COMPLIANCE STATUS REPORT &
Voluntary Remediation Program
Application

FOUNTAIN OAKS SHOPPING CENTER

4920 Roswell Road, NE
Sandy Springs, Fulton County, Georgia 37347

HSI No. 10807

Prepared for:
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MEI Project No. 15513

Professional Certification

This report has been prepared by Marion Environmental Inc. under the supervision of the Professionals whose seals and signatures appear hereon. The findings, recommendations, specifications, or professional opinions are presented within the limits prescribed by the client, after being prepared in accordance with generally accepted professional practice. No other warranty is expressed or implied.

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STATEMENT OF FINDINGS

The Fountain Oaks Shopping Center (FOSC), 4920 Roswell Road NE, Sandy Springs, Fulton County, Georgia (the subject site) is currently listed on the Georgia Hazardous Site Inventory (HSI) as HSI No. 10807. Through this application, the responsible party (responsible for on-site groundwater impacts and off-site impacts to the west) and current property owners seek to have the subject site de-listed from the HSI and have regulatory oversight for the subject site and associated properties transferred to the Georgia Voluntary Remediation Program (VRP). The applicant and property owners therefore request that the FOSC site be de-listed from the HSI.

The three properties that are the subject of this application include:

1. Fountain Oaks Shopping Center (subject site), 4920 Roswell Rd NE, Sandy Springs, GA 30342 Fulton County Assessor Parcel No 17 009300061319.

2. 115 West Belle Isle Road (FOSC Outparcel), Sandy Springs, Georgia 30342 Fulton County Assessor Parcel No 17 009300021073.

3. Long Island Terrace property (undeveloped), Sandy Springs, Georgia 30342 Fulton County Assessor Parcel No 17 009300060881.

The extent of on-site and off-site soil, groundwater and soil vapor contaminants of concern (COCs) impacts and potential exposure risks have been thoroughly delineated through multiple investigations conducted by Marion Environmental, Inc. (MEI) and others from 2005 to 2015.

A soil remediation project conducted by others on the FOSC site in 2007-2008 removed all on-site soils exceeding approved Risk Reduction Standards (RRS). A vapor intrusion (VI) mitigation system was installed by others beneath the north tenant wing of the FOSC and operated for approximately two and a half years (12/2008 to 05/2011). Exposure risks associated with former on-site soil and soil vapor impacts have therefore been successfully mitigated.

The FOSC site was originally placed on the HSI due to soil contamination from a release of tetrachloroethene (PCE) and 14 associated COCs. As documented in multiple reports prepared by others, and summarized herein, soil on the site is in compliance with approved Types 1, 3, and/or 4 Risk Reduction Standards (RRS). Since the soil contamination that caused the FOSC site to be listed on the HSI has been remediated to within the approved RRS, the site is therefore now eligible for de-listing from the HSI.

March 2015 groundwater analytical result indicated that COC concentrations exceed applicable RRS at 14 on-site monitoring wells. The COCs and 14 exceedance locations are:

- Benzene (MWs-20, 21 & 28)
- cDCE (MWs-2, 4, 16, 20 & 28)
- PCE (MWs-2, 3, 5, 9, 13S, 14, 16, 20, 22, 23 & 28)
- TCE (MWS-2, 4, 6, 16, 20 & 28)
- VC (MWs-16 & 28)

Additionally, USEPA vapor intrusion screening level (VISL) calculations conducted in conjunction with the March 2015 groundwater sampling event, but using limited information indicate the *potential* presence of VI risks for PCE and TCE in excess of target levels at MW-2 and MW-4. However, Johnson & Ettinger (J&E) VI modeling using detailed site-specific data

indicates that all COCs in groundwater, including PCE and TCE, *do not* represent a VI risk in excess of target levels for either on-site commercial worker or off-site residential receptors.

There are no *off-site* soil or groundwater impacts in excess of applicable Type 1/Type 2 residential RRS.

The overall conceptual site model (CSM) of the FOSC subject location is of a site where:

- Release sources and substances released have been well defined.
- The lateral and vertical extent and magnitude of soil contamination on-site and potential exposure risks have been well defined through exhaustive subsurface investigations.
- Soil contamination on-site in excess of RRS was removed.
- The lateral and vertical extent and magnitude of groundwater contamination on and off-site and associated exposure risks have been well defined.
- Groundwater flow and subsurface contaminant migration patterns in soil and groundwater are/were significantly affected by the pre-development topography.
- The groundwater contaminant plume, although in excess of RRS in several locations, is stable and rapidly attenuating.
- Groundwater fate & transport modeling demonstrates that:
    - On-site groundwater RRS exceedances are not a significant risk to hypothetical remote off-site residential receptors.
    - The contaminant plume is stable, and is not anticipated to migrate downgradient significantly beyond current dimensions.
- Potential vapor intrusion (VI) impacts for both on-site commercial receptors and off-site residential receptors have been both:
    - Assessed through soil vapor sampling, a soil vapor survey, indoor air sampling, VI modeling, and soil gas sampling; and
    - Mitigated through operation of an on-site VI mitigation system.
- Potential on-site VI impacts/residual soil gas COC concentrations are below applicable risk-based levels.
- Potential DNAPL was investigated and determined not to be present beneath the site.
- There are no soil, groundwater, or vapor intrusion (VI) impacts in excess of RRS/risk-based levels on off-site properties.

Hence, the overall FOSC CSM is a site that has been thoroughly investigated, the potential human health and environmental risks have been evaluated and the site complies with applicable RRS for soil and vapor intrusion. Groundwater in excess of RRS on-site is not a human health or environmental risk due to incomplete exposure pathways, and a plume that is rapidly attenuating. Groundwater fate & transport modeling using conservative assumptions and input values demonstrates that groundwater RRS exceedances on site are not a significant risk to hypothetical off-site residential receptors at a 1000-ft downgradient point of exposure (POE).

On-site exposure domains for this CSM include those areas of the site where:

- Groundwater COC concentrations exceed applicable RRS for the incomplete, but *potentially complete* groundwater ingestion pathway.
- VISL screening calculations indicated that *potential* VI risks exceed target levels (i.e., at wells MW-2 and MW-4).

There is no off-site exposure domain because:

- The FOSC site is a non-drinking water site
- There are no off-site groundwater COC concentrations exceeding applicable RRS
- The groundwater contaminant plume is naturally attenuating at a rapid rate
- Fate & transport modeling demonstrates a lack of risk for off-site groundwater ingestion by hypothetical remote residential receptors.

No soil remediation, and thus no remediation plan, is necessary for on- or off-site soil, because:

- The extent of soil on-site contamination was exhaustively delineated
- On-site soil exceeding RRS was removed during the 2007-2008 soil remediation project
- Remaining in-situ concentrations of COCs in on-site soil have been exhaustively demonstrated through collection of excavation verification samples and borings/monitoring wells installed by MEI
- No COCs in excess of applicable RRS have been detected in off-site soils.

The excavation of approximately 3,831 tons of contaminated soil from the release source area and immediate downgradient area in 2007-2008 removed a significant secondary source of groundwater contamination via the soil-to-groundwater leaching pathway. As a result, groundwater COC concentrations in on-site release source and downgradient areas and have been rapidly attenuating and associated exposure risk levels have been rapidly declining.

In a meeting with EPD on February 27, 2015, Kroger representatives requested permission to abandon all monitoring wells within the footprint of a proposed building expansion. EPD personnel gave tentative verbal approval to abandon these wells, including:

- MW-4
- MW-9
- MW-26
- MW-27
- MW-2 (possibly within spread footing location)
- MW-17 (possibly within spread footing location)

For the following reasons MEI requests closure of all downgradient and cross-gradient wells associated with the former on-site dry cleaner solvent release:

- The contaminated soil that would have acted as an ongoing secondary source of groundwater contamination (via soil to groundwater leaching) has been removed,
- The proposed Kroger expansion will further cover the former on-site release source area and immediate downgradient area, further reducing rainfall infiltration and any associated residual, low-level soil-to-groundwater leaching.
- The groundwater contaminant plume is rapidly attenuating, and
- There are no off-site, downgradient groundwater impacts in excess of applicable RRS.

Therefore, MEI requests abandonment of the following 13 wells.

- Within the proposed Kroger expansion footprint or footing:
    1. MW-2
    2. MW-4
    3. MW-9
    4. MW-17
    5. MW-26
    6. MW-27
- Additional cross-gradient and downgradient wells:
    1. MW-3
    2. MW-13D
    3. MW-13S
    4. MW-29
    5. MW-30
    6. MW-31
    7. MW-32

Engineering controls including a passive vapor barrier, and possibly a sub-slab depressurization system, will be installed beneath the slab of the proposed Kroger expansion to mitigate the potential VI risk. Hence, the *potential* VI to indoor air inhalation exposure pathway will be rendered permanently incomplete through installation of the vapor barrier engineering control.

Engineering controls are not necessary for the remaining potential exposure domains on site, i.e., locations where groundwater exceeds Type 3/Type 4 RRS, because all of these areas are unoccupied, paved parking areas, and will remain so for the foreseeable future. Institutional controls, specifically, deed notices and restrictive covenants are proposed to mitigate potential exposure risks from on-site groundwater exceeding applicable RRS.

A restrictive environmental covenant is proposed between the property owner(s) and the EPD as a means of mitigating potential exposure to groundwater exceeding RRS. The specific language of the covenant will be negotiated between the property owners and EPD, but is likely to include:

- Digging notices/restrictions,
- Zoning restrictions,
- Land use restrictions,
- Groundwater use prohibitions, and/or
- Building permit conditions

MEI proposes to abandon the 13 monitoring wells within 6 months of receipt of EPD approval. The following four required generic milestones included in this initial application:

1. Horizontal delineation of the release and associated COCs on property accessible at the time of enrollment;
2. Horizontal delineation of the release and associated COCs on property inaccessible at the time of enrollment;
3. Update CSM to include vertical delineation, finalize the remediation plan and provide a preliminary cost estimate for implementation of remediation and associated continuing actions; and
4. Submit the compliance status report (CSR) required under the VRP, including requisite certifications.

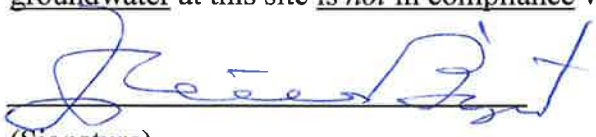
Item numbers 1, 2 and 3 above have been completed and this information previously submitted to EPD, with the exception of “preliminary cost estimates for implementation of remediation and associated continuing actions” which no longer appear to be necessary. Item number 4 above, submittal of a CSR, should be considered completed with the submittal of this updated CSR and VRP application.

CERTIFICATION OF COMPLIANCE

I certify under penalty of law that this report and all attachments were prepared under my direction in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Based on my review of the findings of this report, and my review of the findings of reports prepared by others on file at the Georgia Department of Natural Resources, Environmental Protection Division (EPD), Hazardous Site Response Program (HSRP), with respect to the *soil* risk reduction standards (RRSs) of the Rules for Hazardous Site Response, Rule 391-3-19-.07, I have determined that the soil at this site is in compliance with the approved Type 1, 3, and/or 4 Risk Reduction Standards.

Based on my review of the findings of this report with respect to the risk reduction standards (RRSs) of the Rules for Hazardous Site Response, Rule 391-3-19.07, I have determined that groundwater at this site is *not* in compliance with Type 3 and/or Type 4 risk reduction standards.



(Signature)

Fletcher Bright for LIA

(Typed Name)

(Title)

Fletcher Bright Company
537 Market Street, Suite 400
Chattanooga, TN 37402
(423) 755-8830

GROUNDWATER SCIENTIST STATEMENT

I certify that I am a qualified groundwater scientist who has both a bachelors and masters degrees in Geology as well as a bachelors degree in Chemical Engineering and have sufficient training and experience in groundwater hydrology and related fields, as demonstrated by state registration and completion of accredited university courses, that enable me to make sound professional judgments regarding groundwater monitoring and contaminant fate and transport. I further certify that this Compliance Status Report and Voluntary Remediation Program application and accompanying documents for the Fountain Oaks Shopping Center located at 4920 Roswell Road in Sandy Springs, Fulton County, Georgia were prepared by me and appropriately qualified colleagues and subordinates working under my direction.

(Signature)

Steve Wild, P.G.

MARION ENVIRONMENTAL, INC.

Georgia Stamp or Seal

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LIST OF ACRONYMS AND ABBREVIATIONS

BGS.....Below Ground Surface
COC..... Chemical/Contaminant of Concern
cDCE.....cis-1,2-dichloroethene
DC.....Dry Cleaner
DCE .....Dichloroethene
DNR.....Georgia Department of Natural Resources
DP .....Direct Push (i.e., "Geoprobe) borings
EPA.....Environmental Protection Agency
EPD.....[Georgia] Environmental Protection Division
ESA.....Environmental Site Assessment
FOSC .....Fountain Oaks Shopping Center
HSRA..... [Georgia] Hazardous Site Response Act
HSRP .....Hazardous Site Response Program
MEI..... Marion Environmental, Incorporated
:g/kg..... micrograms per kilogram (equivalent to ppb)
:g/L .....micrograms per Liter (equivalent to ppb)
MCL.....[Drinking Water] Maximum Contaminant Level
mg/kg .....milligrams per kilogram (equivalent to ppm)
mg/L.....milligrams per Liter (equivalent to ppm)
msl..... mean sea level
MW .....Monitor Well
NC.....Notification Concentration
PCE.....Tetrachloroethene (Perchloroethene)
POE.....Point of Exposure
ppb .....parts per billion
ppm ..... parts per million
RRS.....Risk Reduction Standards
RRFM .....Roswell Road Food Mart
TCE..... Trichloroethene
tDCE trans-1,2-dichloroethene
UC..... United Consulting
USRIF ..... U.S. Retail Income Fund VIII-D
UST.....Underground Storage Tank
VC.....Vinyl Chloride
VI ..... Vapor Intrusion
VIA ..... Vapor Intrusion Assessment
VOC.....Volatile Organic Compound
VRP.....Voluntary Remediation Program

1.0 INTRODUCTION

The Fountain Oaks Shopping Center (FOSC), 4920 Roswell Road NE, Sandy Springs, Fulton County, Georgia (the subject site) site is currently listed on the Georgia Hazardous Site Inventory (HSI) as HSI No. 10807. Through this application, the responsible party (responsible for on-site groundwater impacts and off-site impacts) and current property owners seek to have the subject site de-listed from the HSI and have regulatory oversight for the subject site and associated properties transferred to the Georgia Voluntary Remediation Program (VRP). The applicant and property owners therefore request that the FOSC site be de-listed from the HSI.

1.1. Applicability and Site Qualifications

Long Island Associates (LIA) is a responsible party, as defined by the Georgia Hazardous Site Response Act (HSRA), for groundwater contamination beneath property located at 4920 Roswell Road in Sandy Springs, Fulton County, Georgia (the subject property). The subject property, for the purposes of this application for entry into the Voluntary Remediation Program (VRP), also includes two associated parcels, one located at 115 West Belle Isle Drive (0.25 acre) and an undeveloped parcel on Long Island Terrace (0.74 acre). LIA is submitting this Voluntary Remediation Program (VRP) Application for the subject property under the Georgia Voluntary Remediation Program Act (VRPA) pursuant to Official Code of Georgia Annotated (O.C.G.A.) § 12-8-100, et seq. The VRP Application Form is attached (**Appendix A**) and a check for the $5,000 VRP Application Fee is included.

According to O.C.G.A. § 12-8-105, in order to be considered a "qualifying property," a property must be listed on the Hazardous Site Inventory (HSI), meet the criteria of the Georgia Hazardous Site Reuse and Redevelopment Act ("the Brownfields Act"), or have a release of regulated substances to the environment. The subject property was first listed on the HSI on July 15, 2005 as the Fountain Oaks Shopping Center (FOSC), 4920 Roswell Road NE, HSI Site Number 10807.

An adjacent property at 4980 Roswell Road NE, occupied by Chastain Cleaners, was sub-listed as part of HSI 10807 on October 3, 2008. However, the Chastain Cleaners site is not included in

this VRP application since it is an off-site dry cleaning solvent release source (as discussed subsequently in **Section 2.3** herein) whose release has migrated onto the FOSC site.

Under O.C.G.A. § 12-8-105, in order to qualify for entry into the VRP, the property must not be subject to any of the following limitations:

1. It cannot be listed on the federal National Priorities List ("the NPL" or "Superfund" list).
2. It cannot be currently undergoing response activities required by an Order of the Regional Administration of the U.S. Environmental Protection Agency (EPA).
3. It shall not be a facility that is required to have a permit under the Georgia Hazardous Waste Management Act.
4. It shall not violate the terms and conditions under which the Georgia Environmental Protection Division (EPD) operates and administers remedial programs by delegation or similar authorization from the U.S. EPA.
5. It shall not have any lien filed under the Hazardous Waste Management Act or the Georgia Underground Storage Tank Management Act.

None of the limiting criteria listed in items 1 through 5 above apply to the subject properties. Therefore, the FOSC site is a "qualifying property" under the VRP.

According to O.C.G.A. § 12-8-106, the following criteria must be met in order for the Participant to meet the qualifications of the VRP:

1. The Participant must be the owner of the property or have express permission to enter another's property to perform corrective action, including, to the extent applicable, implementing controls for the site pursuant to written lease, license, order, or indenture.
2. The Participant must not be in violation of any order, judgment, statute, rule, or regulation subject to the enforcement authority of the Director.
3. The Participant must meet other such criteria as may be established by the Georgia Department of Natural Resources (DNR) Board.

Since the Participant meets all of the criteria stated above, the Participant is "qualified" under the VRP. The owner of the property is as follows:

AMREIT Fountain Oaks LP
8 Greenway Plaza, Suite 1000
Houston, TX 77046
Telephone: (713) 850 1400

The Applicant is requesting entry into the VRP with the express consent of the current property owner, AMREIT Fountain Oaks, LP.

The three properties that are the subject of this application are (**Figure 1 in Appendix B**):

1.Fountain Oaks Shopping Center (subject site)

4920 Roswell Rd NE, Sandy Springs, GA 30342

Fulton County Assessor Parcel No 17 009300061319. Area: 13.5 acres.

2.115 West Belle Isle Road, Sandy Springs, Georgia 30342

Fulton County Assessor Parcel No 17 009300021073. Area: 0.2571 acres.

3.Long Island Terrace property (undeveloped), Sandy Springs, Georgia 30342

Fulton County Assessor Parcel No 17 009300060881. Area: 0.74 acres.

Appendix E contains the warranty deeds, tax plats and property owners' permission to file this VRP application for the three qualifying properties.

1.2. Site Location & Description

This Application was prepared to obtain entry into the Georgia VRP for the Fountain Oaks Shopping Center (FOSC) site, 4920 Roswell Road NE, Sandy Springs, Fulton County, Georgia (**Figure 1** in **Appendix B**). The FOSC site is Georgia Hazardous Site Index (HSI) Site Number 10807. Former dry cleaning (DC) operations at the FOSC resulted in the release of compounds to the environment that are regulated under the Georgia Hazardous Site Response Act.

Additionally, two off-site, upgradient sources have released regulated constituents into groundwater that have migrated onto the FOSC site. Chlorinated solvent constituents have been identified in groundwater on the Chastain Cleaners property, located northeast of the site, directly across W. Belle Isle Road. Gasoline constituents have been identified in groundwater on the Roswell Road Food Mart property, located adjacent to the northeast corner of the site. Similar constituents have been detected in groundwater on the FOSC subject site immediately downgradient of these off-site sources. Refer to **Section 2.3** for further discussion and to documents in **Appendix G**.

The FOSC site encompasses approximately 13.5 acres and contains a retail shopping center with a Kroger grocery store and service and retail shops (**Figure 2**). Two additional properties affected by groundwater contamination from the on-site and off-site sources are included within the scope of this VRP application, as listed in **Section 1.1**.

Three buildings are located on the FOSC subject property. The largest of the buildings is located on the western half of the property, and consists of three contiguous structures; a north wing and south wing separated by a Kroger grocery store. Both the north and south wings of that building contain multiple commercial, retail, and professional tenant spaces.

The north wing contains five tenant spaces. The south wing is a two-story structure comprised of multiple tenant spaces. The next smaller building on the property is also a two-story, multiple-tenant structure located on the southern portion of the FOSC subject site. The third building on the property is a freestanding modern petroleum UST facility/fuel station located centrally on the easternmost side.

2.0 PREVIOUS INVESTIGATIONS & REMEDIAL ACTIONS

2.1 Overview - Previous Investigations & Remedial Actions

Records obtained from the Georgia Department of Natural Resources, Environmental Protection Division (EPD) and other sources show that the site was developed into the current retail shopping center in 1987 by Long Island Associates, Ltd. Dry cleaning (DC) operations were conducted in the northernmost tenant bay under the business ownership of several different

entities for approximately 20 years from November 1987 until approximately March 2007. LIA sold the FOSC to U.S. Retail Income Fund VIII-D (USRIF) in December 2003. Hence, DC operations were conducted on site during both LIA's and USRIF's ownership of the property.

Former on-site DC ownership details are documented in multiple reports on file with the EPD HSRP. Previous work conducted at the site includes soil and groundwater investigations, a soil remediation project, vapor intrusion assessments, a soil vapor survey, indoor air testing and a recent comprehensive groundwater monitoring event. All of this work is detailed in documents previously submitted to and on file with the EPD HSRP. All previous investigation & remediation work is briefly described herein, and is summarized in the following table, which includes the document, date and pages where the work is described in detail.

A release of chlorinated solvents and other chlorinated volatile organic compounds (CVOCs) associated with on-site DC operations was discovered in March 2005 during a Phase II Environmental Site Assessment conducted by Keramida Environmental, Inc. The presence of CVOC contamination in on-site soil was reported to EPD in a letter from United Consulting (UC) dated May 31, 2005. The exact date of the first release of the dry cleaning solvent tetrachloroethene (PCE, also known as perchloroethylene or "perc") is unknown, but clearly occurred sometime between 1987 and 2005.

Following initial discovery of the release in March 2005, multiple soil and groundwater investigations were conducted by between March 2005 and June 2007 by Keramida Environmental and United Consulting (UC). These investigations determined the extent of soil contamination on site in excess of calculated Risk Reduction Standards (RRS) and the magnitude of groundwater contamination in multiple locations on site.

The results of these 2005-2007 investigations indicated that there were three release sources for on-site soil and/or groundwater contamination from both DC solvents and petroleum hydrocarbons (see discussion in **Section 2.3**):

1. A former on-site DC tenant bay,
2. An off-site, upgradient DC operation (Chastain Cleaners), and

3. An off-site, upgradient petroleum underground storage tank (UST) facility, (CITGO/Roswell Road Food Mart).

TABLE 1 - Summary of Previous Investigation, Remediation, & Mitigation Activities

Investigation/ Report Date	Entity/Consultant/Contractor or Performing Investigation/Remediation	Investigation/Remediation Summary	Document on file at EPD where work described/documented, Document Date, Location within Document
1992	U.S. EPA	Emergency removal of abandoned drums. Drums not associated with on-site drycleaner. No soil or groundwater sampling conducted	UC PPCAP, 28-NOV-05, Page 4
29-Oct-03	National Assessment Corp. (NAC)	Phase I ESA. No Phase II ESA recommended	UC PPCAP, 28-NOV-05, Page 4
14-Mar-05	Professional Service Industries, Inc.	Phase I ESA. Phase II ESA recommended	UC PPCAP, 28-NOV-05, Pages 4-5
30-Mar-05	Keramida Environmental Inc. (Keramida)	Phase II ESA. Eleven borings installed inside & outside drycleaner bay. Soil contaminated with PCE at 0.014 to 34.8 ppm discovered	UC PPCAP, 28-NOV-05, Page 5
29-Apr-05	Keramida	Installation of 4 monitoring wells (MWs) (MW-1 to MW-4). Groundwater PCE, TCE and cDCE contamination discovered.	UC PPCAP, 28-NOV-05, Page 5
May-June 2005	United Consulting	PPCAP Investigation. Installation of 23 direct push (DP) soil borings and 3 monitoring wells (MWs) (MW-5 to MW-11). Collection of 59 soil and 7 groundwater samples.	UC PPCAP, 28-NOV-05, Page 5-9 & 38-42, Tables 1 & 2
21-Feb-08	United Consulting	Vapor Intrusion Assessment & Mitigation Design	UC VIA & Mitigation Design Rpt, 21-FEB-2008
Nov. 2006 - June 2007	United Consulting	PPCSR Investigation. Installation of 49 DP borings. Installation of 5 MWs (MW-8 to MW-12). Field screen soil every 2 ft. Analyze one soil sample per boring. Define areas where soil corrective action necessary.	UC PPCSR, 10-JUN-08, Pages 13-21, Tables 1 & 2
Nov. 2007 - May 2008	United Consulting/ Greenleaf Environmental	Soil remediation project. Removal of 3,830.53 tons of impacted soil. Collection & analysis of 213 soil verification/confirmation samples and 146 split verification/confirmation samples (by MEI).	UC PPCSR, 10-JUN-08, Pages 34-45, Tables 7 & 8
11-Dec-07	Marion Environmental Inc.	Preliminary Corrective Action Plan (PCAP). Proposed soil vapor survey of site to identify impacted areas. Groundwater investigation proposed to follow soil vapor survey. Calculation of Risk Reduction Standards (RRS) proposed.	MEI PCAP, 11-Dec-07
May 2008 - May 2009	Marion Environmental Inc.	PCAP/CSR GW Investigation. Installation of 22 MWs (MW-13S to MW-33). Define extent of groundwater contamination on and off-site. Confirm no off-site soil impacts.	MEI CSR, 14-JAN-10, Pages 26-51, Tables 1-4
25-Aug-08	Marion Environmental Inc./ Atlantic Environmental Inc.	Off-Site indoor residential air sampling. Sample results confirm no impacts to off-site indoor air quality.	MEI CSR, 14-JAN-10, Pages 59-61, Appendix G
Sep-08	Marion Environmental Inc./ W.L. Gore & Assoc.	Soil vapor survey. Survey indentifies three distinct commingled plumes originating from one on-site and two off-site release sources.	MEI CSR, 14-JAN-10, Pages 51-58, Appendix F
Dec-2008	United Consulting	Installation of vapor intrusion mitigation system (VIMS) including: passive soil vapor barrier in former DC tenant bay, passive sub-slab depressurization system beneath former DC tenant bay, installation of eight 100-ft long, north-south horizontal borings	UC Vapor Mitigation System Implementation Rpt, 3-JUN-2009
May-2011	United Consulting	Shut down and abandon vapor intrustion mitigation system in accordance with VI mitigation, sampling and modeling showing no existing impacts or potential VI impacts in excess of 1E-05 carcinogenic or HQ=1 non-carcinogenic health effects.	UC Vapor System Sampling and Modeling for Closure Rpt, 25-FEB-2011. UC Vapor Intrusion Mitigation System (VIMS) Closure Report, 26-MAY-2011. EPD Approval Ltr 8-AUG-2011
Mar-2015	Marion Environmental Inc.	Groundwater sampling event. Site-wide comprehensive sampling of all wells. Document significant natural attenuation of groundwater contamination in on-site release source and downgradient areas. Vapor Intrusion Screening Levels calculated with US EPA VISL calculator. Updated RRS calculated.	MEI GW Monitoring Rpt., 14-MAY-15

The methods, results and conclusions of the previous investigations conducted by others are documented in multiple reports on file with the EPD HSRP. Soil analytical results confirming the delineation of the full on-site extent of soil contamination are tabulated in **Tables 4 & 5 in Appendix C.** Locations of previous soil assessment borings and samples are shown on **Figures 3 & 4 in Appendix B.** The list of COCs detected during these soil investigations is discussed in **Section 2.3** herein.

Following delineation of the lateral and vertical extent of on-site soil contamination in excess of RRS, a soil remediation project was conducted by USRIF between November 2007 and May 2008. That project resulted in the removal of 3,830.53 tons of impacted soil and the collection and analysis of 213 soil verification/confirmation samples, and 146 split verification/ confirmation samples. The results of the soil remediation and verification sampling (**Tables 7 & 8**) indicated that all impacted soil in excess of calculated RRS was successfully removed from the site. This work is documented in UC's June 8, 2010 Prospective Purchaser Compliance Status Report (PPCSR).

The locations and approximate depths of the remediated areas are shown on **Figure 5 in Appendix B**. Soil verification/confirmation sample analytical results are tabulated in **Tables 7 & 8 in Appendix C**.

The potential presence of dense non-aqueous phase liquid (DNAPL) or "free product" was evaluated by UC using procedures in EPA guidance documents during investigatory phases of soil impact assessment and during excavation/verification sampling. Although PCE concentrations slightly exceeded 1 % of the solubility limit in some groundwater samples, other potential DNAPL indicators were not present. Therefore, based on the results of extensive testing and observations, DNAPL was not considered present in soil or groundwater. This work is documented in UC's June 8, 2010 Prospective Purchaser Compliance Status Report (PPCSR).

Following the soil remediation project, UC installed a vapor intrusion mitigation system (VIMS) beneath the former DC tenant bay and the north tenant wing of the FOSC site. This system consisted of a passive vapor barrier and sub slab depressurization system installed beneath the

former DC facility and an active vapor mitigation system was installed beneath the remaining units in the north FOSC wing. The VIMS was operated for approximately two and a half years, from December 2008 to May 2011.

EPD authorized shutdown of the VIMS system after soil gas sampling results and VI modeling results both indicated that there were no VI risks present on site in excess of target levels. The system was shut down, decommissioned and the shallow vapor monitoring wells abandoned in May 2011. This VI mitigation and monitoring work is documented in three reports prepared by UC:

- Vapor Intrusion Assessment and Mitigation Design Report (21-FEB-2008)
- Vapor Intrusion Mitigation System Implementation Report (3-JUN-2009), and
- Vapor System Sampling and Modeling for Closure Report (25-FEB-2011)

MEI initiated investigations of the full on- and off-site extent of groundwater contamination and the extent of off-site soil and groundwater contamination after completion of the soil remediation project. Twenty-three monitoring wells were installed on- and off-site between May 2008 and May 2009. Collection and analysis of soil and groundwater samples confirmed that the full extent, depth and magnitude of the groundwater contaminant plume were defined by these investigations. Soil analytical results from samples collected during the groundwater investigation confirmed that there are no off-site soil impacts associated with the former on-site DC release source. This work is documented in MEI's January 14, 2010 CSR, a copy of which is provided on the compact disc included as **Appendix I** herein.

The locations of soil borings/groundwater monitoring wells installed by MEI are shown on **Figure 6 in Appendix B**. Monitoring well construction details are provided in **Table 3**. Soil sample analytical results from these borings are tabulated in **Table 5 in Appendix C**. Groundwater analytical results from all groundwater monitoring wells and sampling events conducted on site are tabulated in **Table 9 in Appendix C**. Groundwater analytical results showing only those compounds detected in groundwater during the most recent, March 2015 groundwater sampling event are tabulated in **Table 10 in Appendix C**. A discussion of COCs

detected in groundwater during any previous sampling event in comparison to only those COCs detected during the most recent, March 2015 sampling event is contained in **Section 2.3** herein.

An investigation of nearby off-site, indoor residential air quality at 79 West Belle Isle Road, located immediately west of FOSC was conducted by Industrial Hygiene consultants Atlantic Environmental Inc. (AEI) in August 2008, under subcontract to MEI. The results of this study confirmed that there were no impacts to off-site indoor residential air quality associated with vapor intrusion of contaminants released from former on-site DC operations. Since the 2008 indoor air sampling event, during which no DC vapors were detected, recent groundwater analytical results (March 2015) show that contaminant concentrations have declined in the nearest upgradient well (MW-13S) by an average of 93.6%. This remarkable reduction in upgradient groundwater contaminant concentrations is evidence of significantly reduced off-site vapor intrusion risk for the neighboring property. The 2008 indoor air sampling work is documented in AEI's report, included as Appendix G MEI's January 14, 2010 CSR. Groundwater analytical results for all sampling events are tabulated in **Table 9**.

A soil vapor survey on the northern portion of the FOSC site and adjacent off-site areas was conducted by MEI in September 2008. One hundred and twenty-four (124) W.L. Gore & Associates (now Amplified Geochemical Imaging LLC) Gore-Sorber® soil vapor absorption modules were deployed on the northern portion of the FOSC site. These modules were installed outside of structures at an approximate 50-foot-by-50-foot grid shown on the figures included within Gore's report to MEI, which is included as Appendix F of MEI's January 14, 2010 CSR.

The results of this soil vapor survey identified three distinct contaminant plumes commingled on the FOSC site. These three plumes originated from one on-site source (the former DC operations) and from two off-site sources (Chastain Cleaners and the CITGO/Roswell Road Food Mart ("CITGO/RRFM")). Copies of the soil vapor maps from Gore's 2008 survey report, showing both soil vapor module installation locations and color-contoured analytical results for PCE, TCE, cDCE and BTEX are included as **Figures 7 – 10 in Appendix B**.

As stated previously, all of the above prior work detailed herein was described in MEI's January 14, 2010 CSR. On March 9, 2015, the EPD HSRP issued a review letter for the CSR.

The EPD noted in their March 9, 2015 letter that the CSR had certified that the site did not comply with Risk Reduction Standards (RRS) and that monitored natural attenuation (MNA) had been recommended by MEI as the groundwater remediation method. Further, the EPD directed LIA to perform the following activities:

1. Conduct a site-wide comprehensive groundwater monitoring event.
2. Construct specific geologic cross-sections.
3. Evaluate the vapor intrusion pathway using up-to-date groundwater analytical results.
4. Calculate updated Risk Reduction Standards (RRS) based on current toxicity values.

In response the EPD's letter, MEI conducted a comprehensive groundwater monitoring event in March 2015. Groundwater samples were collected from all 29 existing wells and analyzed for VOC concentrations. The methods and results of this sampling event were documented in MEI's Groundwater Monitoring Report dated May 14, 2015, on file with the EPD HSRP, a copy of which is provided on the compact disc included as **Appendix E** herein.

Groundwater analytical results from the March 2015 sampling event show that 13 compounds were present in on-site groundwater, while five compounds were detected in off-site groundwater (**Table 10**). Comparison of the March 2015 groundwater sampling results with those of the previous 2008 or 2009 event at each well generally indicate significant reductions in PCE, TCE and cDCE across the site, with few exceptions. At 12 wells surrounding and downgradient from the former on-site drycleaner (MWs-2, 3, 4, 9, 13S, 14, 18, 19, 26, 27 and 30), PCE declined by an average of approximately 74%, TCE by approximately 49% and cDCE by approximately 19% between 2008/2009 and 2015.

Comparison of the March 2015 and previous groundwater analytical data showed clearly that COC concentrations in the on-site source area and downgradient areas declined sharply from 2008/2009 levels due to natural attenuation. Hence, there is ample evidence that removal of the

secondary source material (the impacted soil) followed by rapid natural attenuation is an effective remedy for cleanup of groundwater impacted from former on-site dry cleaning operations.

MEI prepared geologic cross sections (specified by the EPD) showing groundwater monitoring well depths, screened intervals, soil/rock types encountered, and depth to water information utilizing specific wells as requested in the EPD's March 9, 2015 letter. These cross sections were included in the May 14, 2015 Groundwater Monitoring Report. Updated cross sections are included as **Figures 11 & 12 in Appendix B**. A three-dimensional graphic conceptual site model (CSM) utilizing these cross sections is included as **Plate 1 in Appendix H**.

Vapor intrusion screening was performed for the groundwater volatilization to indoor air inhalation pathway for a commercial worker utilizing the U.S. EPA Vapor Intrusion Screening Level (VISL) calculator, as requested in the EPD's March 9, 2015 letter. The VISL "Groundwater Concentration to Indoor Air Concentration" (GWC-IAC) calculator indicated that two compounds, TCE and benzene, were present in groundwater at concentrations capable of exceeding the 1E-05 carcinogenic risk for commercial workers via the indoor air inhalation pathway.

Similarly, the GWC-IAC calculator indicates that two compounds, PCE and TCE, are present at concentrations capable of exceeding the toxicity effects hazard quotient of 1.0 for commercial workers via the indoor air inhalation pathway. Hence three compounds, PCE, TCE and benzene, are present in on-site groundwater at concentrations capable of exceeding indoor air inhalation targets. The VISL-calculated target concentrations of PCE, TCE and benzene, the locations at which these targets are exceeded, and the groundwater concentrations of these three VOCs are:

Compound	VISL Target Conc.	Exceedance Locations (MAR-2015 Concentration)		
PCE	370 µg/L	MW-2 (775 µg/L)	MW-22 (520 µg/L)	
TCE	32 µg/L	MW-2 (71.5 µg/L)	MW-4 (120 µg/L)	MW-16 (35 µg/L)
Benzene	100 µg/L	MW-28 (135 µg/L)		

The groundwater contamination exceeding the VISL groundwater target concentrations at monitoring wells MW-16, MW-22 and MW-28 likely was released from the off-site release

sources, Chastain Cleaners and the CITGO/RRFM. Therefore, the release from the former on-site drycleaner appears only to have affected the VISL target exceedances at source area wells MW-2 and MW-4.

As previously described, an indoor air quality study was conducted by MEI on August 25, 2008 in a home at 79 West Belle Isle Road, downgradient from the on-site source release area. That study, documented in the January 2010 CSR, showed that there was no impact on off-site indoor air quality from the on-site release. Contaminant concentrations (PCE, TCE and cDCE) at the nearest upgradient monitoring well (MW-13S) have declined by approximately 93% since the 2008 indoor air study was performed, indicating a significant reduction of potential vapor intrusion risk for this nearby property.

Updated groundwater Risk Reduction Standards (RRS) were calculated using current U.S. EPA toxicity values. The results of these calculations were detailed in the May 14, 2015 Groundwater Monitoring Report and are described herein in **Section 2.5.2** and summarized in **Tables 19 – 24 in Appendix C.**

2.2 On-Site Petroleum UST Facility

An on-site petroleum UST facility containing three fiberglass double-walled tanks was installed at the FOSC in November 2005. This on-site UST facility is not the source of petroleum-contaminated groundwater on the FOSC site as evidenced by:

- There are no records of a release from this facility (Facility ID No. 10001030) in Georgia EPD, UST Management Program (USTMP) records.
- There is an USTMP record of a confirmed release from the Roswell Road Food Mart (CITGO/RRFM), 4968 Roswell Rd, Facility ID No. 9000005, on May 2, 1989, as well as USTMP records of multiple "suspected releases" on the following dates:
    - 09/24/1997
    - 05/13/1998
    - 06/05/1998
    - 07/13/1999
    - 04/16/2001
    - 05/14/2001
    - 02/26/2002
    - 10/26/2011

- The most recent investigation at the CITGO/RRFM in 1997 confirmed the presence of the petroleum VOCs benzene, toluene, ethylbenzene and xylenes (BTEX) in groundwater on the property (see discussion in **Section 2.3** and documentation in **Appendix G**).
- Groundwater contamination from benzene and methyl tert-butyl ether (MTBE) was detected in samples collected from MW-5, downgradient from the CITGO/RRFM, in April and June 2005, prior to installation of the on-site UST facility in November 2005.
- MTBE is associated with the on-site groundwater petroleum contamination (**Table 9 and Figure 21**)
    - MTBE is an oxygenate (oxygen-containing compound) used in U.S. gasoline at low levels as an octane enhancer since 1979, and at higher levels in 1992-2005 to fulfill oxygenate requirements for reformulated gasoline (RFG) set by Congress in the 1990 Clean Air Act Amendments.
    - According to EPA data, MTBE has not been used in significant quantities in RFG (non-compliance) areas since 2005. A similar decrease in MTBE use was also observed in conventional gasoline areas (Kinner, 2001) and (http://archive.epa.gov/mtbe/web/html/faq.html).
    - Therefore it is unlikely that gasoline stored in the modern USTs installed in November 2005 at the on-site fuel station ever contained MTBE.
    - MTBE is very soluble in groundwater (approximately 50,000 mg/L); approximately 30 times more soluble, and significantly less volatile, than are the petroleum hydrocarbon constituents of gasoline.
    - MTBE does not readily sorb to soil, rock surfaces, or organic carbon in soil because of its high solubility. In contrast, the BTEX compounds (benzene, toluene, ethylbenzene, xylenes) are retarded relative to groundwater velocity because they sorb to soil/rock surfaces and organic carbon in soil. Hence, MTBE moves faster and further in groundwater than the BTEX compounds.
    - Because of its high solubility and lack of retardation, MTBE tends to form “halo” of groundwater contamination along the leading edge of a groundwater gasoline contaminant plume, where the released gasoline contained MTBE. This is exactly the situation in the petroleum contaminant plume at FOSC (**Figure 21 & Table 9**).

- Groundwater contaminated with benzene and MTBE is present at wells MW-5, MW-20 and MW-21, hydraulically *upgradient* from the on-site Kroger fuel station (**Table 9 and Figure 17**). The March 12, 2015 sample from MW-21, approximately 100 feet upgradient from the on-site fuel station, contained 2,500 µg/L of MTBE.
- The 2008 soil vapor survey map for BTEX (**Figure 10**) indicates an area of concentrated BTEX vapor (a vapor "hot spot") north of, and hydraulically upgradient from the on-site fuel station.

Hence, the on-site Kroger fuel station is not the source of petroleum hydrocarbons detected in on-site groundwater. The petroleum release source is clearly the off-site CITGO/RRFM facility.

2.3 Source Area Summary

There are three release source areas associated with soil and/or groundwater contamination on the FOSC site: one on-site source, and two off-site sources. These three release sources are:

On-Site Source: Former Dry Cleaning Operation
Fountain Oaks Shopping Center
4920 Roswell Road NE, Sandy Springs, GA 30342
Parcel ID No. 17 00930006131
HSI Site No. 10807

Property Owner Information:
AMREIT Fountain Oaks LP
8 Greenway Plaza, Suite 1000, Houston, TX 77046

Off-Site Source: Active Dry Cleaning Operation
Chastain Cleaners
4980 Roswell Road NE, Sandy Springs, Georgia 30342
Parcel ID No. 17 009300021826

Property Owner Information:
Give Us Inc
740 Woodscape Trail, Johns Creek, GA 30022
Roswell, Georgia 30022 U S

Off-Site Source: Active Petroleum UST Facility
Roswell Road Food Mart
4968 Roswell Road NE, Sandy Springs, Georgia 30342
Parcel ID No. 17 -009300021842
UST Facility ID No. 09000005

Property Owner Information:
The Rock It Inc
P O Box 19695, Atlanta, GA 30325

Chastain Cleaners and Roswell Road Food Mart (RRFM) are both directly upgradient of the FOSC subject site, based on the directions of groundwater flow as shown on **Figures 17 & 18 in Appendix B**. Groundwater contaminant plumes originating on each of these properties have migrated onto the FOSC subject site.

Chastain Cleaners is sub-listed on the HSI with FOSC as HSI No. 10807. The most recent investigation at Chastain Cleaners in 2009 confirmed chlorinated volatile organic compounds (CVOCS) in groundwater, including PCE, TCE, cDCE and VC. **Figure G1 in Appendix G** depicts the CVOC plume dimensions in monitoring wells on the Chastain Cleaners site and in wells immediately downgradient on the FOSC subject site. Figures EPS1 and AC2 in **Appendix G** respectively show the October 2009 and November 2008 concentrations of PCE and other CVOCs in groundwater on the Chastain Cleaners site. Based on groundwater flow directions, distances from the impacted off-site wells to the former dry cleaners at FOSC, and the documented presence of CVOCs in groundwater on this upgradient property, a release of CVOCs that migrated onto the FOSC subject site originated on the Chastain Cleaners property.

The Roswell Road Food Mart site (RRFM, formerly EZ Serve gas station) was granted "No Further Action" (NFA) status for a confirmed petroleum release by the Georgia EPD UST Management Program in 1998 (copy of EPD NFA letter in **Appendix G**). The most recent investigation at RRFM in 1997 confirmed the presence of gasoline VOCs benzene, toluene, ethylbenzene and xylenes (BTEX) in groundwater on the property. **Figure G2 in Appendix G** depicts the total BTEX contaminant plume on both the RRFM site and immediate downgradient areas on the FOSC subject site. Based on groundwater flow directions, the documented presence of petroleum compounds in groundwater on the upgradient RRFM parcel, and the lack of any documented release from the UST facility on the FOSC property (see **Section 2.2**), the release of BTEX that migrated onto the FOSC subject site originated on the RRFM property.

2.4 Chemicals/Contaminants of Concern

Multiple potential chemicals of concern (COC) have been detected during previous soil and groundwater investigations. The CSR prepared by MEI, dated January 14, 2010, presented multiple potential COCs detected in groundwater. The PPCAP prepared by UC dated November 28, 2005, also presented multiple potential COCs for soil. The combined list of potential COCs from these two documents include:

1. acetone
2. benzene
3. 2-butanone (aka methyl ethyl ketone, MEK)
4. n-butylbenzene
5. sec-butylbenzene
6. carbon disulfide (CD)
7. chlorobenzene
8. chloroform
9. cyclohexane
10. 1,2-dichloroethane (1,2-DCA)
11. cis-1,2-dichloroethene (cDCE)
12. diisopropyl ether
13. ethylbenzene
14. isopropylbenzene (cumene)
15. methyl cyclohexane
16. 4-methyl-2-pentanone (aka methyl isobutyl ketone, MIBK)
17. methyl-tertiary butyl ether (MTBE)
18. n-propylbenzene
19. tetrachloroethene (PCE)
20. toluene
21. trichloroethene (TCE)
22. 1,2,3-trimethylbenzene (1,2,3-TMB)
23. 1,2,4- trimethylbenzene (1,2,4-TMB)
24. 1,3,5- trimethylbenzene (1,3,5-TMB)
25. vinyl chloride (VC)
26. xylenes

One additional previously undetected PCE/TCE degradation daughter compound, trans-1,2-dichloroethene (tDCE), was reported to be present in on-site groundwater for the first time in March 2015.

Of the 27 total *potential* COCs, the following nine compounds are not listed in EPD Rules, Chapter 391-3-19, Appendix I, *Regulated Substances and Soil Concentrations That Trigger Notification* and are therefore not regulated under the HSRP:

1. n-butylbenzene
2. sec-butylbenzene
3. diisopropyl ether
4. methyl cyclohexane
5. methyl-tertiary butyl ether (MTBE)
6. n-propylbenzene
7. 1,2,3-trimethylbenzene (1,2,3-TMB)
8. 1,2,4- trimethylbenzene (1,2,4-TMB)
9. 1,3,5- trimethylbenzene (1,3,5-TMB)

Chlorobenzene was only detected in two soil samples from a single location, directly beneath the former location of a DC machine in boring I-DP-2 at 1 foot (0.0065 mg/kg) and 9 feet (0.0078 mg/kg) below ground surface (BGS). The HSRP notification concentration (NC) for chlorobenzene is 4.18 mg/kg, while the final approved Type 3 RRS is 10 mg/kg (**Table 21**). Soil was excavated to a depth of 13 to 16 feet BGS in this area. No soil verification sample from this area (**Tables 7 & 8**), or any other soil or groundwater sample collected on site (**Tables 6 & 9**) contained any chlorobenzene. Hence, chlorobenzene is not a COC.

Additionally, the following seven compounds were either only detected in groundwater at a single location during a single sampling event, or were not detected in groundwater during the most recent, March 2015 sampling event. Justification for elimination of these compounds from consideration as COCs is presented below, and through the calculations in **Tables 22 & 23**. The

seven compounds not detected in groundwater during the March 2015 groundwater sampling event that should be eliminated from consideration as COCs are:

1. 1,2-dichloroethane (1,2-DCA) (detected once at MW-28, 3 µg/L, 5/20/2009)
2. cyclohexane (detected once at MW-5, 12 µg/L, 4/20/2006)
3. ethylbenzene (last detected at MW-19, 1.4 µg/L, 5/21/2009)
4. methyl cyclohexane (only detected at MW-5, 6.5 µg/L, 4/20/06 & 6.7 µg/L, 11/1/06)
5. 4-methyl-2-pentanone (MIBK) (detected once at MW-25, 16 µg/L, 5/22/2009)
6. toluene (last detected at MW-19, 11 µg/L, 5/21/2009)
7. xylenes (last detected at MW-5, 20 µg/L, 5/20/2009 & MW-19, 24 µg/L, 5/21/2009)

Hence, for the purposes of this VRP application, the 10 COCs are:

1. acetone
2. benzene
3. chloroform
4. cis-1,2-dichloroethene (cDCE)
5. trans-1,2-dichloroethene (tDCE)
6. isopropylbenzene (cumene)
7. methyl ethyl ketone (MEK) or (2-butanone)
8. tetrachloroethene (PCE)
9. trichloroethene (TCE)
10. vinyl chloride (VC)

2.5 Existing Regulatory Framework

The FOSC site is currently regulated by the Georgia EPD Hazardous Site Response Program (HSRP) as authorized by the Georgia Hazardous Site Response Act (Official Code of Georgia Annotated (O.C.G.A.) §12-8-90 et seq.) and promulgated under Chapter 391-3-19 of the Rules of the Georgia EPD.

As stated in **Section 2.1** previously, DC operations were conducted on site under the ownership of both the original developer of the property (LIA) and the subsequent purchaser (USRIF). The magnitude and extent of contamination documented during initial subsurface investigations in

2005 suggested groundwater contamination originated during LIA's ownership of the property. Since DC operations had continued under USRIF's subsequent ownership, on-going contribution to on-site soil contamination could not be ruled out.

Subsequently, investigation and remediation of groundwater contamination was delegated to the original developer of the property (LIA), while investigation and remediation of soil contamination and potential DNAPL impacts were delegated to the purchaser (USRIF). USRIF subsequently voluntarily investigated and remediated on-site soil impacts and investigated potential DNAPL. LIA was responsible for the investigation and remediation (if necessary) of on-site groundwater and off-site soil and groundwater impacts. Investigation and remediation of both soil and groundwater impacts on and off site have been regulated under the HSRP to date.

Additionally, the property was granted a limitation of liability (LOL) by the EPD in a letter dated March 6, 2006 pursuant to the 2005 Amendment (Georgia Senate Bill 277) to O.C.G.A. Section §12-8-200 et seq. of the Hazardous Site Reuse and Redevelopment Act ("the Georgia Brownfields Act"). EPD determined that the property owner at that time, U.S. Retail Income Fund VIII-D (USRIF), was eligible to receive a LOL for preexisting releases that occurred prior to December 31, 2003, subject to a number of specific conditions outlined in the approval letter. The Georgia Brownfield Program Summary Table (https://epd.georgia.gov/brownfield#links) shows that the FOSC site is on the list of Brownfield properties, with [soil] cleanup completed 18-JUL-08, with restricted, non-residential land use, and Type 3 and 4 RRS applicable.

2.6 Risk Reduction Standards

2.6.1 Soil Risk Reduction Standards

Soil Risk Reduction Standards (RRS) were calculated by UC on behalf of USRIF, the party voluntarily performing investigation and remediation of on-site soil contamination under the auspices of the Georgia Brownfields Program. Type 3 and 4 RRS were calculated for multiple COCs in soil and subsequently approved by EPD. Type 1, default RRS were reported to have been provided by the EPD in a letter dated May 10, 2007. Hence, Type 1 default, Type 3 and/or Type 4 RRS for on-site soil were calculated for following 14 compounds (UC PPCSR, 10-JUN-08, Table 5):

1. acetone
2. carbon disulfide (CD)
3. chlorobenzene
4. cumene (isopropylbenzene)
5. 1,1-dichloroethene (1,1-DCE)
6. cis-1,2-dichloroethene (cDCE)
7. trans-1,2-dichloroethene (tDCE)
8. ethylbenzene
9. 4-methyl-2-pentanone (methyl isobutyl ketone) (MIBK)
10. tetrachloroethene (PCE)
11. toluene
12. trichloroethene (TCE)
13. xylenes
14. vinyl chloride (VC)

Following EPD approval of the 14 RRSs for soil listed above, two additional, previously undetected compounds, benzene and 2-butanone (a.k.a., methyl ethyl ketone or "MEK"), were found to be present in on-site soil during MEI's 2008-2009 subsurface investigations. Type 4 commercial RRS were calculated by MEI for these two compounds using USEPA Risk Assessment Guidance for Superfund (RAGS), Part B, Equation 6 (carcinogenic health effects) and Equation 7 (non-carcinogenic effects) (USEPA, 1991). Equation input parameters were standard exposure assumptions listed in **Table 19** and compound-specific values listed in **Table 20**.

The previously approved Type 1, Type 3 and/or Type 4 soil RRS calculated by others and the Type 4 RRS for benzene and MEK calculated by MEI are included in **Table 21**. Analytical data from verification samples collected during the 2007-2008 soil remediation project indicate that all impacted soil exceeding applicable RRS was successfully removed from the site. Analytical data from MEI's 2008-2009 subsurface investigation confirmed that no COCs were present in on-site soil in excess of applicable RRS.

A summary of soil confirmation sample analytical results in comparison to applicable RRS is included as **Table 21**. As shown by the data in **Table 21,** the site is currently in compliance with applicable RRS for soil. A Certification of Compliance verifying the compliance of on-site soil with all applicable RRS is included on page viii of this CSR.

2.6.2 Groundwater Risk Reduction Standards

Updated groundwater RRS were calculated following the recent March 2015 sampling event, using current U.S. EPA toxicity values. Updated toxicity values were obtained from the U.S. EPA Regional Screening Level (RSL) calculator website. Additional guidance was obtained from the U.S. EPA Region 4 Human Health Risk Assessment Supplemental Guidance and from the Georgia EPD HSRP.

MEI calculated Type 2 RRS for off-site residential land use for both potential carcinogenic and non-carcinogenic effects and both resident adult and child receptors. Likewise, in accordance with EPD Rules, MEI calculated Type 4 RRS for on-site commercial land use for carcinogenic and non-carcinogenic effects for a commercial worker.

In accordance with EPD Rules, the highest of the Type 1 default RRS, or the calculated Type 2 RRS is the final RRS for the residential use scenario. Similarly, the higher of either the Type 3 default or calculated site-specific Type 4 RRS is the final RRS for commercial usage.

Comparison of the RRS values with reported March 2015 groundwater concentrations show off-site groundwater is within applicable Type 1/Type 2 RRS. The results of the Type 3/Type 4 RRS evaluation indicate that five compounds are present in on-site groundwater in excess of the RRS for commercial use. The five compounds reported to be present in groundwater during the March 2015 sampling event in excess of Type 3/Type 4 commercial RRS values are:

- benzene
- cis-1,2-dichloroethylene (cDCE)
- tetrachloroethene (PCE)
- trichloroethene (TCE)
- vinyl chloride (VC)

Groundwater isoconcentration contour/plume delineation maps for the five COCs present in on-site groundwater in excess of applicable RRS are presented as **Figures 21 – 25 in Appendix B**.

Comparison of the Type 3/Type 4 commercial RRS to the March 2015 groundwater analytical data indicate exceedance of the RRS at 14 monitoring wells on the FOSC site. As previously noted, there are three sources of groundwater contamination on the FOSC site: the former on-site drycleaner, an off-site drycleaner (Chastain Cleaners) and an off-site gas station (CITGO/RRFM). The two off-site release sources are responsible for the majority of Type 3/Type 4 RRS exceedances (**Table 24**).

These two off-site release sources are responsible for Type 3/Type 4 RRS exceedances at ten of the 14 monitoring well exceedance locations: MW-5, MW-6, MW-8, MW-16, MW-19 MW-20, MW-21, MW-22, MW-23 and MW-28 (**Table 24**). Hence, the release from the former on-site drycleaner has resulted in RRS exceedances at only seven monitoring wells on the FOSC site: MW-2, MW-3, MW-4, MW-9, MW-13S, MW-14 and MW-27 (**Table 24**). Therefore, due to the release from former on-site DC operations, the site does not comply with Type 3/Type 4 RRS for groundwater at seven monitoring wells. A Certification of Compliance verifying the non-compliance of on-site groundwater with applicable RRS is included on page viii of this CSR.

3.0 CONCEPTUAL SITE MODEL (CSM)

3.1 Conceptual Site Model - Overview

The overall conceptual site model (CSM) of the FOSC subject location is of a site where:

- The release sources, one on-site and two off-site, and substances released into the environment on and surrounding the FOSC site have been well defined.
- The lateral and vertical extent and magnitude of soil contamination on-site and potential human health risks associated with the former DC operation were well defined through a series of exhaustive subsurface investigations.
- Soil contamination on-site in excess of applicable RRS was successfully removed via a 2007-2008 soil remediation/excavation project.

- The lateral and vertical extent and magnitude of groundwater contamination on and off-site, and associated human health risks, were defined through during a thorough 2008-2009 investigation.
- Groundwater flow, and subsurface contaminant migration patterns in soil and groundwater, are/were significantly affected by the pre-development topography.
- The groundwater contaminant plume, although in excess of RRS in several locations, is stable and naturally attenuating at a rapid rate due to removal of the contaminated source area soils/secondary source material.
- Potential vapor intrusion (VI) impacts for both on-site commercial receptors and off-site residential receptors:
    - Have been assessed through soil vapor sampling, a soil vapor survey, indoor air sampling, VI modeling, and installation and
    - Have been mitigated through operation of an on-site VI mitigation system.
- Potential on-site VI impacts/residual soil gas COC concentrations are currently well below applicable risk-based levels.
- The potential presence of DNAPL was investigated. DNAPL was determined not to be present on or beneath the site.
- There are no soil, groundwater, or vapor intrusion (VI) impacts in excess of RRS/risk-based levels on off-site properties.

Hence, the overall CSM of the FOSC site is of a site that has been thoroughly investigated, the potential human health and environmental risks evaluated, and complies with applicable RRS for soil and vapor intrusion. Groundwater in excess of RRS on-site is not a human health or environmental risk due to incomplete exposure pathways, and a plume that is rapidly attenuating.

Detailed descriptions of the individual components of the CSM outlined above are presented herein as follows. A graphic three-dimensional representation of the FOSC CSM is included as **Plate 1 in Appendix H**. The cross sections utilized in construction of **Plate 1** were specified by the EPD in their letter of March 9, 2015, a copy of which is contained in **Appendix F**.

3.2 Geologic and Hydrogeologic Setting

The FOSC site is located within the Piedmont Physiographic Province of Georgia, which is composed of hard igneous and metamorphic rocks derived from the recrystallization of ancient (300 to 600 million year old) sediments. These ancient sediments were deeply buried and subjected to high temperatures and pressures during a collision between the African and North American continents approximately 300 to 250 million years ago.

The geology of the Piedmont is complex, with multiple, intermingled rock formations of different materials and ages. The Piedmont is essentially the remnant of several ancient mountain chains that have since eroded away. At least five separate geologic events led to deposition of parent sediment, including the Grenville orogeny during the collision of continents approximately 1,250 to 980 million years ago, and the Appalachian orogeny during the formation of the supercontinent Pangaea approximately 350 – 300 million years ago. The last major event in the history of the Piedmont was the break-up of Pangaea, when North America and Africa began to separate approximately 250 million years ago. Large basins formed from the rifting were subsequently filled by sediments shed from surrounding higher ground.

Locally, low density fluids, characterized by an abundance of silicon dioxide, collected into hot molten magmas and migrated upward through the surrounding denser rock. These magmas cooled in the crust and formed large homogeneous rock bodies that are highly resistant to erosion. Subsequent removal of the surrounding land mass by erosion has formed extensive exposed granites, such as Stone Mountain, that characterize the Piedmont of the Southeastern United States.

The Georgia Geological Survey (Bulletin 96, *Geology of the Greater Atlanta Area*, 1984) shows the rocks underlying the FOSC site as undifferentiated, ductally sheared rocks of the Brevard fault zone. According to the Geologic Map of Georgia (1979, Atlanta Area, North 4 East 2, Geologic Survey of Georgia) the rocks beneath the site are “button mica schist,” a type of high-grade metamorphic rock. A geologic map and geologic map legend of the FOSC site vicinity are included as **Figures 13 and 14,** respectively.

Groundwater in this region is contained in joints, fractures and other openings in bedrock, and in pore spaces in the overlying residual soil. Groundwater recharge occurs by seepage of water through the soil and/or rock or by flowing directly into openings in outcropping rock. The primary source of recharge water is from infiltration of precipitation, but can also originate from river discharge during dry periods.

The movement of groundwater typically follows the original surface topography, moving from hilltops and uplands to stream valleys. The water table is generally 30 to 100 feet below the ground surface on hilltops and hillsides, but is at or near the ground surface in stream valleys and draws. In this type of geologic setting, the direction of groundwater flow is anticipated generally to conform to topographic slope or to that of nearby surface water.

Data obtained at the FOSC site demonstrate this regional groundwater flow system. The groundwater is flowing principally in the soil above bedrock and to a lesser degree through the bedrock system. In some areas, the rock surface extends above the groundwater table. Recharge is through infiltration of rainwater.

3.2.1 Topography and Drainage

The surface relief of the Piedmont is characterized by relatively low, rolling hills with heights above sea level between 200 feet (50 m) and 800 to 1,000 feet (250 m to 300 m). Based on the U.S. Geological Survey (USGS) 7.5-minute Sandy Springs, Georgia topographic quadrangle map (1955, photo-revised 1983) pre-development elevations at the FOSC site ranged from approximately 1,010 ft msl to approximately 1,030 ft msl. According to the surveyed land surface elevations at each of the 22 monitor wells installed by MEI in 2008-2009, the elevations on and immediately surrounding the FOSC site range from approximately 960 to 990 ft msl.

A historic topographic map, dated 1928 (**Figure 15**), shows the FOSC site in an area of gently rolling hills with elevations of approximately 990 feet above mean sea level (ft msl) to 1,040 ft msl. Two small valleys traversed the FOSC site in a general northeast to southwest orientation. One valley small was located on the northern portion of the site, originating in the approximate

area of the off-site Chastain Cleaners facility and traversing the site to the southwest, beneath the location of the former on-site DC tenant bay.

The second small valley was shown on the southern portion of the FOSC site. The two previously existing small valleys were apparently filled for the construction of the FOSC development. The unfilled remnants of these two small valleys are still present west and southwest of the FOSC site, as shown on the 2014 USGS Sandy Springs topographic map (**Figure 15**).

The 2014 USGS topographic map (**Figure 15**) shows the eastern portion of the site sloping westward, and then leveling to the west. Surface water flow at the FOSC site and immediate vicinity generally flows west and southwest.

3.2.2 Geology - Soil/Unconsolidated Residuum

Soil samples collected and logged during the multiple subsurface investigations performed at the site indicate that there is approximately one to 22 feet of fill material overlaying residual native soils on site. The fill soils generally consisted of silts with varying amounts of clay, fine sand, mica, weathered mica schist (saprolite), and less-weathered rock fragments.

Residual soil/unconsolidated residuum was encountered below the fill materials, above competent bedrock. The residual soils were generally classified as silts and fine sand with varying amounts of clay, mica, and weathered rock fragments.

As noted previously, fill materials are present near land surface across the majority of the FOSC site with thicknesses ranging from approximately one to twenty-two feet. The in-filling of the site is suggested by the presence of two small valleys shown on 1927-1930 topographic maps geo-referenced to current Atlanta-area street maps, with the approximately boundary of the FOSC site and structures overlain (**Figure 15**) (http://disc.library.emory.edu/atlantamaps/atlanta-1927-30-topographic-maps-with-open-street-map-overlay/) . Hence, consistent with the previously existing topography, fill thickness generally thickens from east to west

3.2.3 Bedrock Geology

As stated herein in **Section 3.2.3**, according to the Georgia Geological Survey publication "Geology of the Greater Atlanta Area" (Bulletin 96, 1984), the rocks underlying the FOSC site are undifferentiated, ductally sheared rocks of the Brevard fault zone. According to the Georgia Geological Survey publication "Geologic Map of Georgia" (1979, Atlanta Area, North 4 East 2) rocks beneath the site are "button mica schist," a type of high-grade metamorphic rock.

The mica schist rock type mapped by the Georgia Geological Survey was confirmed to be present beneath the FOSC site during rock drilling conducted by MEI in 2008 to 2009, as shown in MEI's January 14, 2010 CSR (Appendix C – Boring Logs). Further, the mica schist beneath the site was found to be interfingered with more highly metamorphosed gneiss and amphibolite.

Depth to competent bedrock at the FOSC site varies from approximately about 40 to 65 feet below surface grade (BGS). A geologic map and geologic map legend of the FOSC site vicinity are included as **Figures 13 and 14,** respectively. A bedrock surface elevation map is presented as **Figure 16.**

3.3 CSM - Soil/Residuum

As noted previously, there is approximately one to 22 feet of fill material overlaying residual native soils on site. The fill soils generally consisted of silts with varying amounts of clay, fine sand, mica, weathered mica schist (saprolite), and less-weathered rock fragments. Residual soil/unconsolidated residuum was classified as silts and fine sand with varying amounts of clay, mica, and weathered mica schist interfingered with occasional less-weathered rock horizons.

The in filling of two small valleys formerly at the FOSC was necessary to level and develop the site into its current, relatively level configuration. The original, pre-development topographic surface has played a significant role in the migration of contaminants released from the former on-site DC source and the two off-site sources. The original topography of the site is shown on a 1927-1930 topographic map with the approximately boundary of the FOSC site and associated structures overlain (**Figure 15**).

3.3.1 Delineation of COC Concentrations

The extent of on-site soil contamination was delineated through previous investigations conducted initially by Keramida Environmental and through subsequent exhaustive soil boring and sampling conducted by UC. During the course of these previous soil investigations, the following activities were performed to delineate the lateral and vertical extent of soil contamination on site:

1. Keramida (Phase II ESA, March 30, 2005) installation of 11 soil borings, including:
    a. Seven borings between 18 and 30 ft deep (four converted to monitoring wells).
    b. Four shallow borings within the former DC tenant bay.
    c. Collection and analysis of 18 soil samples for VOC concentrations.
    d. PCE present in 16 of 18 samples at 0.014 to 34.8 mg/kg (**Table 4**).
2. UC (PPCAP, 28-NOV-05):
    a. Installation of 18 direct push borings.
    b. Installation of 8 groundwater monitoring wells.
    c. Collection and analysis of 63 soil samples for VOCs concentrations
    d. PCE present in 25 of 63 soil samples at concentrations up to 380 mg/kg (Results in **Table 4**).
3. UC extent of contamination investigation (UC PPCSR, 10-JUN-08):
    a. Installation of 49 direct push (DP) environmental assessment borings, (EAB-1 - EAB-49), to assess extent of PCE in soil for remedial actions.
    b. Installation of two hand-auger borings (HA-1 & HA-2) inside coin dealer & restaurant tenant spaces to assess the extent of PCE under these facilities for remedial actions;
    c. Collection and field screening of soil samples every two feet from DP borings.
    d. Selection of two to three soil samples from each DP & hand auger boring for analytical testing for PCE concentrations (results tabulated in **Tables 4 & 5**).
    e. PCE present in 97 of 106 samples collected.
    f. PCE present in excess of NCs in 56 samples.
    g. PCE present in excess of approved Type 4 RRS (1.18 mg/kg) in 35 samples.

Additionally, following the soil remediation project (**Sections 2.1 and 3.2.2**)**,** MEI installed 22 monitoring wells and 4 DP borings, and collected and analyzed 33 soil samples during our 2008-

2009 PCAP/CSR investigation. Analysis of these soil samples indicated that on-site concentrations of PCE (the principle COC) ranged from below detection limits (BDL) to 300 micrograms per kilogram (µg/kg). Additionally, during MEI's 2008-2009 investigation, no soil sample collected from an off-site boring contained any COCs in excess of default, Type 1 RRS (**Table 6**).

Hence, through the installation of approximately 106 borings and collection and analysis of approximately 220 soil samples, the extent of soil contamination on the FOSC site was well defined. Consequently, the potential human health risks associated with on-site soil contamination, reflected in RRS exceedances, was also well defined prior to initiation of the 2007-2008 soil remediation project. An isoconcentration contour map showing the delineated extent of PCE in soil was provided as Figure 4 in UC's 10-JUN-2008 PPCSR.

Soil boring and monitoring well installation locations are shown on **Figures 3, 4 & 6 in Appendix B**. Soil sample analytical results are tabulated in **Tables 4 – 8 of Appendix C.**

3.3.2 Soil Remediation

A soil remediation/excavation project was conducted in the area surrounding and within the former on-site DC tenant bay. Prior to excavating the contaminated soil, the lateral and vertical extent of impacts exceeding the Type 4 RRS for PCE, the principle COC, was defined through the installation of 49 environmental assessment borings and collection and analysis of 106 soil samples (see discussion in **Section 3.3.1**).

Prior to commencement of the corrective actions, PCE was the only constituent detected in soil above the Type 4 RRS. PCE was therefore the primary COC driving soil corrective action.

Remedial operations included excavation and removal for disposal of the impacted soils with COC concentrations greater than the approved Type 4 RRS for PCE of 1.18 mg/kg. Excavation began in November 2007 and concluded in May 2008. Engineered shoring was used to support the land and structures surrounding the excavation, to prevent soil collapse into the excavation pits.

Analytical testing of initial verification samples indicated the presence of COCs in approximately 1-5% of excavated areas at concentrations greater than the approved RRS. Re-excavation was then conducted in these areas with subsequent follow-up verification sampling. This process continued until the results of the verification sampling demonstrated that the soils remaining in place complied with the approved RRS.

During excavation of Areas 5 and 6 (**Figure 5**) undercutting the adjacent tenant space restaurant, an approximate 3-foot diameter cylindrical excavation was observed directly below the spread footing for the south wall of the former DC facility. The origin of the cylindrical excavation was likely a former test boring for a caisson foundation. This cylindrical excavation/preferential pathway (Area EA 6A) was remediated by over drilling with a 6-foot diameter auger to a depth of 31 ft BGS, at which point competent rock was encountered.

Through the soil remediation process:

- Five stages of excavation and follow-up verification sampling were conducted at some locations.
- Approximately 3,830 tons of impacted soils were removed
- A preferential vertical pathway to groundwater was discovered directly beneath the former DC tenant bay.
- Collection and analysis of 213 soil verification samples indicated that all soil in excess of RRS was successfully removed.
- Collection and analysis of 146 split verification samples provided separate confirmation that all soil in excess of RRS was successfully removed.

The results of the soil remediation verification sampling (**Tables 7 & 8**) therefore confirm successful removal of all impacted soil in excess of calculated RRS. This work is documented in UC's June 8, 2010 Prospective Purchaser Compliance Status Report (PPCSR).

Hence, the on-site soil portion of the CSM is of formerly contaminated soil that has been remediated and therefore does not pose a significant human health or environmental risk.

3.3.3 Magnitude and Extent of Remaining COC Concentrations

The results of soil verification sample analyses collected during the soil remediation project indicate that the following are the maximum concentrations of the principle COCs remaining in on-site soil:

Compound	Approx. Max. Residual	Type 4 RRS
• Benzene	0.016 mg/kg	53.1 mg/kg
• PCE	1.1 mg/kg	1.18 mg/kg
• TCE	0.18 mg/kg	0.7 mg/kg
• cDCE	0.2 mg/kg	1.84 mg/kg
• VC	Not Detected	0.2 mg/kg

Remaining COC concentrations were all below applicable RRS (**Tables 7, 8 & 21**).

3.4 CSM - Groundwater

3.4.1 Groundwater Flow Directions, Gradients and Velocity

Groundwater elevation data in **Table 3** were used to construct potentiometric maps for the FOSC site for March 10, 2015 and May 20-22, 2009 (**Figures 17 and 18**).

Based on the potentiometric maps included as **Figures 17 and 18**, groundwater flow on site is complex, with a groundwater flow divide. This groundwater divide and groundwater flow clearly mimics the pre-development topography at the site, as evidence by an overlay of the March 10, 2015 groundwater potentiometric surface with the 1928 topographic map of the site (**Figure 19**).

As shown on **Figure 17**, Groundwater flows toward the southwest to west-southwest on the northern portion of the property, including the on-site release source area. Groundwater beneath the southern portion of the property flows toward the south to south-southwest (**Figure 17**).

The groundwater hydraulic gradient in the source area generally varies from approximately 0.01 to 0.05 feet/foot (ft/ft), with an average of approximately 0.03 ft/ft. As shown on **Figure 17**, the direction of groundwater flow is generally from the north-northeast toward the south-southwest.

According to a previous hydrogeological assessment, described by UC in their November 28, 2005 PPCAP, the overall porosity of the residuum beneath the site is approximately 0.22, while the effective porosity is approximately 0.20. Additionally, the hydraulic conductivity of unconsolidated residuum beneath the site is reported to vary between approximately 2.29E-05 centimeters per second (cm/s) and approximately 2.64E-04 cm/s, with a geometric mean of approximately 7.78E-05 cm/s.

Groundwater flow velocity (Darcy velocity) was calculated using the site-specific data above and the Darcy Equation:

$$v = K * i / n$$

Where:

K = hydraulic conductivity = 7.78E-05 cm/s = 80.4 ft/yr

i = hydraulic gradient (dimensionless slope) ≈ 0.03 (average value)

n = porosity ≈ 0.2 (20% porosity) estimated for residuum.

Therefore,

v = (80.4 ft/yr)(0.03)/0.2

v = 12 ft/yr = approximate average groundwater flow velocity.

Hence, the average groundwater flow velocity is approximately 12 ft/yr, with a flow direction toward the west-southwest near the former on-site DC release source area, and a south-southwesterly flow direction beneath the southern portion of the site.

3.4.2 Water Resources

3.4.2.1 Drinking Water Supplies

The City of Atlanta's water supply and treatment system is owned and operated by the City of Atlanta Department of Watershed Management (DWM). The geographic area served by the City

of Atlanta water treatment and distribution system covers an area greater than 650 square miles and includes the City of Sandy Springs (www.atlantaga.gov/modules/showdocument.aspx?documentid=2831). Additional public water supplies in the area are operated by the Dekalb County Department of Watershed Management (DWM) (http://dekalbwatershed.com/Chattahoochee.htm)

The intakes for these two municipal water supplies are located the following distances from the FOSC site:

- Atlanta DWM – Atlanta – Fulton County Water Treatment Plant 12.6 miles
- Atlanta DWM – Chattahoochee Water Treatment Plant 6.1 miles
- Atlanta DWM – Hemphill Water Treatment Plant 7.0 miles
- Dekalb County DWM – Chattahoochee Raw Water Transmission Main 6.9 miles

A search of U.S. Geological Survey records of wells in Georgia (http://waterdata.usgs.gov/ga/nwis/inventory) indicates that there are no water supply wells located within a two-mile radius of the FOSC site. Specifically, there are no records of any water supply wells within a four-mile-by-four-mile latitude and longitude defined "box" centered on the FOSC site. Hence, groundwater impacts on the FOSC site are not a potential threat to public or private water supplies.

3.4.2.2 Surface Water

The 2014 USGS Sandy Springs topographic quadrangle map (**Figure 1**) shows that the nearest downgradient surface water stream is an unnamed tributary to Nancy Creek located approximately 1,200 feet southwest of the on-site groundwater contaminant plume. Since the downgradient extent of the groundwater contaminant plume has been defined, the FOSC site is not a potential threat to downgradient surface water bodies.

3.4.3 Groundwater Contaminant Plumes

3.4.3.1 Source Areas

As stated previously (**Section 2.3**), there are three release source areas associated with groundwater contamination on the FOSC site: one on-site source, and two off-site sources:

On-Site Source: Former Dry Cleaning Operation
Fountain Oaks Shopping Center
4920 Roswell Road NE, Sandy Springs, GA 30342
Parcel ID No. 17 00930006131
HSI Site No. 10807

Off-Site Source: Active Dry Cleaning Operation
Chastain Cleaners
4980 Roswell Road NE, Sandy Springs, Georgia 30342
Parcel ID No. 17 009300021826

Off-Site Source: Active Petroleum UST Facility
Roswell Road Food Mart
4968 Roswell Road NE, Sandy Springs, Georgia 30342
Parcel ID No. 17 -009300021842
UST Facility ID No. 09000005

3.4.3.2 Plume Delineation

The groundwater contaminant plume was delineated through the installation of 33 monitoring wells between 2005 and 2009 and through the collection and analysis of 163 groundwater samples from these wells between 2005 and 2015. The results of both the 2008/2009 and 2015 groundwater sampling events indicate that the lateral and vertical extent of groundwater contamination has been defined.

The results of the recent, March 2015 groundwater sampling event indicate that there are 14 locations on site (listed below) where groundwater exceeds applicable Type 3/Type 4 RRS for one of five COCs (**Table 23 and Figure 20**). These COCs and on-site exceedance locations are:

- Benzene (MWs-20, 21 & 28)
- cDCE (MWs-2, 4, 16, 20 & 28)
- PCE (MWs-2, 3, 5, 9, 13S, 14, 16, 20, 22, 23 & 28)
- TCE (MWS-2, 4, 6, 16, 20 & 28)
- VC (MWs-16 & 28)

The results of this same March 2015 groundwater sampling event indicate that there are no off-site groundwater COC concentrations in excess of applicable Type 1/Type 2 RRS (**Tables 10 & 22; Figure 20**). The 22 µg/L of PCE reported in March 2015 at monitoring well MW-13S, adjacent to the western property boundary, suggests the possibility that off-site groundwater may

be impacted above the 11 µg/L Type 1/Type 2 residential RRS. However, at two wells located farther downgradient, MW-30 and MW-31, the March 2015 PCE concentrations were 10 µg/L and <1 µg/L (i.e., "BDL") respectively. Hence the downgradient extent of the plume is defined west of and downgradient from the former on-site release source area.

Groundwater analytical results from all groundwater samples collected at the site are tabulated in **Table 9 in Appendix C**. A groundwater quality map showing analytical results of the recent, March 2015 groundwater sampling event in comparison to previous (2008/2009) analytical results at each well is included as **Figure 20**. Groundwater isoconcentration contour/plume delineation maps for the five COCs present in on-site groundwater in excess of applicable Type 3/Type 4 Commercial RRS are presented as **Figures 21 – 25 in Appendix B**.

3.4.3.3 Qualifying Delineation Criteria

The Georgia VRP Act (O.C.G.A. §12-8-100 et seq.) defines five potential criteria that may be used as satisfactory evidence of the delineation of the horizontal and vertical extent of soil or groundwater contamination. These five criteria are (O.C.G.A. §12-8-108):

1. Concentrations from an appropriate number of samples that are representative of local ambient or anthropogenic background conditions not affected by the subject site release;
2. Soil concentrations less than those concentrations that require notification under standards (i.e., notification concentrations or "NCs");
3. Two times the laboratory lower detection limit concentration using an applicable analytical test method recognized by the USEPA;
4. For metals in soils… [Not Applicable]
5. Default, residential cleanup standards;

The groundwater contaminant plume that originated from the former on-site DC source is defined under criteria number 5 above. Specifically, the COC levels are below the default, Type 1 residential cleanup standards in the monitoring wells farthest downgradient to the south and southeast (MWs 7, 33 and 15), farthest downgradient to the west (within the topographic valley that is in-filled beneath the site) (MWs 30 & 31) and cross-gradient to the north (MW-25). Groundwater isoconcentration contour/plume delineation maps for the five COCs present in on-

site groundwater in excess of applicable Type 3/Type 4 Commercial RRS (benzene, cDCE, PCE, TCE and VC) are presented as **Figures 21 – 25 in Appendix B**.

Collection of soil samples during multiple site investigations by MEI and others have defined the extent of soil contamination to within default, Type 1 RRS (**Tables 4 – 8**). Hence, the downgradient and cross-gradient extent of soil and groundwater contamination associated with the release from the former on-site DC operation have been delineated in accordance with applicable language in the authorizing statute. Delineation of the upgradient extent of groundwater contamination associated with the two off-site release sources, Chastain Cleaners and the CITGO/RRFM, are the responsibilities of the respective property owners and/or business operators at those two locations.

3.4.3.4 Plume Stability & Natural Attenuation

The groundwater contaminant plume associated with the former on-site DC release source is stable and naturally attenuating at a rapid rate. Comparison of the results of the most recent, March 2015 groundwater sampling event with those of the previous 2009 or 2008 event (the most recent previous event varies well to well) generally indicate significant and/or remarkable reductions in PCE, TCE and cDCE across the site, with few exceptions (**Table 9 and Figure 20**)

The rapid natural attenuation of groundwater contamination is illustrated on a groundwater quality map included as **Figure 20**, which shows the PCE, TCE, cDCE and VC results from the March 2015 sampling event, as well as the previous results from 2008 or 2009. As shown by the data on **Figure 20** and in **Table 9**, at 12 wells surrounding and downgradient from the former on-site drycleaner (MWs-2, 3, 4, 9, 13S, 14, 18, 19, 26, 27 and 30), PCE declined by an average of approximately 74%, TCE by approximately 49% and cDCE by approximately 19%.

These reductions in PCE, TCE and cDCE concentrations in the release source and downgradient areas show clearly that natural attenuation is occurring at a rapid pace. Remediation of the contaminated source area soils (secondary source material) has no doubt been an important contributing factor to the observed rapid natural attenuation of groundwater contamination.

Hence, the groundwater contaminant plume aspect of the CSM is of a delineated, stable plume that is rapidly attenuating.

3.4.4 Groundwater Fate & Transport/Natural Attenuation Modeling

3.4.4.1 Domenico Steady-State Fate & Transport / Natural Attenuation Model

The Domenico analytical model (Domenico, 1987) is a solution to the advection-dispersion partial-differential equation of contaminant transport in groundwater. The Domenico model is commonly used to predict downgradient groundwater contaminant concentrations along a straight-line flow path at a given distance from a release point source (USEPA, 2002; USEPA, 1996; ASTM, 1995).

The Domenico model contains:

- one dimensional groundwater velocity,
- mechanical dispersion in the longitudinal, transverse, and vertical directions,
- a first order degradation rate constant,
- a finite contaminant source (rectangular dimensions) perpendicular to flow,
- a steady-state source (i.e., a constant concentration source), and yields
- steady-state contaminant concentration at a specified distance along a plume centerline.

The analytical solution form of the Domenico equation was programmed into a Microsoft Excel spreadsheet to perform the modeling documented herein. The model was applied to the FOSC groundwater contaminant plume to estimate downgradient COC concentrations in groundwater at a 1000-foot distance downgradient from the delineated plume boundary, as specified in the Georgia VRP Act (O.C.G.A. § 12-8-102 (b)(11)(C)). The model was also used to estimate the maximum downgradient extent of the groundwater contaminant plume for the five COCs exceeding Type 3/4 Commercial RRS in on-site groundwater.

Use of the model requires contaminant concentration data at a minimum of one source area monitoring well and one to two downgradient wells. The groundwater data must show a reasonable plume pattern typical of “point sources” (i.e., contaminant concentration is highest in the source well and gradually decreasing in downgradient wells). The model is calibrated by

adjusting three model input parameters to fit groundwater concentration spatial pattern based on the spatial concentration distribution data. The model after calibration is then used to predict the horizontal plume length in groundwater.

The Domenico analytical model is based on the advection-dispersion partial-differential equation for organic contaminant transport processes in groundwater as described in Domenico and Robbins (1985). Under conditions of steady-state source, continuous source with one-dimensional groundwater velocity, three dimensional dispersion, and a first order degradation rate constant, the analytical solution can be expressed as the following equation (Domenico 1987):

$$\frac{C_x}{C_0} = \exp\left\{\frac{x}{2\alpha_x}\left[1-\left(1+\frac{4\lambda\alpha_x}{\upsilon}\right)^{\frac{1}{2}}\right]\right\} erf\left[\frac{Y}{4(\alpha_y x)^{\frac{1}{2}}}\right] erf\left[\frac{Z}{4(\alpha_z x)^{\frac{1}{2}}}\right]$$

Where,

C_x - contaminant concentration in a downgradient well at distance x (mg/L),

C_o - contaminant concentration in the source well (mg/L),

x - centerline distance between the source well and downgradient well (cm),

α_x, α_y & α_z - longitudinal, transverse, and vertical dispersivity (cm), respectively,

λ- degradation rate constant (day^{-1}),

v - groundwater velocity (cm/day),

Y - source width (cm),

Z - source depth (cm),

erf - error function,

exp - exponential function.

The Domenico groundwater contaminant fate & transport model assumes:

1. A source of finite width and thickness dimensions perpendicular to groundwater flow,
2. A steady state (steady or fixed concentration) source,
3. Homogeneous aquifer properties,
4. One dimensional groundwater flow,
5. First order degradation rate,

6. Contaminant concentration estimated at the centerline of the plume,
7. Molecular diffusion based on concentration gradient is neglected,
8. No retardation (e.g., sorption) in transport processes.

Understanding model assumptions is crucial for simulating transport processes of contaminants in groundwater. The inherent assumptions in the model equation make it a conservative means of estimating downgradient contaminant concentrations. Specifically, the model assumes a steady-state, fixed concentration contamination source within a rectangular area perpendicular to the direction of groundwater flow/plume migration. As documented in **Section 3.4.3.4**, groundwater contaminant concentrations in the release source area and downgradient areas are rapidly attenuating.

Hence, the steady-state (fixed concentration) assumption implicit in the model is a conservative assumption. MEI utilized the highest groundwater concentrations of benzene, cDCE, PCE, TCE and VC measured in groundwater during the recent March 2015 sampling event as the steady-state source area groundwater concentration (C_{source}). The source area width (W) was assumed to be approximately 32.4 feet, based on the 30-foot north-south width of the former DC tenant bay, and a composite groundwater flow direction toward the west-southwest, with a bearing of 250 degrees. Hence, the width of the former DC tenant bay perpendicular to flow (at a 90° angle to 250°, i.e., 160° or 340°) is approximately 32.4 feet, the assumed width of the source area.

The value of the source area depth was left at the default value of 200 cm, to be conservative. Source zone / mixing zone thickness was estimated at 216 cm (7.1 ft), which is the average distance between the depth at which groundwater was first encountered in borings and depth to competent bedrock/refusal (see **Table 2**).

Understanding chemical properties in relation to model assumptions are also critical in interpreting the transport model results. For example, MTBE has a low potential for sorption onto soil particles/organic carbon due to its low soil-groundwater organic carbon partition coefficient (K_{oc}) value (12 L/kg) while PCE has a relatively high K_{oc} value (94.95 L/kg) and a corresponding high retardation potential.

"Retardation" is the slower movement of a contaminant in groundwater, relative to the groundwater velocity, due to sorption of the contaminant onto soil particles and organic carbon. Thus, the speed of contaminant transport is "retarded" relative to groundwater velocity.

Therefore, the lack of retardation in the model, assumption No. 8 above, may not be a significant factor for MTBE, but suggests the model tends to overestimate downgradient concentrations of COCs with higher K_{oc} values like benzene, PCE and TCE. Hence, for these compounds, the predicted downgradient concentration is a conservative estimate.

All model input parameters consisted of one the following:

- Site-specific information contained in this report, and/or in previous reports on the FOSC site by MEI and others, as documented in **Table 1.**
- Conservative, default values published by:
    - The US EPA (Regional Screening Levels (RSL) Table, 2015)
    - The American Society for Testing and Materials (E2081-00 & E1739-95),
    - The Georgia EPD
- Values from public or published, documented sources
    - (U.S. National Weather Service, Weidemeir, et al., 1999)

All fate and transport model input parameters, parameter values, data sources, formulas for individual/intermediate variables, conversion factors, and intermediate and final calculations are documented in **Table 12 through Table 16 in Appendix C**.

An implicit assumption is that model input parameters are in consistent units, hence modeled linear dimensions (distances, depths, widths, etc.) are in centimeters (cm); velocities (distance/time) are in cm/day or cm/year. Concentration values were input in milligrams per liter (mg/L). Corresponding site-specific values more commonly expressed in feet, inches, ft/yr, in/yr, micrograms per liter (µg/L), etc., and corresponding conversion factors/formulas, are all given in the groundwater fate & transport modeling calculations documented in **Tables 12-16 in Appendix C**

Significant aspects of the groundwater fate and transport modeling relative to VRP regulatory compliance, derivation of natural attenuation constants, calculation of the soil-to-groundwater leaching source term and model calibration are discussed in **Sections 3.4.4.2 – 3.4.4.5** as follows. Groundwater fate and transport modeling results are discussed in **Section 3.4.4.6**, and are summarized in **Tables 12-16 in Appendix C**.

3.4.4.2 Point of Exposure, Estimation of Centerline Distance Modeled

As previously stated, the fate and transport model was applied to the groundwater plume to estimate downgradient COC concentrations at a 1000-foot distance downgradient from the delineated plume boundary, at the "point of exposure" (POE) as defined in the Georgia VRP Act (O.C.G.A. § 12-8-102 (b)(11)(C)):

> " 'Point of exposure' means the nearest of the following locations:
> (A) The closest existing down gradient drinking water supply well; [NOTE: >2 miles]
> (B) The likely nearest future location of a downgradient drinking water supply well where public supply water is not currently available and is not likely to be made available within the foreseeable future; [NOTE: >2 miles] or
> (C) The hypothetical point of drinking water exposure located at a distance of 1000 feet downgradient from the delineated site contamination under this part."

Hence, the nearest POE is a hypothetical drinking water well located 1000 feet downgradient from the delineated plume boundaries on the FOSC site. Groundwater isoconcentration contour/plume delineation maps for the five compounds in on-site groundwater in excess of Type 3/4 Commercial RRS (benzene, cDCE, PCE, TCE & VC) are presented as **Figures 21 – 25 in Appendix B**. The plumes shown on **Figures 21-25** were delineated to the applicable default Type 1 RRS criterion specified in the Georgia VRP Act (**Section 3.4.3.3**). The specific delineation criterion for each compound is specified on each of the five maps.

One of the conditions for using the Domenico Model to simulate contaminant fate & transport is that the selected downgradient well must be along the plume centerline, at a distance specified by the user. The total distance modeled, from release source to POE includes both the 1,000-ft distance from the delineated downgradient edge of the contaminant plume to the POE, as well as

the distance along the groundwater flow path from the release source to the delineated edge of the plume.

The on-site release source area for chlorinated COCs is the former DC tenant bay on the northern tip of the FOSC north wing (**Figure 3**). Groundwater beneath the northwest portion of the FOSC, including the release source, and adjacent off-site area flows predominantly toward the west-southwest, or on an approximate bearing of 250 degrees. The distances from the release source to the downgradient delineated plume edges for three of the four chlorinated COCs exceeding RRS (cDCE, PCE and TCE), along the 250° groundwater flow path, were estimated from the plume maps included as **Figures 22-25**.

Although the release source for benzene is the off-site CITGO/RRFM, the location of the highest groundwater benzene concentration on the FOSC site is monitoring well MW-28 (135 μg/L). Likewise, the location of the highest vinyl chloride (VC) concentration on site is also at MW-28. Hence, for purposes of modeling the fate & transport of benzene and VC in groundwater, MW-28 was assumed to be the on-site "release source area" for these two compounds. The distances from the surrogate source area (MW-28) to downgradient delineated plume edges, along the predominant groundwater flow path (250° bearing), were estimated from the benzene and VC isoconcentration / plume delineation maps (**Figures 21 & 25**). Other source area parameters, such as source width and thickness, depth to impacted soil, mixing zone thickness, etc. were assumed to remain constant at both the actual on-site release source (the former DC tenant bay) and the surrogate release source (MW-28).

The estimated distances from the on-site release source area, and surrogate benzene release source area, and the total plume centerline/groundwater fate & transport distances modeled are summarized below:

COC	Distance: Source - Delin. Plume Edge	Distance: Plume Edge Pt. of Exposure	Distance, total
Benzene	160 ft (4,877 cm)	1,000 ft (30,480 cm)	1,160 ft (35,357 cm)
cDCE	110 ft (3,353 cm)	1000 ft (30,480 cm)	1,110 ft (33,833 cm)
PCE	300 ft (9,144 cm)	1000 ft (30,480 cm)	1,300 ft (39,624 cm)
TCE	175 ft (5,334 cm)	1000 ft (30,480 cm)	1,175 ft (35,814 cm)
VC	70 ft (2,134 cm)	1000 ft (30,480 cm)	1,070 ft (32, 614 cm)

3.4.4.3 Derivation of Natural Attenuation Rate/Decay Constants

Considering the remarkable reductions in groundwater contaminant concentrations observed at the FOSC site since the soil remediation/source removal project in 2007-2008, MEI utilized USEPA methods to derive site-specific attenuation/"decay" rate constants (i.e., values of lambda, λ) for use in the contaminant fate & transport modeling. The methods used to derive the attenuation rate constants are described in the EPA documents "Calculation and Use of First-Order Rate Constants for Monitored Natural Attenuation Studies" (USEPA, 2002) and "Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water" (USEPA, 1998). Calculated site-specific values of the attenuation rate constant, lambda (or K_{point} in USEPA, 2002) were compared to values published in Howard, et al. (1991) "Handbook of Environmental Degradation Rates."

First, MEI calculated approximate attenuation rate constants for the five COCs exceeding RRS in on-site groundwater using the measured changes in contaminant concentrations at each well from the time of peak contaminant concentration, i.e., 2008 or 2009 levels, to the most recent March 2015 levels (**Table 9**) with the exponential growth/decay equation:

$$\mathbf{C_t = C_o\, e^{-kt}}$$

Where: C_t = Concentration at time (t), i.e., 2015
C_o = Original (peak) concentration (in 2008 or 2009)
e = natural exponent
k = attenuation rate constant ($time^{-1}$)
t = time.

The exponential decay equation was then rearranged to solve for k, the attenuation/degradation rate constant for a single COC at a single well:

$$k = \ln (C_t / C_o) / t$$

The geometric mean of attenuation rate constants were calculated for groups of wells within each of three areas: the release source area (immediately downgradient from the on-site release source), the downgradient plume (originating from the on-site release source), and wells impacted from the off-site release sources. The results of these "two-point" attenuation rate calculations at individual wells for individual COCs are summarized in **Table 11**.

MEI also utilized the method for determination of the "Concentration vs. Time Attenuation Rate Constant" described in EPA (2002). This method requires a linear-linear plot of the natural log (ln) of contaminant concentration on the y-axis against elapsed time (days) on the x-axis.

An exponential regression analysis through the plotted points gives the equation of the line of best fit. If the data plot to a straight line, the degradation rate relationship is first order. The slope of this regression line is the attenuation rate constant, k_{point}.

The concentration versus time attenuation rate constant at a single point (k_{point}) is not indicative of plume trends. However, the calculation of k_{point} at multiple wells over the entire plume can be used to assess plume attenuation and trends (EPA, 2002). The geometric mean of k_{point} attenuation rate constants were calculated for groups of wells within the release source area, the downgradient plume, and wells impacted from the off-site release sources (**Table 11**).

These geometric means k_{point} values for the source area (k_{source}), downgradient plume, and off-site source groups were then compared to published values (Howard, et al., 1991) (**Table 11**). In all

cases, the calculated site-specific geometric mean attenuation rate was within the published range of values.

At most contaminant release sites, the source area attenuation rate is slower than the rate in the downgradient plume. Hence, concentration profiles tend to retreat back toward the source over time. In this circumstance, the lifecycle of the plume is controlled by the rate of attenuation of the source, and can be predicted by concentration versus time plots for the most contaminated wells (EPA, 2002).

MEI utilized the lower, more conservative calculated geometric mean value of lambda/k_{point} (i.e., slower decay) from either the source area (k_{source}) or downgradient plume in the contaminant fate & transport modeling. Calculated attenuation rate constants are summarized in **Table 11**. Values of lambda used in the fate & transport modeling are shown in the modeling calculations presented as **Tables 12 – 16 in Appendix C**.

3.4.4.4 Soil to Groundwater Leaching

As stated previously, the Domenico model uses a steady-state (fixed concentration) rectangular source of fixed width and depth/thickness, oriented perpendicular to the direction of groundwater flow/plume transport. MEI utilized the highest groundwater concentrations of benzene, cDCE, PCE, TCE and VC measured in groundwater during the recent March 2015 sampling event as the C_{source} concentration. However, leaching of residual contamination from soil into underlying groundwater contributes to source area groundwater contaminant concentrations. Hence, the steady-state groundwater source area concentration is given by the following formula.

$$C_{source} = C_{max,\ gw} + C_{leach,\ soil}$$

Where:

C_{source} – Steady-state groundwater concentration in source zone.

$C_{max,\ gw}$ – Maximum groundwater contaminant concentration in source zone.

$C_{leach,\ soil}$ – Soil-to-groundwater leachate concentration contributing to source.

Since source area soils have been remediated, contributions to existing groundwater contamination from soil-to-groundwater leaching (C_{leach}) are likely to be relatively minor. Nonetheless, out of an abundance of caution, MEI calculated soil-to-groundwater leaching concentrations for the contaminant fate & transport modeling. Residual soil COC concentrations are presented in **Table 21**.

Soil to groundwater leaching calculations were performed using the equations and methods outlined in American Society of Testing and Materials (ASTM) Standard Guide E2081 "Standard Guide for Risk-Based Corrective Action" (ASTM, 2015). Soil to groundwater leaching model input parameters, similar to the input parameters for the fate & transport modeling, were a combination of the following:

- Site-specific information contained in this report, and/or in previous reports on the FOSC site by MEI and others, as documented in **Table 1.**
- Conservative, default values published by:
    - The US EPA (Regional Screening Levels (RSL) Table, 2015)
    - The American Society for Testing and Materials (E2081-00 & E1739-95),
    - The Georgia EPD
- Values from public or published, documented sources (U.S. National Weather Service, Weidemeir, et al., 1999)

Surface water precipitation infiltration (I) into soil was estimated as a percentage of total rainfall using the following empirical formula (Wiedemeir, et al., 1999, p. 52):

$$I = P^2 * k_i$$

Where:

I = infiltration (cm/yr)

P = annual precipitation (cm/yr)

k_i = infiltration coefficient (yr/cm)

The annual normal precipitation for Atlanta is 49.71 inches per year (126 cm/yr), according to National Weather Service, Peachtree City, Georgia on-line records (http://www.srh.noaa.gov/ffc/?n=rainfall_scorecard). The value of k_i is dependent upon soil

type, with values of 0.0018 for sandy soil, 0.0009 for silty soil, and 0.00018 for clay soil (Wiedemeir, et al., 1999). Hence the empirically estimated precipitation infiltration rate is:

$$I = (126 \text{ cm/yr})^2 * (0.0009 \text{ yr/cm}) = 14.3 \text{ cm/yr} = 5.65 \text{ in/yr} =$$

Soil to groundwater leaching formulas, input parameters, parameter values, data sources, and calculation results are presented in **Tables 12 – 16 in Appendix C**. The results of the soil to groundwater leaching calculations are briefly summarized below.

COC	Soil - Maximum Residual Concentration	Soil to GW Leaching Concentration
Benzene	0.016 mg/L	0.0013 mg/L
cDCE	0.30 mg/L	0.11 mg/L
PCE	1.1 mg/L	0.17 mg/L
TCE	0.18 mg/L	0.043 mg/L
VC	ND – Subst. 0.0012 MDL	0.00062 mg/L

3.4.4.5 Model Calibration

The historically observed downgradient transport of PCE from the source area to downgradient wells was used to calibrate the model. PCE was used since it was the substance originally released on from the on-site former DC source.

The model was calibrated using the following site-specific values:

- Distances from the source area to downgradient wells.
- Historical groundwater PCE concentrations:
  - Source area maximum concentrations, both historical and recent
  - Downgradient well concentrations
- Groundwater velocity
- Attenuation rate constant

The farthest downgradient well from the release source where PCE has been detected is MW-30 (**Figure 17, Table 9**). Fortuitously, MW-30 is also located virtually directly hydraulically downgradient from the release source, approximately 300 feet. This well was installed May 13,

2009 (**Table 2**) and first sampled on May 21, 2009 (**Table 9**). Source area well MW-2 (downgradient from the former DC source), which has historically contained the highest concentrations of dissolved contaminants, was sampled May 22, 2009. Hence, May 2009 is the first date on which there is groundwater plume data from both the source area and farthest downgradient well. The May 2009 PCE concentration in MW-2 was 2,900 µg/L, while the concentration at MW-30 was 42 µg/L.

The highest groundwater PCE concentrations were previously reported in groundwater closer to the DC release source, 11,000 µg/L at now-destroyed well MW-10 on 11/21/2006, approximately 60 ft downgradient from the DC tenant bay. However, no corresponding downgradient data is available for this earlier date. Hence, determining the proper source area groundwater concentration ($C_{max, gw}$) for model calibration was problematic, since this concentration could vary between 2,900 µg/L (the 05/2009 value for which both source and downgradient data were available) and 11,000 µg/L (the highest reported value, from 11/2006).

Estimation of a source area soil PCE concentration ($C_{max, soil}$) for estimation of the soil to groundwater leaching concentration (C_{leach}) was also challenging. The maximum pre-remediation PCE concentration in soil at a single location, at boring I-DP-2, directly beneath a former DC machine location, was 380 mg/kg (**Table 5**). However, the geometric mean of the maximum reported PCE concentrations, where PCE was present, in 10 select pre-remediation source area borings in and immediately surrounding the former DC tenant bay (**Table 4**) is 6 mg/kg. Hence, the PCE soil source term ($C_{max, soil}$) could vary between 6 and 380 mg/kg.

MEI therefore adopted the following approach to model calibration. Initially, values of dispersivity and attenuation rate were held constant. A 2,900 µg/L PCE concentration was assumed for $C_{max, gw}$ (05/2009 concentration at MW-2) and the soil source area term was adjusted until the PCE concentration 300 feet downgradient matched the 05/2009 42 µg/L concentration measured at MW-30. A soil source area concentration of 200 mg/kg produced the best fit.

A sensitivity analysis was then conducted for the Domenico model by varying input parameter values, one at a time, within reasonable ranges. Model outputs from various input values were

compared with the "baseline" case. The sensitivity analysis results indicate that model output is sensitive to the following model input parameters:

- Longitudinal dispersivity (α_x)
- Groundwater velocity (v)
- Downgradient transport distance (x), and
- Attenuation rate constant (λ).

Since site-specific values of v, x, and λ have been calculated herein previously, but v and λ have a narrow range of values, a sensitivity analysis was performed for varying values of these parameters. The four parameters were used to calibrate the model by changing the values of these parameters to best fit the May 2009 analytical data.

3.4.4.6 Downgradient Extent of Contaminant Plume

As stated previously, the Domenico model was used to estimate the maximum downgradient extent of the groundwater contaminant plume for the five COCs exceeding Type 3/4 Commercial RRS in on-site groundwater. The model input parameters utilized were identical to those listed above, with one exception.

Instead of specifying a fixed distance downgradient (x) at which point the model would calculate a concentration (C_x), a trial-and-error approach was utilized to determine the distance downgradient at which the concentration, C_x, equaled the default Type 1 RRS. This trial-and-error determination of the downgradient distance at which the concentration (C_x) equaled the default Type 1 RRS was performed using the Microsoft Excel "Goal Seek" function.

The goal seek function allows the user to specify the desired result of a formula to find the input value necessary to achieve that result. In the Goal Seek dialog box, the user specifies the cell containing the formula ("Set Cell"), the desired value for the formula to return ("To Value", in this case, C_x = Type 1 RRS) and one of the source cells that the formula is dependent upon ("By Changing Cell", in this case, the downgradient distance, x). Both of the cell specifications must be a single cell reference or name. The "To Value" must be a number. The source cell

specified to change ("By Changing Cell") to obtain the desired "To Value", must contain a number, rather than a formula.

The Goal Seek command then uses a simple linear search beginning with guesses on the positive or negative side of the value in the source cell (By Changing Cell). Excel uses the initial guesses and recalculates the formula. Guesses bringing the formula result closer to the targeted result (To Value) is the direction (positive or negative) in which Goal Seek continues to guess. If neither direction appears to approach the target value, Goal Seek makes additional guesses further away from the initial source cell value. After the direction is determined, Goal Seek uses an iterative process in which the source cell value changes incrementally at varying rates until converging upon the target value.

The results of the calculations estimating the downgradient extent of the contaminant plume(s) are summarized in **Section 3.4.4.7**. The calculated downgradient extent of each of the five COCs exceeding commercial RRS on site are shown on **Figures 21 – 25 in Appendix B**.

3.4.4.7 Fate & Transport / Natural Attenuation Model Results

The results of the contaminant fate & transport modeling calculations in **Tables 12-16** indicate, that for all five COCs exceeding RRS in on-site groundwater, the projected concentration at a POE 1000 ft downgradient from the delineated plume was significantly below default, Type 1 RRS/Drinking Water MCLs. The results of the groundwater fate & transport modeling calculations are briefly summarized below.

COC	Modeled Downgradient POE Concentration	Default, Type 1 RRS/ Drinking Water MCL	Max. Downgradient Extent of Plume
Benzene	0.12 µg/L	5 µg/L	186 ft
cDCE	0.29 µg/L	70 µg/L	70 ft
PCE	0.18 µg/L	5 µg/L	263 ft
TCE	0.14 µg/L	5 µg/L	198 ft
VC	0.013 µg/L	2 µg/L	82 ft

As stated previously, since there is no retardation in the Domenico model relative to groundwater velocity, the predicted downgradient PCE, TCE and benzene concentrations are conservative,

maximum approximations. Therefore, the modeling results demonstrate that on-site groundwater contamination in excess of Type 3/Type 4 Commercial RRS does not pose a significant human health risk to a hypothetical groundwater user at a downgradient point of exposure (POE).

The calculated downgradient extent of the contaminant plume for the five COCs exceeding commercial RRS on site are shown on **Figures 21 – 25**. As shown on plume maps for cDCE and PCE, **Figures 22 and 23**, respectively, the calculated maximum downgradient extent of the contaminant plume for these two COCs is somewhat less than the current extent of each plume. The possible explanations for the difference between the calculated maximum downgradient extent and the current extent of the plume include:

- The groundwater source area concentration (C_{source}) utilized in the modeling calculations are the most recent, March 2015 concentrations. Past concentrations of PCE and cDCE in source area groundwater were orders of magnitude greater than at present, resulting in a larger present-day plume in comparison to the estimated extent of a future plume.
- The plume did not originally degrade as rapidly in the past, before soil/secondary source removal, as it does at present, resulting in farther downgradient COC transport in comparison to estimated future transport.

Hence, the modeling results show that the downgradient extent of PCE and cDCE are not anticipated to expand significantly beyond current plume dimensions. Therefore, the modeling results confirm that the plume is stable and that on-site groundwater contamination in excess of Commercial RRS does not pose a significant human health risk to potential off-site users.

3.5 CSM – Vapor Intrusion

3.5.1 Vapor Intrusion Assessments

Multiple soil vapor investigations/assessments, vapor intrusion (VI) modeling, indoor air testing and a soil vapor survey were all performed to quantify potential human health risks from the VI exposure pathway. Previous VI assessments and mitigation efforts are described in the Vapor Intrusion Assessment and Mitigation Design Report (UC, 21-FEB-2008), Vapor Intrusion Mitigation System Implementation Report (UC, 3-JUN-2009), and Vapor System Sampling and Modeling for Closure Report (UC, 25-FEB-2011).

Hence, the VI aspect of the CSM is of a site where potential VI issues have been well investigated and potential impacts in excess of risk-based standards have been abated. The assessment, modeling, sampling and mitigation work upon which this description is based are detailed below.

3.5.2 Vapor Intrusion Modeling

Vapor intrusion modeling using the Johnson & Ettinger (J&E) model (U.S. EPA, 1991) was initially performed by UC as described in their 21-FEB-2008 Vapor Intrusion Assessment and Mitigation Design Report. The J&E modeling work performed by UC concluded:

- There was a potential for vapor intrusion into the proposed buildings from the impacted groundwater, using a target risk level of one in a million (1:1,000,000), (1E-06) for the DC and adjacent tenant spaces up to, but not including the Kroger.
  Note: EPD uses a target risk level of 1:100,000 or 1E-05.
- The health risk in excess of 1E-06 could be mitigated with the installation of a vapor venting system.
- The Kroger and tenant spaces south of the Kroger were not at risk.

A VI mitigation system (VIMS) was subsequently installed and operated by UC for approximately two years (**Section 3.5.5**). The opportunity for potential closure of the VIMS was identified by UC following a review of MEI's January 14, 2010 CSR. UC performed revised VI modeling using the J&E model, 1E-05 target carcinogenic risk levels and site-specific parameters utilized by MEI during our J&E VI modeling efforts.

Based on UC's revised model results, COC concentrations of COC in soil gas did not cause carcinogenic risk to exceed the risk levels in of 1E-5 or non-carcinogenic toxicity effects to exceed a hazard quotient of 1.0 for potential commercial workers.

MEI performed VI modeling during our 2008-2009 CSR investigation (MEI CSR, 14-JAN-2010) using the J&E model to evaluate potential health effects of occupant exposure to COC vapors. MEI utilized a target risk level of 1E-05 and site specific subsurface data to calculate the

acceptable groundwater concentrations associated with both carcinogenic and non-carcinogenic effects, for both residential and commercial usage. The results of MEI's J&E VI modeling indicated that no COCs were present in 2008/2009, in either on-site or off-site groundwater at concentrations that would cause carcinogenic or non-carcinogenic risk to exceed target levels for either commercial workers on the FOSC site or for residential receptors at neighboring off-site properties.

MEI also compared COC "final indoor exposure groundwater concentrations" calculated with the J&E model to the most recent, March 2015 groundwater concentrations (**Table 18**). **Table 17** contains the J&E model input parameters and documents the sources of the values utilized in the J&E modeling.

As shown in **Table 18,** no groundwater concentrations of COCs exceed the calculated J&E "final indoor exposure groundwater concentrations." Hence, VI modeling using detailed site-specific data and the most recent COC concentrations indicate that there are no significant human health risks associated with potential VI from contaminated groundwater.

The results of the J&E vapor intrusion modeling indicate that no COCs in on-site or off-site groundwater are present at concentrations that would cause carcinogenic risk to exceed 10^{-5} or non-carcinogenic toxicity effects to exceed a hazard quotient of 1.0 for potential commercial worker on site or residential receptors at neighboring properties. Therefore, vapor intrusion modeling results indicate that groundwater COC concentrations on and off-site do not represent a significant human health threat to potential receptors via the vapor intrusion pathway.

MEI recently performed VI screening as requested in the EPD's letter of March 9, 2015 (copy in **Appendix F**) using the U.S. EPA's Vapor Intrusion Screening Level (VISL) calculator, version 3.3.1 (May 2014). This screening was performed for the groundwater volatilization to indoor air inhalation pathway for a commercial worker. User inputs into the calculator are limited, but include target carcinogenic risk level (1E-05), groundwater temperature (17.6 °C; interpolated from the U.S. EPA maps) and maximum concentrations of listed VOCs in groundwater.

The VISL "Groundwater Concentration to Indoor Air Concentration" (GWC-IAC) calculator indicated that TCE and benzene were present in groundwater at concentrations *potentially capable* of exceeding 1E-05 carcinogenic risk for commercial workers via the indoor air inhalation pathway. Similarly, the GWC-IAC calculator indicated that PCE and TCE were present in on-site groundwater at concentrations *potentially capable* of exceeding the toxicity effects hazard quotient of 1.0 for commercial workers via the indoor air inhalation pathway. Hence, the VISL screening identified three compounds, PCE, TCE and benzene, in on-site groundwater at concentrations capable of exceeding indoor air inhalation targets for carcinogenic or non-carcinogenic effects.

The VISL calculator determines groundwater "target concentrations," i.e., concentrations at which carcinogenic and/or non-carcinogenic screening levels are not exceeded. The VISL-calculated target concentrations of PCE, TCE and benzene, the locations at which these targets are exceeded, and the groundwater concentrations of these three VOCs are tabulated below.

Compound	VISL Target Conc.	Exceedance Locations (MAR-2015 Concentration)
PCE	370 µg/L	MW-2 (775 µg/L); MW-22 (520 µg/L)
TCE	32 µg/L	MW-2 (71.5 µg/L), MW-4 (120 µg/L); MW-16 (35 µg/L)
Benzene	100 µg/L	MW-28 (135 µg/L)

The groundwater contamination exceeding the VISL groundwater target concentrations at MW-16, MW-22 and MW-28 was released from the off-site sources, Chastain Cleaners and the CITGO/RRFM. Hence, the release from the former on-site drycleaner is only responsible for the VISL target exceedances of PCE and TCE at MW-2 and MW-4. **However, as stated previously, multiple iterations of J&E VI modeling performed by MEI and UC using detailed site-specific parameters have determined that potential VI risks are below target levels for both on-site commercial worker and off-site residential receptors.**

3.5.3 Soil Vapor Survey

MEI conducted a soil vapor survey at the FOSC site in September 2008. One hundred twenty-four (124) Gore-Sorber modules were employed on an approximate 50 by 50-foot grid over the

entire northern portion of the FOSC site and neighboring public rights-of-way. The methods and results of the soil vapor survey are described MEI's 14-JAN-2010 CSR and in W. L. Gore & Associates' (Gore's) report included as Appendix F therein**.**

Four principle COCs were chosen for soil vapor survey color contour mapping for their utility in determining the on-site extent of contamination and documenting the migration of impacted groundwater from off site onto the FOSC site:

- Tetrachloroethene (PCE) (**Figure 7**)
- Trichloroethene (TCE) (**Figure 8**)
- cis-1,2-dichloroethene (cDCE) (**Figure 9**)
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) (**Figure 10**).

PCE was detected at 92 of the 124 module locations. The maximum calculated PCE concentration on site was approximately 42,608 micrograms per cubic meter ($\mu g/m^3$), at a location approximately 50 feet north of the former on-site dry cleaner. The results of the soil vapor study indicated that the highest PCE concentrations were present around the perimeter of the former on-site dry cleaner.

A secondary area of elevated PCE concentration was located approximately 100 feet southwest of Chastain Cleaners. This area of elevated concentration was approximately 400 feet east and hydraulically upgradient of the former on site dry cleaner tenant space (**Figure 7**).

TCE was detected in 32 of 124 modules during the survey, with calculated concentrations ranging from 0.68 $\mu g/m^3$ to 460.14 $\mu g/m^3$. Maximum concentrations mirrored the results of PCE. Two areas of higher concentrations were just north of the former on-site dry cleaners and southwest of Chastain Cleaners (**Figure 8**).

Detections of cDCE were lower in concentration than PCE or TCE. cDCE was detected at 9 of the 124 module locations, in concentrations calculated to range from 0.85 $\mu g/m^3$ to 194.62 $\mu g/m^3$. Two cDCE areas of elevated concentration were identified, one hydraulically

downgradient of the former on-site dry cleaner and one downgradient from Chastain Cleaners (**Figure 9**).

BTEX was detected at 91 of the 124 module locations at concentrations ranging from 0.01 $\mu g/m^3$ to 72.95 $\mu g/m^3$. The highest reported detections were located in the northeastern corner of the FOSC parking lot (**Figure 10**).

The soil vapor survey showed that there were clearly two separate sources for chlorinated solvent (CVOCs) contamination in soil gas at the FOSC site, the former on-site DC operation and Chastain Cleaners off site. The results of the soil vapor survey also showed that all significant BTEX contamination was associated with the CITGO/RRFM filling station northeast of the FOSC site.

Hence, the soil vapor survey confirmed the presence of three commingled groundwater contaminant plumes on the FOSC site from one on-site and two off-site sources.

3.5.4 Indoor Air Quality Sampling

MEI contracted with industrial hygiene consultants Atlantic Environmental, Inc. (AEI) to perform air sampling inside the residence 79 West Belle Isle Road on August 25, 2008. This work is described in MEI's 14-JAN-2010 CSR and in AEI's report to MEI included as Appendix G in the CSR**.**

Air samples were collected using SUMMA® Canisters at locations pre-defined by MEI in concert with the property owner. Ambient or "background" air sampling was also performed at two locations outside the residence.

Laboratory analytical results indicated that there were no indoor air concentrations of the DC COCs (PCE or TCE) or any daughter products (DCE and VC) in any sample. In the conclusion of their report, AEI stated, "Based on AEI's physical findings and laboratory results, no further work is necessary at this time."

Since the indoor air sampling was conducted in August 2008, groundwater concentrations of PCE, TCE and cDCE have declined precipitously (**Table 9**) at the nearest upgradient monitoring well, MW-13S. The July 2008 and March 2015 concentrations of these three compounds at this well, and the percent declines in COC concentrations, are listed as follows. Note from the data in **Table 9** that the July 7, 2008 groundwater samples from MW-13S were split between two independent Georgia-certified environmental laboratories and that a duplicate March 10, 2015 sample was collected and analyzed.

MW-13S - PCE, TCE & cDCE Groundwater Concentrations

	7-JUL-08 Avg. Conc.	10-MAR-15 Avg. Conc.	% Reduction
PCE	1,005 µg/L	22 µg/L	-97.8%
TCE	29 µg/L	1.95 µg/L	-93.3 %
cDCE	33 µg/L	3.4 µg/L	-89.7%

Since no indoor vapors were detected during sampling in 2008, and groundwater contaminant concentrations have declined in the nearest upgradient well by an average of 93.6%, the risk of off-site VI appears minuscule. Hence, in accordance with discussions with EPD HSRP personnel in a meeting of February 27, 2015, the previous indoor air sampling conducted at the residence at 79 West Belle Isle Road, in concert with the remarkable reductions in groundwater COC concentrations, are evidence that there is no VI risk for this neighboring property.

3.5.5 On-Site Vapor Mitigation System

UC installed a vapor intrusion mitigation system (VIMS) beneath the former DC tenant bay and the north tenant wing of the FOSC site. This system consisted of:

- A passive vapor barrier and sub slab depressurization system installed beneath the former DC facility. Slotted piping was placed in a gravel bed and covered with a high-density polyethylene (HDPE) below the concrete subfloor. The slotted piping was connected to a vertical riser and passive wind turbine.
- An active vapor mitigation system was installed beneath the remaining units in the north FOSC wing. A system of eight north-south slotted gas collection pipes were

hydraulically jacked under these units. The eight collection pipes were manifolded together in an alternating pattern and connected to roof-mounted vacuum blowers.

- A telemetry system was installed to monitor blower operation by monitoring the vacuum pressure at both of the discharge pipes of the active VIMS on one-hour intervals.
- Monitoring ports including two sets of three 8-foot deep monitoring wells along each of the east and west sides of the building. A total of nine shallow vapor monitoring ports were installed
- The pressure monitoring of the VIMS indicated that negative pressures were generated at least 12 feet away from the collection piping, with greater negative pressure generation closer to the system. Thus, the VIMS operated as designed, depressurizing the soil beneath the tenant spaces of the north section of the FOSC.

This system was operation for approximately two and a half years, from December 2008 to May 2011. The system was shut down, decommissioned and the shallow vapor monitoring wells abandoned in May 2011.

EPD authorized shutdown of the VIMS system after soil gas sampling results and VI modeling results both indicated that there were no VI risks present on site in excess of target levels. This work is documented in three report prepared by UC:

- Vapor Intrusion Assessment and Mitigation Design Report (21-FEB-2008)
- Vapor Intrusion Mitigation System Implementation Report (3-JUN-2009), and
- Vapor System Sampling and Modeling for Closure Report (25-FEB-2011)

Hence, there are no residual VI risks in excess of applicable target levels present on the FOSC site.

3.6 CSM – Exposure Model

The conceptual exposure model of the FOSC site is one in which, based on current and projected future property and groundwater uses, there are no threats to human health or the environment in excess of applicable risk-based levels. Specifically, potential exposure sources (soil, groundwater, DNAPL & soil vapor) and pathways (ingestion, inhalation, etc.) have been

thoroughly assessed, exposure risks have been quantified and excess risk has been mitigated. The details of the conceptual site exposure model are described below.

3.6.1 Current and Future Land Uses

3.6.1.1 Fountain Oaks Shopping Center (FOSC)

The FOSC, Parcel ID 17 009300061319, is a commercial retail shopping center and will continue to be used for commercial purposes for the foreseeable future. The eastern portion of site is zoned C-1, "Community Business District" by the City of Sandy Springs, as shown on the online geographic information system (GIS) zoning map (gis.sandyspringsga.gov/flexviewers/Gen_Flex/). The zoning western portion of the FOSC subject property is shown as "None" on the Sandy Springs zoning map.

MEI understands that the primary tenant of the facility, Kroger, intends to expand their building and operation on site into the area currently occupied by the north tenant wing and the adjacent area immediately to the west. Hence, with the proposed expansion of the Kroger facility imminent, the FOSC site will continue to be used for commercial purposes for the foreseeable future. Therefore, the site also will be occupied exclusively by commercial worker and/or construction worker receptors for the foreseeable future. The approximate area of the proposed Kroger expansion is shown on **Figure 1**.

3.6.1.2 115 West Belle Isle Road – FOSC Outparcel

A small outparcel of the FOSC site with the address of 115 West Belle Isle Road, Parcel ID 17 009300021073, is located in the parking lot immediately west of the FOSC north wing, within the footprint of the proposed Kroger expansion (**Figure 1**).

Although the site is currently zoned R-4, "Single Family Dwelling" according to the Sandy Springs GIS website, it is also currently a parking area in a commercial development. Further, the site lies within the footprint of the proposed Kroger building expansion, the construction of which is imminent, according to information provided to MEI. Hence, the property at 115 West Belle Isle Road will continue to be used for commercial purposes for the foreseeable future. The site will therefore be occupied exclusively by commercial worker and/or construction worker

receptors for the foreseeable future. The approximate area of the proposed Kroger expansion in relation to the property boundary of 115 West Belle Isle Road is shown on **Figure 1**.

3.6.1.3 Long Island Terrace – Undeveloped Property

The undeveloped property on Long Island Terrace, Parcel ID 17 009300060881, is zoned R-3 "Single Family Dwelling District" by the City of Sandy Springs. However, the property is "land-locked" with no road access and occupies a topographic basin. It is unlikely that this property will be developed for residential use given the steep slopes, uneven terrain, viewshed, and land-locked nature of the parcel. However, the property will be considered as "residential" and occupied by residential receptors for conceptual exposure modeling purposes.

3.6.1.4 Off-Site Neighboring Properties

The neighboring cross gradient properties to the north of the FOSC site, and the downgradient properties to the west of FOSC are all used for single-family residences. These properties are likely to continue being used for residential purposes and occupied by potential residential receptors for the foreseeable future.

3.6.2 Exposure Pathways & Receptors

There are only five *potentially* complete on-site exposure pathways for the following potential receptors:

- Soil – Dermal Contact (construction worker receptor)
- Groundwater – Dermal Contact (construction worker receptor)
- Soil – Vapor intrusion to indoor air inhalation (commercial worker receptor)
- Groundwater - Vapor intrusion to indoor air inhalation (commercial worker receptor)
- Groundwater – Ingestion (commercial worker receptor)

As shown by a comparison of residual on-site and off-site soil concentrations to calculated RRS, there are no concentrations of COCs in either on-site or off-site soil in excess of RRS. Calculation of Type 3/Type 4 RRS includes consideration of the dermal contact for a construction worker exposure pathway. The 2007-2008 soil remediation project removed all soil from the site in excess of Type 3/Type 4 RRS.

The potential dermal contact exposure pathway for a construction worker receptor is an incomplete pathway, due to the depth to groundwater on site. As shown by the groundwater potentiometric data in **Table 3**, the average depth to groundwater across the entire FOSC site is approximately 34 feet, while average depth to groundwater surrounding the on-site release source area is approximately 36.7 feet. These depths to groundwater are well below depths that construction projects typically penetrate into the subsurface. Hence, the exposure pathway: groundwater- dermal contact for a potential construction worker receptor is an incomplete pathway.

As described in **Section 3.5.2**, vapor intrusion modeling conducted by UC and MEI, both before and following VI mitigation by UC, have demonstrated that there is no excess risk present on site for the VI to indoor air pathway for a commercial worker receptor, from either a soil or groundwater source.

As described in **Section 3.4.2.1**, there are no drinking water supply sources within a two-mile radius of the site. The FOSC site is a non-drinking water site.

Hence, there are no complete exposure pathways on the FOSC site.

3.6.3 Exposure Domains

As defined in the Georgia VRP Act (§ O.C.G.A. 12-8-102), "exposure domains" are the contaminated geographical areas of a site that can result in exposure to a particular receptor via a specified exposure pathway. Specifically:

- The soil exposure domain for surficial contact with site soils is the area impacted by COCs from the ground surface down to a depth of two feet BGS.
- The soil exposure domain for exposure of construction workers is the impacted area of soils from the ground surface down to the depth of construction; and
- The soil exposure domain for protection of groundwater at an established point of exposure is the impacted area of site soils from the ground surface down to the uppermost groundwater zone.

The on-site exposure domains for this conceptual site model only include those areas of the site where:

- Groundwater COC concentrations exceed applicable RRS for the incomplete, but *potentially complete* groundwater ingestion pathway (**Tables 22 & 23**). These COCs and 14 on-site exceedance locations are:
    - Benzene (MWs-20, 21 & 28)
    - cDCE (MWs-2, 4, 16, 20 & 28)
    - PCE (MWs-2, 3, 5, 9, 13S, 14, 16, 20, 22, 23 & 28)
    - TCE (MWS-2, 4, 6, 16, 20 & 28)
    - VC (MWs-16 & 28)
    - Benzene (MWs-20, 21 & 28)
- VISL screening calculations indicated that there is *potential* VI risks that exceed target levels (i.e., at wells MW-2 and MW-4).

The only *potential* off-site exposure domain would be a limited area of groundwater contamination immediately adjacent to the FOSC site for the incomplete groundwater ingestion pathway for a potential residential receptor. Hence, there is no off-site exposure domain because:

- The FOSC site is a non-drinking water site (see **Section 3.4.2.1**)
- There are no off-site groundwater COC concentrations exceeding applicable RRS (see **Section 3.4.3.2**)
- The groundwater contaminant plume is naturally attenuating at a relatively rapid rate (see **Section 3.4.3.4**.).
- Groundwater contaminant fate & transport modeling demonstrates a lack of risk for off-site groundwater ingestion by hypothetical remote residential receptors.

The proposed use of engineering and institutional controls to mitigate *potential* on-site exposure risks associated with the incomplete exposure pathways is described in **Section 4.0** as follows.

4.0 VOLUNTARY REMEDIATION PLAN

4.1. Voluntary Remediation Plan - Soil

No soil remediation, and thus no remediation plan, is necessary for on- or off-site soil because:

- The extent of soil on-site contamination was exhaustively delineated (see **Section 3.3.1**),
- On-site soil exceeding approved RRS was removed during the 2007-2008 soil remediation project (see **Section 3.3.2**),
- The remaining in-situ concentrations of COCs in on-site soil was exhaustively demonstrated through collection of verification samples and borings/monitoring wells installed by MEI (see **Section 3.3.3**), and
- No COCs in excess of applicable RRS have been detected in off-site soils (see **Section 3.3.1**)
- The proposed Kroger expansion (see **Sections 3.6.1.1 and 3.6.1.2**) will cover the on-site release source area and immediate downgradient area, further reducing rainfall infiltration from this currently covered, paved portion of the site and thus reducing any associated residual, low-level soil-to-groundwater leaching.

Soil at the FOSC site is in compliance with all applicable/EPD-approved RRS, as certified in the report Certification of Compliance on page viii herein. Since the site was initially listed on the HSI for a release of tetrachloroethene (PCE) to soil, and on-site soil has been remediated and is now in compliance with applicable RRS, the FOSC site is now eligible for de-listing from the HSI. The applicant and property owners therefore request that the EPD remove the FOSC site from the HSI.

4.2. Voluntary Remediation Plan – Groundwater

As noted in **Section 3.6.3**, there are two general exposure domains present on the FOSC site:

- Areas where groundwater COC concentrations exceed applicable RRS for the incomplete, but *potentially complete* groundwater ingestion pathway, and
- The small area downgradient from the on-site release source (at MW-2 and MW-4) where VISL screening calculations indicated *potential* VI risks exceeding target levels.

4.2.1. Secondary Source Removal & Natural Attenuation

The excavation of approximately 3,831 tons of contaminated soil from the release source area and immediate downgradient area in 2007-2008 (see **Sections 2.1 and 3.3.2**) removed this significant secondary source of groundwater contamination via the soil-to-groundwater leaching pathway. As a result, groundwater COC concentrations in both the on-site release source and downgradient areas have been rapidly attenuating (see **Section 3.4.3.4**) and associated exposure risk levels have been rapidly declining.

4.2.2. Monitoring Well Abandonment

In a meeting with EPD on February 27, 2015, Kroger representatives requested permission to abandon all monitoring wells within the footprint of their proposed expansion. EPD personnel gave tentative verbal approval to abandon these wells, which include (**Figure 4**):

- MW-4
- MW-9
- MW-26
- MW-27

Additionally, monitoring wells MW-2 and MW-17 are located close to the spread footing location for the proposed expansion, and therefore may need to be abandoned to accommodate building construction.

In addition to abandonment of the wells located within the footprint of the proposed Kroger expansion, MEI requests closure of all downgradient and cross-gradient wells associated with the former on-site release, for the following reasons:

- The contaminated soil that would have acted as an ongoing secondary source of groundwater contamination (via soil to groundwater leaching) has been removed,
- The proposed Kroger expansion will further cover the on-site release source and immediate downgradient area, further reducing rainfall infiltration and any associated residual, low-level soil-to-groundwater leaching.
- The groundwater contaminant plume is rapidly attenuating, and
- There are no off-site, downgradient groundwater impacts in excess of applicable RRS.

Therefore, MEI requests abandonment of the following wells.

- Within the proposed Kroger expansion footprint or footing:
    1. MW-2
    2. MW-4
    3. MW-9
    4. MW-17
    5. MW-26
    6. MW-27
- Additional cross-gradient and downgradient wells:
    1. MW-3
    2. MW-13D
    3. MW-13S
    4. MW-29
    5. MW-30
    6. MW-31
    7. MW-32

Therefore, abandonment of 13 groundwater monitoring wells is requested at the FOSC site.

4.3. Engineering Controls

A passive vapor barrier, and possibly a sub-slab depressurization system, will be installed beneath the slab of the proposed Kroger expansion to mitigate the potential VI risk suggested by the VISL calculations (**Section 3.5.2**). Hence, the *potential* VI to indoor air inhalation exposure pathway will be rendered permanently incomplete through the installation of the vapor barrier engineering control.

Engineering controls are not necessary for the remaining exposure domains on site, i.e., locations where groundwater exceeds Type 3/Type 4 RRS, because all of these areas are unoccupied, paved parking areas, and will remain so for the foreseeable future.

4.4. Institutional Controls

MEI proposes the use of institutional controls, specifically, deed notices and restrictive covenants, to mitigate potential exposure risks from on-site groundwater exceeding applicable RRS.

4.4.1. Restrictive Covenants

A restrictive environmental covenant is proposed between the property owner(s) and the EPD as a means of mitigating potential exposure to groundwater exceeding RRS. The specific language of the covenant will be negotiated between the property owners and EPD prior to submittal of the final revised Compliance Status Report that is due upon completion of corrective action. This covenant should include:

- Digging notices/restrictions,
- Zoning restrictions,
- Land use restrictions,
- Groundwater use prohibitions, and/or
- Building permit conditions

5.0 MILESTONE SCHEDULE

MEI proposes to abandon the 13 monitoring wells listed in **Section 4.2.2** above within 6 months of receipt of EPD approval to abandon the wells. A monitoring well abandonment report, confirming well abandonment and documenting well abandonment procedures, will be submitted to EPD within 30 days of completion of this task.

As listed on the VRP application form, the following four required generic milestones must be included in this initial application:

1. Within 12 months of enrollment (into the VRP):
    a. Horizontal delineation of the release and associated COCs on property where access is available at the time of enrollment;
2. Within 24 months of enrollment:
    a. Horizontal delineation of the release and associated constituents of concern

extending onto property for which access was not available at the time of enrollment;

3. Within 30 months of enrollment:
    a. Update the site CSM to include vertical delineation, finalize the remediation plan and provide a preliminary cost estimate for implementation of remediation and associated continuing actions; and
4. Within 60 months after enrollment,
    a. Submit the compliance status report (CSR) required under the VRP, including requisite certifications.

Please note that all four of item numbers 1, 2 and 3 above have been completed and this information submitted to EPD. Item number 4 above should be considered completed upon submittal of this updated CSR.

A milestone schedule Gantt chart is included as **Appendix D**.

6.0 SUMMARY & CONCLUSIONS

The Fountain Oaks Shopping Center (FOSC), 4920 Roswell Road NE, Sandy Springs, Fulton County, Georgia (the subject site) is currently listed on the Georgia Hazardous Site Inventory (HSI) as HSI No. 10807. Through this application, the responsible party (responsible for on-site groundwater impacts and off-site impacts to the west) and current property owners seek to have the subject site de-listed from the HSI and have regulatory oversight for the subject site and associated properties transferred to the Georgia Voluntary Remediation Program (VRP). The applicant and property owners therefore request that the FOSC site be de-listed from the HSI.

The three properties that are the subject of this application include:

1. Fountain Oaks Shopping Center (subject site), 4920 Roswell Rd NE, Sandy Springs, GA 30342 Fulton County Assessor Parcel No 17 009300061319.

2. 115 West Belle Isle Road (FOSC Outparcel), Sandy Springs, Georgia 30342 Fulton County Assessor Parcel No 17 009300021073.

3. Long Island Terrace property (undeveloped), Sandy Springs, Georgia 30342
   Fulton County Assessor Parcel No 17 009300060881.

The extent of on-site and off-site soil, groundwater and soil vapor contaminants of concern (COC) impacts and potential exposure risks have been thoroughly delineated over the course of multiple investigations conducted by Marion Environmental, Inc. (MEI) and others from 2005 to 2015.

A soil remediation project conducted by others on the FOSC site in 2007-2008 removed all on-site soils exceeding approved Risk Reduction Standards (RRS). A vapor intrusion (VI) mitigation system was installed by others beneath the north tenant wing of the FOSC and operated for approximately two and a half years, from December 2008 to May 2011. Exposure risks associated with former on-site soil and soil vapor impacts have therefore been successfully mitigated.

The FOSC site was originally placed on the HSI due to soil contamination from a release of tetrachloroethene (PCE) and 14 associated COCs. As documented in multiple reports prepared by others, and summarized herein, soil on the site complies with approved Types 1, 3, and/or 4 Risk Reduction Standards (RRS). Since the soil contamination that caused the FOSC site to be listed on the HSI has been remediated to within the approved RRS, the site is therefore now eligible for de-listing from the HSI.

March 2015 groundwater analytical result indicated that COC concentrations exceed applicable RRS at 14 on-site monitoring wells. The COCs and 14 exceedance locations are:

- Benzene (MWs-20, 21 & 28)
- cDCE (MWs-2, 4, 16, 20 & 28)
- PCE (MWs-2, 3, 5, 9, 13S, 14, 16, 20, 22, 23 & 28)
- TCE (MWS-2, 4, 6, 16, 20 & 28)
- VC (MWs-16 & 28)

Additionally, USEPA vapor intrusion screening level (VISL) calculations conducted in conjunction with the March 2015 groundwater sampling event, but using limited information indicate the *potential* presence of VI risks for PCE and TCE in excess of target levels at MW-2 and MW-4. However, Johnson & Ettinger (J&E) VI modeling (using detailed site-specific data) indicates that all COCs in groundwater, including PCE and TCE, *do not* represent a VI risk in excess of target levels for either on-site commercial worker or off-site residential receptors.

There are no *off-site* soil or groundwater impacts in excess of applicable Type 1/Type 2 RRS.

The overall conceptual site model (CSM) of the FOSC subject location is of a site where:

- Release sources and substances released have been well defined.
- The lateral and vertical extent and magnitude of soil contamination on-site and potential exposure risks have been well defined through exhaustive subsurface investigations.
- Soil contamination on-site in excess of RRS was removed.
- The lateral and vertical extent and magnitude of groundwater contamination on and off-site and associated exposure risks have been well defined.
- Groundwater flow and subsurface contaminant migration patterns in soil and groundwater are/were significantly affected by the pre-development topography.
- The groundwater contaminant plume, although in excess of RRS in several locations, is stable and rapidly attenuating.
- Groundwater fate & transport modeling has demonstrated that:
    - On-site groundwater RRS exceedances are not a significant health risk to hypothetical off-site residential receptors.
    - The contaminant plume is stable, and is not anticipated to migrate downgradient significantly beyond current dimensions.
- Potential vapor intrusion (VI) impacts for both on-site commercial receptors and off-site residential receptors have been both:
    - Assessed through soil vapor sampling, a soil vapor survey, indoor air sampling, VI modeling, and soil gas sampling; and
    - Mitigated through operation of an on-site VI mitigation system.

- Potential on-site VI impacts/residual soil gas COC concentrations are below applicable risk-based levels.
- Potential DNAPL was investigated and determined not to be present beneath the site.
- There are no soil, groundwater, or vapor intrusion (VI) impacts in excess of RRS/risk-based levels on off-site properties.

Hence, the overall FOSC CSM is a site that has been thoroughly investigated, the potential human health and environmental risks have been evaluated and the site complies with applicable RRS for soil and vapor intrusion. Groundwater in excess of RRS on-site is not a human health or environmental risk due to incomplete exposure pathways, and a plume that is rapidly attenuating. Groundwater fate & transport modeling using conservative assumptions and input values demonstrates that groundwater RRS exceedances on site are not a significant risk to hypothetical off-site residential receptors at a 1000-ft downgradient point of exposure (POE).

On-site exposure domains for this CSM include those areas of the site where:

- Groundwater COC concentrations exceed applicable RRS for the incomplete, but *potentially complete* groundwater ingestion pathway.
- VISL screening calculations indicated that *potential* VI risks exceed target levels (i.e., at wells MW-2 and MW-4).

There is no off-site exposure domain because:

- The FOSC site is a non-drinking water site
- There are no off-site groundwater COC concentrations exceeding applicable RRS
- The groundwater contaminant plume is naturally attenuating at a rapid rate
- Fate & transport modeling demonstrates a lack of risk for off-site groundwater ingestion by hypothetical residential receptors.

No soil remediation, and thus no remediation plan, is necessary for on- or off-site soil, because:

- The extent of soil on-site contamination was exhaustively delineated
- On-site soil exceeding RRS was removed during the 2007-2008 soil remediation project
- Remaining in-situ concentrations of COCs in on-site soil have been exhaustively

demonstrated through collection of excavation verification samples and borings/monitoring wells installed by MEI

- No COCs in excess of applicable RRS have been detected in off-site soils.

The excavation of approximately 3,831 tons of contaminated soil from the release source area and immediate downgradient area in 2007-2008 removed a significant secondary source of groundwater contamination via the soil-to-groundwater leaching pathway. As a result, groundwater COC concentrations in on-site release source and downgradient areas and have been rapidly attenuating and associated exposure risk levels have been rapidly declining.

In a meeting with EPD on February 27, 2015, Kroger representatives requested permission to abandon all monitoring wells within the footprint of a proposed building expansion. EPD personnel gave tentative verbal approval to abandon these wells, including:

- MW-4
- MW-9
- MW-26
- MW-27
- MW-2 (possibly within spread footing location)
- MW-17 (possibly within spread footing location)

For the following reasons MEI requests closure of all downgradient and cross-gradient wells associated with the former on-site dry cleaner solvent release:

- The contaminated soil that would have acted as an ongoing secondary source of groundwater contamination (via soil to groundwater leaching) has been removed,
- The proposed Kroger expansion will further cover the on-site release source and immediate downgradient area, further reducing rainfall infiltration and any associated residual, low-level soil-to-groundwater leaching.
- The groundwater contaminant plume is rapidly attenuating, and
- There are no off-site, downgradient groundwater impacts in excess of applicable RRS.

Therefore, MEI requests abandonment of the following 13 wells.

- Within the proposed Kroger expansion footprint or footing:
    1. MW-2
    2. MW-4
    3. MW-9
    4. MW-17
    5. MW-26
    6. MW-27
- Additional cross-gradient and downgradient wells:
    7. MW-3
    8. MW-13D
    9. MW-13S
    10. MW-29
    11. MW-30
    12. MW-31
    13. MW-32

Engineering controls including a passive vapor barrier, and possibly a sub-slab depressurization system, will be installed beneath the slab of the proposed Kroger expansion to mitigate the potential VI risk. Hence, the *potential* VI to indoor air inhalation exposure pathway will be rendered permanently incomplete through the installation of the vapor barrier engineering control.

Engineering controls are not necessary for the remaining exposure domains on site, i.e., locations where groundwater exceeds Type 3/Type 4 RRS, because all of these areas are unoccupied, paved parking areas, and will remain so for the foreseeable future. Institutional controls, specifically, deed notices and restrictive covenants are proposed to mitigate potential exposure risks from on-site groundwater exceeding applicable RRS.

A restrictive environmental covenant is proposed between the property owner(s) and the EPD as a means of mitigating potential exposure to groundwater exceeding RRS. The specific language

of the covenant will be negotiated between the property owners and EPD, but is likely to include:

- Digging notices/restrictions,
- Zoning restrictions,
- Land use restrictions,
- Groundwater use prohibitions, and/or
- Building permit conditions

MEI proposes to abandon the 13 monitoring wells within 6 months of receipt of EPD approval. The following four required generic milestones included in this initial application:

1. Horizontal delineation of the release and associated COCs on property accessible at the time of enrollment;
2. Horizontal delineation of the release and associated COCs on property inaccessible at the time of enrollment;
3. Update CSM to include vertical delineation, finalize the remediation plan and provide a preliminary cost estimate for implementation of remediation and associated continuing actions; and
4. Submit the compliance status report (CSR) required under the VRP, including requisite certifications.

Item numbers 1, 2 and 3 above have been completed and this information previously submitted to EPD, with the exception of "preliminary cost estimates for implementation of remediation and associated continuing actions" which no longer appear to be necessary. Item number 4 above, submittal of a CSR, should be considered completed with the submittal of this updated CSR and VRP application.

7.0 REFERENCES

American Society for Testing and Materials (ASTM). 1995. Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites. ASTM E1739-95. West Conshohocken, PA.

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Howard, P.H., Boethling, R.S., Jarvis, W.F., Meylan, W.M., and Michalenko, E.M. 1991. Handbook of Environmental Degradation Rates, Lewis Publishers, CRC Press, 2000 Corporate Blvd. N.W., Boca Raton, FL 33431.

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Kinner, Nancy E. 2001. Fate, Transport and Remediation of MTBE. Testimony before the United States Senate Committee on Environment and Public Works. Salem, NH.

U.S. Environmental Protection Agency (USEPA). 1991. Risk Assessment Guidance for Superfund (RAGS): Volume 1 - Human Health Evaluation Manual (HHEM) (Part B, Development of Risk-Based Preliminary Remediation Goals). Office of Emergency and Remedial Response, Washington, DC. EPA/540/R-92/003. OSWER Directive 9285.7-O1B. NTIS PB92-963333.

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USEPA. 1998. Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water. EPA/600/R-98/128, 1998.

USEPA. 2002. Ground Water Issue Paper - "Calculation and Use of First-Order Rate Constants for Monitored Natural Attenuation Studies". EPA/540/S-02/500.

USEPA. February 2004. User's Guide for Evaluating Subsurface Vapor Intrusion into Buildings. http://epa.gov/swerrims/riskassessment/airmodel/pdf/2004_0222_3phase_users_guide.pdf

Weidemeir, Todd H., Rifai, H.S., Newell, C.J., and Wilson, J.T. 1999. Natural Attenuation of Fuels and Chlorinated Solvents in the Subsurface. John Wiley & Sons, New York, NY.

Appendix A

VRP Application

Voluntary Investigation and Remediation Plan Application Form and Checklist

VRP APPLICANT INFORMATION

COMPANY NAME	Long Island Associates, LTD.				
CONTACT PERSON/TITLE	Fletcher Bright / Sr. Partner, Long Island Associates, LTD.; President, Fletcher Bright Company				
ADDRESS	537 Market Street, Suite 400, Chattanooga, TN 37402				
PHONE	(423) 755-8830	**FAX**		**E-MAIL**	fbright@fbright.com

GEORGIA CERTIFIED PROFESSIONAL GEOLOGIST OR PROFESSIONAL ENGINEER OVERSEEING CLEANUP

NAME	Steve Wild			**GA PE/PG NUMBER**	#1360
COMPANY	Marion Environmental, Inc.				
ADDRESS	115 Parmenas Lane, Chattanooga, TN 37405				
PHONE	(423) 499-4919	**FAX**	(423) 892-5122	**E-MAIL**	swild@marionenv.com

APPLICANT'S CERTIFICATION

In order to be considered a qualifying property for the VRP:

(1) The property must have a release of regulated substances into the environment;
(2) The property shall not be:
- (A) Listed on the federal National Priorities List pursuant to the federal Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. Section 9601.
- (B) Currently undergoing response activities required by an order of the regional administrator of the federal Environmental Protection Agency; or
- (C) A facility required to have a permit under Code Section 12-8-66.

(3) Qualifying the property under this part would not violate the terms and conditions under which the division operates and administers remedial programs by delegation or similar authorization from the United States Environmental Protection Agency.
(4) Any lien filed under subsection (e) of Code Section 12-8-96 or subsection (b) of Code Section 12-13-12 against the property shall be satisfied or settled and released by the director pursuant to Code Section 12-8-94 or Code Section 12-13-6.

In order to be considered a participant under the VRP:
- (1) The participant must be the property owner of the voluntary remediation property or have express permission to enter another's property to perform corrective action.
- (2) The participant must not be in violation of any order, judgment, statute, rule, or regulation subject to the enforcement authority of the director.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also certify that this property is eligible for the Voluntary Remediation Program (VRP) as defined in Code Section 12-8-105 and I am eligible as a participant as defined in Code Section 12-8-106.

APPLICANT'S SIGNATURE			
APPLICANT'S NAME/TITLE (PRINT)	**On behalf of Fletcher Bright, Sr. Partner, Long Island Associates, Ltd.**	**DATE** 12-11-15	

QUALIFYING PROPERTY INFORMATION (For additional qualifying properties, please refer to the last page of application form)			
HAZARDOUS SITE INVENTORY INFORMATION (if applicable)			
HSI Number	10807	Date HSI Site listed	7/14/2005
HSI Facility Name	Fountain Oaks Shopping Center	NAICS CODE	531120
PROPERTY INFORMATION			
TAX PARCEL ID	17 009300061319	PROPERTY SIZE (ACRES)	13.5
PROPERTY ADDRESS	4920 Roswell Road, NE		
CITY	Sandy Springs	COUNTY	Fulton
STATE	GA	ZIPCODE	30342
LATITUDE (decimal format)	33.8897 N	LONGITUDE (decimal format)	84.3828 W
PROPERTY OWNER INFORMATION			
PROPERTY OWNER(S)	AMREIT FOUNTAIN OAKS LP	PHONE #	(713) 850 1400
MAILING ADDRESS	8 Greeenway Plaza, Suite 1000		
CITY	Houston	STATE/ZIPCODE	TX 77046

ITEM #	DESCRIPTION OF REQUIREMENT	Location in VRP (i.e. pg., Table #, Figure #, etc.)	For EPD Comment Only (Leave Blank)
1.	**$5,000 APPLICATION FEE** IN THE FORM OF A CHECK PAYABLE TO THE GEORGIA DEPARTMENT OF NATURAL RESOURCES. (PLEASE LIST CHECK DATE AND CHECK NUMBER IN COLUMN TITLED "LOCATION IN VRP." PLEASE DO NOT INCLUDE A SCANNED COPY OF CHECK IN ELECTRONIC COPY OF APPLICATION.)		
2.	**WARRANTY DEED(S)** FOR QUALIFYING PROPERTY.	Appendix E	
3.	**TAX PLAT** OR OTHER FIGURE INCLUDING QUALIFYING PROPERTY BOUNDARIES, ABUTTING PROPERTIES, AND TAX PARCEL IDENTIFICATION NUMBER(S).	Appendix E	
4.	**ONE (1) PAPER COPY AND TWO (2) COMPACT DISC (CD) COPIES** OF THE VOLUNTARY REMEDIATION PLAN IN A SEARCHABLE PORTABLE DOCUMENT FORMAT (PDF).	See Accompanying Bound Document	
5.	The VRP participant's initial plan and application must include, using all reasonably available current information to the extent known at the time of application, a graphic three-dimensional preliminary conceptual site model (CSM) including a preliminary remediation plan with a table of delineation standards, brief supporting text, charts, and figures (no more than 10 pages, total) that illustrates the site's surface and subsurface setting, the known or suspected source(s) of contamination, how contamination might move within the environment, the potential human health and ecological receptors, and the complete or incomplete exposure pathways that may exist at the site; the preliminary CSM must be updated as the investigation and remediation progresses and an up-to-date CSM must be included in each semi-annual status report submitted to the director by the participant; a **PROJECTED MILESTONE SCHEDULE** for investigation and remediation of the site, and	See Section 5.0 and Appendix D	

	after enrollment as a participant, must update the schedule in each semi-annual status report to the director describing implementation of the plan during the preceding period. A Gantt chart format is preferred for the milestone schedule. The following four (4) generic milestones are required in all initial plans with the results reported in the participant's next applicable semi-annual reports to the director. The director may extend the time for or waive these or other milestones in the participant's plan where the director determines, based on a showing by the participant, that a longer time period is reasonably necessary:		
5.a.	Within the first 12 months after enrollment, the participant must complete horizontal delineation of the release and associated constituents of concern on property where access is available at the time of enrollment;	**Completed. See Accompanying Bound Document**	
5.b.	Within the first 24 months after enrollment, the participant must complete horizontal delineation of the release and associated constituents of concern extending onto property for which access was not available at the time of enrollment;	**Completed. See Accompanying Bound Document**	
5.c.	Within 30 months after enrollment, the participant must update the site CSM to include vertical delineation, finalize the remediation plan and provide a preliminary cost estimate for implementation of remediation and associated continuing actions; and	**Completed. See Accompanying Bound Document**	
5.d.	Within 60 months after enrollment, the participant must submit the compliance status report required under the VRP, including the requisite certifications.	**Completed. See Accompanying Bound Document**	
6.	**SIGNED AND SEALED PE/PG CERTIFICATION** AND SUPPORTING DOCUMENTATION: "I certify under penalty of law that this report and all attachments were prepared by me or under my direct supervision in accordance with the Voluntary Remediation Program Act (O.C.G.A. Section 12-8-101, et seq.). I am a professional engineer/professional geologist who is registered with the Georgia State Board of Registration for Professional Engineers and Land Surveyors/Georgia State Board of Registration for Professional Geologists and I have the necessary experience and am in charge of the investigation and remediation of this release of regulated substances. Furthermore, to document my direct oversight of the Voluntary Remediation Plan development, implementation of corrective action, and long term monitoring, I have attached a monthly summary of hours invoiced and description of services provided by me to the Voluntary Remediation Program participant since the previous submittal to the Georgia Environmental Protection Division. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." _____ _____ Printed Name and GA PE/PG Number Date _____ Signature and Stamp		

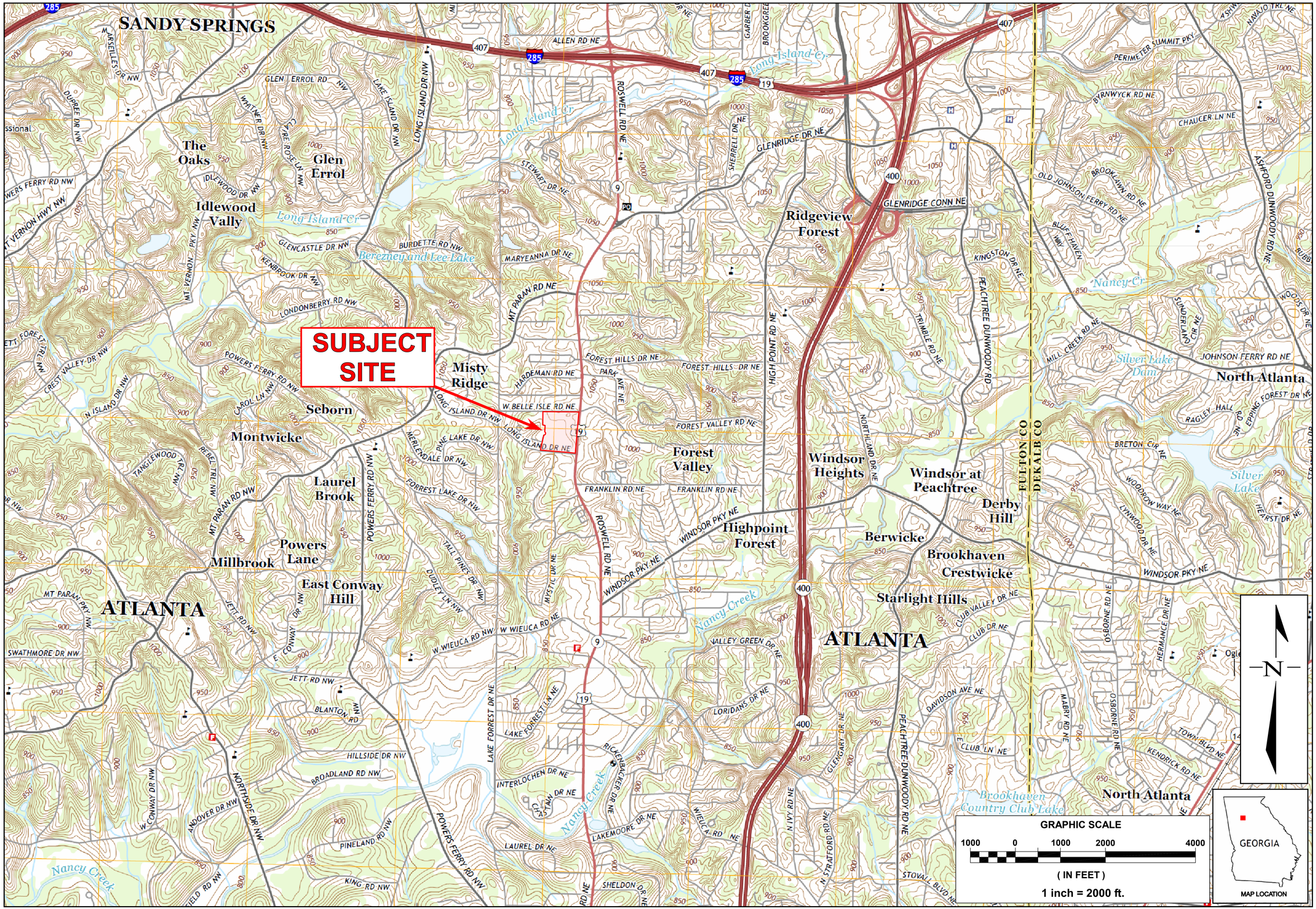
ADDITIONAL QUALIFYING PROPERTIES (COPY THIS PAGE AS NEEDED)

PROPERTY INFORMATION			
TAX PARCEL ID	17 009300021073	PROPERTY SIZE (ACRES)	0.2571
PROPERTY ADDRESS	115 WEST BELLE ISLE RD		
CITY	Sandy Springs	COUNTY	Fulton
STATE	Georgia	ZIPCODE	30342
LATITUDE (decimal format)	33.890359 N	LONGITUDE (decimal format)	84.383507 W
PROPERTY OWNER INFORMATION			
PROPERTY OWNER(S)	AMREIT FOUNTAIN OAKS LP	PHONE #	(713) 850 1400
MAILING ADDRESS	8 Greenway Plaza, Suite 1000		
CITY	Houston	STATE/ZIPCODE	TX 77046

PROPERTY INFORMATION			
TAX PARCEL ID	17 009300060881	PROPERTY SIZE (ACRES)	0.74
PROPERTY ADDRESS	Long Island Terrace		
CITY	Sandy Springs	COUNTY	Fulton
STATE	Georgia	ZIPCODE	30342
LATITUDE (decimal format)	33.889830 N	LONGITUDE (decimal format)	84.384275 W
PROPERTY OWNER INFORMATION			
PROPERTY OWNER(S)	Michael O. Savage	PHONE #	(423) 755-8830
MAILING ADDRESS	Attn: Fletcher Bright, 537 Market St., Suite 400		
CITY	Chattanooga	STATE/ZIPCODE	TN 37402

Appendix B

Figures



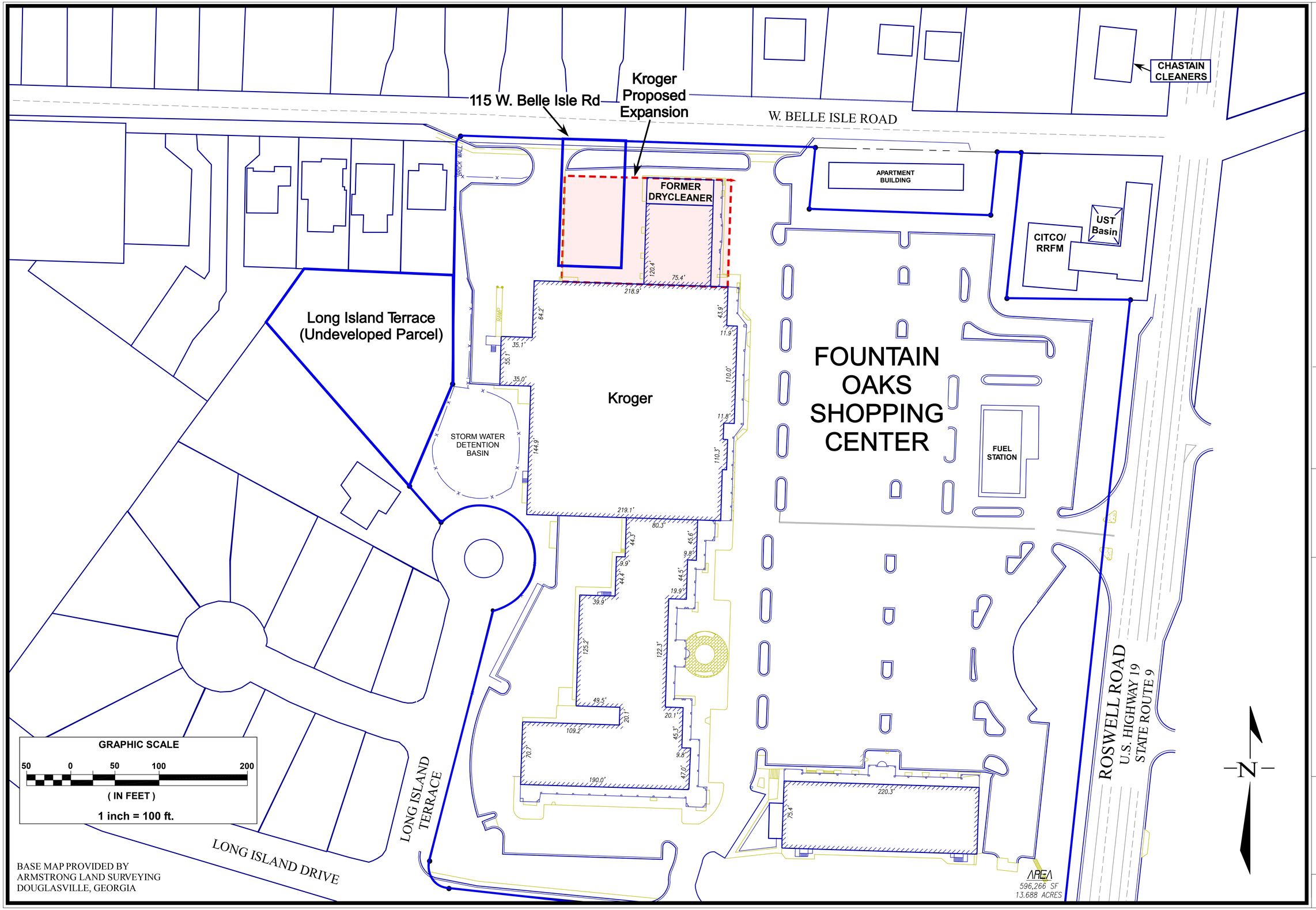
TOPOGRAPHIC SITE VICINITY MAP

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD, SANDY SPRINGS, GA

PROJECT: 15513	FACILITY: HSI No. 10807	DATE REVISED: 11/30/15
DATE:	SCALE: Ref. Scale Bar	APPROVED:

MARION ENVIRONMENTAL, INC.
115 PARMENAS LANE
CHATTANOOGA, TN
423-499-4919
www.marionenv.com

FIGURE 1



BASE MAP PROVIDED BY
ARMSTRONG LAND SURVEYING
DOUGLASVILLE, GEORGIA

SITE MAP

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD, SANDY SPRINGS, GA

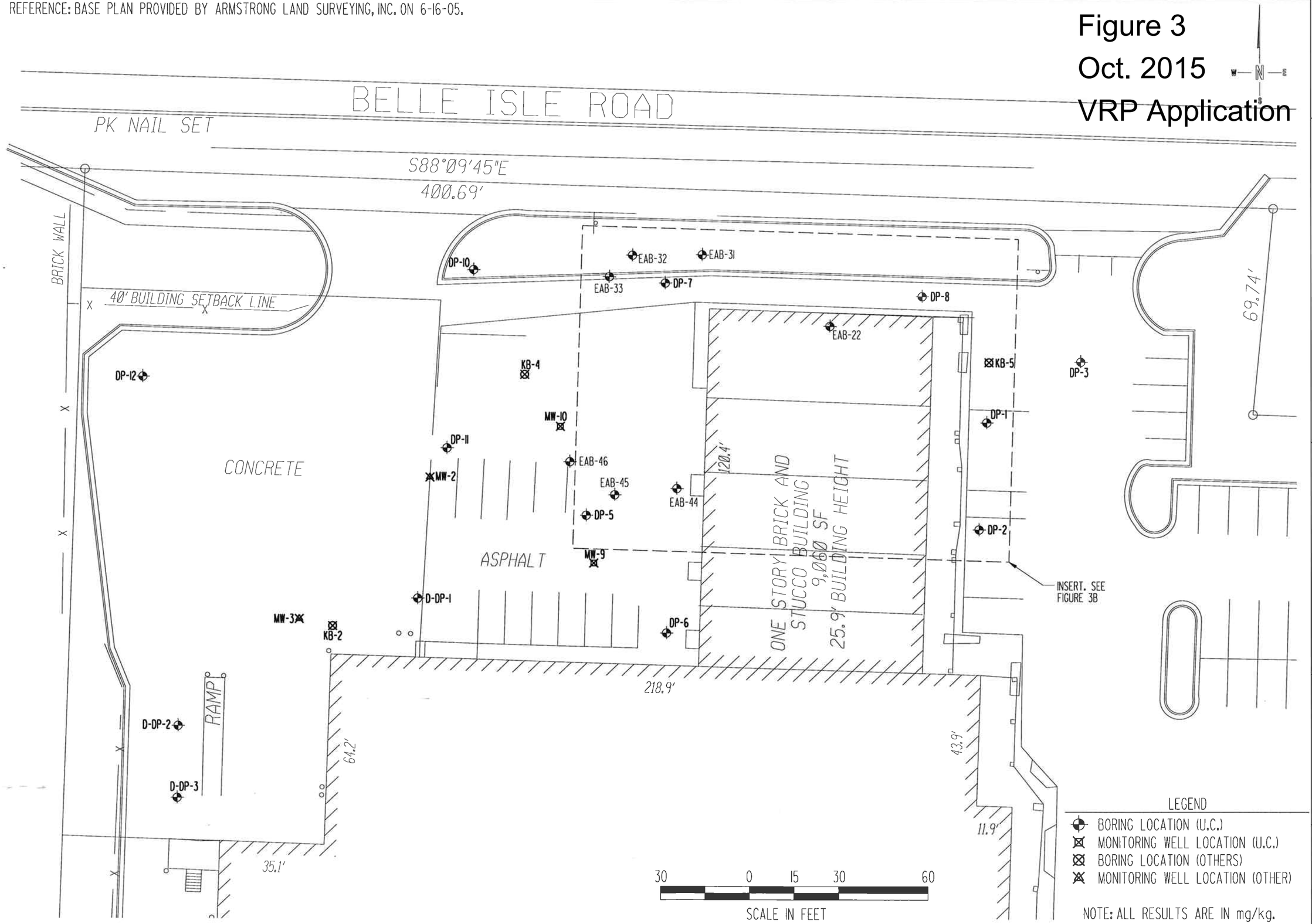
PROJECT: 15513	FACILITY: HSI No. 10807
DATE: 09/30/15	DATE REVISED: 11/30/15
SCALE: 1" = 100'	APPROVED:

MARION ENVIRONMENTAL, INC.
115 PARMENAS LANE
CHATTANOOGA, TN
423-499-4919
www.marionenv.com

FIGURE 2

REFERENCE: BASE PLAN PROVIDED BY ARMSTRONG LAND SURVEYING, INC. ON 6-16-05.

Figure 3
Oct. 2015
VRP Application



LEGEND

- BORING LOCATION (U.C.)
- MONITORING WELL LOCATION (U.C.)
- BORING LOCATION (OTHERS)
- MONITORING WELL LOCATION (OTHER)

NOTE: ALL RESULTS ARE IN mg/kg.

FIG. 3A

05170604.dgn

TITLE: BORING & MONITORING WELL LOCATION PLAN
FOUNTAIN OAKS SHOPPING CENTER
NORTH WING DETAIL

UNITED, CONSULTING
770 – 209-0029 FAX 582-2900
E-MAIL ADDRESS UNITED@UNITEDCONSULTING.COM
WEB SITE WWW.UNITEDCONSULTING.COM

PROJECT NO: 2005.1706.08

REVISIONS:

DATE: MAY 22, 2008

CHECKED:

SCALE: 1" = 30'

PREPARED: PJC

CLIENT: U.S. RETAIL INCOME FUND VIII-D

Figure 4 - Oct. 2015 VRP Application

EAB-33C
EAB-33B
EAB-33A
EAB-32
EAB-31
EAB-49
EAB-34
EAB-33
EAB-9
DP-7
EAB-8A
EAB-8
EAB-25
EAB-24
DRIVE THRU
EAB-23
EAB-48
KB-11
DP-8
FORMER AWNING
MW-12
EAB-7
EAB-6
EAB-47
FORMER SIDEWALK
EAB-17
EAB-11
EAB-5A
EAB-5
EAB-5C
EAB-5B
EAB-30
I-DP-2
GP-1(3)
GP-1(1)
GP-1(9)
FORMER DRYCLEAN MACHINE
EAB-22
EAB-21
EAB-15
FORMER PATIO
EAB-10
FORMER FLOOR DRAIN
KB-8
EAB-16
DP-9
EAB-18
EAB-4
KB-1
KB-1B
KB-1A
FORMER LINT TRAP
EAB-38
I-DP-1
EAB-36
EAB-28
EAB-26
GP-2(1)
GP-2(3)
I-DP-3
GP-2(9)
KB-9
KB-5
MW-11
EAB-2
EAB-3
KB-10
FORMER FLOOR DRAIN
EAB-39
EAB-37
EAB-29
KB-7
EAB-27
EAB-1
MW-1
EAB-12
GAS
EAB-40
EAB-35
DP-1
EAB-14
EAB-13
MW-10
EAB-43
DP-4
EAB-41
EAB-46
EAB-42
EAB-44
EAB-45
DP-5

W — N — E — S

10 0 5 10 20
SCALE IN FEET

LEGEND
- BORING LOCATION (U.C.)
- MONITORING WELL LOCATION (U.C.)
- BORING LOCATION (OTHERS)
- MONITORING WELL LOCATION (OTHER)

REFERENCE: BASE PLAN PROVIDED BY ARMSTRONG LAND SURVEYING, INC. ON 6-16-05.

FIG. 3B
05170604.dgn

TITLE: BORING & MONITORING WELL LOCATION PLAN
FOUNTAIN OAKS SHOPPING CENTER
DRY CLEANER TENANT SPACE DETAIL

UNITED, CONSULTING
770 - 209-0029 FAX 582-2900
E-MAIL ADDRESS UNITED@UNITEDCONSULTING.COM
WEB SITE WWW.UNITEDCONSULTING.COM

PROJECT NO: 2005.1706.08
REVISIONS:
DATE: MAY 22, 2008
CHECKED:
SCALE: 1" = 10'
PREPARED: PJC

CLIENT: U.S. RETAIL INCOME FUND VIII-D

Figure 5 - Oct. 2015 VRP Application

FIG. 15

EAB-33C
EAB-33B
EAB-33A
EAB-32
EAB-31
EAB-49
EAB-34
EAB-33
DP-7
EAB-8A
EAB-8
EAB-25
EAB-24
DRIVE THRU
EAB-23
EAB-48
DP-8
EAB-9
KB-11
MW-12
EAB-7
EAB-6
EAB-47
AWNING
CONCRETE
UNDERGROUND POWER LINE
EAB-17
EAB-11
EAB-5A
EAB-5
EAB-5C
EAB-5B
EAB-15
EAB-30
I-DP-2
EAB-22
TRANSFORMER
EAB-10
EAB-16
KB-8
EAB-38
I-DP-1
EAB-36
EAB-26
EAB-28
I-DP-3
KB-5
DP-9
EAB-18
UNDERGROUND GAS LINE (APPROX.)
UNDERGROUND POWER LINE
EAB-4
KB-1
KB-1B
KB-1A
VAULT
MW-11
EAB-2
EAB-3
KB-10
KB-9
EAB-39
EAB-37
EAE-29
KB-7
EAB-1
EAB-12
GAS
HAB-2
HAB-1
DP-1
EAB-40
EAB-35
EAB-14
EAB-13
DP-4
EAB-43
EAB-46
EAB-41
EAB-42
EAB-44
EAB-45

EXCAVATION KEY		
PIT	SIZE	DEPTH
1	5'x5'	10'
2	18'x12.5'	10'
3	2'x12'	3'
4	10'x10'	15'
5	4'x10'	10'
6	4'x10'-4'x6'	8'
7	7'x7'	20'
8	14'x14'	25'(?)
9	14'x23'	25'
10	7'x7'	25'
11	6'x40'	15'
12	4'x8'	15'
13	4'x8'	25'
14	2'x30'	15'
15	12'x20'	25'
16	35'x±40'	15'
TOTAL	2,180 YD^3	

LEGEND

- BORING LOCATION (U.C.)
- MONITORING WELL LOCATION (U.C.)
- BORING LOCATION (OTHERS)
- PCE RESULTS LESS THAN RRS
- PCE RESULTS GREATER THAN RRS
- EXCAVATION PIT, DESIGNATION & DEPTH
- EXCAVATION DEPTH OF 10' OR LESS
- EXCAVATION DEPTH OF 15'
- EXCAVATION DEPTH OF 20'
- EXCAVATION DEPTH OF 25'

10 0 5 10 20
SCALE IN FEET

TITLE: ORIGINAL EXCAVATION PLAN
FOUNTAIN OAKS SHOPPING CENTER

UNITED CONSULTING
770 - 208-0029 FAX 582-2300
E-MAIL ADDRESS UNITED@UNITEDCONSULTING.COM
WEB SITE WWW.UNITEDCONSULTING.COM

SCALE: 1" = 10'
DATE: 7-19-07
PROJECT NO: 2005.1706.08
PREPARED: VPV
CHECKED:
REVISIONS:

CLIENT: U.S. RETAIL INCOME FUND VIII-D

MONITORING WELL AND DIRECT PUSH BORING LOCATIONS

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD, SANDY SPRINGS, GA

MW-24
115 W. Belle Isle Rd
Kroger Proposed Expansion
A'
MW-25
W. BELLE ISLE ROAD
CHASTAIN CLEANERS
MW-18
MEIB-4
MW-22
MW-13D
MW-13S
B
MEIB-1
MEIB-3
MEIB-2
MW-12
MW-26
MW-11
MW-10
MW-1
MW-27
MW-17
MW-2
MW-9
B'
MW-4
FORMER DRYCLEANER
APARTMENT BUILDING
MW-19
MW-8
MW-5
CITCO/ RRFM
UST Basin
MW-30
MW-3
MW-14
MW-23
MW-20
MW-21
Long Island Terrace (Undeveloped Parcel)
MW-31
FOUNTAIN OAKS SHOPPING CENTER
MW-29
A
Kroger
STORM WATER DETENTION BASIN
FUEL STATION
MW-28
MW-16
MW-32
MW-6
MW-15
MW-33
MW-7
LONG ISLAND TERRACE
LONG ISLAND DRIVE
ROSWELL ROAD
U.S. HIGHWAY 19
STATE ROUTE 9
AREA
596,266 SF
13.688 ACRES

LEGEND

STANDARD SYMBOLS

MW-1	MONITORING WELL
MW-11	DESTROYED MONITOR WELL (MW'S 1, 10, 11, 12, 24)
MEIB-2	DIRECT PUSH SOIL BORING (MEI)
A——A'	LINE OF SECTION FIGURE 11 CROSS SECTION
B——B'	LINE OF SECTION FIGURE 12 CROSS SECTION

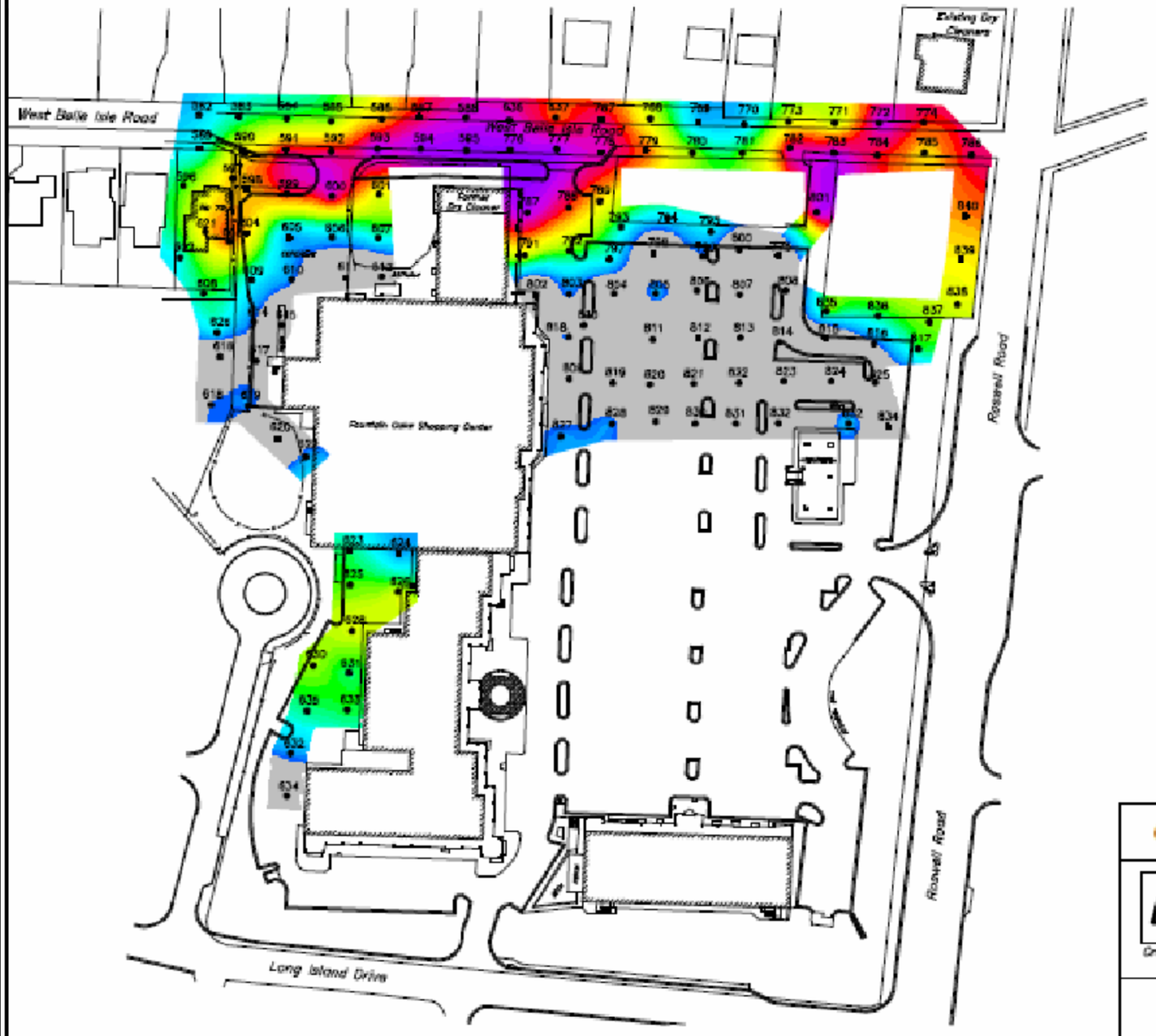
GRAPHIC SCALE
50 0 50 100 200
(IN FEET)
1 inch = 100 ft.

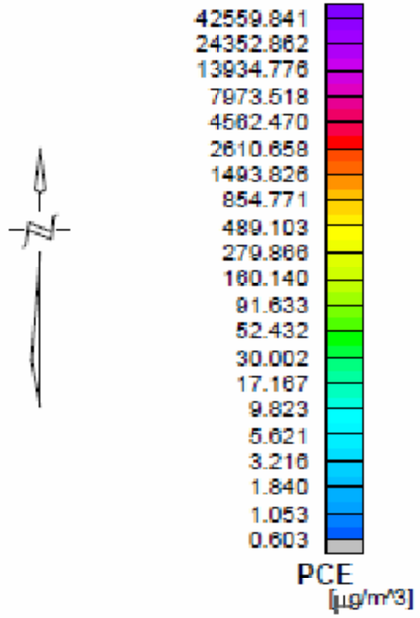
BASE MAP PROVIDED BY
ARMSTRONG LAND SURVEYING
DOUGLASVILLE, GEORGIA

PROJECT: 15513
FACILITY: HSI No. 10807
DATE REVISED: 11/30/15
DATE: 09/30/15
SCALE: 1" = 100'
APPROVED:

MARION ENVIRONMENTAL, INC.
115 PARMENAS LANE
CHATTANOOGA, TN
423-499-4919
www.marionenv.com

FIGURE 6





Scale 1:1600

100 0 100 200 300

(feet)

GORE ™ Surveys for Environmental Site Assessment

W.L. GORE & ASSOCIATES, INC.
100 CHESAPEAKE BOULEVARD
ELKTON, MD, USA 21921
USA
(410) 392-7600

Marion Environmental, Chattanooga, TN
Fountain Oaks Shopping Center
Tetrachloroethene
Estimated Soil Gas Concentrations

DATE DRAWN: 30 Oct 2008	DRAWN BY: JW	ORIG. CAD: FOSC Gore...DWG	SITE CODE: BNK
REV. DATE:	REV. #:	PROJECT NUMBER: 13784066	

SOIL VAPOR SURVEY RESULTS MAP
TETRACHLOROETHENE (PCE)

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD, SANDY SPRINGS, GA

DATE:		PROJECT: 15513	
SCALE: Ref. Scale Bar		FACILITY: HSI No. 10807	
APPROVED:		DATE REVISED: 11/30/15	

MARION ENVIRONMENTAL, INC.
115 PARMENAS LANE
CHATTANOOGA, TN
423-499-4919
www.marionenv.com

FIGURE 7

460.257
320.848
223.666
155.919
108.693
75.770
52.820
36.821
25.668
17.894
12.474
8.696
6.062
4.226
2.946
2.054
1.432
0.998
0.696
0.485
0.338

TCE
[µg/m^3]

Scale 1:1800

100 0 100 200 300
(feet)

GORE ™ Surveys for Environmental Site Assessment

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USA
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Marion Environmental, Chattanooga, TN
Fountain Oaks Shopping Center
Trichloroethene
Estimated Soil Gas Concentrations

DATE DRAWN: 30 Oct 2008	DRAWN BY: JW	ORIG. CAD: FOSC Gore...DWG	SITE CODE: ENX
REV. DATE:	REV. #:	PROJECT NUMBER: 13784066	

SOIL VAPOR SURVEY RESULTS MAP
TRICHLOROETHENE (TCE)

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD, SANDY SPRINGS, GA

PROJECT: 15513	FACILITY: HSI No. 10807	DATE REVISED: 11/30/15
DATE:	SCALE: Ref. Scale Bar	APPROVED:

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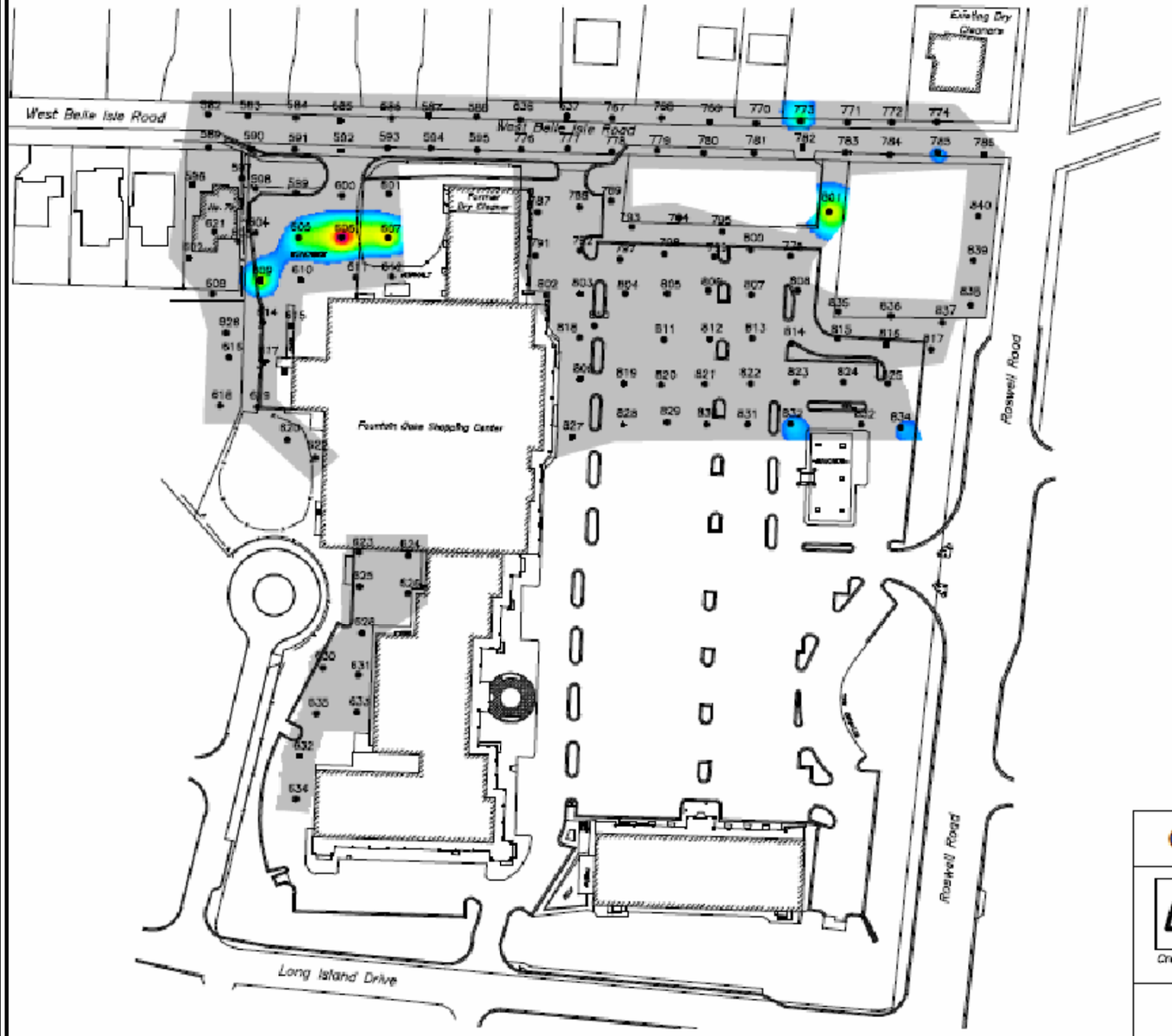
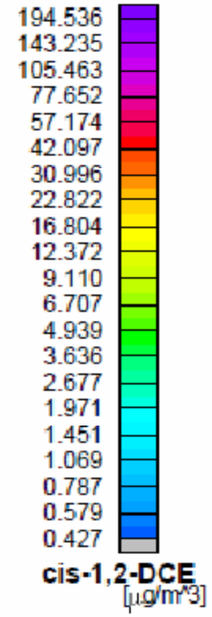
FIGURE 8





Scale 1:1800

100 0 100 200 300

(feet)

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Marion Environmental, Chattanooga, TN
Fountain Oaks Shopping Center
cis-1,2-Dichloroethene
Estimated Soil Gas Concentrations

DATE DRAWN: 30 Oct 2008	DRAWN BY: JW	ORIG. CAD: FOSC Gore...DWG	SITE CODE: ENX
REV. DATE:	REV.#:	PROJECT NUMBER: 13784088	

SOIL VAPOR SURVEY RESULTS MAP
cis-1,2-DICHLOROETHENE (cDCE)

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD, SANDY SPRINGS, GA

PROJECT: 15513	FACILITY: HSI No. 10807
DATE:	DATE REVISED: 11/30/15
SCALE: Ref. Scale Bar	
APPROVED:	

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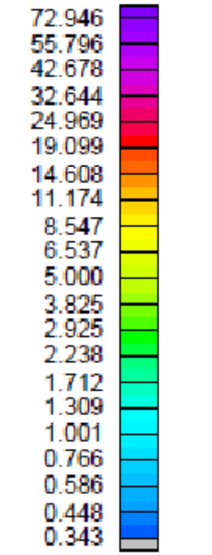
FIGURE 9



Scale 1:1800

100 0 100 200 300

(feet)

GORE ™ Surveys for Environmental Site Assessment

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USA
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Marion Environmental, Chattanooga, TN
Fountain Oaks Shopping Center
BTEX
Estimated Soil Gas Concentrations

DATE DRAWN: 30 Oct 2008	DRAWN BY: JW	ORIG. CAD: FOSC Gore...DWG	SITE CODE: ENX
REV. DATE:	REV. #:	PROJECT NUMBER: 13784068	

SOIL VAPOR SURVEY RESULTS MAP
BENZENE, TOLUENE, ETHYLBENZENE
& XYLENES (BTEX)

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD, SANDY SPRINGS, GA

PROJECT:	15513
FACILITY:	HSI No. 10807
DATE REVISED:	11/30/15
DATE:	
SCALE:	Ref. Scale Bar
APPROVED:	

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FIGURE 10

A

A’

MW-29

MW-14

MW-3

MW-17

MW-2

MW-10

MW-26

MW-1

MW-11

MW-12

MW-18

MW-25

1000'

990'

980'

970'

960'

950'

940'

930'

920'

910'

900'

890'

880'

ELEVATION - FEET ABOVE MEAN SEA LEVEL

PCE: 10
TCE: ND
cDCE: 1.4

PCE: 40
TCE: 2.8
cDCE: 6.0

PCE: 33
TCE: 2.5
cDCE: 5.1

PCE: 775
TCE: 71.5
cDCE: 66.5

PCE: 11
TCE: 1.8
cDCE: 4.2

PCE: ND
TCE: ND
cDCE: ND

PCE: 3.4
TCE: 3.3
cDCE: 4.9

PCE: ND
TCE: ND
cDCE: ND

LEGEND

INTERFINGERED HORIZONS OF SILT, FINE SAND & WEATHERED, SAPROLITIC MICA SCHIST WITH OCCASIONAL THIN COMPETENT ROCK HORIZONS

COMPETENT BEDROCK
BREVARD ZONE UNDIFFERENTIATED
DUCTALLY SHEARED ROCKS
(MICA SCHIST & GNEISS)

GROUNDWATER ENCOUNTERED DURING DRILLING

MOST RECENT GROUNDWATER ELEVATION AT WELL

MONITORING WELL - EXISTING

MONITORING WELL - DESTROYED

MW-26

MW-10

SCREENED INTERVAL

MARCH 2015 GROUNDWATER CONTAMINANT CONCENTRATION IN MICROGRAMS/LITER (µg/L)

PCE: 11
TCE: 1.8
cDCE: 4.2

40' 0' 40'

HORIZONTAL SCALE

3x VERTICAL EXAGGERATION

CROSS SECTION A-A’

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD, SANDY SPRINGS, GA

PROJECT: 15513

FACILITY: HSI No. 10807

DATE REVISED: 09/30/15

DATE: 04/30/15

SCALE:

APPROVED:

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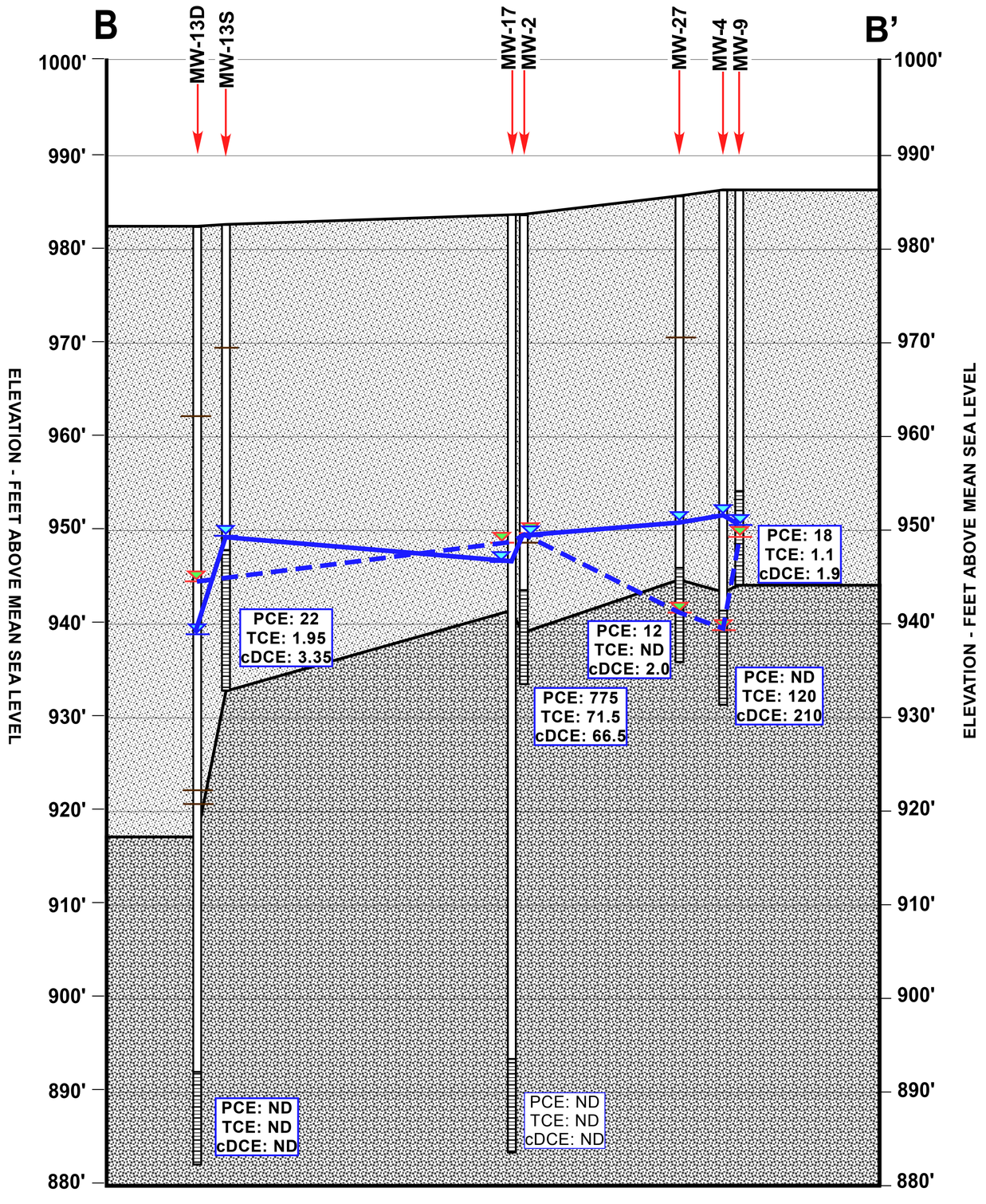
MEI

FIGURE 11



LEGEND

- INTERFINGERED HORIZONS OF SILT, FINE SAND & WEATHERED, SAPROLITIC MICA SCHIST WITH OCCASIONAL THIN COMPETENT ROCK HORIZONS
- COMPETENT BEDROCK BREVARD ZONE UNDIFFERENTIATED DUCTALLY SHEARED ROCKS (MICA SCHIST & GNEISS)
- GROUNDWATER ENCOUNTERED DURING DRILLING
- MOST RECENT GROUNDWATER ELEVATION AT WELL
- MONITORING WELL - EXISTING (MW-26)
- MONITORING WELL - DESTROYED (MW-10)
- MARCH 2015 GROUNDWATER CONTAMINANT CONCENTRATION IN MICROGRAMS/LITER (µg/L) — PCE: 12, TCE: ND, cDCE: 2.0
- SCREENED INTERVAL

40' 0' 40'
HORIZONTAL SCALE

3x VERTICAL EXAGGERATION

CROSS SECTION B-B'

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD, SANDY SPRINGS, GA

PROJECT: 15513
FACILITY: HSI No. 10807
DATE REVISED: 09/30/15
DATE: 04/30/15
SCALE:
APPROVED:

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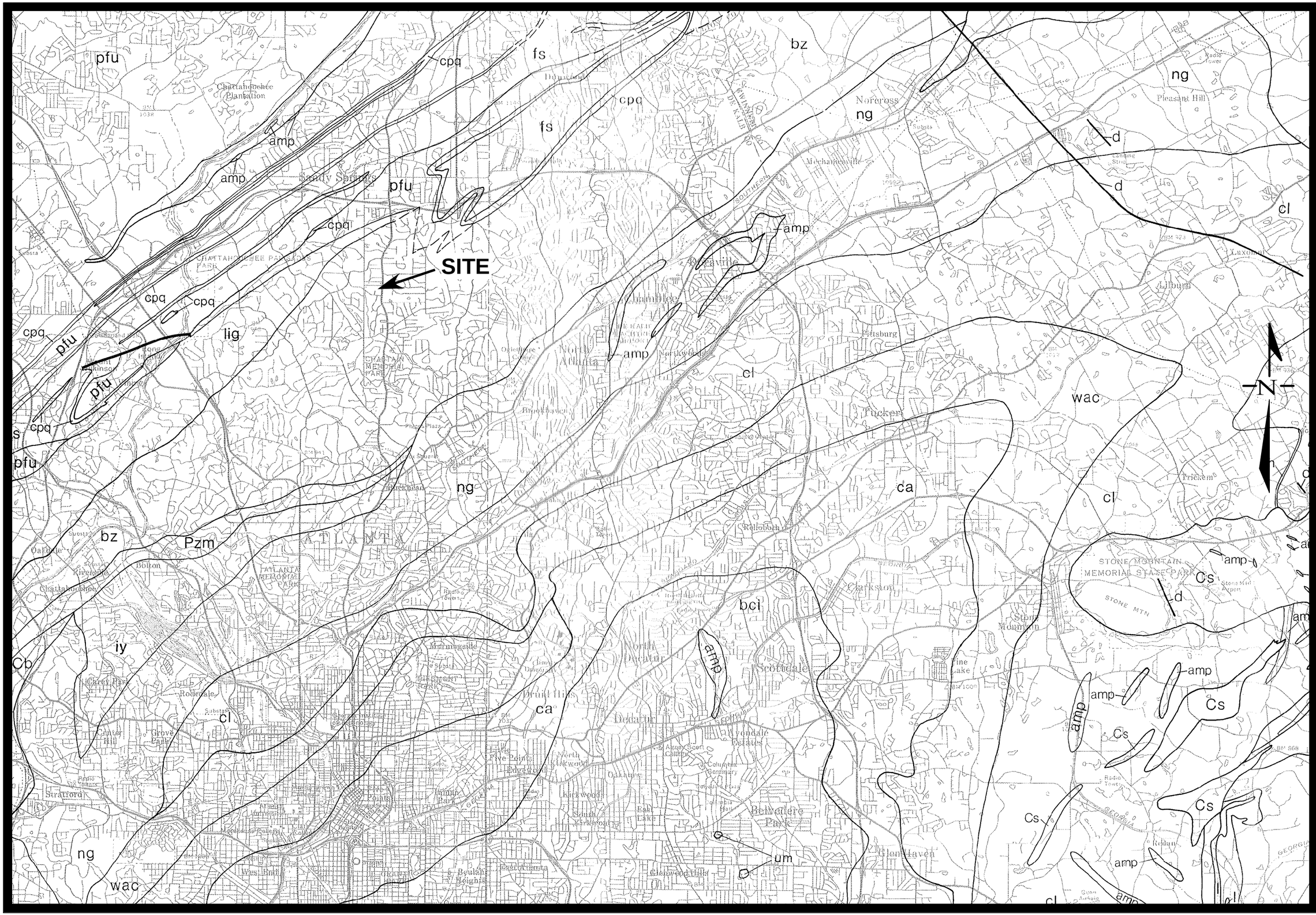
FIGURE 12



GEOLOGIC MAP

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD, SANDY SPRINGS, GA

PROJECT: 15513	FACILITY: HSI No. 10807
DATE: 09/30/15	DATE REVISED: 09/30/15
SCALE: NTS	APPROVED:

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FIGURE 13

Southern Piedmont and Brevard Fault Zone

(modified after Atkins and Higgins, 1980; and Kline, 1981)

d — diabase dikes

fzy / bz / bzm — Ductally sheared rocks: includes Brevard fault zone undifferentiated (bz), Brevard zone mylonites (bzm), and other mylonites (my).

cs — STONE MOUNTAIN GRANITE

cps — PANOLA GRANITE

cb — BEN HILL GRANITE

cp — PALMETTO GRANITE: includes the Snake Bag gneiss (sr), and the Tyrone phase (t).

lig — LITHONIA GNEISS

Pzuc — UNION CITY COMPLEX

Pzss / Pzut / Pzsa / Pzss — SOAPSTONE RIDGE COMPLEX: includes a schist unit (Pzss), an amphibolite unit (Pzsa), an amphibolite and schist unit (Pzsas) and a coarse-grained ultramafic unit (Pzum).

n / l — SNELLVILLE FORMATION: includes the Norris Lake Schist Member (n) and the Lanier Mountain Quartzite Member (l).

fs — FACTORY SHOALS FORMATION

cpq — CHATTAHOOCHEE PALISADES QUARTZITE

pl / h — PROMISED LAND FORMATION: includes the Hannah Member (h).

wc — WOLF CREEK FORMATION

sn — SENOIA FORMATION

pfu — POWERS FERRY FORMATION UNDIFFERENTIATED

wac — WAHOO CREEK FORMATION

st — STONEWALL FORMATION

f / tc / ca — CLARKSTON FORMATION: includes the Fairburn Member (f), Tar Creek Member (tc), and undifferentiated Clarkston Formation (ca).

icq — INTRENCHMENT CREEK QUARTZITE

cc — CAMP CREEK FORMATION

SANDY SPRINGS GROUP

NEW GEORGIA GROUP

UNASSIGNED AND UNNAMED ROCKS

um — meta-ultramafic rocks

amp — amphibolite and hornblende gneiss

bgn — predominantly biotite gneiss

ggn — granitic gneiss

sg — sillimanite-graphite schist

m — marble

bgn/amp/sch — biotite gneiss, amphibolite, and mica schist undifferentiated

q — quartzite

bms — biotite muscovite schist

Symbols

CONTACT, DASHED WHERE INFERRED

THRUST FAULT, DASHED WHERE INFERRED

D / U — REVERSE FAULT, DASHED WHERE INFERRED, DOTTED WHERE UNCERTAIN

FLINTY CRUSH ROCK

STRIKE-SLIP FAULT

SOURCE: MCCONNELL AND ABRAMS, GEOLOGY OF THE GREATER ATLANTA REGION GA DNR BULLETIN 96

GEOLOGIC MAP LEGEND

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD, SANDY SPRINGS, GA

PROJECT: 15513
FACILITY: HSI No. 10807
DATE: 09/30/15
DATE REVISED: 09/30/15
SCALE: NTS
APPROVED:

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Fax: 423-892-5122
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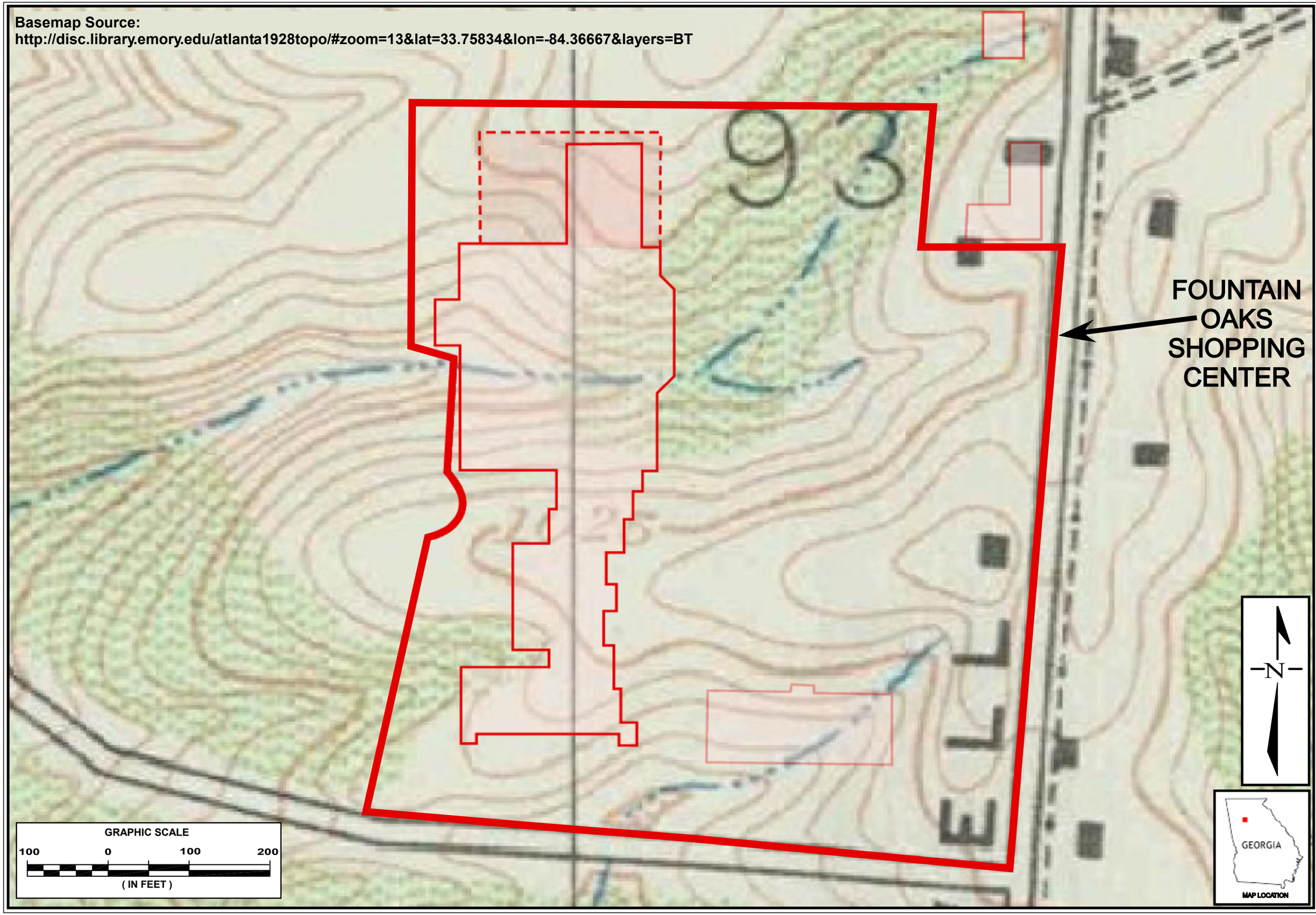
FIGURE 14

Basemap Source:
http://disc.library.emory.edu/atlanta1928topo/#zoom=13&lat=33.75834&lon=-84.36667&layers=BT



1928 TOPOGRAPHIC MAP WITH
FOUNTAIN OAKS SHOPPING CENTER OVERLAY

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD, SANDY SPRINGS, GA

PROJECT:	15513
FACILITY:	HSI No. 10807
DATE REVISED:	11/30/15
DATE:	
SCALE:	Ref. Scale Bar
APPROVED:	

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FIGURE 15

BEDROCK SURFACE ELEVATION CONTOURS

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD, SANDY SPRINGS, GA

115 W. Belle Isle Rd

Kroger Proposed Expansion

W. BELLE ISLE ROAD

CHASTAIN CLEANERS

APARTMENT BUILDING

FORMER DRYCLEANER

CITCO/ RRFM

UST Basin

Long Island Terrace (Undeveloped Parcel)

FOUNTAIN OAKS SHOPPING CENTER

Kroger

FUEL STATION

STORM WATER DETENTION BASIN

BRICK WALL

RAMP

970'

960'

930'

940'

950'

ROSWELL ROAD
U.S. HIGHWAY 19
STATE ROUTE 9

LONG ISLAND TERRACE

LONG ISLAND DRIVE

AREA
596,266 SF
13.688 ACRES

GRAPHIC SCALE
50 0 50 100 200
(IN FEET)
1 inch = 100 ft.

BASE MAP PROVIDED BY
ARMSTRONG LAND SURVEYING
DOUGLASVILLE, GEORGIA

PROJECT: 15513
FACILITY:
HSI No. 10807
DATE REVISED: 11/30/15

DATE: 09/30/15
SCALE: 1" = 100'
APPROVED:

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FIGURE 16

GROUNDWATER POTENTIOMETRIC SURFACE
10-MARCH-2015

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD, SANDY SPRINGS, GA

115 W. Belle Isle Rd

W. BELLE ISLE ROAD

Kroger Proposed Expansion

CHASTAIN CLEANERS

APARTMENT BUILDING

FORMER DRYCLEANER

CITCO/ RRFM

UST Basin

FUEL STATION

FOUNTAIN OAKS SHOPPING CENTER

Kroger

Long Island Terrace (Undeveloped Parcel)

STORM WATER DETENTION BASIN

BRICK WALL

MW-13D 949.32'
MW-30 942.48'
MW-31 942.34'
MW-29 943.57'
MW-32 948.14'
MW-6 948.23'
MW-15 942.14'
MW-33 937.52'
MW-7 943.04'
MW-16 953.24'
MW-14 950.42'
MW-3 949.77'
MW-17 949.43'
MW-2
MW-4 951.49'
MW-9 950.40'
MW-26 951.67'
MW-27 950.73'
MW-18 955.35'
MW-19 956.25'
MW-25 960.83'
MW-8 956.19'
MW-5 958.01'
MW-22 961.65'
MW-21 958.21'
MW-20 957.03'
MW-23 954.53'
MW-28 955.69'

ROSWELL ROAD
U.S. HIGHWAY 19
STATE ROUTE 9

LONG ISLAND TERRACE

LONG ISLAND DRIVE

AREA
596,266 SF
13.688 ACRES

GRAPHIC SCALE
50 0 50 100 200
(IN FEET)
1 inch = 100 ft.

BASE MAP PROVIDED BY
ARMSTRONG LAND SURVEYING
DOUGLASVILLE, GEORGIA

N

PROJECT: 15513
FACILITY: HSI No. 10807
DATE: 09/30/15
DATE REVISED: 11/30/15
SCALE: 1" = 100'
APPROVED:

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CHATTANOOGA, TN
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FIGURE 17

GROUNDWATER POTENTIOMETRIC SURFACE
20-22 MAY 2009

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD, SANDY SPRINGS, GA

Kroger Proposed Expansion

947.72' MW-24 115 W. Belle Isle Rd

952.91' MW-25

960.86' MW-13

W. BELLE ISLE ROAD

CHASTAIN CLEANERS

MW-22 958.86'

MW-13D

MW-13S 947.67'

951.41' MW-26

FORMER DRYCLEANER

947.56' MW-27

MW-17

MW-2 947.56'

MW-9 948.04'

MW-4 948.34'

MW-3 945.96'

MW-30 941.55'

MW-14 948.19'

MW-19 955.70'

MW-8 954.07'

MW-5 955.48'

APARTMENT BUILDING

UST Basin

CITCO/ RRFM

MW-23 952.26'

MW-20 954.25'

MW-21 955.68'

Long Island Terrace (Undeveloped Parcel)

MW-31 941.39'

MW-29 942.93'

FOUNTAIN OAKS SHOPPING CENTER

Kroger

STORM WATER DETENTION BASIN

953.52' MW-28

FUEL STATION

MW-16 952.04'

MW-32 923.27'

MW-6 947.54'

MW-15 941.92'

MW-33 936.63'

MW-7 940.12'

AREA 596,266 SF 13.688 ACRES

ROSWELL ROAD
U.S. HIGHWAY 19
STATE ROUTE 9

LONG ISLAND TERRACE

LONG ISLAND DRIVE

GRAPHIC SCALE
50 0 50 100 200
(IN FEET)
1 inch = 100 ft.

N

BASE MAP PROVIDED BY
ARMSTRONG LAND SURVEYING
DOUGLASVILLE, GEORGIA

PROJECT: 15513	FACILITY: HSI No. 10807
DATE: 09/30/15	DATE REVISED: 11/30/15
SCALE: 1" = 100'	APPROVED:

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CHATTANOOGA, TN
423-499-4919
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FIGURE 18

Basemap Source:
http://disc.library.emory.edu/atlanta1928topo/#zoom=13&lat=33.75834&lon=-84.36667&layers=BT

FOUNTAIN OAKS SHOPPING CENTER

GRAPHIC SCALE
100 0 100 200
(IN FEET)

GEORGIA
MAP LOCATION

1928 TOPOGRAPHIC MAP WITH
10-MARCH-2015
POTENTIOMETRIS SURFACE OVERLAY

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD, SANDY SPRINGS, GA

PROJECT: 15513
FACILITY: HSI No. 10807
DATE REVISED: 11/30/15
DATE:
SCALE: Ref. Scale Bar
APPROVED:

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FIGURE 19

GROUNDWATER QUALITY MAP
MARCH 2015 & MOST RECENT PREVIOUS RESULTS

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD, SANDY SPRINGS, GA

PROJECT: 15513	FACILITY: HSI No. 10807		
DATE: 03/31/20155	SCALE: 1" = 100'	DATE REVISED: 10/19/15	
		APPROVED:	

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CHATTANOOGA, TN
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MW-13S
11/11/2009 PCE: 160 TCE: 9.7 cDCE: 12
03/10/15 PCE: 22 TCE: 2 cDCE: 3.4

MW-13D
12/15/08 PCE: ND TCE: ND cDCE: ND
03/11/15 PCE: ND TCE: ND cDCE: ND

MW-24
05/21/09 PCE: ND TCE: ND cDCE: ND
2009 ABANDONED PRIOR TO PAVING

MW-27
11/11/09 PCE: 61 TCE: 7 cDCE: 11
03/11/15 PCE: 12 TCE: ND cDCE: 2

MW-26
11/11/09 PCE: 68 TCE: ND cDCE: ND
03/30/15 PCE: 11 TCE: 1.8 cDCE: 4.2

MW-25
05/22/09 PCE: ND TCE: ND cDCE: ND
03/11/15 PCE: ND TCE: ND cDCE: ND

MW-18
11/11/09 PCE: 87 TCE: 50 cDCE: 9.2
03/11/15 PCE: 3.4 TCE: 3.3 cDCE: 4.9

MW-8
05/20/09 PCE: 12 TCE: 2.7 cDCE: 22
03/11/15 PCE: 14 TCE: ND cDCE: 2.5

MW-19
05/21/09 PCE: 130 TCE: ND cDCE: ND
03/12/15 PCE: 7.5 TCE: ND cDCE: ND

MW-17
12/15/08 PCE: ND TCE: ND cDCE: ND
03/11/15 PCE: ND TCE: ND cDCE: ND

MW-2
11/11/09 PCE: 1,950 TCE: 140 cDCE: 67
03/12/15 PCE: 775 TCE: 72 cDCE: 67

MW-3
11/10/09 PCE: 47 TCE: 7.2 cDCE: 12
03/11/15 PCE: 33 TCE: 2.5 cDCE: 5.1

MW-30
11/11/09 PCE: 23 TCE: 1.4 cDCE: 1.4
03/11/15 PCE: 10 TCE: ND cDCE: 1.4

MW-31
05/21/09 PCE: ND TCE: ND cDCE: ND
03/11/15 PCE: ND TCE: ND cDCE: ND

MW-14
11/10/09 PCE: 70 TCE: 9.2 cDCE: 15
03/11/15 PCE: 40 TCE: 2.8 cDCE: 6.0

MW-29
05/21/09 PCE: ND TCE: 1.1 cDCE: 7.4
03/11/15 PCE: ND TCE: 1.1 cDCE: 7.9

MW-32
05/21/09 PCE: ND TCE: ND cDCE: ND
03/11/15 PCE: ND TCE: ND cDCE: ND

MW-16
05/21/09 PCE: 66 TCE: 160 cDCE: 97 VC: 21
03/11/15 PCE: 19 TCE: 35 cDCE: 100 VC: 11

MW-6
05/21/09 PCE: 22 TCE: 11 cDCE: 11
03/10/15 PCE: 3.9 TCE: 5.5 cDCE: 26

MW-15
05/21/09 PCE: 10 TCE: 4 cDCE: 2.2
03/11/15 PCE: 1.9 TCE: 3.7 cDCE: 22

MW-33
05/21/09 PCE: 2.2 TCE: ND cDCE: ND
03/10/15 PCE: ND TCE: 2.2 cDCE: 17

MW-9
11/11/09 PCE: 100 TCE: 7.8 cDCE: 10
03/12/15 PCE: 18 TCE: 1.1 cDCE: 1.9

MW-4
11/11/09 PCE: 290 TCE: 220 cDCE: 99
03/12/15 PCE: ND TCE: 120 cDCE: 210

MW-22
05/20/09 PCE: 270 TCE: 13 cDCE: 900
03/12/15 PCE: 520 TCE: 6.7 cDCE: 12

MW-5
05/20/09 PCE: 495 TCE: 19 cDCE: 37 VC: 2.2
03/12/15 PCE: 170 TCE: 5.2 cDCE: 26 VC: 1.9

MW-21
05/21/09 PCE: ND TCE: ND cDCE: ND
03/12/15 PCE: ND TCE: ND cDCE: 1.0

MW-20
05/20/09 PCE: 510 TCE: 17 cDCE: 25
03/12/15 PCE: 160 TCE: 8.8 cDCE: 43

MW-23
05/20/09 PCE: 60 TCE: 3.8 cDCE: 14
03/11/15 PCE: 120 TCE: 2.8 cDCE: 10

MW-28
05/20/09 PCE: 19 TCE: 26 cDCE: 95 VC: 9.2
03/11/15 PCE: 18 TCE: 8 cDCE: 53 VC: 4.7

MW-7
05/20/09 PCE: ND TCE: ND cDCE: ND
03/10/15 PCE: ND TCE: ND cDCE: ND

115 W. Belle Isle Rd
Kroger Proposed Expansion
W. BELLE ISLE ROAD
APARTMENT BUILDING
FORMER DRYCLEANER
CHASTAIN CLEANERS
CITCO/ RRFM
US Basin
Long Island Terrace (Undeveloped Parcel)
STORM WATER DETENTION BASIN
FUEL STATION
ROSWELL ROAD
U.S. HIGHWAY 19
STATE ROUTE 9
LONG ISLAND TERRACE
AREA
596,266 SF
13.688 ACRES

ALL RESULTS SHOWN IN ug/L (ppb)

GRAPHIC SCALE
50 0 50 100 200
(IN FEET)
1 inch = 100 ft.

BASE MAP PROVIDED BY
ARMSTRONG LAND SURVEYING
DOUGLASVILLE, GEORGIA

N

FIGURE 20

BENZENE ISOCONCENTRATION CONTOUR & PLUME DELINEATION MAP

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD, SANDY SPRINGS, GA

W. BELLE ISLE ROAD

CHASTAIN CLEANERS

APARTMENT BUILDING

FORMER DRYCLEANER

CITCO/ RRFM

UST Basin

FUEL STATION

STORM WATER DETENTION BASIN

MW-25
MW-18
MW-22
MW-13D
MW-13S
MW-26
MW-2
MW-17
MW-27
MW-9
MW-3
MW-4
MW-30
MW-14
MW-19
MW-8
MW-23
MW-20
MW-21
MW-31
MW-29
MW-28
MW-16
MW-32
MW-6
MW-15
MW-33
MW-7

Benzene: 1.5 ug/L
MTBE: <1 ug/L

Benzene: 15 ug/L
MTBE: 2.5 ug/L

Benzene: 24 ug/L
MTBE: 2500 ug/L

Benzene: 135 ug/L
MTBE: 855 ug/L

Benzene: 2.2 ug/L
MTBE: 340 ug/L

Modeled Surrogate Release Source Area

186 ft

60 ppb

40 ppb

20 ppb

5 ppb

5 ppb

Approx. Current Extent of Plume

Modeled Maximum Downgradient Extent of Plume

PLUME DELINEATION CRITERION:
5 ug/L TYPE 1 DEFAULT RRS

Benzene & MTBE Concentrations - MAR-2015
(Concentrations BDL at locations w/o results posted)

GRAPHIC SCALE
50 0 50 100 200
(IN FEET)
1 inch = 100 ft.

LONG ISLAND DRIVE

LONG ISLAND TERRACE

ROSWELL ROAD
U.S. HIGHWAY 19
STATE ROUTE 9

AREA
596,266 SF
13.688 ACRES

N

BASE MAP PROVIDED BY
ARMSTRONG LAND SURVEYING
DOUGLASVILLE, GEORGIA

PROJECT: 15513
FACILITY: HSI No. 10807
DATE REVISED: 11/09/2015
DATE: 09/30/15
SCALE: 1" = 100'
APPROVED:

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FIGURE 21

cis-1,2-DICHLOROETHENE (cDCE) ISOCONCENTRATION CONTOUR & PLUME DELINEATION MAP

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD, SANDY SPRINGS, GA

Modeled Downgradient Extent of Plume

Modeled Release Source Area

Approx. Current Extent of Plume

Surrogate Release Source Area

W. BELLE ISLE ROAD

LONG ISLAND DRIVE

LONG ISLAND TERRACE

ROSWELL ROAD
U.S. HIGHWAY 19
STATE ROUTE 9

CHASTAIN CLEANERS

APARTMENT BUILDING

FORMER DRYCLEANER

CITCO/ RRFM

UST Basin

FUEL STATION

STORM WATER DETENTION BASIN

MW-13D

MW-13S
cDCE: 3.4 ug/L

MW-17
cDCE: 67 ug/L

MW-2

MW-26
cDCE: 4.2 ug/L

MW-27
cDCE: 2.0 ug/L

MW-9
cDCE: 1.9 ug/L

MW-3

MW-4
cDCE: 210 ug/L

MW-30
cDCE: 1.4 ug/L

MW-14
cDCE: 6.0 ug/L

MW-31
cDCE: 17 ug/L

MW-29
cDCE: 7.9 ug/L

MW-32

MW-6

MW-15
cDCE: 22 ug/L

MW-33

MW-7

MW-25

MW-18
cDCE: 4.9 ug/L

MW-22
cDCE: 12 ug/L

MW-19

MW-8
cDCE: 2.5 ug/L

MW-5
cDCE: 26 ug/L

MW-23
cDCE: 10 ug/L

MW-20
cDCE: 43 ug/L

MW-21
cDCE: 1.0 ug/L

MW-28
cDCE: 53 ug/L

MW-1
cDCE: 100 ug/L

70 ppb

40 ppb

100 ppb

50 ft

PLUME DELINEATION CRITERION
70 ug/L TYPE 1 DEFAULT RRS

cDCE Concentrations - MAR-2015
(Concentrations BDL at locations w/o results posted)

GRAPHIC SCALE
50 0 50 100 200
(IN FEET)
1 inch = 100 ft.

AREA
596,266 SF
13.688 ACRES

N

BASE MAP PROVIDED BY
ARMSTRONG LAND SURVEYING
DOUGLASVILLE, GEORGIA

PROJECT: 15513
FACILITY: HSI No. 10807
DATE REVISED: 11/09/2015
DATE: 09/30/15
SCALE: 1" = 100'
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FIGURE 22

TETRACHLOROETHYLENE (PCE) ISOCONCENTRATION CONTOUR & PLUME DELINEATION MAP

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD, SANDY SPRINGS, GA

Modeled Release Source Area

Modeled Maximum Downgradient Extent of Plume

Approx. Current Extent of Plume

W. BELLE ISLE ROAD

CHASTAIN CLEANERS

FORMER DRYCLEANER

APARTMENT BUILDING

CITCO/ RRFM

UST Basin

FUEL STATION

STORM WATER DETENTION BASIN

MW-25

MW-18 PCE: 3.4 ug/L

MW-22 PCE: 520 ug/L

MW-13D

MW-13S PCE: 22 ug/L

MW-26 PCE: 11 ug/L

MW-2

MW-17 PCE: 775 ug/L

MW-27 PCE: 2.0 ug/L

MW-9 PCE: 18 ug/L

MW-4

MW-3 PCE: 33 ug/L

MW-30 PCE: 10 ug/L

MW-14 PCE: 40 ug/L

MW-19 PCE: 7.5 ug/L

MW-8 PCE: 14 ug/L

MW-5 PCE: 170 ug/L

MW-23 PCE: 120 ug/L

MW-20 PCE: 160 ug/L

MW-21

MW-31

MW-29

MW-28 PCE: 53 ug/L

MW-16 PCE: 19 ug/L

MW-32

MW-6 PCE: 3.9 ug/L

MW-15 PCE: 1.9 ug/L

MW-33

MW-7

100 ppb

200 ppb

300 ppb

400 ppb

5 ppb

PLUME DELINEATION CRITERION
5 ug/L TYPE 1 DEFAULT RRS

PCE Concentrations - MAR-2015
(Concentrations BDL at locations w/o results posted)

GRAPHIC SCALE
50 0 50 100 200
(IN FEET)
1 inch = 100 ft.

AREA
596,266 SF
13.688 ACRES

ROSWELL ROAD
U.S. HIGHWAY 19
STATE ROUTE 9

LONG ISLAND TERRACE

LONG ISLAND DRIVE

N

BASE MAP PROVIDED BY
ARMSTRONG LAND SURVEYING
DOUGLASVILLE, GEORGIA

PROJECT: 15513
FACILITY: HSI No. 10807
DATE REVISED: 11/09/2015
DATE: 09/30/15
SCALE: 1" = 100'
APPROVED:

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FIGURE 23

TRICHLOROETHYLENE (TCE) ISOCONCENTRATION CONTOUR & PLUME DELINEATION MAP

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD, SANDY SPRINGS, GA

Modeled Release Source Area

Modeled Maximum Downgradient Extent of Plume

Approx. Current Extent of Plume

W. BELLE ISLE ROAD

CHASTAIN CLEANERS

APARTMENT BUILDING

FORMER DRYCLEANER

CITCO/ RRFM

UST Basin

FUEL STATION

STORM WATER DETENTION BASIN

MW-25

MW-18 TCE: 3.3 ug/L

MW-22 TCE: 6.7 ug/L

MW-13D

MW-13S TCE: 2.0 ug/L

MW-26 TCE: 1.8 ug/L

MW-19

MW-17

MW-2

MW-27

MW-8

MW-5 TCE: 5.2 ug/L

TCE: 72 ug/L

MW-9 TCE: 1.1 ug/L

MW-30

MW-3 TCE: 2.5 ug/L

MW-4 TCE: 120 ug/L

MW-14 TCE: 2.8 ug/L

MW-23 TCE: 2.8 ug/L

MW-20 TCE: 8.8 ug/L

MW-21

MW-31

MW-29 TCE: 1.1 ug/L

MW-28 TCE: 8.0 ug/L

MW TCE: 35 ug/L

MW-32

MW-6 TCE: 5.5 ug/L

MW-15 TCE: 3.7 ug/L

MW-33 TCE: 2.2 ug/L

MW-7

10 ppb
20 ppb
5 ppb

PLUME DELINEATION CRITERION
5 ug/L TYPE 1 DEFAULT RRS

PCE Concentrations - MAR-2015
(Concentrations BDL at locations w/o results posted)

AREA
596,266 SF
13.688 ACRES

GRAPHIC SCALE
50 0 50 100 200
(IN FEET)
1 inch = 100 ft.

BASE MAP PROVIDED BY
ARMSTRONG LAND SURVEYING
DOUGLASVILLE, GEORGIA

LONG ISLAND DRIVE

LONG ISLAND TERRACE

ROSWELL ROAD
U.S. HIGHWAY 19
STATE ROUTE 9

N

PROJECT: 15513
FACILITY: HSI No. 10807
DATE REVISED: 11/09/2015
DATE: 09/30/15
SCALE: 1" = 100'
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FIGURE 24

VINYL CHLORIDE (VC) ISOCONCENTRATION CONTOUR & PLUME DELINEATION MAP

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD, SANDY SPRINGS, GA

W. BELLE ISLE ROAD

CHASTAIN CLEANERS

MW-25

MW-18

MW-22

MW-13D

MW-13S

MW-26

FORMER DRYCLEANER

MW-2

MW-17

MW-27

MW-9

MW-3

MW-4

MW-30

MW-14

MW-31

MW-29

APARTMENT BUILDING

MW-19

MW-8

MW-5

UST Basin

CITCO/ RRFM

VC: 1.9 ug/L

2 ppb

MW-23

MW-20

VC: 2.2 ug/L

MW-21

Approx. Current Extent of Plume

Modeled Surrogate Release Source Area

STORM WATER DETENTION BASIN

FUEL STATION

MW-28

VC: 4.3 ug/L

MW-16

VC: 11 ug/L

4 ppb

2 ppb

MW-32

Modeled Maximum Downgradient Extent of Plume

2 ppb

MW-6

MW-15

MW-33

MW-7

PLUME DELINEATION CRITERION
2 ug/L TYPE 1 DEFAULT RRS

VC Concentrations - MAR-2015
(Concentrations BDL at locations w/o results posted)

AREA
596,266 SF
13.688 ACRES

ROSWELL ROAD
U.S. HIGHWAY 19
STATE ROUTE 9

LONG ISLAND TERRACE

LONG ISLAND DRIVE

GRAPHIC SCALE
50 0 50 100 200
(IN FEET)
1 inch = 100 ft.

N

BASE MAP PROVIDED BY
ARMSTRONG LAND SURVEYING
DOUGLASVILLE, GEORGIA

PROJECT: 15513
FACILITY: HSI No. 10807
DATE REVISED: 11/09/2015

DATE: 09/30/15
SCALE: 1" = 100'
APPROVED:

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MEI

FIGURE 25

Appendix C

Tables

TABLE 1 - Summary of Previous Investigation, Remediation, & Mitigation Activities

Investigation/ Report Date	Entity/Consultant/Contractor Performing Investigation/Remediation	Investigation/Remediation Summary	Document on file at EPD where work described/documented, Document Date, Location within Document
1992	U.S. EPA	Emergency removal of abandoned drums. Drums not associated with on-site drycleaner. No soil or groundwater sampling conducted	UC PPCAP, 28-NOV-05, Page 4
29-Oct-03	National Assessment Corp. (NAC)	Phase I ESA. No Phase II ESA recommended	UC PPCAP, 28-NOV-05, Page 4
14-Mar-05	Professional Service Industries, Inc.	Phase I ESA. Phase II ESA recommended	UC PPCAP, 28-NOV-05, Pages 4-5
30-Mar-05	Keramida Environmental Inc. (Keramida)	Phase II ESA. Eleven borings installed inside & outside drycleaner bay. Soil contaminated with PCE at 0.014 to 34.8 ppm discovered	UC PPCAP, 28-NOV-05, Page 5
29-Apr-05	Keramida	Installation of 4 monitoring wells (MWs) (MW-1 to MW-4). Groundwater PCE, TCE and cDCE contamination discovered.	UC PPCAP, 28-NOV-05, Page 5
May-June 2005	United Consulting	PPCAP Investigation. Installation of 23 direct push (DP) soil borings and 3 monitoring wells (MWs) (MW-5 to MW-11). Collection of 59 soil and 7 groundwater samples.	UC PPCAP, 28-NOV-05, Page 5-9 & 38-42, Tables 1 & 2
21-Feb-08	United Consulting	Vapor Intrusion Assessment & Mitigation Design	UC VIA & Mitigation Design Rpt, 21-FEB-2008
Nov. 2006 - June 2007	United Consulting	PPCSR Investigation. Installation of 49 DP borings. Installation of 5 MWs (MW-8 to MW-12). Field screen soil every 2 ft. Analyze one soil sample per boring. Define areas where soil corrective action necessary.	UC PPCSR, 10-JUN-08, Pages 13-21, Tables 1 & 2
Nov. 2007 - May 2008	United Consulting/ Greenleaf Environmental	Soil remediation project. Removal of 3,830.53 tons of impacted soil. Collection & analysis of 213 soil verification/confirmation samples and 146 split verification/confirmation samples (by MEI).	UC PPCSR, 10-JUN-08, Pages 34-45, Tables 7 & 8
11-Dec-07	Marion Environmental Inc.	Preliminary Corrective Action Plan (PCAP). Proposed soil vapor survey of site to identify impacted areas. Groundwater investigation proposed to follow soil vapor survey. Calculation of Risk Reduction Standards (RRS) proposed.	MEI PCAP, 11-Dec-07
May 2008 - May 2009	Marion Environmental Inc.	PCAP/CSR GW Investigation. Installation of 22 MWs (MW-13S to MW-33). Define extent of groundwater contamination on and off-site. Confirm no off-site soil impacts.	MEI CSR, 14-JAN-10, Pages 26-51, Tables 1-4
25-Aug-08	Marion Environmental Inc./ Atlantic Environmental Inc.	Off-Site indoor residential air sampling. Sample results confirm no impacts to off-site indoor air quality.	MEI CSR, 14-JAN-10, Pages 59-61, Appendix G
Sep-08	Marion Environmental Inc./ W.L. Gore & Assoc.	Soil vapor survey. Survey indentifies three distinct commingled plumes originating from one on-site and two off-site release sources.	MEI CSR, 14-JAN-10, Pages 51-58, Appendix F
Dec-2008	United Consulting	Installation of vapor intrusion mitigation system (VIMS) including: passive soil vapor barrier in former DC tenant bay, passive sub-slab depressurization system beneath former DC tenant bay, installation of eight 100-ft long, north-south horizontal borings beneath entire northern wing of	UC Vapor Mitigation System Implementation Rpt, 3-JUN-2009
May-2011	United Consulting	Shut down and abandon vapor intrustion mitigation system in accordance with VI mitigation, sampling and modeling showing no existing impacts or potential VI impacts in excess of 1E-05 carcinogenic or HQ=1 non-carcinogenic health effects.	UC Vapor System Sampling and Modeling for Closure Rpt, 25-FEB-2011. UC Vapor Intrusion Mitigation System (VIMS) Closure Report, 26-MAY-2011. EPD Approval Ltr 8-AUG-2011
Mar-2015	Marion Environmental Inc.	Groundwater sampling event. Site-wide comprehensive sampling of all wells. Document significant natural attenuation of groundwater contamination in on-site release source and downgradient areas. Vapor Intrusion Screening Levels calculated with US EPA VISL calculator. Updated RRS calculated.	MEI GW Monitoring Rpt., 14-MAY-15

TABLE 2
WELL CONSTRUCTION DETAILS
FOUNTAIN OAKS SHOPPING CENTER

Well ID	Date Installed	Consultant	Total Depth (ft BGS)	Depth to First Water (ft BGS)	Depth to Bedrock (ft BGS)	Well Diameter (inches)	Well Screen Interval From (ft BGS)	Well Screen Interval To (ft BGS)	Screen Length (ft)	TOC Elevation (ft MSL)	Ground Elevation (ft MSL)	Bedrock Elevation (ft MSL)
MW-1	*3/18/2005*	*Keramida*	*55*	*41*	*35*	*2*	*45*	*55*	*10*	*988.68*	---	*953.7*
MW-2	3/19/2005	Keramida	50	33.5	42	2	40	50	10	983.45	983.71	941.5
MW-3	3/19-20/05	Keramida	65	30	55	2	54	64	10	980.79	---	925.8
MW-4	3/20-21/05	Keramida	55	47	43	2	45	55	10	986.19	---	943.2
MW-5	6/17/2005	United	38.5	34	32	2	27.5	37.5	10	987.90	---	955.9
MW-6	6/20/2005	United	33	30	19.5	2	23	33	10	976.69	977.02	957.2
MW-7	6/20/2005	United	49	40	28.3	2	32	47	15	985.55	985.79	957.3
MW-8	11/6/2006	United	39	37	31	2	24	39	15	987.60	987.85	956.6
MW-9	11/6/2006	United	42	37	42	2	32	42	10	986.02	---	944.0
MW-10	*11/7-8/06*	*United*	*41*	*38.5*	*39*	*2*	*31*	*41*	*10*	*986.79*	---	*947.8*
MW-11	*11/7-8/06*	*United*	*46*	*44*	*43*	*2*	*34*	*46*	*12*	*1000.08*	---	*957.1*
MW-12	*11/8/2006*	*United*	*46*	*40.4*	*18*	*2*	*31*	*46*	*15*	*999.85*	---	*981.9*
MW-13D	5/13-30/08	Marion	100	38	58	2	90	100	10	982.10	982.48	924.1
MW-13S	5/14-15/08	Marion	49.5	38	58	2	34.5	49.5	15	982.35	982.35	924.4
MW-14	5/15-16/08	Marion	45	35	45	2	35	45	15	979.51	979.99	934.5
MW-15	5/16-17/08	Marion	39	32	39	2	29	39	10	976.05	976.57	937.1
MW-16	5/16/2008	Marion	40	30	40	2	30	40	10	982.05	981.60	942.1
MW-17	5/21-6/4/08	Marion	100	35	47.5	2	89	99	10	983.49	983.82	936.0
MW-18	6/6-7/08	Marion	45	35	35	2	35	45	10	995.19	995.58	960.2
MW-19	6/6/2008	Marion	40	31	39	2	30	40	10	990.85	991.16	951.9
MW-20	5/19/2008	Marion	42	28.6	42	2	30	40	10	985.13	985.64	943.1
MW-21	5/19/2008	Marion	38	28.6	25.5	2	23	38	15	990.13	990.65	964.6
MW-22	6/7/2008	Marion	35	28.6	32	2	25	35	10	987.66	988.06	955.7
MW-23	5/17/2008	Marion	40	31	31.5	2	19	39	20	984.13	984.58	952.6
MW-24	*5/7/2009*	*Marion*	*50*	*45*	*50*	*2*	*50*	*40*	*10*	*976.10*	*976.45*	*926.1*
MW-25	5/4/2009	Marion	44	?	24	2	44	34	10	995.32	995.75	971.3
MW-26	5/4/2009	Marion	59	57?	33	2	59	44	15	987.90	988.24	954.9
MW-27	5/4/2009	Marion	46	38	34	2	46	36	10	986.53	986.85	952.5
MW-28	5/5/2009	Marion	49	40	49	2	49	39	10	983.41	983.90	934.4
MW-29	5/12/2009	Marion	42	38?	42	2	42	32	10	982.68	979.07	940.7
MW-30	5/12/2009	Marion	34	27	34	2	34	24	10	972.84	968.18	938.8
MW-31	5/13/2009	Marion	23	20?	23	2	23	13	10	962.64	958.71	939.6
MW-32	5/13/2009	Marion	64	N/A	34	2	64	44	20	985.12	985.55	951.1
MW-33	5/5/2009	Marion	49	N/A	27.5	2	49	29	20	976.34	976.63	948.8

(1) Top of Casing (TOC) elevations for wells MW-2, 6, 7 and 8 and MW-13 to MW-33 surveyed by Armstrong Surveying, Douglasville, GA
(2) Top of casing elevations for monitoring wells MW-1, 3, 4, 5, 9, 10, 11 and 12 calculated by Marion Environmental
(3) Well construction information for wells MW-1 through MW-12 obtained from documents on file at Georgia Environmental Protection Division
(4) "BGS" means "Below Ground Surface"
(5) "ft MSL" means "feet above mean sea level"
(6) Monitoring wells MW-1, MW-10, MW-11, MW-12 & MW-24 destroyed. Data from destroyed wells in italics within table.

TABLE 3
FOUNTAIN OAKS SHOPPING CENTER
WATER LEVEL AND POTENTIOMETRIC DATA SUMMARY
(All Units in Feet)

Well #	Top of Casing Elevation (ft MSL)	Date	Depth to Water (ft BGS)	Water Level Elevation (ft MSL)
MW-1	988.68	21-Jun-05	38.52	950.16
		29-Oct-05	37.60	951.08
		11-Jun-06	NM	-
Destroyed during 2007-2008 soil excavation project.				
MW-2	983.45	21-Jun-05	33.42	950.03
		29-Oct-05	31.81	951.64
		11-Jun-06	34.19	949.26
		16-Jul-08	35.81	947.64
		31-Oct-08	37.25	946.20
		1-Dec-08	37.62	945.83
		15-Dec-08	37.71	945.74
		22-May-09	35.89	947.56
		10-Nov-09	34.26	949.19
		10-Mar-15	34.02	949.43
MW-3	980.79	21-Jun-05	30.35	950.44
		29-Oct-05	28.59	952.20
		11-Jun-06	31.18	949.61
		16-Jul-08	31.85	948.94
		31-Oct-08	37.52	943.27
		1-Dec-08	34.73	946.06
		15-Dec-08	34.83	945.96
		22-May-09	34.83	945.96
		10-Nov-09	31.35	949.44
		10-Mar-15	31.02	949.77
MW-4	986.19	21-Jun-05	NM	-
		29-Oct-05	38.63	947.56
		11-Jun-06	NM	-
		31-Oct-08	NM	-
		1-Dec-08	40.05	946.14
		15-Dec-08	39.44	946.75
		22-May-09	37.85	948.34
		10-Nov-09	36.28	949.91
		10-Mar-15	34.70	951.49
MW-5	987.90	21-Jun-05	30.29	957.61
		29-Oct-05	29.73	958.17
		11-Jun-06	30.40	957.50
		16-Jul-08	NM	-
		31-Oct-08	NM	-
		1-Dec-08	32.33	955.57
		15-Dec-08	32.42	955.48
		20-May-09	32.42	955.48
		10-Nov-09	30.94	956.96
		10-Mar-15	29.89	958.01

TABLE 3
FOUNTAIN OAKS SHOPPING CENTER
WATER LEVEL AND POTENTIOMETRIC DATA SUMMARY
(All Units in Feet)

Well #	Top of Casing Elevation (ft MSL)	Date	Depth to Water (ft BGS)	Water Level Elevation (ft MSL)
MW-6	976.69	21-Jun-05	28.86	947.83
		29-Oct-05	28.49	948.20
		11-Jun-06	28.70	947.99
		16-Jul-08	28.52	948.17
		31-Oct-08	29.25	947.44
		1-Dec-08	28.62	948.07
		15-Dec-08	29.15	947.54
		21-May-09	29.15	947.54
		10-Nov-09	28.82	947.87
		10-Mar-15	28.46	948.23
MW-7	985.55	21-Jun-05	39.24	946.31
		29-Oct-05	38.93	946.62
		11-Jun-06	43.35	942.20
		16-Jul-08	44.03	941.52
		1-Dec-08	45.40	940.15
		15-Dec-08	45.43	940.12
		20-May-09	45.43	940.12
		10-Nov-09	40.51	945.04
		10-Mar-15	42.51	943.04
MW-8	987.60	11-Jun-06	31.65	955.95
		16-Jul-08	NM	-
		1-Dec-08	33.42	954.18
		15-Dec-08	33.53	954.07
		20-May-09	33.53	954.07
		10-Nov-09	31.69	955.91
		10-Mar-15	31.41	956.19
MW-9	986.02	11-Jun-06	35.91	950.11
		31-Oct-08	39.94	946.08
		1-Dec-08	39.74	946.28
		15-Dec-08	39.85	946.17
		22-May-09	37.98	948.04
		10-Nov-09	36.13	949.89
		10-Mar-15	35.62	950.40
MW-10	986.79	11-Jun-06	37.35	949.44
Destroyed during 2007-2008 soil excavation project.				
MW-11	1000.08	11-Jun-06	37.62	962.46
Destroyed during 2007-2008 soil excavation project.				
MW-12	999.85	11-Jun-06	NM	-
Destroyed during 2007-2008 soil excavation project.				
MW-13D	982.10	7-Jul-08	83.58	898.52
		16-Jul-08	90.46	891.64
		31-Oct-08	53.72	928.38
		1-Dec-08	48.80	933.30
		15-Dec-08	47.21	934.89
		21-May-09	50.75	931.35
		10-Mar-15	43.25	938.85

TABLE 3
FOUNTAIN OAKS SHOPPING CENTER
WATER LEVEL AND POTENTIOMETRIC DATA SUMMARY
(All Units in Feet)

Well #	Top of Casing Elevation (ft MSL)	Date	Depth to Water (ft BGS)	Water Level Elevation (ft MSL)
MW-13S	982.35	7-Jul-08	34.52	947.83
		16-Jul-08	34.65	947.70
		31-Oct-08	36.08	946.27
		1-Dec-08	36.51	945.84
		15-Dec-08	36.60	945.75
		21-May-09	34.68	947.67
		10-Nov-09	33.17	949.18
		10-Mar-15	33.03	949.32
MW-14	979.51	8-Jul-08	37.02	942.49
		16-Jul-08	31.08	948.43
		31-Oct-08	32.65	946.86
		1-Dec-08	33.09	946.42
		15-Dec-08	33.13	946.38
		21-May-09	31.32	948.19
		10-Nov-09	29.60	949.91
		10-Mar-15	29.09	950.42
MW-15	976.05	7-Jul-08	34.64	941.41
		16-Jul-08	33.62	942.43
		31-Oct-08	34.71	941.34
		1-Dec-08	32.34	943.71
		15-Dec-08	34.35	941.70
		21-May-09	34.13	941.92
		10-Nov-09	Obstructed	
		10-Mar-15	33.91	942.14
MW-16	982.05	8-Jul-08	29.74	952.31
		16-Jul-08	29.55	952.50
		31-Oct-08	30.00	952.05
		1-Dec-08	30.33	951.72
		15-Dec-08	30.33	951.72
		21-May-09	30.01	952.04
		10-Nov-09	29.31	952.74
		10-Mar-15	28.81	953.24
MW-17	983.49	7-Jul-08	90.13	893.36
		16-Jul-08	92.36	891.13
		31-Oct-08	61.14	922.35
		1-Dec-08	53.85	929.64
		15-Dec-08	51.18	932.31
		21-May-09	52.23	931.26
		10-Nov-09	Obstructed	
		10-Mar-15	37.10	946.39

TABLE 3
FOUNTAIN OAKS SHOPPING CENTER
WATER LEVEL AND POTENTIOMETRIC DATA SUMMARY
(All Units in Feet)

Well #	Top of Casing Elevation (ft MSL)	Date	Depth to Water (ft BGS)	Water Level Elevation (ft MSL)
MW-18	995.19	7-Jul-08	34.60	960.59
		16-Jul-08	34.54	960.65
		31-Oct-08	34.72	960.47
		1-Dec-08	35.05	960.14
		15-Dec-08	34.97	960.22
		21-May-09	34.33	960.86
		10-Nov-09	34.25	960.94
		10-Mar-15	39.84	955.35
MW-19	990.85	7-Jul-08	35.37	955.48
		16-Jul-08	35.15	955.70
		31-Oct-08	34.84	956.01
		1-Dec-08	35.59	955.26
		15-Dec-08	35.64	955.21
		21-May-09	35.15	955.70
		10-Nov-09	34.81	956.04
		10-Mar-15	34.60	956.25
MW-20	985.13	7-Jul-08	30.16	954.97
		16-Jul-08	30.26	954.87
		31-Oct-08	30.84	954.29
		1-Dec-08	31.20	953.93
		15-Dec-08	31.15	953.98
		20-May-09	30.88	954.25
		10-Nov-09	29.91	955.22
		10-Mar-15	28.10	957.03
MW-21	990.13	8-Jul-08	DRY	NA
		16-Jul-08	DRY	NA
		31-Oct-08	34.25	955.88
		1-Dec-08	34.03	956.10
		15-Dec-08	34.04	956.09
		21-May-09	34.45	955.68
		10-Nov-09	33.88	956.25
		10-Mar-15	31.92	958.21
MW-22	987.66	7-Jul-08	29.47	958.19
		16-Jul-08	28.83	958.83
		31-Oct-08	NM	---
		1-Dec-08	29.68	957.98
		15-Dec-08	29.72	957.94
		20-May-09	28.80	958.86
		10-Nov-09	27.41	960.25
		10-Mar-15	26.01	961.65

TABLE 3
FOUNTAIN OAKS SHOPPING CENTER
WATER LEVEL AND POTENTIOMETRIC DATA SUMMARY
(All Units in Feet)

Well #	Top of Casing Elevation (ft MSL)	Date	Depth to Water (ft BGS)	Water Level Elevation (ft MSL)
MW-23	984.13	7-Jul-08	32.85	951.28
		16-Jul-08	31.76	952.37
		31-Oct-08	32.87	951.26
		1-Dec-08	33.12	951.01
		15-Dec-08	33.19	950.94
		20-May-09	31.87	952.26
		10-Nov-09	30.15	953.98
		10-Mar-15	29.60	954.53
MW-24	976.10	21-May-09	28.38	947.72
		10-Nov-09	Destroyed	
MW-25	995.32	22-May-09	42.41	952.91
		10-Nov-09	38.33	956.99
		10-Mar-15	34.49	960.83
MW-26	987.90	22-May-09	36.49	951.41
		10-Nov-09	36.15	951.75
		10-Mar-15	36.23	951.67
MW-27	986.53	22-May-09	38.13	948.40
		10-Nov-09	36.34	950.19
		10-Mar-15	35.80	950.73
MW-28	983.41	20-May-09	29.89	953.52
		10-Nov-09	28.64	954.77
		10-Mar-15	27.72	955.69
MW-29	982.68	20-May-09	39.75	942.93
		10-Nov-09	37.67	945.01
		10-Mar-15	39.11	943.57
MW-30	972.84	21-May-09	31.29	941.55
		10-Nov-09	29.65	943.19
		10-Mar-15	30.36	942.48
MW-31	962.64	21-May-09	21.25	941.39
		10-Nov-09	19.61	943.03
		10-Mar-15	20.30	942.34
MW-32	985.12	21-May-09	61.85	923.27
		10-Nov-09	35.44	949.68
		10-Mar-15	36.98	948.14
MW-33	976.34	21-May-09	39.71	936.63
		10-Nov-09	39.53	936.81
		10-Mar-15	38.82	937.52

Notes: (1) "ft MSL" means "feet Above Mean Sea Level"
(2) "ft BGS" means "feet Below Ground Surface"
(3) "NM" means "not measured"

Table 4 & 5 - Oct. 2015 CSR

TABLE 1: INVESTIGATION SOIL ANALYTICAL TESTING SUMMARY

CONSUL-TANT	BORING	DEPTH (feet)	OVM DATA (ppm)	MIBK	Ac	CD	Chl	cis-1,2-DCE	EB	IPB	MC	PCE	T	TCE	X	pH	SC
UNITED CONSULTING	EAB-1	18	232	-	-	-	-	-	-	-	-	**0.68**	-	-	-	-	-
		24	179	-	-	-	-	-	-	-	-	0.048	-	-	-	-	-
	EAB-2	10	239	-	-	-	-	-	-	-	-	***5***	-	-	-	-	-
		24	160	-	-	-	-	-	-	-	-	***2.6***	-	-	-	-	-
	EAB-3	14	256	-	-	-	-	-	-	-	-	***4.6***	-	-	-	-	-
		20	310	-	-	-	-	-	-	-	-	***40***	-	-	-	-	-
	EAB-4	6	143	-	-	-	-	-	-	-	-	***4.6***	-	-	-	-	-
		22	222	-	-	-	-	-	-	-	-	***69***	-	-	-	-	-
	EAB-5	6	226	-	-	-	-	-	-	-	-	***2.9***	-	-	-	-	-
		8	132	-	-	-	-	-	-	-	-	***2.1***	-	-	-	-	-
	EAB-6	2	135	-	-	-	-	-	-	-	-	***1.7***	-	-	-	-	-
		12	256	-	-	-	-	-	-	-	-	**0.91**	-	-	-	-	-
	EAB-7	4	157	-	-	-	-	-	-	-	-	0.12	-	-	-	-	-
		14	213	-	-	-	-	-	-	-	-	***16***	-	-	-	-	-
	EAB-8	2	112	-	-	-	-	-	-	-	-	***1.3***	-	-	-	-	-
		16	100	-	-	-	-	-	-	-	-	0.091	-	-	-	-	-
	EAB-9	4	60	-	-	-	-	-	-	-	-	***2.5***	-	-	-	-	-
		16	104	-	-	-	-	-	-	-	-	0.062	-	-	-	-	-
	EAB-10	4	61	-	-	-	-	-	-	-	-	**0.63**	-	-	-	-	-
		6	95	-	-	-	-	-	-	-	-	***2.2***	-	-	-	-	-
	EAB-11	4	324	-	-	-	-	-	-	-	-	***13***	-	-	-	-	-
		6	34.5	-	-	-	-	-	-	-	-	***40***	-	-	-	-	-
	EAB-12	10	112	-	-	-	-	-	-	-	-	***14***	-	-	-	-	-
		16	83.8	-	-	-	-	-	-	-	-	***3.7***	-	-	-	-	-
	EAB-13	10	52.1	-	-	-	-	-	-	-	-	***6.4***	-	-	-	-	-
		16	178	-	-	-	-	-	-	-	-	0.054	-	-	-	-	-
	EAB-14	14	333	-	-	-	-	-	-	-	-	***14***	-	-	-	-	-
		20	46.3	-	-	-	-	-	-	-	-	0.13	-	-	-	-	-
	EAB-15	6	31	-	-	-	-	-	-	-	-	**0.79**	-	-	-	-	-
		8	49.9	-	-	-	-	-	-	-	-	0.11	-	-	-	-	-
	EAB-16	14	300	-	-	-	-	-	-	-	-	***5.2***	-	-	-	-	-
		20	281	-	-	-	-	-	-	-	-	0.047	-	-	-	-	-
	EAB-17	10	173	-	-	-	-	-	-	-	-	**0.88**	-	-	-	-	-
		16	144	-	-	-	-	-	-	-	-	**0.6**	-	-	-	-	-
	EAB-18	8	88.6	-	-	-	-	-	-	-	-	***9.3***	-	-	-	-	-
		22	142	-	-	-	-	-	-	-	-	0.11	-	-	-	-	-
	EAB-21	4	24.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		16	26.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	EAB-22	6	205.5	-	-	-	-	-	-	-	-	0.092	-	-	-	-	-
		12	274	-	-	-	-	-	-	-	-	0.031	-	-	-	-	-
		22	217	-	-	-	-	-	-	-	-	0.0076	-	-	-	-	-
	EAB-23	6	79.1	-	-	-	-	-	-	-	-	0.16	-	-	-	-	-
		22	157.8	-	-	-	-	-	-	-	-	***16***	-	-	-	-	-
	EAB-24	8	93	-	-	-	-	-	-	-	-	0.058	-	-	-	-	-
		16	91.8	-	-	-	-	-	-	-	-	0.065	-	-	-	-	-
		22	72.6	-	-	-	-	-	-	-	-	0.013	-	-	-	-	-
	EAB-25	4	74	-	-	-	-	-	-	-	-	***2.3***	-	-	-	-	-
		16	104.2	-	-	-	-	-	-	-	-	***5.8***	-	-	-	-	-
		22	88.5	-	-	-	-	-	-	-	-	***2.8***	-	-	-	-	-
	EAB-26	4	382	-	-	-	-	-	-	-	-	0.035	-	-	-	-	-
		12	414	-	-	-	-	-	-	-	-	0.034	-	-	-	-	-
		20	263	-	-	-	-	-	-	-	-	BRL	-	-	-	-	-
	EAB-27	10	173	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		22	161	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	EAB-28	4	245	-	-	-	-	-	-	-	-	0.17	-	-	-	-	-
		16	385	-	-	-	-	-	-	-	-	**0.3**	-	-	-	-	-
		22	823	-	-	-	-	-	-	-	-	0.019	-	-	-	-	-
	EAB-29	6	1149	-	-	-	-	-	-	-	-	***11***	-	-	-	-	-
		12	437	-	-	-	-	-	-	-	-	0.02	-	-	-	-	-
		20	304	-	-	-	-	-	-	-	-	0.014	-	-	-	-	-
	EAB-30	10	>9999	-	-	-	-	-	-	-	-	***13***	-	-	-	-	-
		24	193	-	-	-	-	-	-	-	-	**0.42**	-	-	-	-	-
	EAB-31	8	39.6	-	-	-	-	-	-	-	-	0.028	-	-	-	-	-
		22	42.5	-	-	-	-	-	-	-	-	0.079	-	-	-	-	-
	EAB-32	10	28	-	-	-	-	-	-	-	-	0.012	-	-	-	-	-
		22	60.5	-	-	-	-	-	-	-	-	0.021	-	-	-	-	-
	EAB-33	4	69.1	-	-	-	-	-	-	-	-	0.025	-	-	-	-	-
		24	33.4	-	-	-	-	-	-	-	-	0.034	-	-	-	-	-
	EAB-34	4	25.1	-	-	-	-	-	-	-	-	**0.65**	-	-	-	-	-
		16	49.6	-	-	-	-	-	-	-	-	BRL	-	-	-	-	-
		22	30.8	-	-	-	-	-	-	-	-	**0.35**	-	-	-	-	-
	EAB-35	12	312	-	-	-	-	-	-	-	-	***5.8***	-	-	-	-	-
		22	82.1	-	-	-	-	-	-	-	-	0.044	-	-	-	-	-
	EAB-36	8	130	-	-	-	-	-	-	-	-	0.082	-	-	-	-	-
		18	1071	-	-	-	-	-	-	-	-	0.086	-	-	-	-	-
	EAB-37	8	276	-	-	-	-	-	-	-	-	**0.86**	-	-	-	-	-
		12	356	-	-	-	-	-	-	-	-	**0.82**	-	-	-	-	-
		22	535	-	-	-	-	-	-	-	-	0.061	-	-	-	-	-
	EAB-38	8	97	-	-	-	-	-	-	-	-	***4.1***	-	-	-	-	-
		22	244	-	-	-	-	-	-	-	-	**0.18**	-	-	-	-	-
	EAB-39	10	586	-	-	-	-	-	-	-	-	***5.7***	-	-	-	-	-
		16	284	-	-	-	-	-	-	-	-	0.079	-	-	-	-	-
	EAB-40	4	93.7	-	-	-	-	-	-	-	-	BRL	-	-	-	-	-
		12	149	-	-	-	-	-	-	-	-	**0.47**	-	-	-	-	-
		24	69.8	-	-	-	-	-	-	-	-	0.089	-	-	-	-	-
	EAB-41	14	343	-	-	-	-	-	-	-	-	**0.8**	-	-	-	-	-
		24	136	-	-	-	-	-	-	-	-	0.03	-	-	-	-	-
	EAB-42	6	22.7	-	-	-	-	-	-	-	-	0.13	-	-	-	-	-
		16	41.6	-	-	-	-	-	-	-	-	0.059	-	-	-	-	-
		22	345	-	-	-	-	-	-	-	-	***1.9***	-	-	-	-	-
	EAB-43	6	53.7	-	-	-	-	-	-	-	-	0.024	-	-	-	-	-
		16	136	-	-	-	-	-	-	-	-	***1.2***	-	-	-	-	-
		24	152.2	-	-	-	-	-	-	-	-	***0.79***	-	-	-	-	-
	EAB-44	10	33.7	-	-	-	-	-	-	-	-	BRL	-	-	-	-	-
		18	61.8	-	-	-	-	-	-	-	-	**0.54**	-	-	-	-	-
	EAB-45	14	32.6	-	-	-	-	-	-	-	-	***1.7***	-	-	-	-	-
		22	37.1	-	-	-	-	-	-	-	-	BRL	-	-	-	-	-
	EAB-46	4	17.4	-	-	-	-	-	-	-	-	BRL	-	-	-	-	-
		16	19.2	-	-	-	-	-	-	-	-	**0.34**	-	-	-	-	-
		24	23.5	-	-	-	-	-	-	-	-	BRL	-	-	-	-	-
	EAB-47	6	22.6	-	-	-	-	-	-	-	-	0.17	-	-	-	-	-
		16	141	-	-	-	-	-	-	-	-	**1.1**	-	-	-	-	-
		22	104.9	-	-	-	-	-	-	-	-	***1.2***	-	-	-	-	-
	EAB-48	2	6.5	-	-	-	-	-	-	-	-	0.047	-	-	-	-	-
		14	13.7	-	-	-	-	-	-	-	-	0.034	-	-	-	-	-
	EAB-49	8	3.9	-	-	-	-	-	-	-	-	BRL	-	-	-	-	-
		22	8.3	-	-	-	-	-	-	-	-	BRL	-	-	-	-	-
	HAB-1	2	-	-	-	-	-	-	-	-	-	**0.76**	-	-	-	-	-
		4	-	-	-	-	-	-	-	-	-	**0.4**	-	-	-	-	-
	HAB-2	5	-	-	-	-	-	-	-	-	-	***4***	-	-	-	-	-
KERAMIDA	KB-1	4-6	73.2	<0.012	<0.119	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	**0.683**	<0.006	<0.006	<0.012	-	-
		12-14	85	<0.013	<0.13	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	***34.8***	<0.006	<0.006	<0.012	-	-
		26-27	270	<0.012	<0.116	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	0.014	<0.006	<0.006	<0.012	-	-

Table 4 & 5 - Oct. 2015 CSR

TABLE 1: INVESTIGATION SOIL ANALYTICAL TESTING SUMMARY

CONSUL-TANT	BORING	DEPTH (feet)	OVM DATA (ppm)	MIBK	Ac	CD	Chl	cis-1,2-DCE	EB	IPB	MC	PCE	T	TCE	X	pH	SC
UNITED CONSULTING	KB-1A	12 to 14	72.8	-	-	-	-	-	-	-	-	***13 (0.13)***	-	-	-	-	-
	KB-1B	5-Jan	236	-	-	-	-	-	-	-	-	-	-	-	-	5.39	438
		10-Jan	360	<0.0057	<0.057	<0.0057	<0.0028	0.0045	<0.0028	<0.0028	<0.0028	***4.1***	<0.0028	0.0038	0.0056	-	-
		18-Jan	616	<0.0063	<0.063	<0.0063	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	**0.4**	<0.0032	<0.0032	<0.0064	-	-
		18.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		21	>2999	<0.0057	<0.057	<0.0057	<0.0029	0.01	<0.0029	<0.0029	<0.0029	***44 (0.058)***	<0.0029	0.013	<0.0058	5.98	415
		23.5		-	-	-	-	-	-	-	-	-	-	-	-		
		24	91	<0.0063	<0.063	<0.0063	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	0.022	<0.0031	<0.0031	<0.0062	-	-
KERAMIDA	KB-2	12-14	0.3	<0.012	<0.123	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	0.072	<0.006	<0.006	<0.012	-	-
		34-35.4	1.5	<0.013	<0.132	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	0.1	<0.006	<0.006	<0.012	-	-
	KB-3	24-26	82.6	<0.011	<0.114	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	0.05	<0.006	<0.006	<0.012	-	-
	KB-4	16-18	5.3	<0.013	<0.13	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	**0.184**	<0.006	<0.006	<0.012	-	-
	KB-5	4-6	0.9	<0.011	<0.115	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	0.029	<0.006	<0.006	<0.012	-	-
		12-14	0.9	<0.013	<0.132	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	0.068	<0.007	<0.007	<0.0013	-	-
		28-29.5	1.2	<0.011	<0.111	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.012	-	-
	KB-6	28-30	26.1	<0.012	<0.119	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	0.026	<0.006	<0.006	<0.012	-	-
	KB-7	0.5-1	0.3	<0.013	<0.127	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	**0.21**	<0.006	<0.006	<0.012	-	-
	KB-8	2.5-3	22.9	<0.012	<0.119	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.012	-	-
	KB-9	2.5-3	9.1	<0.011	<0.115	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	0.066	<0.006	<0.006	<0.012	-	-
	KB-10	1.5-2	7.6	<0.013	<0.128	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	**0.2**	<0.006	<0.006	<0.012	-	-
	KB-11	0-2	6.6	<0.012	<0.119	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	0.071	<0.006	<0.006	<0.012	-	-
		10-Aug	8.2	<0.012	<0.118	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	0.124	<0.006	<0.006	<0.012	-	-
		18-19	2.8	<0.012	<0.119	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	0.027	<0.006	<0.006	<0.012	-	-
UNITED CONSULTING	DP-1	5	0.6	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.0051	<0.003	<0.003	<0.006	-	-
		10	ND	-	-	-	-	-	-	-	-	<0.0031	-	-	-	-	-
	DP-2	2.5	ND	<0.0065	<0.065	<0.0065	<0.0033	<0.0033	<0.0033	<0.0033	<0.0033	0.0038	<0.0033	<0.0033	<0.0033	-	-
		10	ND	-	-	-	-	-	-	-	-	<0.0034	-	-	-	-	-
	DP-3	5	ND	<0.0065	<0.065	<0.0065	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	-	-
	DP-4	5	0.2	<0.0062	<0.062	<0.0062	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	-	-
		15	188.3	<0.0069	<0.069	<0.0069	<0.0034	0.005	<0.0034	<0.0034	<0.0034	0.054 (<0.0088)	<0.0034	<0.0034	<0.0034	-	-
	DP-5	5	0.6	<0.0055	<0.055	0.0064	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	<0.0028	-	-
	DP-6	5	ND	<0.0053	<0.053	<0.0053	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	-	-
		10	0.2	<0.0058	<0.058	<0.0058	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	-	-
	DP-7	5	26.5	<0.0053	<0.053	<0.0053	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026 (<0.0088)	<0.0026	<0.0026	<0.0026	-	-
		10	20.7	-	-	-	-	-	-	-	-	**0.55**	-	-	-	-	-
		15	33.1	-	-	-	-	-	-	-	-	0.095	-	-	-	-	-
	DP-8	1	4.2	<0.0075	<0.075	<0.0075	<0.0038	<0.0038	<0.0038	<0.0038	<0.0038	<0.0038	<0.0038	<0.0038	<0.0038	-	-
		10	2.2	-	-	-	-	-	-	-	-	<0.0033	-	-	-	-	-
	DP-9	5	5	<0.0057	<0.057	<0.0057	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	0.1 (<0.0088)	<0.0029	<0.0029	<0.0029	-	-
		-	92.8	<0.0058	<0.058	<0.0058	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	0.07	<0.0029	<0.0029	<0.0029	-	-
	DP-10	5	ND	<0.0061	<0.061	<0.0061	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	-	-
	DP-11	5	1	<0.0068	<0.068	<0.0068	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	0.028	<0.0034	<0.0034	<0.0034	-	-
		10	ND	-	-	-	-	-	-	-	-	<0.0031	-	-	-	-	-
	DP-12	2.5	ND	<0.0064	<0.064	<0.0064	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	-	-
	MW-5	15	64.2	<0.0064	<0.064	<0.0064	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0064	-	-
	MW-6	10	0.7	<0.0062	<0.062	<0.0062	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0062	-	-
	MW-7	5	ND	<0.0063	<0.063	<0.0063	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	<0.0064	-	-
	I-DP-1	1	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		3	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		10	78.2	<0.0056	<0.056	<0.0056	<0.0028	0.077	<0.0028	<0.0028	<0.0028	0.13	<0.0028	0.013	<0.0056	8.9	397
		12	7.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		15	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		16	169	<0.0062	<0.062	<0.0062	<0.0031	0.0039	<0.0031	<0.0031	<0.0031	0.088	<0.0031	<0.0031	<0.0031	9.7	430
		18	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		20	49.9	-	-	-	-	-	-	-	-	-	-	-	-	6	424
	I-DP-2	1	>2999	<0.0059	0.066	<0.0059	0.0065	0.025	0.0062	0.0033	<0.0029	***350 (3.9)***	0.016	**0.21E**	0.026	-	-
		3	479	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		5	1348	<0.006	0.073	<0.006	<0.003	0.041	<0.003	<0.003	<0.003	***120 (0.080)***	<0.003	0.037	<0.009	6.65	395
		6		-	-	-	-	-	-	-	-	-	-	-	-	-	-
		8		-	-	-	-	-	-	-	-	-	-	-	-	-	-
		9	459	0.008	<0.063	<0.0063	0.0078	<0.0031	0.013	0.0036	<0.0031	***380 (<0.0088)***	0.0059	0.023	0.0309	4.97	376
		10.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-
		14	3.2	<0.0067	<0.067	<0.0067	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	0.012	<0.0034	<0.0034	<0.0068	-	-
	I-DP-3	1	6.4	-	-	-	-	-	-	-	-	-	-	-	-	5.37	376
		3	27.4	<0.0061	<0.061	<0.0061	<0.003	<0.003	<0.003	<0.003	<0.003	0.092	<0.003	<0.003	0.006	5.73	411
		5.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-
		8		-	-	-	-	-	-	-	-	-	-	-	-	-	-
		9	ND	<0.0074	<0.074	<0.0074	<0.0037	<0.0037	<0.0037	<0.0037	<0.0037	0.013	<0.0037	<0.0037	0.0074	4.78	358
		14.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-
		20.5		-	-	-	-	-	-	-	-	-	-	-	-	-	-
		22	ND	<0.0059	<0.059	<0.0059	<0.003	<0.003	<0.003	<0.003	<0.003	0.086	<0.003	<0.003	<0.006	5.18	347
	D-DP-1	1	ND	<0.0057	<0.057	<0.0057	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	<0.0058	7.03	408
	D-DP-2	1	ND	<0.0058	<0.058	<0.0058	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	<0.0029	<0.0058	-	-
	D-DP-3	1	ND	<0.0054	<0.054	<0.0054	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027	<0.0054	-	-
	MW-8	5	ND	<0.0057	0.16	<0.0057	<0.0029	<0.0029	<0.0029	<0.0029	0.012	<0.0029	<0.0029	<0.0029	<0.0086	-	-
	MW-9	28	13.2	<0.0062	<0.062	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	<0.0093	-	-
	MW-10	11	29.1	<0.0058	<0.058	<0.058	<0.0029	0.02	<0.0029	<0.0029	<0.0029	0.047	<0.0029	0.0075	<0.0087	-	-
	MW-11	5	119	<0.006	<0.060	<0.006	<0.003	0.0075	<0.003	<0.003	<0.003	***4.8 (<0.0084*)***	<0.003	0.0058	<0.009	-	-
		13	460	<0.0058	0.098	<0.0058	<0.0029	0.2	<0.0029	<0.0029	<0.0029	***5.8 (0.05*)***	<0.0029	0.059	<0.0086	-	-
		15	944	<0.0059	<0.059	<0.0059	<0.0029	0.0091	<0.0029	<0.0029	<0.0029	***11.0 (0.031*)***	<0.0029	0.0099	<0.0088	-	-
		20	179	<0.0069	0.22	<0.0069	<0.0034	0.0081	<0.0034	<0.0034	<0.0034	0.49 (<0.0084*)	<0.0034	<0.0034	<0.013	-	-
	MW-12	5	21.2	<0.007	<0.07	<0.007	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035	**0.78**	<0.0035	<0.0035	<0.0105	-	-
		10	20.4	<0.0064	<0.064	<0.0064	<0.0032	<0.0032	<0.0032	<0.0032	<0.0032	0.1	<0.0032	<0.0032	<0.0096	-	-
	B-MW-2	30	4.1	<0.006	<0.060	<0.006	<0.003	<0.003	<0.003	<0.003	<0.003	0.014	<0.003	<0.003	<0.003	-	-
		43	ND	<0.0061	<0.061	<0.0061	<0.0031	<0.0031	<0.0031	<0.0031	<0.0031	0.033	<0.0031	<0.0031	<0.0031	-	-
EPD	**NC**			**3.3**	**2.74**	**DL**	**418**	**0.53**	**20**	**21.88**	**0.08**	**0.18**	**14.4**	**0.13**	**20**		
	Type 4 RRS			*367.18*	*25.44*	*146.2*	*14.21*	*1.98*	*162.15*	*143.83*		*1.183*	*119.33*	*0.55*	*1,370*		

NOTES

–: Not analyzed

Concentrations in (#) are samples analyzed using the toxicity characteristic leaching procedure (TCLP) or synthetic precipitate leaching proceedure (SPLP).

Some results are reported below laboratory reporting limits to levels of the method detection limit.

Constituents not listed were below laboratory reporting limits

Bold concentrations are greater than the respective NC

Italicized concentrations are greater than the respective Type IV RRS

All results in milligrams per kilogram (mg/Kg), except TCLP analysis in milligrams per liter (mg/L),and unless otherwise noted.

MIBK is 4-Methyl-2-Pentanone
Ac is Acetone
CD is Carbon Disulfide
Chl is Chloroform
Cis-1,2-DCE is cis-1,2-Dichloroethene
pH is log concnetratio of Hydrogen ions (in Standard Units, SU)
SC is Specific Conductance in micro mohs per centimeter

EB is Ethyl Benzene
IPB is Isopropylbenzene
MC is Methylene Chloride
PCE is Tetrachloroethene
T is Toluene
TCE is Trichloroethene
X is Xylene

TABLE 6

Fountain Oaks Shopping Center

Soil Analytical Results - Marion Environmental

(All concentration units in milligrams per kilogram (mg/kg))

Boring	Date	Depth (ft)	Acetone	Benzene	2-Butanone (MEK)	cis-1,2,-Dichloroethene (cDCE)	Ethylbenzene	p-Isopropyltoluene	Methyl tert-butyl ether	Tetrachloroethene (PCE)	Trichloroethene (TCE)
Monitoring Well Borings											
MW-13D	5/13/2008	35-38	**0.18**	<0.0013	<0.013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
MW-13S	5/15/2008	32-38	<0.063	<0.0013	<0.013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
MW-14	5/15/2008	10-15	**0.120**	<0.0012	<0.012	<0.0012	**0.0014**	**0.0082**	<0.0012	<0.0012	<0.0012
	5/16/2008	30-35	**0.097**	<0.0014	<0.014	<0.0014	<0.0014	<0.0014	<0.0014	**0.0098**	<0.0014
MW-15	5/16/2008	33-36	<0.061	<0.0012	<0.012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012
MW-16	5/17/2008	5-10	<0.058	<0.0012	<0.012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012
	5/17/2008	25-30	<0.059	<0.0012	<0.012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012
MW-17	5/21/2008	30-35	<0.059	<0.0012	<0.012	<0.0012	<0.0012	<0.0012	<0.0012	**0.014**	<0.0012
MW-18	6/6/2008	25-30	<0.056	<0.0011	**0.013**	<0.0011	<0.0011	<0.0011	<0.0011	**0.0011**	<0.0011
MW-19	6/6/2008	25-30	<0.064	<0.0013	<0.013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
MW-20	5/19/2008	20-25	**0.27**	<0.0011	**0.12**	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
(Dup. 2)	5/19/2008	20-25	**0.29**	<0.0012	**0.091**	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012
	5/19/2008	30-35	<0.066	<0.0013	**0.020**	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
MW-21	5/19/2008	5-10	**0.079**	**0.0012**	**0.099**	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
	5/19/2008	25-27	<0.054	**0.0012**	<0.011	<0.0011	<0.0011	<0.0011	**0.010**	<0.0011	<0.0011
MW-22	6/9/2008	25-30	<0.056	<0.0011	<0.011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
(Dup.)	6/9/2008	25-30	<0.066	<0.0013	<0.013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
MW-23	5/17/2008	30-33	<0.053	<0.0011	<0.011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
MW-24	5/4/2009	10-15	**0.081**	<0.0012	<0.012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012
		25-30	<0.064	<0.0013	<0.013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
MW-25	5/4/2009	16-24	<0.063	<0.0012	<0.012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012
MW-26	No Sample Collected in Soil Remediation Area, with EPD Approval										
MW-27	No Sample Collected in Soil Remediation Area, with EPD Approval										
MW-28	5/5/2009	5-10	<0.063	<0.0012	<0.012	<0.012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012
		30-35	<0.065	**0.0016**	<0.013	<0.013	<0.0013	<0.0013	**0.015**	<0.0013	<0.0013
MW-29	5/12/2009	5-7	<0.063	<0.0012	<0.012	<0.012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012
		37-39	<0.062	<0.012	<0.012	<0.012	<0.0012	**0.0070**	<0.0012	<0.0013	<0.0013
MW-30	5/12/2009	25-27	<0.057	<0.0011	<0.011	<0.011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
MW-31	5/13/2009	13-15	<0.066	<0.0013	<0.013	<0.013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
MW-32	5/5/2009	25-29	<0.058	<0.0012	<0.012	<0.012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012
MW-33	5/5/2009	25-27.5	<0.055	<0.0011	<0.011	<0.011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
Direct Push Soil Borings											
MEIB-1	8/21/2008	34-35	<0.060	<0.0012	<0.012	<0.0012	<0.0012	<0.0012	<0.0012	**0.0032**	<0.0012
MEIB-2	8/21/2008	34-35	<0.060	<0.0012	<0.012	**0.0027**	<0.0012	<0.0012	<0.0012	**0.048**	**0.0015**
MEIB-3	8/21/2008	29-30	<0.064	<0.0013	<0.013	ND	<0.0013	<0.0013	<0.0013	**0.040**	**0.0039**
MEIB-4	8/21/2008	29-30	<0.064	<0.0013	<0.013	**0.0024**	<0.0013	<0.0013	<0.0013	**0.300**	**0.003**

Table 7 - Oct. 2015 CSR

TABLE 7: SOIL VERIFICATION ANALYTICAL TESTING SUMMARY

Verification Sample Description	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	1,2-DCB	Chlorobenzene	First Re-Verification Sample Description	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	1,2-DCB	Chlorobenzene	Second Re-Verification Sample Description	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	1,2-DCB	Chlorobenzene	Third Re-Verification Sample Description	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	1,2-DCB	Chlorobenzene	Fourth Re-Verification Sample Description	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	1,2-DCB	Chlorobenzene
SV-1 @ 11'	**5.9**	0.012	0.044	<0.0057	<0.0057	<0.0057	<0.0057	Excavation expanded into adjacent area																															
SV-2 @ 8'	**1.3**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	Excavation expanded into adjacent area																															
SV-3 @ 8'	**210**	<26	<26	<26	<26	<26	<26	Excavation expanded into adjacent area																															
SV-4 @ 7'	**11**	<0.25	0.28	<0.25	<0.25	<0.25	<0.25	Excavation expanded into adjacent area																															
SV-5 @ 10'	**1.3**	0.0063	0.018	<0.0041	<0.0041	<0.0041	<0.0041	Excavation expanded into adjacent area																															
SV-6 @ 7'	**4.9**	0.033	0.0051	<0.0051	<0.0051	<0.0051	<0.0051	Excavation expanded into adjacent area																															
SV-7 @ 7'	0.065	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044																															
SV-8 @ 7'	**12**	0.047	0.0063	<0.0052	<0.0052	<0.0052	<0.0052	Excavation expanded into adjacent area																															
SV-9 @ 7'	**12**	0.046	0.11	<0.0062	<0.0062	<0.0062	<0.0062	Excavation expanded into adjacent area																															
VS-10 @ 2E-A3	1.1	0.011	0.02	<0.0044	<0.0044	<0.0044	<0.0044																															
VS-11 @ 3B-A3	0.11	<0.0048	<0.0054	<0.0048	<0.0048	<0.0048	<0.0048																															
VS-12 @ 2W-A3	0.16	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041																															
SV-13 @ 10N-A15	0.0091	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049																															
SV-14 @ 10W-A15	0.036	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055	<0.0055																															
SV-15 @10S-A15	0.039	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047																															
SV-16 @10E-A15	0.32	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044																															
SV-17 @ 18B(NE)-A15	0.046	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045																															
SV-18 @ 23 B(W)-A15	0.087	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048																															
SV-19 @ 16N-A15	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058																															
SV-20 @ 18W-A15	0.066	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048																															
SV-21 @ 18S-A15	0.0082	<0.0037	<0.0037	<0.0037	<0.0037	<0.0037	<0.0037																															
SV-22 @ 18E-A15	0.0063	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051																															
SV-23 @ 23B(SE)A-15	0.02	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048																															
SV-24 @ 5N-A15	0.03	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046																															
SV-25 @ 5W-A15	0.063	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043																															
SV-26 @ 5E-A15	0.061	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045																															
SV-27 @ 5S-A15	0.36	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046																															
SV-28 @ 8N-A13	0.011	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047																															
SV-29 @8N-A12	0.28	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045																															
SV-30 @ 8S-A11	0.078	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045																															
SV-31 @ 10E-A13	0.033	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005																															
SV-32-13N-A12	0.01	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051																															
SV33-13W-A11	0.0088	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005																															
SV-34-13S-A11	0.13	<0.0046	0.0051	<0.0046	<0.0046	<0.0046	<0.0046																															
SV-35-13E-A11	0.09	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049																															
SV-36-B(SE)-A11	0.049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049																															
SV-37-B(NW)-A12	0.029	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047																															
SV-38 @ 20N-A13	0.0059	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045																															
SV-39 @ 20W-A13	0.035	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047																															
SV-40 @ 20S-A13	0.039	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005																															
SV-41 @ 20E-A13	0.0077	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0034																															
SV-42 @ 4N-A12	0.6	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041																															
SV-43 @ 4W-A12	0.27	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004																															
SV-44 @ 4S-A11	0.0069	<0.004	0.3	<0.004	<0.004	<0.004	<0.004																															
SV-45 @ 4E-A13	0.2	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041																															
SV-46 @ 13N-A11	0.028	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048																															
SV-47 @ 13W-A11	0.017	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048																															
SV-48 @ 13S-A11	0.043	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052																															
SV-49 @ 8N-A11	0.062	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049																															
SV-50 @ 8W-A11	0.29	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047																															
SV-51 @ 8S-A11	0.15	<0.0054	<0.0054	<0.0054	<0.0054	<0.0054	<0.0054																															
SV-52 @ 3N-A11	0.088	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048																															
SV-53 @ 3W-A11	**1.2**	0.01	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	SV-77 @ B(W)-A11	0.049	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048																											
								SV-78 @ 8W-A11	0.25	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051																													
SV-54 @ 3S-A11	0.089	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042																															
SV-55 @ B(E)-A11	0.023	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005																															
SV-56 @ B(W)-A11	0.047	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049																															
SV-57 @ B(N)-A8	0.028	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046																															
SV-58 @ B(S)-A8	0.026	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048																															
SV-59 @ 13W-A8	0.054	0.0059	<0.0057	<0.0057	<0.0057	<0.0057	<0.0057																															
SV-60 @ 8W-A8	0.81	0.026	0.077	<0.0047	<0.0047	<0.0047	<0.0047																															
SV-61 @ 3W-A8	0.76	0.0066	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041																															
SV-62 @ 8E-A8	**3.1**	0.021	1.1	0.0077	<0.004	<0.004	<0.004	Excavation expanded into adjacent area																															
SV-63 @ B(N)-A9	0.04	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053																															
SV-64 @ B(S)-A9	**1.7**	0.015	0.047	<0.0044	<0.0044	<0.0044	<0.0044	SV-73 @ B(S)-A9	**5.6**	0.0057	0.09	<0.0057	<0.0057	<0.0057	<0.0057																											
								SV-74 @ B(N)-A9	**1.2**	0.012	0.035	<0.0045	<0.0045	<0.0045	<0.0045	SV-122 @ B(N)-A9	0.15	<0.0057	<0.0057	<0.0057	<0.0057	<0.0057	<0.0057																							
								SV-76 @ 17W-A9	0.049	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	SV-123 @ B(S)-A9	0.016	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049																							
SV-65 @ 22N-A9	0.058	<0.0043	0.0049	<0.0043	<0.0043	<0.0043	<0.0043																															
SV-66 @ 17N-A9	0.073	<0.0045	0.0076	<0.0045	<0.0045	<0.0045	<0.0045																															
SV-67 @ 22W-A9	1	0.015	0.055	<0.0046	<0.0046	<0.0046	<0.0046																															
SV-68 @ 17W-A9	**1.2**	0.023	0.044	<0.0042	<0.0042	<0.0042	<0.0042	SV-75 @ B(W)-A9	0.014	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046																											
SV-69 @ 22S-A9	0.39	0.011	0.021	<0.0048	<0.0048	<0.0048	<0.0048																															
SV-70 @ 17S-A9	0.073	<0.0047	0.0047	<0.0047	<0.0047	<0.0047	<0.0047																															
SV-71 @ 22E-A9	0.59	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044																															
SV-72 @ 17E-A9	0.016	<0.0059	<0.0059	<0.0059	<0.0059	<0.0059	<0.0059																															
SV-79 @ 13N-A16	**1.5**	0.011	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	SV-115 @ 13NW-A16	**1.3**	0.022	0.0073	<0.0037	<0.0037	<0.0037	<0.0037	SV-127 @ 13' MW-A16	0.068	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052													
SV-80 @ 8N-A16	0.3	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004																															
SV-81 @ 3N-A16	0.045	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041																															
SV-82 @ 13WN-A16	0.053	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046																															
SV-83 @ 8WN-A16	0.013	0.0075	0.13	<0.0047	<0.0047	<0.0047	<0.0047																															
SV-84 @ 3WN-A16	<0.0043	0.077	0.019	<0.0043	<0.0043	<0.0043	<0.0043																															
SV-85 @ 13WS-A16	0.022	0.054	0.2	<0.0039	<0.0039	<0.0039	<0.0039																															
SV-86 @ 8WS-A16	0.013	0.035	0.058	<0.0042	<0.0042	<0.0042	<0.0042																															
SV-87 @ 3WS-A16	0.0054	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049																															
SV-88 @ 13SW-A16	**2.1**	0.3	0.36	0.0085	<0.0045	<0.0045	<0.0045	SV-116 @ 16SE-A16	0.0065	0.0078	0.52	<0.0041	<0.0041	<0.0041	<0.0041																											
								SV-117 @ 16 S-A16	0.0055	0.0044	0.021	<0.0043	<0.0043	<0.0043	<0.0043																													
								SV-118 @ 16W-A16	0.015	0.023	0.44	0.018	<0.0039	<0.0039	<0.0039																													
								SV-119 @ 16SN-A16	0.32	0.023	0.055	<0.0051	<0.0051	<0.0051	<0.0051																													
SV-89 @ 8SW-A16	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004																															
SV-90 @ 3SW-A16	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049																															
SV-91 @ 13SE-A16	0.0082	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042																															
SV-92 @ 8SE-A16	0.0096	0.0068	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046																															
SV-93 @ 3SE-A16	0.027	<0.0039	<0.0039	<0.0039	<0.0039	<0.0039	<0.0039																															
SV-94 @ B(NW)-A16	0.024	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005																															
SV-95 @ B(NWCN)-A16	0.2	<0.0057	<0.0057	<0.0057	<0.0057	<0.0057	<0.0057																															
SV-96 @ B(NWCS)-A16	0.08	<0.0053	0.0065	<0.0053	<0.0053	<0.0053	<0.0053																															
SV-97 @ B(SWCN)-A16	0.097	<0.0055	0.016	<0.0055	<0.0055	<0.0055	<0.0055																															

Table 7 - Oct. 2015 CSR

TABLE 7: SOIL VERIFICATION ANALYTICAL TESTING SUMMARY

Verification Sample Description	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	1,2-DCB	Chlorobenzene	First Re-Verification Sample Description	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	1,2-DCB	Chlorobenzene	Second Re-Verification Sample Description	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	1,2-DCB	Chlorobenzene	Third Re-Verification Sample Description	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	1,2-DCB	Chlorobenzene	Fourth Re-Verification Sample Description	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Chloroform	1,2-DCB	Chlorobenzene
SV-98 @ B(SWCS)-A16	0.3	0.02	0.14	<0.0042	<0.0042	<0.0042	<0.0042																																
SV-99 @ B9SW)-A16	**1.3**	0.15	0.13	<0.0045	<0.0045	<0.0045	<0.0045	SV-120 @ B(SW)-A16	0.14	0.01	0.036	<0.0043	<0.0043	<0.0043	<0.0043																								
SV-100 @ B(SE)-A16	0.031	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005																																
SV-101 @ B(SEC)-A16	0.019	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047																																
SV-102 @ 18N-A7	0.082	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052																																
SV-105 @ 18N-A7	0.082	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052																																
SV-106 @ 18W-A7	0.28	0.0099	0.027	<0.0047	<0.0047	<0.0047	<0.0047																																
SV-107 @ 18E-A7	0.41*	0.011	0.039	<0.0047	<0.0047	<0.0047	<0.0047	SV-121 @ 18E-A7	0.14	<0.0054	0.012	<0.0054	<0.0054	<0.0054	<0.0054																								
SV-108 @ B-A7	0.12	<0.0045	0.0083	<0.0045	<0.0045	<0.0045	<0.0045																																
SV-109 @ B-A10	0.18	0.02	0.032	<0.0053	<0.0053	<0.0053	<0.0053																																
SV-110 @ 22N-A10	0.16	0.011	0.035	<0.0047	<0.0047	<0.0047	<0.0047																																
SV-111 @ 22W-A10	0.16	0.0056	0.025	<0.0047	<0.0047	<0.0047	<0.0047																																
SV-112 @ 18S-A10	0.019	<0.0061	0.0064	<0.0061	<0.0061	<0.0061	<0.0061																																
SV-113 @ 22S-A10	0.17	0.019	0.064	<0.0053	<0.0053	<0.0053	<0.0053																																
SV-114 @ 22E-A10	0.12	0.0063	0.02	<0.0045	<0.0045	<0.0045	<0.0045																																
SV-124 @ 13(N)-A16	0.42	0.0052	<0.0038	<0.0038	<0.0038	<0.0038	<0.0038																																
SV-125 @ 13N-A16	0.19	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051																																
SV-126 @ B(N)-A16	0.11	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045																																
SV-128 @ B(MW)-A16	0.045	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044																																
SV-129 @ 16W-A8	0.09	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042																																
SV-130 @ 16W-A9	0.008	<0.0038	<0.0038	<0.0038	<0.0038	<0.0038	<0.0038																																
SV-131 @ 16W-A16	0.021	<0.0046	0.0058	<0.0046	<0.0046	<0.0046	<0.0046																																
SV-132 @ 8W-A8*	**1.4**	0.017	0.029	<0.0047	<0.0047	<0.0047	<0.0047	Excavation expanded into adjacent area																																
SV-133 @ 8W-A9	0.092	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042																																
SV-134 @ 8W-A16	0.084	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041																																
SV-135 @ 8E-A8	0.1	<0.0039	0.0043	<0.0039	<0.0039	<0.0039	<0.0039																																
SV-136 @ 8E-89	0.063	<0.0036	<0.0036	<0.0036	<0.0036	<0.0036	<0.0036																																
SV-137 @ 8E-A16	0.12	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049																																
SV-138 @ 5N-A2	**59**	0.016	0.013	<0.0045	<0.0045	<0.0045	<0.0045	SV-152 @ 5N-A14	0.16	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056																								
SV-139 @ 8N-A2	0.064	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042	SV-153 @ 8N-A14	0.5	<0.0061	0.026	<0.0061	<0.0061	<0.0061	<0.0061																								
SV-140 @ 13N-A2	**16**	0.0057	0.026	<0.005	<0.005	<0.005	<0.005	SV-154 @ 13N-A14	0.66	<0.0076	0.026	<0.0076	<0.0076	<0.0076	<0.0076																								
SV-141 @ 5W-A2	**9**	0.037	0.093	<0.004	<0.004	<0.004	<0.004	SV-155 @ 5W-A2	0.5	0.012	0.065	<0.0052	<0.0052	<0.0052	<0.0052																								
SV-142 @ 8W-A2	**17**	0.01	0.077	<0.0045	0	<0.0045	<0.0045	SV-156 @ 8W-A2	**8.1**	0.12	0.72	<0.0054	<0.0054	<0.0054	<0.0054	Excavation expanded into adjacent area																								
SV-143 @ 13W-A2	0.58	<0.0043	0.014	<0.0043	<0.0043	<0.0043	<0.0043	SV-157 @ 13W-A2	0.25	<0.0074	0.039	<0.0074	<0.0074	<0.0074	<0.0074																								
SV-144 @ 5S-A2	0.87	0.039	0.11	<0.0045	<0.0045	<0.0045	<0.0045	SV-158 @ 5S-A2	**2.1**	0.11	0.26	<0.0064	<0.0064	<0.0064	<0.0064	Excavation expanded into adjacent area																								
SV-145 @ 8S-A2	**1.4**	0.0083	0.064	<0.0047	<0.0047	<0.0047	<0.0047	SV-159 @ 8S-A2	0.18	0.0058	0.018	<0.0054	<0.0054	<0.0054	<0.0054																								
SV-146 @ 13S-A2	**3.9**	0.017	0.14	<0.0047	<0.0047	<0.0047	<0.0047	SV-160 @ 13S-A2	0.092	<0.006	0.0082	<0.006	<0.006	<0.006	<0.006																								
SV-147 @ 5E-A2	1.8	0.0046	0.0084	<0.0043	<0.0043	<0.0043	<0.0043	SV-161 @ 5E-A2	0.21	<0.0054	0.0097	<0.0054	<0.0054	<0.0054	<0.0054																								
SV-148 @ 8E-A2	0.074	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046																																
SV-149 @ 13E-A2	0.064	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047																																
SV-150 @ 15B(W)-A2	0.78*	0.0063	0.039	<0.0052	<0.0052	<0.0052	<0.0052	SV-162 @ 16B(N)-A2	**1.3**	0.012	0.045	<0.0066	<0.0066	<0.0066	<0.0066	SV-175 @ 18B(N)-A2	0.057	<0.0049	0.005	<0.0049	<0.0049	<0.0049	<0.0049														
								SV-163 @ 16B(S)-A2	**1.6**	0.017	0.067	<0.0052	<0.0052	<0.0052	<0.0052	SV-176 @ 18B(S)-A2	0.21	<0.0049	0.014	<0.0049	<0.0049	<0.0049	<0.0049														
SV-151 @ 15B(E)-A2	0.24	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047																																
SV-164 @ 5N-A4	0.22	<0.0046	0.015	<0.0046	<0.0046	<0.0046	<0.0046																																
SV-165 @ 8N-A4	0.59	0.0045	0.018	<0.0036	<0.0036	<0.0036	<0.0036																																
SV-166 @ 13N-A4	0.24	<0.0047	0.0079	<0.0047	<0.0047	<0.0047	<0.0047																																
SV-167 @ 5W-A4	0.71	0.0045	0.0081	<0.0043	<0.0043	<0.0043	<0.0043																																
SV-168 @ 8W-A4	**3.9**	0.022	0.066	<0.0054	<0.0054	<0.0054	<0.0054	Excavation expanded into adjacent area																																
SV-169 @ 13W-A4	0.26	0.0067	0.051	<0.0056	<0.0056	<0.0056	<0.0056																																
SV-170 @ 5S-A4	0.036	0.007	0.0046	<0.0043	<0.0043	<0.0043	<0.0043																																
SV-171 @ 8S-A4	0.023	<0.0044	0.0045	<0.0044	<0.0044	<0.0044	<0.0044																																
SV-172 @ 13S-A4	0.049	<0.0045	0.0054	<0.0045	<0.0045	<0.0045	<0.0045																																
SV-173 @ 16B(N)-A4	0.28	<0.0047	0.03	<0.0047	<0.0047	<0.0047	<0.0047																																
SV-174 @ 16B(S)-A4	0.26	0.0075	0.055	<0.0049	<0.0049	<0.0049	<0.0049																																
SV-177 @ 5W-A1	**1.2**	0.017	0.052	<0.0046	<0.0046	<0.0046	<0.0046	Excavation expanded into adjacent area																																
SV-178 @ 11W-A1	0.018	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042																																
SV-179 @ 5S-A1	**1.3**	0.057	0.034	<0.0046	<0.0046	<0.0046	<0.0046	SV-185 @ 5S-A1	**3.9**	0.078	0.033	<0.0042	0.0089	<0.0042	<0.0042	SV-186 @ 5S-A1	**1.4**	0.023	0.012	<0.0044	<0.0044	<0.0044	<0.0044	SV-187 @ 5S-A1	**1.3**	0.0074	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	SV-189 @ 5S-A1	0.1	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046
																								SV-188 @ 5S-A1	0.072	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	SV-190 @ 5S-A1							
SV-180 @ 11S-A1	0.0054	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043																																
SV-181 @ 5E-A1	0.32	<0.0043	0.0072	<0.0043	<0.0043	<0.0043	<0.0043																																
SV-182 @ 11E-A1	0.11	<0.0046	0.0079	<0.0046	<0.0046	<0.0046	<0.0046																																
SV-183 @ 14B(N)-A1	0.19	<0.0056	0.023	<0.0056	<0.0056	<0.0056	<0.0056																																
SV-184 @ 14B(S)-A1	0.24	<0.0044	0.011	<0.0044	<0.0044	<0.0044	<0.0044																																
SV-191 @ 5S-A6	<0.0043	0.015	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043																																
SV-192 @ 10S-A6	**2.3**	0.065	0.46	<0.0042	<0.0042	<0.0042	<0.0042	SV-202 @ 12S-A6	0.036	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051																								
SV-193 @ 5E-A6	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004																																
SV-194 @ 10E-A6	0.54	0.0087	0.021	<0.004	<0.004	<0.004	<0.004																																
SV-195 @ 5S-A6	0.059	0.037	0.013	<0.0038	<0.0038	<0.0038	<0.0038																																
SV-196 @ 10S-A6	0.077	<0.0048	0.0051	<0.0048	<0.0048	<0.0048	<0.0048																																
SV-197 @ 5E-A6	0.61	0.18	0.033	<0.0042	<0.0042	<0.0042	<0.0042																																
SV-198 @ 10E-A6	**1.9**	0.018	0.061	<0.0043	<0.0043	<0.0043	<0.0043	SV-203 @ 12E-A6	0.028	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005																								
SV-199 @ 12B(SW)-A6	**2.3**	0.07	0.19	<0.0043	<0.0043	<0.0043	<0.0043	SV-201 @ 14B-A6	0.36	0.0095	0.034	<0.0051	<0.0051	<0.0051	<0.0051																								
SV-200 @ 12B(NE)-A6	0.14	<0.0036	0.0083	<0.0036	<0.0036	<0.0036	<0.0036																																
SV-204 @ 20W-A6A	**4.6**	0.035	0.063	<0.0047	<0.0047	<0.0047	<0.0047	SV-207 @ 22N-A6A	0.66	0.02	0.076	<0.0047	<0.0047	<0.0047	<0.0047																								
SV-205 @ 20E-A6A	0.6	<0.0043	0.011	<0.0043	<0.0043	<0.0043	<0.0043	SV-208 @ 22SE-A6A	0.39	<0.0045	0.0071	<0.0045	<0.0045	<0.0045	<0.0045																								
								SV-209 @ 22SW-A6A	0.79	0.0093	0.023	<0.0052	<0.0052	<0.0052	<0.0052																														
SV-206 @ 21B-A6A	**2100**	3.3	1.6	0.013	0.031	0.0064	0.038	Excavated to rock																																
SV-210 @ 31E-A6A	0.63	0.0087	0.019	<0.0039	<0.0039	<0.0039	<0.0039																																
SV-211 @ 31SE-A6A	1.1	0.011	0.014	<0.0046	<0.0046	<0.0046	<0.0046																																
SV-212 @ 31SW-A6A	1.1	0.015	0.023	<0.0043	<0.0043	<0.0043	<0.0043																																
SV-213 @ 22N-A6A	0.19	<0.0048	0.03	<0.0048	<0.0048	<0.0048	<0.0048																																

NOTES:
Remedial excavations and verification sample acquisition was performed between November 7, 2007, and May 17, 2008
Verification samples were obtained from the base and sidewalls of the excavation directly by hand or utilizing an excavator bucket.
The verification samples were collected using EPA preservation method 5035, and were submitted for testing of chlorinated volatile organic compounds (CVOCs) using EPA testing method 8260B.
Side wall verification samples were generally obtained at a frequency of one sample per 25 linear feet per 8 feet of depth, with a minimum of one per side.
Base verification samples were generally obtained at a frequency of one per 200 square feet of excavation, with a minimum of two per excavation.
Marion Environmental, Inc. (MEI) collected split samples from each verification sample location. The split samples were tested for volatile organic compounds (VOCs) using EPA testing method 8260B.
Sample designations SV-103 and SV-104 were not used. Sample number SV-190 @ 5S-A1 was collected but not analyzed by the laboratory.
Except sample numbers SV-1 through SV-9, base samples are denoted with a B (i.e. SV-200-B(NE)-A6) and side wall samples contained only a direction (i.e. N, S, E, W)
CVOC constituents not reported were below the laboratory detection limits.

PCE: Tetrachloroethene
TCE: Trichloroethene
cis-1,2-DCE: cis-1,2-Dichloroethene
trans-1,2-DCE: trans-1,2-Dichloroethene
1,2-DCB: 1,2-Dichlorobenzene
*: MEI split sample results above approved RRS
Analytical testing results in mg/Kg

TABLE 8: MARION SPLIT VERIFICATION SAMPLE TEST RESULTS

Verification Sample Description	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Acetone	VC	1,1,2-Trichloro-1,2,2-trifluoro	IPB	Naphtha-lene	1,2,4-TMB	1,2,3-TMB	1,3,5-TMB	1,1-DCE	P-IBT	CB	1,1,1,2-TCA	MEK	EB	Chloro-form
SV-1 @ 11'	**5.3**	<0.065	<0.065	<0.065	<3.2	<0.065	<0.065	<0.065	<0.32	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.65	<0.065	<0.32
SV-2 @ 8'	0.26	0.0061	0.0042	<0.0011	<0.055	<0.0011	<0.0011	<0.0011	<0.0055	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0055
SV-3 @ 8'	**2200**	<3.6	<3.6	<3.6	<180	<3.6	<3.6	<3.6	<18	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<36	<3.6	<18
SV-4 @ 7'	**7.7**	0.11	0.23	<0.055	<2.8	<0.055	<0.055	<0.055	<0.28	<0.055	<0.055	<0.055	<0.055	<0.055	<0.055	<0.055	<0.55	<0.055	<0.28
SV-5 @ 10'	0.6	0.01	0.013	<0.0012	0.068	<0.0012	<0.0012	<0.0012	<0.0060	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.006
SV-6 @ 7'	**9.5**	0.14	<0.13	<0.13	<6.4	<0.13	<0.13	<0.13	<0.64	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<1.3	<0.13	<0.64
SV-7 @ 7'	0.18	0.0067	0.0022	<0.0011	<0.054	<0.0011	<0.0011	<0.0011	<0.0054	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0054
SV-8 @ 7'	**19**	0.1	<0.065	<0.065	<3.3	<0.065	<0.065	<0.065	<0.33	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.065	<0.65	<0.065	<0.33
SV-9 @ 7'	**13**	<0.12	0.12	<0.12	<5.8	<0.12	0.51	<0.12	<0.58	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<1.2	<0.12	<0.58
VS-10 @ 2E-A3	0.74	0.038	0.088	<0.001	0.083	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.005
VS-11 @ 3B-A3	0.16	0.01	0.022	<0.001	<0.05	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.005
VS-12 @ 2W-A3	0.45	0.013	0.0066	<0.001	0.062	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.005
SV-13 @ 10N-A15	0.036	<0.001	<0.001	<0.001	<0.05	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.005
SV-14 @ 10W-A15	0.015	<0.001	<0.001	<0.001	<0.05	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.005
SV-15 @10S-A15	0.0045	<0.001	<0.001	<0.001	<0.05	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001	<0.005
SV-16 @10E-A15	0.0062	<0.001	<0.0011	<0.0011	<0.054	<0.0011	0.0025	<0.0011	<0.0054	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0054
SV-17 @ 18B(NE)-A15	0.024	<0.0014	<0.0014	<0.0014	<0.07	<0.0014	<0.0014	<0.0014	<0.007	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.014	<0.0014	<0.007
SV-18 @ 23B(W)-A15	0.1	<0.0011	0.0019	<0.0011	<0.057	<0.0011	<0.0011	<0.0011	<0.0057	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0057
SV-19 @ 16N-A15	0.0034	<0.0012	<0.0012	<0.0012	<0.06	<0.0012	<0.0012	<0.0012	<0.006	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.006
SV-20 @ 18W-A15	0.032	<0.0012	<0.0012	<0.0012	<0.058	<0.0012	<0.0012	<0.0012	<0.0058	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0058
SV-21 @ 18S-A15	0.021	<0.0012	<0.0012	<0.0012	<0.061	<0.0012	<0.0012	<0.0012	<0.0061	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0061
SV-22 @ 18E-A15	0.0075	<0.0012	<0.0012	<0.0012	<0.058	<0.0012	<0.0012	<0.0012	<0.0058	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0058
SV-23 @ 23B(SE)A-15	0.019	<0.0012	<0.0012	<0.0012	<0.059	<0.0012	<0.0012	<0.0012	<0.0059	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0059
SV-24 @ 5N-A15	0.011	<0.0013	<0.0013	<0.0013	<0.063	<0.0013	<0.0013	<0.0013	<0.0063	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0063
SV-25 @ 5W-A15	0.14	<0.0012	<0.0012	<0.0012	<0.0058	<0.0012	<0.0012	<0.0012	<0.0058	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0058
SV-26 @ 5E-A15	0.17	<0.0013	<0.0013	<0.0013	<0.065	<0.0013	<0.0013	<0.0013	<0.0065	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0065
SV-27 @ 5S-A15	0.34	0.0022	0.0017	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-28 @ 8N-A13	0.017	<0.0013	<0.0013	<0.0013	<0.064	<0.0013	<0.0013	<0.0013	<0.0064	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0064
SV-29 @8N-A12	0.53	0.0033	0.0012	<0.0011	<0.056	<0.0011	<0.0011	<0.0011	<0.0056	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0056
SV-30 @ 8S-A11	0.26	0.0051	0.017	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-31 @ 10E-A13	0.49	0.002	0.0014	<0.0011	<0.056	<0.0011	<0.0011	<0.0011	<0.0056	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0056
SV-32-13N-A12	0.035	<0.0015	<0.0015	<0.0015	<0.074	<0.0015	<0.0015	<0.0015	<0.0074	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.015	<0.0015	<0.0074
SV33-13W-A11	0.012	<0.0011	<0.0011	<0.0011	<0.056	<0.0011	<0.0011	<0.0011	<0.0056	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0056
SV-34-13S-A11	0.1	0.0013	0.0038	<0.0011	<0.057	<0.0011	<0.0011	<0.0011	<0.0057	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0057
SV-35-13E-A11	0.036	<0.0012	0.0016	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-36-B(SE)-A11	0.039	<0.0012	<0.0012	<0.0012	<0.058	<0.0012	<0.0012	<0.0012	<0.0058	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0058
SV-37-B(NW)-A12	0.04	<0.0011	<0.0011	<0.0011	<0.057	<0.0011	<0.0011	<0.0011	<0.0057	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0057
SV-38 @ 20N-A13	0.031	<0.0011	<0.0011	<0.0011	<0.055	<0.0011	<0.0011	<0.0011	<0.0055	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0055
SV-39 @ 20W-A13	0.22	0.0033	0.0056	<0.0012	<0.061	<0.0012	<0.0012	<0.0012	<0.0061	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0061
SV-40 @ 20S-A13	0.03	<0.0014	<0.0014	<0.0014	<0.069	<0.0014	<0.0014	<0.0014	<0.0069	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.014	<0.0014	<0.0069
SV-41 @ 20E-A13	0.0081	<0.0014	<0.0014	<0.0014	<0.069	<0.0014	<0.0014	<0.0014	<0.0069	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.014	<0.0014	<0.0069
SV-42 @ 4N-A12	0.33	0.013	<0.0012	<0.0012	0.063	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-43 @ 4W-A12	0.38	0.005	0.0038	<0.0012	<0.058	<0.0012	<0.0012	<0.0012	<0.0058	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0058
SV-44 @ 4S-A11	0.0055	0.003	0.22	0.0022	<0.067	<0.0013	<0.0013	0.0015	<0.0067	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0067
SV-45 @ 4E-A13	0.22	<0.0015	0.0016	<0.0015	<0.074	<0.0015	<0.0015	<0.0015	<0.0074	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.015	<0.0015	<0.0074
SV-46 @ 13N-A11	0.057	<0.0011	<0.0011	<0.0011	<0.054	<0.0011	<0.0011	<0.0011	<0.0054	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0054
SV-47 @ 13W-A11	0.017	<0.0011	<0.0011	<0.0011	<0.054	<0.0011	<0.0011	<0.0011	<0.0054	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0054
SV-48 @ 13S-A11	0.032	<0.0012	<0.0012	<0.0012	<0.06	<0.0012	<0.0012	<0.0012	<0.006	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.006
SV-49 @ 8N-A11	0.014	<0.0012	<0.0012	<0.0012	<0.058	<0.0012	<0.0012	<0.0012	<0.0058	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0058
SV-50 @ 8W-A11	0.071	<0.0012	<0.0012	<0.0012	<0.058	<0.0012	<0.0012	<0.0012	<0.0058	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0058
SV-51 @ 8S-A11	0.04	<0.0012	<0.0012	<0.0012	<0.059	<0.0012	<0.0012	<0.0012	<0.0059	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0059
SV-52 @ 3N-A11	0.054	<0.0012	<0.0012	<0.0012	<0.059	<0.0012	<0.0012	<0.0012	<0.0059	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0059
SV-53 @ 3W-A11	**2**	0.0037	<0.0012	<0.0012	<0.059	<0.0012	<0.0012	<0.0012	<0.0059	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0059
SV-54 @ 3S-A11	0.56	0.0057	0.0025	<0.0013	<0.064	<0.0013	<0.0013	<0.0013	<0.0064	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0064
SV-55 @ B(E)-A11	0.012	<0.0012	<0.0012	<0.0012	<0.061	<0.0012	<0.0012	<0.0012	<0.0061	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0061
SV-56 @ B(W)-A11	0.018	<0.0012	<0.0012	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-57 @ B(N)-A8	0.022	<0.0011	0.0018	<0.0011	<0.056	<0.0011	<0.0011	<0.0011	<0.0056	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0056
SV-58 @ B(S)-A8	0.027	<0.0011	0.0024	<0.0011	<0.056	<0.0011	<0.0011	<0.0011	<0.0056	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0056
SV-59 @ 13W-A8	0.032	<0.0013	0.0029	<0.0013	<0.063	<0.0013	<0.0013	<0.0013	<0.0063	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0063
SV-60 @ 8W-A8	1	0.02	0.062	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-61 @ 3W-A8	0.026	<0.0014	<0.0014	<0.0014	<0.068	<0.0014	<0.0014	<0.0014	<0.0068	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.014	<0.0014	<0.0068
SV-62 @ 8E-A8	0.17	<0.048	3.3	<0.048	<2.4	<0.048	<0.048	<0.048	<0.24	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.48	<0.048	<0.24
SV-63 @ B(N)-A9	0.06	<0.0012	0.0028	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	0.023	<0.0012	0.003	0.0014	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-64 @ B(S)-A9	0.87	0.0092	0.03	<0.0013	<0.065	<0.0013	<0.0013	<0.0013	<0.0065	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0065
SV-65 @ 22N-A9	0.027	<0.0012	0.0022	<0.0012	<0.058	<0.0012	<0.0012	<0.0012	<0.0058	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0058
SV-66 @ 17N-A9	0.1	<0.0012	0.0051	<0.0012	<0.061	<0.0012	<0.0012	<0.0012	<0.0061	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0061
SV-67 @ 22W-A9	0.49	0.0075	0.024	<0.0012	<0.06	<0.0012	<0.0012	<0.0012	<0.006	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.006
SV-68 @ 17W-A9	**1.9**	0.0055	0.0098	<0.0012	<0.058	<0.0012	<0.0012	<0.0012	<0.0058	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0058
SV-69 @ 22S-A9	0.34	0.011	0.018	<0.0013	<0.063	<0.0013	<0.0013	<0.0013	<0.0063	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0063
SV-70 @ 17S-A9	0.051	<0.0012	0.0017	<0.0012	<0.063	<0.0012	<0.0012	<0.0012	<0.0063	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0063
SV-71 @ 22E-A9	0.17	<0.0012	<0.0012	<0.0012	<0.06	<0.0012	<0.0012	<0.0012	<0.006	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.006
SV-72 @ 17E-A9	0.0067	<0.0012	<0.0012	<0.0012	<0.059	<0.0012	<0.0012	<0.0012	<0.0059	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0059
SV-73 @ B(S)-A9	**10**	0.13	0.25	<0.0014	<0.069	<0.0014	<0.0014	<0.0014	<0.0069	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.014	<0.0014	<0.0069
SV-74 @ B(N)-A9	**1.7**	<0.064	<0.064	<0.064	<3.2	<0.064	<0.064	<0.064	<0.32	<0.064	<0.064	<0.064	<0.064	<0.064	<0.064	<0.064	<0.64	<0.064	<0.32
SV-75 @ B(W)-A9	0.0046	<0.0013	<0.0013	<0.0013	<0.064	<0.0013	<0.0013	<0.0013	<0.0064	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0064
SV-76 @ 17W-A9	0.059	<0.0012	<0.0012	<0.0012	<0.061	<0.0012	<0.0012	<0.0012	<0.0061	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0061
SV-77 @ B(W)-A11	0.042	<0.0012	<0.0012	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-78 @ 6W-A11	0.2	0.0014	<0.0013	<0.0013	<0.064	<0.0013	<0.0013	<0.0013	<0.0064	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0064
SV-79 @ 13N-A16	0.3	0.0039	0.0014	<0.0013	<0.064	<0.0013	<0.0013	<0.0013	<0.0064	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0064
SV-80 @ 8N-A16	0.11	0.0016	<0.0012	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-81 @ 3N-A16	0.049	<0.0012	<0.0012	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	0.012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-82 @ 13WN-A16	0.078	0.0015	0.0015	<0.0012	<0.059	<0.0012	<0.0012	<0.0012	<0.0059	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0059
SV-83 @ 8WN-A16	0.0095	0.0036	0.035	<0.0013	<0.063	<0.0013	<0.0013	<0.0013	<0.0063	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0063
SV-84 @ 3WN-A16	<0.0012	0.028	0.013	<0.0012	<0.061	<0.0012	<0.0012	<0.0012	<0.0061	<0.0012	<0.0012	<0.0012	0.0032	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0061
SV-85 @ 13WS-A16	0.0095	0.033	0.15	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-86 @ 8WS-A16	0.0049	0.009	0.02	<0.0011	<0.056	<0.0011	<0.0011	<0.0011	<0.0056	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0056
SV-87 @ 3WS-A16	0.0044	<0.0012	<0.0012	<0.0012	<0.058	<0.0012	<0.0012	<0.0012	<0.0058	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0058
SV-88 @ 13SW-A16	0.16	0.066	1	0.0098	<0.06	<0.0012	<0.0012	<0.0012	<0.006	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.006
SV-89 @ 8SW-A16	0.0016	0.004	0.0022	<0.0013	<0.064	<0.0013	<0.0013	<0.0013	<0.0064	<0.0013	<0.0013	<0.0013	<0.0013	0.0027	<0.0013	<0.0013	<0.013	<0.0013	<0.0064
SV-90 @ 3SW-A16	<0.0012	<0.0012	<0.0012	<0.0012	<0.06	<0.0012	<0.0012	<0.0012	<0.006	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.006
SV-91 @ 13SE-A16	0.018	0.0041	0.0029	<0.0012	<0.063	<0.0012	<0.0012	<0.0012	<0.0063	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0063
SV-92 @ 8SE-A16	0.0052	0.0095	0.0052	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-93 @ 3SE-A16	0.0065	<0.0012	<0.0012	<0.0012	<0.061	<0.0012	<0.0012	<0.0012	<0.0061	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0061
SV-94 @ B(NW)-A16	0.02	<0.0012	<0.0012	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-95 @ B(NWCN)-A16	0.16	0.0037	0.0061	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-96 @ B(NWCS)-A16	0.12	0.0034	0.0074	<0.0012	<0.061	<0.0012	<0.0012	<0.0012	<0.061	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0061
SV-97 @ B(SWCN)-A16	0.23	0.01	0.03	<0.0012	<0.059	<0.0012	<0.0012	<0.0012	<0.0059	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0059
SV-98 @ B(SWCS)-A16	0.84	0.075	0.2	<0.054	<2.7	<0.054	<0.054	<0.054	<0.27	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.54	<0.054	<0.27
SV-99 @ B9SW)-A16	**1.2**	0.086	0.3	<0.047	<2.4	<0.047	<0.047	<0.047	<0.24	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047	<0.047	<0.47	<0.047	<0.24
SV-100 @ B(SE)-A16	0.014	<0.0011	<0.0011	<0.0011	<0.056	<0.0011	<0.0011	<0.0011	<0.0056	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0056
SV-101 @ B(SEC)-A16	0.015	<0.0012	<0.0012	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-105 @ 18N-A7	0.13	0.0042	0.013	<0.0014	<0.073	<0.0014	<0.0014	<0.0014	<0.0073	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.014	<0.0014	<0.0073
SV-106 @ 18W-A7	0.45	0.012	0.043	<0.0012	<0.061	<0.0012	<0.0012	<0.0012	<0.0061	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0061
SV-107 @ 18E-A7	**1.4**	<0.057	0.087	<0.057	<2.8	<0.057	<0.057	<0.057	<0.28	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.57	<0.057	<0.28
SV-108 @ B-A7	0.13	0.0039	0.0088	<0.0013	<0.066	<0.0013	<0.0013	<0.0013	<0.0066	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0066
SV-109 @ B-A10	0.59	0.024	0.05	<0.0013	<0.064	<0.0013	<0.0013	<0.0013	<0.0064	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0064
SV-110 @ 22N-A10	0.43	0.02	0.047	<0.0013	<0.064	<0.0013	<0.0013	<0.0013	<0.0064	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0064
SV-111 @ 22W-A10	0.088	0.0034	0.0093	<0.0012	<0.059	<0.0012	<0.0012	<0.0012	<0.0059	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0059
SV-112 @ 18S-A10	0.037	0.0013	0.0034	<0.0011	<0.057	<0.0011	<0.0011	<0.0011	<0.0057	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0057
SV-113 @ 22S-A10	0.054	0.0023	0.0064	<0.0014	0.083	<0.0014	<0.0014	<0.0014	<0.0068	<0.0014	<0.0014	<0.0014	0.013	<0.0014	<0.0014	<0.0014	<0.014	<0.0014	<0.0068
SV-114 @ 22E-A10	0.49	<0.06	<0.06	<0.06	<3.0	<0.06	<0.06	<0.06	<0.3	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.6	<0.06	<0.3
SV-115 @ 13NW-A16	0.83	0.012	0.0061	<0.0012	<0.061	<0.0012	<0.0012	<0.0012	<0.0061	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0061
SV-116 @ 16SE-A16	0.011	0.01	0.69	0.007	0.062	0.055	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-117 @ 16 S-A16	0.0057	0.0058	0.026	<0.0012	<0.062	0.0015	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-118 @ 16W-A16	0.0062	0.023	0.2	0.0049	<0.063	0.0093	<0.0013	<0.0013	<0.0063	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0063
SV-119 @ 16SN-A16	0.36	0.0096	0.022	<0.0012	<0.058	<0.0012	<0.0012	<0.0012	<0.0058	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0058
SV-120 @ B(SW)-A16	0.14	0.0079	0.046	<0.0012	<0.058	<0.0012	<0.0012	<0.0012	<0.0058	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0058
SV-121 @ 22E-A7	0.18	0.0062	0.019	<0.0013	<0.066	<0.0013	<0.0013	<0.0013	<0.0066	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0066
SV-122 @ B(N)-A9	0.019	<0.0012	<0.0012	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-123 @ B(S)-A9	0.46	0.0063	0.019	<0.0013	<0.063	<0.0013	<0.0013	<0.0013	<0.0063	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0063
SV-124 @ 13N-A16*	**2.2**	<0.053	<0.053	<0.053	<2.7	<0.053	<0.053	<0.053	<0.27	<0.053	<0.053	<0.053	<0.053	<0.053	<0.053	<0.053	<0.53	<0.053	<0.27
SV-125 @ 13N-A16	0.0097	<0.0011	<0.0011	<0.0011	<0.056	<0.0011	<0.0011	<0.0011	<0.0056	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0056
SV-126 @ B(N)-A16	0.12	0.0026	0.0043	<0.0011	<0.055	<0.0011	<0.0011	<0.0011	<0.0055	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0055
SV-127 @ 13NW-A16	0.23	0.0044	0.0035	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-128 @ B(NE)-A16	0.013	<0.0011	<0.0011	<0.0011	<0.056	<0.0011	<0.0011	<0.0011	0.013	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0056
SV-129 @ 16W-A8	0.052	<0.0012	0.0026	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-130 @ 16W-A9	0.16	0.0026	<0.0013	<0.0013	<0.066	<0.0013	<0.0013	<0.0013	<0.0066	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0066
SV-131 @ 16W-A16	0.17	0.0064	0.0095	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-132 @ 8W-A8*	**1.2**	0.097	0.14	<0.0013	0.15	<0.0013	<0.0013	<0.0013	<0.0065	<0.0013	<0.0013	<0.0013	<0.0013	0.01	<0.0013	<0.0013	0.014	<0.0013	<0.0065
SV-133 @ 8W-A9	0.014	<0.0012	<0.0012	<0.0012	<0.06	<0.0012	<0.0012	<0.0012	<0.006	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.006

Table 8 - Oct. 2015 CSR

TABLE 8: MARION SPLIT VERIFICATION SAMPLE TEST RESULTS

Verification Sample Description	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Acetone	VC	1,1,2-Trichloro-1,2,2-trifluoro	IPB	Naphtha-lene	1,2,4-TMB	1,2,3-TMB	1,3,5-TMB	1,1-DCE	P-IBT	CB	1,1,1,2-TCA	MEK	EB	Chloro-form
SV-134 @ 8W-A16	0.063	0.0025	0.0028	<0.0012	<0.063	<0.0012	<0.0012	<0.0012	<0.0063	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0063
SV-135 @ 8E-A8	0.069	<0.0013	0.0018	<0.0013	<0.063	<0.0013	<0.0013	<0.0013	<0.0063	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0063
SV-136 @ 8E-89	0.037	0.0032	<0.0013	<0.0013	<0.066	<0.0013	<0.0013	<0.0013	<0.0066	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0066
SV-137 @ 8E-A16	0.031	<0.0013	0.0025	<0.0013	<0.066	<0.0013	<0.0013	<0.0013	<0.0066	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0066
SV-138 @ 5N-A2	**23**	<0.23	<0.23	<0.23	<12	<0.23	<0.23	<0.23	<1.2	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<0.23	<2.3	<0.23	<1.2
SV-139 @ 8N-A2	0.93	<0.0013	0.0021	<0.0013	0.11	<0.0013	<0.0013	<0.0013	<0.0065	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0065
SV-140 @ 13N-A2	**14**	<0.056	<0.056	<0.056	<2.8	<0.056	<0.056	<0.056	<0.28	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.56	<0.056	<0.28
SV-141 @ 5W-A2	**2.3**	0.016	0.034	<0.0012	<0.059	<0.0012	<0.0012	<0.0012	<0.0059	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0059
SV-142 @ 8W-A2	**24**	0.2	0.97	<0.054	<2.7	<0.054	<0.054	<0.054	<0.27	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.054	<0.54	<0.054	<0.27
SV-143 @ 13W-A2	0.37	0.0026	0.014	<0.0012	<0.058	<0.0012	<0.0012	<0.0012	<0.0058	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0058
SV-144 @ 5S-A2	0.8	0.043	0.12	<0.0012	<0.061	<0.0012	<0.0012	<0.0012	<0.0061	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.012	<0.0061
SV-145 @ 8S-A2	**2.3**	0.082	0.13	<0.0012	0.16	<0.0012	<0.0012	<0.0012	<0.0063	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	0.0013	0.0022	0.017	<0.0012	<0.0063
SV-146 @ 13S-A2	0.86	0.0087	0.054	<0.0012	0.074	<0.0012	<0.0012	<0.0012	<0.0059	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0059
SV-147 @ 5E-A2	<0.0012	0.076	0.0014	<0.0012	<0.06	<0.0012	<0.0012	<0.0012	<0.006	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.006
SV-148 @ 8E-A2	0.12	<0.0013	0.0031	<0.0013	<0.065	<0.0013	<0.0013	<0.0013	<0.0065	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0065
SV-149 @ 13E-A2	0.12	<0.0011	0.002	<0.0011	<0.056	<0.0011	<0.0011	<0.0011	<0.0056	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0056
SV-150 @ 15B(W)-A2	**5.1**	0.015	0.011	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	0.0015	<0.0012	<0.0012	<0.0012	0.0013	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-151 @ 15B(E)-A2	0.4	0.0023	0.0086	<0.0011	<0.057	<0.0011	<0.0011	<0.0011	<0.0057	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0057
SV-152 @ 5N-A14	0.22	<0.0014	0.0033	<0.0014	<0.069	<0.0014	<0.0014	<0.0014	<0.0069	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.014	<0.0014	<0.0069
SV-153 @ 8N-A14	0.72	0.0026	0.012	<0.0012	<0.061	<0.0012	<0.0012	<0.0012	<0.0061	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0061
SV-154 @ 13N-A14	0.51	0.01	0.037	<0.0015	<0.074	<0.0015	<0.0015	<0.0015	<0.0074	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.015	<0.0015	<0.0074
SV-155 @ 5W-A2	0.55	0.008	0.045	<0.0012	<0.06	<0.0012	<0.0012	<0.0012	<0.006	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.006
SV-156 @ 8W-A2	**5.2**	0.066	0.66	<0.0012	<0.063	<0.0012	<0.0012	<0.0012	<0.0063	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0063
SV-157 @ 13W-A2	0.61	0.007	0.065	<0.0012	<0.059	<0.0012	<0.0012	<0.0012	<0.0059	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0059
SV-158 @ 5S-A2	**2.8**	0.035	0.096	<0.0012	<0.06	<0.0012	<0.0012	<0.0012	<0.006	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.006
SV-159 @ 8S-A2	0.14	0.0026	0.019	<0.0011	<0.057	<0.0011	<0.0011	<0.0011	<0.0057	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0057
SV-160 @ 13S-A2	0.32	0.0037	0.022	<0.0013	<0.064	<0.0013	<0.0013	<0.0013	<0.0064	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0064
SV-161 @ 5E-A2	0.16	0.0026	0.0056	<0.0012	<0.06	<0.0012	<0.0012	<0.0012	<0.006	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.006
SV-162 @ 16B(N)-A2	**1.5**	0.015	0.048	<0.0012	<0.06	<0.0012	<0.0012	<0.0012	<0.006	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.006
SV-163 @ 16B(S)-A2	**2.4**	0.024	0.11	<0.0013	<0.064	<0.0013	<0.0013	<0.0013	<0.0064	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0064
SV-164 @ 5N-A4	0.076	0.0014	0.0077	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-165 @ 8N-A4	0.11	<0.0012	0.0082	<0.0012	<0.058	<0.0012	0.0034	<0.0012	<0.0058	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0058
SV-166 @ 13N-A4	0.072	<0.0012	0.0055	<0.0012	<0.06	<0.0012	0.0024	<0.0012	<0.006	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.006
SV-167 @ 5W-A4	0.43	0.0035	0.0047	<0.0013	<0.064	<0.0013	<0.0013	<0.0013	<0.0064	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0064
SV-168 @ 8W-A4	0.54	0.0076	0.032	<0.0013	<0.064	<0.0013	0.0017	<0.0013	<0.0064	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0064
SV-169 @ 13W-A4	0.065	0.0018	0.023	<0.0012	<0.06	<0.0012	<0.0012	<0.0012	<0.006	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.006
SV-170 @ 5S-A4	0.035	0.0033	0.0035	<0.0013	<0.066	<0.0013	0.0019	<0.0013	<0.0066	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0066
SV-171 @ 8S-A4	0.016	<0.0011	0.0044	<0.0011	<0.054	<0.0011	0.0012	<0.0011	<0.0054	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0054
SV-172 @ 13S-A4	0.3	0.0044	0.014	<0.0011	<0.056	<0.0011	0.0012	<0.0011	<0.0056	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0056
SV-173 @ 16B(N)-A4	0.08	0.0014	0.012	<0.0012	<0.059	<0.0012	<0.0012	<0.0012	<0.0059	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0059
SV-174 @ 16B(S)-A4	0.11	0.0018	0.017	<0.0015	<0.077	<0.0015	0.0026	<0.0015	<0.0077	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.015	<0.0015	<0.0077
SV-175 @ 18B(N)-A2	<0.0056	<0.0056	<0.0056	<0.0056	<0.28	<0.0056	<0.0056	<0.0056	<0.028	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056	<0.056	<0.0056	<0.028
SV-176 @ 18B(S)-A2	0.013	<0.0062	<0.0062	<0.0062	<0.31	<0.0062	<0.0062	<0.0062	<0.031	<0.0062	<0.0062	<0.0062	<0.0062	<0.0062	<0.0062	<0.0062	<0.062	<0.0062	<0.031
SV-177 @ SW-A1	**1.8**	0.036	0.1	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-178 @ 11W-A1	0.09	0.0016	0.0095	<0.0011	<0.055	<0.0011	<0.0011	<0.0011	<0.0055	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0055
SV-179 @ SS-A1	**1.8**	0.035	0.027	<0.0012	0.089	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-180 @ 11S-A1	0.023	<0.0012	<0.0012	<0.0012	<0.061	<0.0012	<0.0012	<0.0012	<0.0061	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0061
SV-181 @ SE-A1	0.35	0.0081	0.016	<0.0012	<0.059	<0.0012	<0.0012	<0.0012	<0.0059	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0059
SV-182 @ 11E-A1	0.13	0.0025	0.0094	<0.0011	<0.057	<0.0011	<0.0011	<0.0011	<0.0057	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0057
SV-183 @ 14B(N)-A1	0.12	0.0024	0.015	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-184 @ 14B(S)-A1	0.26	0.0018	0.0074	<0.0012	<0.059	<0.0012	<0.0012	<0.0012	<0.0059	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0059
SV-185 @ SS-A1	0.095	<0.0074	<0.0074	<0.0074	<0.37	<0.0074	0.025	<0.0074	<0.037	<0.0074	<0.0074	<0.0074	<0.0074	<0.0074	<0.0074	<0.0074	<0.074	<0.0074	<0.037
SV-186 @ 5S-A1	0.72	0.012	0.0079	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-187 @ 5S-A1	**1.5**	0.022	0.012	<0.0012	<0.06	<0.0012	<0.0012	<0.0012	<0.006	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.006
SV-188 @ 5S-A1	0.059	0.0013	0.0014	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-189 @ 5S-A1	0.072	0.0017	<0.0013	<0.0013	<0.063	<0.0013	<0.0013	<0.0013	<0.0063	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0063
SV-191 @5S-A6	0.0029	0.0079	<0.0013	<0.0013	<0.065	<0.0013	<0.0013	<0.0013	<0.0065	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0065
SV-192 @ 10S-A6	**2.9**	0.064	0.42	<0.0013	<0.063	<0.0013	<0.0013	<0.0013	<0.0063	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0063
SV-193 @ 5E-A6	0.015	0.0044	<0.0012	<0.0012	<0.061	<0.0012	<0.0012	<0.0012	<0.0061	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0061
SV-194 @ 10E-A6	0.7	0.018	0.061	<0.0015	<0.074	<0.0015	<0.0015	<0.0015	<0.0074	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.015	<0.0015	<0.0074
SV-195 @ 5S-A6	0.079	0.057	0.029	<0.0014	<0.071	<0.0014	<0.0014	0.0026	0.058	0.04	0.021	0.025	<0.0014	0.0079	<0.0014	<0.0014	<0.014	0.0016	<0.0071
SV-196 @ 10S-A6	0.87	0.019	0.06	<0.0012	0.1	<0.0012	<0.0012	<0.0012	<0.0059	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0059
SV-197 @ 5E-A6	0.89	0.38	0.099	0.0026	<0.062	<0.0012	<0.0012	<0.0012	0.019	0.0022	0.0028	<0.0012	0.0023	0.0013	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-198 @ 10E-A6	**6.9**	0.098	0.52	0.0022	<0.082	<0.0016	<0.0016	<0.0016	<0.0082	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.016	<0.0016	<0.0082
SV-199 @ 12B-A6	**2**	0.12	0.22	0.0045	<0.072	<0.0014	<0.0014	<0.0014	<0.0072	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0014	<0.014	<0.0014	0.011
SV-200 @ 12B-A6	0.11	0.002	0.01	<0.0011	<0.053	<0.0011	<0.0011	<0.0011	<0.0053	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0053
SV-201 @ 14B-A6	0.77	0.023	0.14	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-202 @ 12S-A6	0.043	<0.0012	0.0019	<0.0012	<0.061	<0.0012	0.0048	<0.0012	<0.0061	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0061
SV-203 @ 12E-A6	0.24	0.0041	0.015	<0.0012	<0.059	<0.0012	0.0035	<0.0012	<0.0059	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0059
SV-204 @ 20W-A6A	**1.5**	0.071	0.12	<0.0013	0.069	<0.0013	<0.0013	<0.0013	<0.0066	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0066
SV-205 @ 20E-A6A	0.14	0.0021	0.01	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-206 @ 21B-A6A	**160**	0.29	0.096	<0.062	3.8	<0.062	<0.062	<0.062	<0.31	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062	<0.062	1.5	<0.062	<0.31
SV-207 @ 22N-AGA	**1.3**	0.021	0.062	<0.0013	<0.063	<0.0013	<0.0013	<0.0013	<0.0063	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013	<0.013	<0.0013	<0.0063
SV-208 @ 22SE-AGA	0.22	0.0023	0.0083	<0.0012	<0.061	<0.0012	<0.0012	<0.0012	<0.0061	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0061
SV-209 @ 22SW-AGA	0.48	0.0066	0.02	<0.0015	<0.075	<0.0015	<0.0015	<0.0015	<0.0075	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.015	<0.0015	<0.0075
SV-210 @ 31N-AGA	0.0017	<0.0011	<0.0011	<0.0011	<0.055	<0.0011	<0.0011	<0.0011	<0.0055	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011	<0.011	<0.0011	<0.0055
SV-211 @ 31SE-AGA	0.27	0.0035	0.01	<0.0012	<0.06	<0.0012	<0.0012	<0.0012	<0.006	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.006
SV-212 @ 31SW-AGA	0.56	0.0092	0.017	<0.0012	<0.062	<0.0012	<0.0012	<0.0012	<0.0062	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0062
SV-213 @ 22N-A6A	0.14	0.0035	0.038	<0.0012	<0.061	<0.0012	<0.0012	<0.0012	<0.0061	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012	<0.012	<0.0012	<0.0061

NOTES

PCE is tetrachloroethene
TCE is trichloroethene
CIS-1,2-DCE is cis-1,2-trichloroethene
TRANS--1,2-DCE is trans-1,2-trichloroethene
1,1.1.2-TCA is 1,1.1.2-trichloroethane
MEK is methyl ethyl ketone, or 2-butanone
P-IBT is p-isobutyl toluene
Data results provided in milligrams per kilogram (mg/kg)
Split samples taken by Marion Environmental Inc (MEI)

VC is vinyl chloride
IPB is isopropyl-benzene
1,2,4-TMB is 1,2,4-trimethylbenzene
1,2,3-TMB is 1,2,3-trimethylbenzene
1,2,5-TMB is 1,2,5-trimethylbenzene
CB is chlorobenzene
EB is ethylbenzene
PCE type 4 risk reduction standard (RRS) for PCE was approved at 1.18 mg/kg
Bold PCE concentrations exceed the approved Type 4 RRS

TABLE 9
Fountain Oaks Shopping Center
Groundwater Analytical Results - VOCs Detected - All Sampling Events, 2005-2015
(All concentration units in micrograms per liter (µg/L))

Boring	Date	Consultant	Acetone	Benzene	n-Butylbenzene	sec-Butylbenzene	Chloroform	1,2-Dichloroethane (1,2DCA)	cis-1,2-Dichloroethene (cDCE)	trans-1,2-Dichloroethene (tDCE)	Di-isoproyl ether	Ethylbenzene	Isopropylbenzene (Cumene)	Methyl Ethyl Ketone (MEK) 2-Butanone	4-Methyl-2-pentanone (MIBK)	Methyl tert. Butyl Ether (MTBE)	n-Propylbenzene	Tetrachloroethene (PCE)	Toluene	Trichloroethene (TCE)	1,2,3-Trimethylbenzene (TMB)	1,2,4-Trimethylbenzene (TMB)	1,3,5-Trimethylbenzene (TMB)	Vinyl chloride (VC)	Xylenes
Groundwater Residential RRS - Types 1/2			**8.0E+03**	**5.4E+00**	**NR**	**NR**	**8.0E+01**	**5.0E+00**	**7.0E+01**	**1.0E+02**	**NR**	**7.0E+01**	**2.1E+02**	**3.0E+03**	**2.0E+03**	**NR**	**NR**	**1.1E+01**	**1.0E+03**	**5.0E+00**	**NR**	**NR**	**NR**	**2.0E+00**	**1.0E+04**
Groundwater Commercial RRS - Types 3/4			**4.6E+04**	**8.7E+00**	**NR**	**NR**	**3.4E+00**	**2.9E+00**	**3.6E+01**	**1.9E+02**	**NR**	**2.9E+01**	**1.0E+00**	**1.2E+04**	**4.2E+03**	**NR**	**NR**	**1.4E+01**	**5.2E+03**	**5.2E+00**	**NR**	**NR**	**NR**	**3.3E+00**	**1.0E+04**
MW-1	4/21/2005	UC	BDL	<5	BDL	BDL	**18.8**	BDL	<5	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	**55.4**	BDL	<5	BDL	BDL	BDL	NA	NA
	6/21/2005	UC	BDL	<5	BDL	BDL	<5	BDL	<5	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	**1100**	BDL	**12**	BDL	BDL	BDL	NA	NA
	4/20/2006	UC	BDL	<5	BDL	BDL	<5	BDL	**10**	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	**1100**	BDL	**17**	BDL	BDL	BDL	NA	NA
	11/1/2006	UC	BDL	<5	BDL	BDL	<5	BDL	**56**	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	**190**	BDL	**7.3**	BDL	BDL	BDL	NA	NA
	12/15/2008	Destroyed during 2007-2008 soil excavation project.																							
MW-2	4/21/2005	UC	BDL	<5	BDL	BDL	**16.3**	BDL	**14.5**	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	**580**	BDL	**33.8**	BDL	BDL	BDL	NA	NA
	6/21/2005	UC	BDL	<5	BDL	BDL	**<5**	BDL	**51**	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	**2,200**	BDL	**170**	BDL	BDL	BDL	NA	NA
	4/20/2006	UC	BDL	<5	BDL	BDL	**7.2**	BDL	**84**	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	**3,600**	BDL	**200**	BDL	BDL	BDL	NA	NA
	11/1/2006	UC	BDL	<5	BDL	BDL	**8.6**	BDL	**67**	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	**1,900**	BDL	**170**	BDL	BDL	BDL	NA	NA
	12/15/2008	MEI	<500	<10	<10	<10	<50	<10	**78**	<10	<10	<10	<10	<500	<100	<100	<10	**1,900**	<10	**120**	<10	<10	<10	<10	<30
	12/15/2008	UC	<50	<5	NA	NA	**8.7**	<5	**81**	<5	NA	<5	<5	<50	<10	<5	NA	**2,400**	<5	**180**	NA	NA	NA	<10	<2
	5/22/2009	MEI	<1200	<25	<25	<25	<120	<25	**68**	<25	<25	<25	<25	<250	<250	<25	<25	**2,900**	<120	**160**	<25	<25	<25	<25	<75
	11/11/2009	MEI	<2500	<50	<50	<50	<250	<50	**61**	<50	<50	<50	<50	<500	<50	<50	<50	**1,900**	<250	**120**	<50	<50	<50	<50	<150
(Dup.)	11/11/2009	MEI	<250	<5	<5	<5	<25	<5	**72**	<5	<5	<5	<5	<50	<50	<5	<5	**2,000**	<25	**160**	<5	<5	<5	<5	<15
	3/12/2015	MEI	<50	<1	<1	<1	**5.6**	<1	**65**	<1	<1	<1	<1	<10	<10	**1.0**	<1	**740**	<5	**70**	<1	<1	<1	<1	<3
(Dup.)	3/12/2015	MEI	<50	<1	<1	<1	**6.1**	<1	**68**	<1	<1	<1	<1	<10	<10	<1	<1	**810**	<5	**73**	<1	<1	<1	<1	<3
MW-3	4/21/2005	UC	BDL	<5	BDL	BDL	**8.3**	BDL	**5.4**	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	**87.1**	BDL	**6.6**	BDL	BDL	BDL	NA	NA
	6/21/2005	UC	BDL	<5	BDL	BDL	<5	BDL	<5	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	**8.5**	BDL	<5	BDL	BDL	BDL	NA	NA
	11/1/2006	UC	BDL	<5	BDL	BDL	**13**	BDL	<5	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	**73**	BDL	**<5**	BDL	BDL	BDL	NA	NA
	12/15/2008	MEI	BDL	<5	BDL	BDL	**9.6**	BDL	<5	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	**73**	BDL	**<5**	BDL	BDL	BDL	NA	NA
	12/15/2008	UC	BDL	<5	BDL	BDL	<5	BDL	**9.4**	BDL	BDL	BDL	BDL	<50	BDL	**48**	BDL	**160**	BDL	**10**	BDL	BDL	BDL	NA	NA
	5/22/2009	MEI	<50	<1	<1	<1	**6.5**	<1	**14**	**<1**	**1.0**	<1	<1	<10	<10	**28**	<1	**78**	<5	**11**	<1	<1	<1	<1	<3
	11/10/2009	MEI	<50	<1	<1	<1	<5	<1	**12**	<1	<1	<1	<1	<10	<10	**2.0**	<1	**47**	<5	**7.2**	<1	<1	<1	<1	<3.0
	3/11/2015	MEI	<50	<1	<1	<1	**10**	<1	**5.1**	<1	<1	<1	<1	<10	<10	**1.0**	<1	**33**	<5	**2.5**	<1	<1	<1	<1	<3

NOTES:

(1) 05-2009 to 2015 samples collected by Marion Environmental Inc. personnel. 07-2008 & 12-2008 samples split between MEI & UC. 2005-2006 samples collected by others.

(2) Analytical results presented in micrograms per liter (µg/L); equivalent to parts per billion ("ppb") units.

(3) Compounds listed in this table were detected in at least one monitor well. Other compounds not listed were "Below Detection Limits" or "BDL." "NA" means "not analyzed" & indicates sample not analyzed for listed analyte.

(4) The "less than" symbol (<) indicates that the compound was not detected above the given numerical Method Detection Limit (MDL). "BDL" means "Below Detection Limits" and indicates that the compound was not detected and the MDL is unknown.

(5) Wells MW-1, MW-10, MW-11 & MW-12 destroyed during 2007-2008 soil excavation project conducted by others.

TABLE 9
Fountain Oaks Shopping Center
Groundwater Analytical Results - VOCs Detected - All Sampling Events, 2005-2015
(All concentration units in micrograms per liter (µg/L))

Boring	Date	Consultant	Acetone	Benzene	n-Butylbenzene	sec-Butylbenzene	Chloroform	1,2-Dichloroethane (1,2DCA)	cis-1,2-Dichloroethene (cDCE)	trans-1,2-Dichloroethene (tDCE)	Di-isoproyl ether	Ethylbenzene	Isopropylbenzene (Cumene)	Methyl Ethyl Ketone (MEK) 2-Butanone	4-Methyl-2-pentanone (MIBK)	Methyl tert. Butyl Ether (MTBE)	n-Propylbenzene	Tetrachloroethene (PCE)	Toluene	Trichloroethene (TCE)	1,2,3-Trimethylbenzene (TMB)	1,2,4-Trimethylbenzene (TMB)	1,3,5-Trimethylbenzene (TMB)	Vinyl chloride (VC)	Xylenes
Groundwater Residential RRS - Types 1/2			**8.0E+03**	**5.4E+00**	**NR**	**NR**	**8.0E+01**	**5.0E+00**	**7.0E+01**	**1.0E+02**	**NR**	**7.0E+01**	**2.1E+02**	**3.0E+03**	**2.0E+03**	**NR**	**NR**	**1.1E+01**	**1.0E+03**	**5.0E+00**	**NR**	**NR**	**NR**	**2.0E+00**	**1.0E+04**
Groundwater Commercial RRS - Types 3/4			**4.6E+04**	**8.7E+00**	**NR**	**NR**	**3.4E+00**	**2.9E+00**	**3.6E+01**	**1.9E+02**	**NR**	**2.9E+01**	**1.0E+00**	**1.2E+04**	**4.2E+03**	**NR**	**NR**	**1.4E+01**	**5.2E+03**	**5.2E+00**	**NR**	**NR**	**NR**	**3.3E+00**	**1.0E+04**
MW-4	4/21/2005	UC	BDL	<5	BDL	BDL	21	BDL	<5	BDL	ND	BDL	BDL	<50	BDL	<5	BDL	**19.2**	BDL	<5	BDL	BDL	BDL	NA	NA
	6/21/2005	UC	BDL	**6**	BDL	BDL	<5	BDL	**55**	BDL	ND	BDL	BDL	<50	BDL	<5	BDL	**1200**	BDL	**78**	BDL	BDL	BDL	NA	NA
	4/20/2006	UC	BDL	<5	BDL	BDL	<5	BDL	**40**	BDL	ND	BDL	BDL	<50	BDL	<5	BDL	**1000**	BDL	**63**	BDL	BDL	BDL	NA	NA
	11/1/2006	UC	BDL	<5	BDL	BDL	<5	BDL	**110**	BDL	ND	BDL	BDL	<50	BDL	<5	BDL	**170**	BDL	**48**	BDL	BDL	BDL	NA	NA
	12/15/2008	MEI	<500	<10	<10	<10	<50	<10	**180**	<10	<10	<10	<10	<100	<10	<10	<10	**250**	<10	**260**	<10	<10	<10	<10	<30
	12/15/2008	UC	BDL	<5	BDL	BDL	<5	BDL	**200**	BDL	ND	BDL	BDL	<50	BDL	<5	BDL	**550**	BDL	**360**	BDL	BDL	BDL	NA	NA
	5/22/2009	MEI	<100	<2	<2	<2	<10	<2	**140**	<2	<2	<2	<2	<20	<20	<2	<2	**490**	<10	**260**	<2	<2	<2	<2	<6
	11/11/2009	MEI	<500	<10	<10	<10	<50	<10	**99**	<10	<10	<10	<10	<100	<100	<10	<10	**290**	<50	**220**	<10	<10	<10	<10	<30
	3/12/2015	MEI	<50	<1	<1	<1	<5	<1	**210**	**1.2**	<1	<1	<1	<10	<1	<1	<1	<10	<5	**120**	<1	<1	<1	<1	<3
MW-5	6/21/2005	UC	BDL	**11**	BDL	BDL	<5	BDL	**9**	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	**1900**	BDL	**16**	BDL	BDL	BDL	NA	NA
	4/20/2006	UC	BDL	**31**	BDL	BDL	**5.7**	BDL	**8.4**	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	**1500**	BDL	**13**	BDL	BDL	BDL	NA	NA
	11/1/2006	UC	BDL	**14**	BDL	BDL	**8.4**	BDL	**5.6**	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	**850**	BDL	**8.5**	BDL	BDL	BDL	NA	NA
	12/15/2008	MEI	<50	**160**	<1	<1	**9.4**	<1	**11**	<1	**2.7**	<1	<1	<50	<10	<5	<1	**330**	<1	**14**	<1	**2.2**	<1	**1.1**	**22**
	12/15/2008	UC	BDL	**150**	BDL	BDL	**5.6**	BDL	**9.1**	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	**370**	BDL	**11**	BDL	BDL	BDL	<2	ND
	5/20/2009	MEI	<50	**190**	**1.8**	**1.7**	<5	<1	**36**	<1	<1	<1	**5.8**	<10	<10	<1	<1	**480**	**7.1**	**19**	**1.2**	**3.1**	<1	**2.3**	**22**
(Dup.)	5/20/2009	MEI	<50	**190**	**1.6**	**1.6**	<5	<1	**38**	<1	<1	<1	**5.6**	<10	<10	<1	<1	**510**	**6.1**	**19**	**1.1**	**2.8**	<1	**2.1**	**20**
	3/12/2015	MEI	<50	**1.5**	<1	<1	<5	<1	**26**	<1	<1	<1	<1	<10	<10	<1	<1	**170**	<5	**5.2**	<1	<1	<1	**1.9**	<3
MW-6	6/21/2005	UC	BDL	<5	BDL	BDL	<5	BDL	**26**	BDL	BDL	BDL	BDL	<50	BDL	**160**	BDL	**51**	BDL	**11**	BDL	BDL	BDL	NA	NA
	12/15/2008	MEI	<50	**19**	<1	<1	<5	<1	**21**	<1	**10**	<1	<1	<50	<10	**360**	<1	**24**	<5	**13**	<1	<1	<1	**2.8**	<3
	12/15/2008	UC	BDL	**17**	BDL	BDL	<5	BDL	**19**	BDL	BDL	BDL	BDL	<50	BDL	**570**	BDL	**25**	BDL	**13**	BDL	BDL	BDL	NA	NA
	5/21/2009	MEI	<250	<5	<5	<5	<25	<5	**11**	<5	<5	<5	<5	<50	<50	**140**	<5	**22**	<25	**11**	<5	<5	<5	<5	<15
	3/10/2015	MEI	<50	<1	<1	<1	<5	<1	**26**	<1	**1.7**	<1	<1	<10	<10	**45**	<1	**3.9**	<5	**5.5**	<1	<1	<1	<1	<3
MW-7	6/21/2005	UC	BDL	<5	BDL	BDL	<5	BDL	<5	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	<5	BDL	<5	BDL	BDL	BDL	NA	NA
	12/15/2008	MEI	<10	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<3
	12/15/2008	UC	BDL	<5	BDL	BDL	<5	BDL	<5	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	<5	BDL	<5	BDL	BDL	BDL	<2	ND
	5/20/2009	MEI	<10	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	<1	<5	<1	<1	<1	<1	<1	<3
	3/10/2015	MEI	<50	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	<1	<5	<1	<1	<1	<1	<1	<3

NOTES:

(1) 05-2009 to 2015 samples collected by Marion Environmental Inc. personnel. 07-2008 & 12-2008 samples split between MEI & UC. 2005-2006 samples collected by others.

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(5) Wells MW-1, MW-10, MW-11 & MW-12 destroyed during 2007-2008 soil excavation project conducted by others.

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Fountain Oaks Shopping Center
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(All concentration units in micrograms per liter (µg/L))

Boring	Date	Consultant	Acetone	Benzene	n-Butylbenzene	sec-Butylbenzene	Chloroform	1,2-Dichloroethane (1,2DCA)	cis-1,2-Dichloroethene (cDCE)	trans-1,2-Dichloroethene (tDCE)	Di-isoproyl ether	Ethylbenzene	Isopropylbenzene (Cumene)	Methyl Ethyl Ketone (MEK) 2-Butanone	4-Methyl-2-pentanone (MIBK)	Methyl tert. Butyl Ether (MTBE)	n-Propylbenzene	Tetrachloroethene (PCE)	Toluene	Trichloroethene (TCE)	1,2,3-Trimethylbenzene (TMB)	1,2,4-Trimethylbenzene (TMB)	1,3,5-Trimethylbenzene (TMB)	Vinyl chloride (VC)	Xylenes
Groundwater Residential RRS - Types 1/2			**8.0E+03**	**5.4E+00**	**NR**	**NR**	**8.0E+01**	**5.0E+00**	**7.0E+01**	**1.0E+02**	**NR**	**7.0E+01**	**2.1E+02**	**3.0E+03**	**2.0E+03**	**NR**	**NR**	**1.1E+01**	**1.0E+03**	**5.0E+00**	**NR**	**NR**	**NR**	**2.0E+00**	**1.0E+04**
Groundwater Commercial RRS - Types 3/4			**4.6E+04**	**8.7E+00**	**NR**	**NR**	**3.4E+00**	**2.9E+00**	**3.6E+01**	**1.9E+02**	**NR**	**2.9E+01**	**1.0E+00**	**1.2E+04**	**4.2E+03**	**NR**	**NR**	**1.4E+01**	**5.2E+03**	**5.2E+00**	**NR**	**NR**	**NR**	**3.3E+00**	**1.0E+04**
MW-8	11/15/2006	UC	BDL	<5	BDL	BDL	**21**	BDL	<5	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	**11**	BDL	<5	BDL	BDL	BDL	NA	NA
	12/15/2008	MEI	<50	<1	<1	<1	**11**	<1	**6.0**	<1	<1	<1	<1	<50	<1	<5	<1	**8.9**	<1	**3.7**	<1	<1	<1	<1	<3
	12/15/2008	UC	BDL	<5	BDL	BDL	**11**	BDL	<5	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	**8.4**	BDL	<5	BDL	BDL	BDL	<2	ND
	5/20/2009	MEI	<50	<5	<1	<1	**9.6**	<1	**22**	<1	<1	<1	<1	<10	<10	<5	<1	**12**	<5	**2.7**	<1	<1	<1	<1	<3
	3/11/2015	MEI	<50	<1	<1	<1	**11**	<1	**2.5**	<1	<1	<1	<1	<50	<10	<1	<1	**14**	<5	<1	<1	<1	<1	<1	<3
MW-9	11/21/2006	UC	BDL	<5	BDL	BDL	**8.5**	BDL	**36**	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	**3500**	BDL	**120**	BDL	BDL	BDL	NA	NA
	12/15/2008	MEI	<1000	<20	<20	<20	<100	<20	**370**	<20	<20	<20	<20	<200	<200	<20	<20	**3400**	<10	**250**	<20	<20	<20	<20	<60
	5/22/2009	MEI	<1200	<25	<25	<25	<120	<25	**120**	<25	<25	<25	<25	<250	<250	<25	<25	**1600**	<120	**110**	<25	<25	<25	<25	<75
(Dup.)	5/22/2009	MEI	<500	<10	<10	<10	<50	<10	**110**	<10	<10	<10	<10	<100	<10	<10	<10	**1400**	<50	**99**	<10	<10	<10	<10	<30
	11/11/2009	MEI	<100	<2	<2	<2	<10	<2	**10**	<2	<2	<2	<2	<20	<20	<2	<2	**100**	<10	**7.8**	<2	<2	<2	<2	<6
	3/12/2015	MEI	<50	<1	<1	<1	**14**	<1	**1.9**	<1	<1	<1	<1	<10	<10	<1	<1	**18**	<5	**1.1**	<1	<1	<1	<1	<3
MW-10	11/21/2006	UC	BDL	<5	BDL	BDL	17	BDL	**190**	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	**11000**	BDL	**210**	BDL	BDL	BDL	NA	NA
		Destroyed during 2007-2008 soil excavation project.																							
MW-11	11/21/2006	UC	BDL	<5	BDL	BDL	<5	BDL	**8.4**	BDL	BDL	BDL	BDL	<50	BDL	<5	BDL	**2200**	BDL	**18**	BDL	BDL	BDL	NA	NA
		Destroyed during 2007-2008 soil excavation project.																							
MW-12	11/21/2006	UC	BDL	<5	BDL	BDL	<5	BDL	<5	BDL	ND	BDL	BDL	**98**	BDL	<5	BDL	**1300**	BDL	**16**	BDL	BDL	BDL	NA	NA
		Destroyed during 2007-2008 soil excavation project.																							
MW-13D	7/7/2008	MEI	**83**	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	**10**	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<3
	7/7/2008	UC	**160**	<5	NA	BDL	<5	BDL	<5	BDL	NA	<5	BDL	BDL	BDL	<5	NA	<5	<5	<5	BDL	<5	NA	<2	<10
	12/15/2008	MEI	**110**	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<3
	12/15/2008	UC	**280**	<5	NA	BDL	<5	BDL	<5	BDL	NA	<5	BDL	BDL	BDL	<5	NA	<5	<5	<5	BDL	<5	NA	<2	<10
	3/11/2015	MEI	**89**	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	**11**	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<3

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(All concentration units in micrograms per liter (µg/L))

Boring	Date	Consultant	Acetone	Benzene	n-Butylbenzene	sec-Butylbenzene	Chloroform	1,2-Dichloroethane (1,2DCA)	cis-1,2-Dichloroethene (cDCE)	trans-1,2-Dichloroethene (tDCE)	Di-isoproyl ether	Ethylbenzene	Isopropylbenzene (Cumene)	Methyl Ethyl Ketone (MEK) 2-Butanone	4-Methyl-2-pentanone (MIBK)	Methyl tert. Butyl Ether (MTBE)	n-Propylbenzene	Tetrachloroethene (PCE)	Toluene	Trichloroethene (TCE)	1,2,3-Trimethylbenzene (TMB)	1,2,4-Trimethylbenzene (TMB)	1,3,5-Trimethylbenzene (TMB)	Vinyl chloride (VC)	Xylenes
Groundwater Residential RRS - Types 1/2			**8.0E+03**	**5.4E+00**	**NR**	**NR**	**8.0E+01**	**5.0E+00**	**7.0E+01**	**1.0E+02**	**NR**	**7.0E+01**	**2.1E+02**	**3.0E+03**	**2.0E+03**	**NR**	**NR**	**1.1E+01**	**1.0E+03**	**5.0E+00**	**NR**	**NR**	**NR**	**2.0E+00**	**1.0E+04**
Groundwater Commercial RRS - Types 3/4			**4.6E+04**	**8.7E+00**	**NR**	**NR**	**3.4E+00**	**2.9E+00**	**3.6E+01**	**1.9E+02**	**NR**	**2.9E+01**	**1.0E+00**	**1.2E+04**	**4.2E+03**	**NR**	**NR**	**1.4E+01**	**5.2E+03**	**5.2E+00**	**NR**	**NR**	**NR**	**3.3E+00**	**1.0E+04**
MW-13S	7/7/2008	MEI	<50	<1	<1	<1	**11**	<1	**33**	<1	<1	<1	<1	<10	<10	**3.2**	<1	**910**	<1	**28**	<1	<1	<1	<1	<3
	7/7/2008	UC	<50	<5	NA	BDL	**11**	BDL	**32**	BDL	NA	<5	BDL	BDL	BDL	<5	NA	**1100**	<5	**30**	BDL	<5	NA	<2	<10
	12/15/2008	MEI	<50	<1	<1	<1	**8.8**	<1	**25**	<1	<1	<1	<1	<10	<10	**10**	<1	**670**	<1	**26**	<1	<1	<1	<1	<3
	12/15/2008	UC	<50	<5	NA	BDL	**9.3**	BDL	**25**	BDL	NA	<5	BDL	BDL	BDL	**13**	NA	**920**	<5	**30**	BDL	<5	NA	<2	<10
	5/22/2009	MEI	<50	<1	<1	<1	<5	<1	**15**	<1	<1	<1	<1	<10	<10	**7.4**	<1	**350**	<5	**16**	<1	<1	<1	<1	<3
	11/10/2009	MEI	<250	<5	<5	<5	<25	<5	**12**	<5	<5	<5	<5	<50	<50	<5	<5	**160**	<25	**9.7**	<5	<5	<5	<5	<15
	3/10/2015	MEI	<50	<1	<1	<1	**12**	<1	**3.0**	<1	<1	<1	<1	<10	<10	<1	<1	**21**	<5	**1.8**	<1	<1	<1	<1	<3
(Dup.)	3/10/2015	MEI	<50	<1	<1	<1	**11**	<1	**3.7**	<1	<1	<1	<1	<10	<10	<1	<1	**23**	<5	**2.1**	<1	<1	<1	<1	<3
MW-14	7/8/2008	MEI	<50	<1	<1	<1	**11**	<1	**4**	<1	<1	<1	<1	<10	<10	**11**	<1	**86**	<5	**4.3**	<1	<1	<1	<1	<3
	7/8/2008	UC	<50	<5	NA	BDL	**14**	BDL	<5	BDL	NA	<5	BDL	BDL	BDL	**17**	NA	**130**	<5	**6.4**	BDL	<5	NA	<2	<10
	12/15/2008	MEI	<50	<1	<1	<1	**13**	<1	**9.4**	<1	**1.2**	<1	<1	<10	<10	**34**	<1	**110**	<5	**8.9**	<1	<1	<1	<1	<3
	12/15/2008	UC	<50	<5	NA	BDL	**13**	BDL	**8.0**	BDL	NA	<5	BDL	BDL	BDL	**42**	NA	**140**	<5	**9.6**	BDL	<5	NA	<2	<10
	5/21/2009	MEI	<50	<1	<1	<1	**7.3**	<1	**15**	<1	**1**	<1	<1	<10	<10	**1.7**	<1	**110**	<5	**12**	<1	<1	<1	<1	<3
	11/10/2009	MEI	<50	<1	<1	<1	**6.2**	<1	**15**	<1	**2.6**	<1	<1	<10	<10	<10	<1	**70**	<5	**9.2**	<1	<1	<1	<1	<3
	3/11/2015	MEI	<50	<1	<1	<1	**9.7**	<1	**6.0**	<1	<1	<1	<1	<10	<10	<1	<1	**40**	<5	**2.8**	<1	<1	<1	<1	<3
MW-15	7/7/2008	MEI	<50	<1	<1	<1	<5	<1	**3.9**	<1	**1.2**	<1	<1	<10	<10	**5.8**	<1	**9.6**	<5	**4.9**	<1	<1	<1	<1	<3
	7/7/2008	UC	<50	<5	NA	BDL	<5	BDL	<5	BDL	NA	<5	BDL	BDL	BDL	<5	NA	**9.2**	<5	<5	BDL	<5	NA	<2	<10
	12/15/2008	MEI	<50	<1	<1	<1	<5	<1	**5.4**	<1	**2.2**	<1	<1	<10	<10	**26**	<1	**15**	<5	**7.8**	<1	<1	<1	<1	<3
	12/15/2008	UC	<50	<5	NA	BDL	<5	BDL	**6.9**	BDL	NA	<5	BDL	BDL	BDL	**47**	NA	**33**	<5	**9.4**	BDL	<5	NA	<2	<10
	5/21/2009	MEI	<50	<1	<1	<1	<5	<1	**2.2**	<1	<1	<1	<1	<10	<10	<1	<1	**10**	<5	**4.0**	<1	<1	<1	<1	<3
	3/11/2015	MEI	<50	<1	<1	<1	<5	<1	**22**	<1	<1	<1	<1	<10	<10	<1	<1	**1.9**	<5	**3.7**	<1	<1	<1	<1	<3
MW-16	7/8/2008	MEI	<50	**5.6**	<1	<1	<5	<1	**66**	<1	**17**	<1	<1	<10	<10	**760**	<1	**120**	<5	**66**	<1	<1	<1	**6.2**	<3
	7/8/2008	UC	<50	**5.3**	NA	BDL	<5	BDL	**61**	BDL	NA	<5	BDL	BDL	BDL	**1400**	NA	**110**	<5	**61**	BDL	<5	NA	<2	<10
	12/15/2008	MEI	<50	**30**	<1	**2.3**	<5	<1	**110**	<1	**23**	<1	**2.4**	<10	<10	**960**	<1	**150**	<5	**120**	<1	<1	<1	**21**	<3
	12/15/2008	UC	<50	**25**	NA	BDL	<5	BDL	**100**	BDL	NA	<5	BDL	BDL	BDL	**1900**	NA	**150**	<5	**110**	BDL	<5	NA	<2	<10
	5/21/2009	MEI	<500	**13**	<10	<10	<50	<10	**97**	<10	**17**	<10	<10	<100	<100	**960**	<10	**66**	<50	**160**	<10	<10	<10	**21**	<3
	3/11/2015	MEI	**54**	**2.2**	<1	<1	<5	<1	**100**	<1	**5.7**	<1	<1	<10	<10	**340**	<1	**19**	<5	**35**	<1	<1	<1	**11**	<3

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Groundwater Residential RRS - Types 1/2			**8.0E+03**	**5.4E+00**	**NR**	**NR**	**8.0E+01**	**5.0E+00**	**7.0E+01**	**1.0E+02**	**NR**	**7.0E+01**	**2.1E+02**	**3.0E+03**	**2.0E+03**	**NR**	**NR**	**1.1E+01**	**1.0E+03**	**5.0E+00**	**NR**	**NR**	**NR**	**2.0E+00**	**1.0E+04**
Groundwater Commercial RRS - Types 3/4			**4.6E+04**	**8.7E+00**	**NR**	**NR**	**3.4E+00**	**2.9E+00**	**3.6E+01**	**1.9E+02**	**NR**	**2.9E+01**	**1.0E+00**	**1.2E+04**	**4.2E+03**	**NR**	**NR**	**1.4E+01**	**5.2E+03**	**5.2E+00**	**NR**	**NR**	**NR**	**3.3E+00**	**1.0E+04**
MW-17	7/7/2008	MEI	<50	<1	<1	<1	**17**	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	<1	**18**	<1	<1	<1	<1	<1	<3
	7/7/2008	UC	<50	<5	NA	BDL	**18**	BDL	<5	BDL	NA	<5	BDL	BDL	BDL	<5	NA	<5	**22**	<5	BDL	<5	NA	<2	<10
	12/15/2008	MEI	<50	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	<1	<5	<1	<1	<1	<1	<1	<3
	12/15/2008	UC	<50	<5	NA	BDL	<5	BDL	<5	BDL	NA	<5	BDL	BDL	BDL	<5	NA	<5	<5	<5	BDL	<5	NA	<2	<10
	3/11/2015	MEI	<50	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	<1	<5	<1	<1	<1	<1	<1	<3
MW-18	7/7/2008	MEI	**50**	<1	<1	<1	<5	<1	**5.2**	<1	<1	<1	<1	<10	<10	<1	<1	**1500**	<5	**9.8**	<1	<1	<1	<1	<3
	7/7/2008	UC	**100**	<5	NA	BDL	<5	BDL	**5.6**	BDL	NA	<5	BDL	BDL	BDL	<5	NA	**1300**	<5	**12**	BDL	<5	NA	<2	<10
	12/15/2008	MEI	<500	<10	<10	<10	<50	<10	**10**	<10	<10	<10	<10	<100	<100	<10	<10	**1000**	<50	**12**	<10	<10	<10	<10	<30
(Dup.)	12/15/2008	MEI	<50	<1	<1	<1	<5	<1	**6.0**	<1	<1	<1	<1	<10	<10	<1	<1	**910**	<50	**14**	<1	<1	<1	<1	<3
	12/15/2008	UC	<50	<5	NA	BDL	<5	BDL	<5	BDL	NA	<5	BDL	BDL	BDL	<5	NA	**1100**	<5	**15**	BDL	<5	NA	<2	<10
	5/21/2009	MEI	<500	<10	<10	<10	<50	<10	**42**	<10	<10	<10	<10	<100	<10	<10	<10	**590**	<50	**24**	<10	<10	<10	<10	<30
(Dup.)	5/21/2009	MEI	<500	<10	<10	<10	<50	<10	**43**	<10	<10	<10	<10	<100	<10	<10	<10	**440**	<50	**24**	<10	<10	<10	<10	<30
	11/11/2009	MEI	<500	<10	<10	<10	<50	<10	**9.2**	<10	<10	<10	<10	<100	<100	<10	<10	**87**	<50	**50**	<10	<10	<10	<10	<30
	3/11/2015	MEI	<50	<1	<10	<1	<5	<1	**4.9**	<1	<1	<1	<1	<1	<10	<1	<1	**3.4**	<5	**3.3**	<1	<1	<1	<1	<3
MW-19	7/7/2008	MEI	<50	**7.9**	**1.3**	<1	**13**	<1	<1	<1	**3.6**	**3.6**	<1	<10	<10	<1	**1.5**	**33**	**10**	<1	<1	**1.8**	**4.5**	<1	**11**
	7/7/2008	UC	<50	**7.6**	NA	BDL	15	BDL	<5	BDL	NA	<5	BDL	BDL	BDL	<5	NA	**49**	**13**	<5	BDL	<5	NA	<2	**6.5**
	12/15/2008	MEI	<50	**16**	**4.4**	<1	**12**	<1	<1	<1	<1	**12**	<1	<10	<10	<1	**5.7**	**69**	**27**	<1	**2.2**	**5.8**	**1.3**	<1	**31**
	12/15/2008	UC	<50	**13**	NA	BDL	11	BDL	<5	BDL	NA	**15**	BDL	BDL	BDL	<5	NA	**92**	**27**	<5	BDL	<5	NA	<2	**30**
	5/21/2009	MEI	<50	**8.8**	**4.1**	<1	**5.8**	<1	<1	<1	<1	**1.4**	<1	<10	<10	<1	**3.7**	**130**	**11**	<1	**1.6**	**5.6**	**1.2**	<1	**24**
	3/12/2015	MEI	<50	<1	<1	<1	**11**	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	**7.5**	<5	<1	<1	<1	<1	<1	<3
MW-20	7/7/2008	MEI	<50	**13**	<1	<1	**8.1**	<1	**4.6**	<1	<1	<1	<1	<10	<10	**3.7**	<1	**340**	<5	**10**	<1	<1	<1	<1	<3
	7/7/2008	UC	<50	**15**	NA	BDL	**9.4**	BDL	**5.1**	BDL	NA	<5	BDL	BDL	BDL	**5.5**	NA	**290**	<5	**12**	BDL	<5	NA	<2	<10
	12/15/2008	MEI	<50	**28**	<1	<1	**8.7**	<1	**7.4**	<1	<1	<1	**1.1**	<10	<10	**6.8**	<1	**420**	<5	**14**	<1	<1	<1	<1	<3
	12/15/2008	UC	<50	**28**	NA	BDL	<5	BDL	**6.1**	BDL	NA	<5	BDL	BDL	BDL	**8.6**	NA	**420**	<5	**15**	BDL	<5	NA	<2	<10
	5/20/2009	MEI	<250	**34**	<5	<5	<25	<5	**25**	<5	<5	<5	<5	<50	<50	**12**	<5	**510**	<25	**17**	<5	<5	<5	<5	<15
	3/12/2015	MEI	<50	**15**	<1	<1	<5	<1	**43**	<1	<1	<1	<1	<10	<10	**2.5**	<1	**160**	<5	**8.8**	<1	<1	<1	**2.2**	<3

NOTES:

(1) 05-2009 to 2015 samples collected by Marion Environmental Inc. personnel. 07-2008 & 12-2008 samples split between MEI & UC. 2005-2006 samples collected by others.

(2) Analytical results presented in micrograms per liter (µg/L); equivalent to parts per billion ("ppb") units.

(3) Compounds listed in this table were detected in at least one monitor well. Other compounds not listed were "Below Detection Limits" or "BDL." "NA" means "not analyzed" & indicates sample not analyzed for listed analyte.

(4) The "less than" symbol (<) indicates that the compound was not detected above the given numerical Method Detection Limit (MDL). "BDL" means "Below Detection Limits" and indicates that the compound was not detected and the MDL is unknown.

(5) Wells MW-1, MW-10, MW-11 & MW-12 destroyed during 2007-2008 soil excavation project conducted by others.

TABLE 9
Fountain Oaks Shopping Center
Groundwater Analytical Results - VOCs Detected - All Sampling Events, 2005-2015
(All concentration units in micrograms per liter (µg/L))

Boring	Date	Consultant	Acetone	Benzene	n-Butylbenzene	sec-Butylbenzene	Chloroform	1,2-Dichloroethane (1,2DCA)	cis-1,2-Dichloroethene (cDCE)	trans-1,2-Dichloroethene (tDCE)	Di-isoproyl ether	Ethylbenzene	Isopropylbenzene (Cumene)	Methyl Ethyl Ketone (MEK) 2-Butanone	4-Methyl-2-pentanone (MIBK)	Methyl tert. Butyl Ether (MTBE)	n-Propylbenzene	Tetrachloroethene (PCE)	Toluene	Trichloroethene (TCE)	1,2,3-Trimethylbenzene (TMB)	1,2,4-Trimethylbenzene (TMB)	1,3,5-Trimethylbenzene (TMB)	Vinyl chloride (VC)	Xylenes
Groundwater Residential RRS - Types 1/2			**8.0E+03**	**5.4E+00**	**NR**	**NR**	**8.0E+01**	**5.0E+00**	**7.0E+01**	**1.0E+02**	**NR**	**7.0E+01**	**2.1E+02**	**3.0E+03**	**2.0E+03**	**NR**	**NR**	**1.1E+01**	**1.0E+03**	**5.0E+00**	**NR**	**NR**	**NR**	**2.0E+00**	**1.0E+04**
Groundwater Commercial RRS - Types 3/4			**4.6E+04**	**8.7E+00**	**NR**	**NR**	**3.4E+00**	**2.9E+00**	**3.6E+01**	**1.9E+02**	**NR**	**2.9E+01**	**1.0E+00**	**1.2E+04**	**4.2E+03**	**NR**	**NR**	**1.4E+01**	**5.2E+03**	**5.2E+00**	**NR**	**NR**	**NR**	**3.3E+00**	**1.0E+04**
MW-21	12/15/2008	MEI	<2500	**1600**	<50	<50	<250	<50	<50	**<50**	**66**	<50	<50	<500	<500	**360**	<50	<50	<250	<50	<50	<50	<50	<50	<150
	12/15/2008	UC	<50	**1700**	NA	BDL	<5	BDL	**10**	BDL	<5	<5	BDL	BDL	BDL	**640**	<5	<5	110	<5	BDL	<5	<5	<5	16
	5/21/2009	MEI	<1000	**1800**	<20	<20	<100	<20	<20	**<20**	**54**	<20	<20	<200	<200	**350**	<20	<20	<100	<20	<20	<20	<20	<20	<60
	3/12/2015	MEI	<50	**24**	<1	<1	<5	<1	**1.0**	**<1**	**46**	<1	<1	<10	<10	**2500**	<1	<1	<5	<1	<1	<1	<1	<1	<3
MW-22	7/7/2008	MEI	<50	<1	<1	<1	**15**	<1	**1.1**	<1	<1	**1**	<1	<10	<10	<1	<1	**120**	<5	**1.9**	<1	<1	<1	<1	**5.9**
	7/7/2008	UC	<50	<5	NA	BDL	**16**	BDL	<5	BDL	NA	<5	BDL	BDL	BDL	<5	NA	**170**	<5	<5	BDL	<5	NA	<2	<10
	12/15/2008	MEI	<50	<1	<1	<1	**10**	<1	**460**	<1	<1	<1	<1	<10	<10	<1	<1	**250**	<5	**14**	<1	<1	<1	**1.2**	<3
	12/15/2008	UC	<50	<5	NA	BDL	<5	BDL	**650**	BDL	NA	<5	BDL	BDL	BDL	<5	NA	**280**	<5	**15**	BDL	<5	NA	<2	<10
	5/20/2009	MEI	<250	<5	<5	<5	<25	<5	**900**	<5	<5	<5	<5	<50	<50	<5	<5	**270**	<25	**13**	<5	<5	<5	<5	<15
	3/12/2015	MEI	<50	<1	<1	<1	**8.9**	<1	**12**	<1	<1	<1	<1	<10	<10	<1	<1	**520**	<5	**6.7**	<1	<1	<1	<1	<3
MW-23	7/7/2008	MEI	<50	<1	<1	<1	**14**	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	**96**	<5	**1.3**	<1	<1	<1	<1	<3
	7/7/2008	UC	<50	<5	NA	BDL	**14**	BDL	<5	BDL	NA	<5	BDL	BDL	BDL	<5	NA	**130**	<5	<5	BDL	<5	NA	<2	<10
	12/15/2008	MEI	<50	<1	<1	<1	**10**	<1	**3.3**	<1	<1	<1	<1	<10	<10	<1	<1	**48**	<5	**3.7**	<1	<1	<1	<1	<3
	12/15/2008	UC	<50	<5	NA	BDL	<5	BDL	<5	BDL	NA	<5	BDL	BDL	BDL	<5	NA	**56**	<5	<5	BDL	<5	NA	<2	<10
	5/20/2009	MEI	<50	<1	<1	<1	**8.6**	<1	**14**	<1	<1	<1	<1	<10	<10	<1	<1	**60**	<5	**3.8**	<1	<1	<1	<1	<3
	3/11/2015	MEI	<50	<1	<1	<1	**5.6**	<1	**10**	<1	<1	<1	<1	<10	<10	<1	<1	**120**	<5	**2.8**	<1	<1	<1	<1	<3
MW-24	5/21/2009	MEI	<50	<1	<1	<10	**7.8**	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	<1	<5	<1	<1	<1	<1	<1	<3
	Abandoned and covered by road paving 2009.																								
MW-25	5/22/2009	MEI	**61**	<1	<1	**69**	<5	<1	<1	<1	<1	<1	<1	<10	**16**	<1	<1	<1	<5	<1	<1	<1	<1	<1	<3
	3/11/2015	MEI	<50	<1	<1	<10	<5	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	<1	<5	<1	<1	<1	<1	<1	<3
MW-26	5/22/2009	MEI	<50	<1	<1	<10	<5	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	**310**	<5	**1.7**	<1	<1	<1	<1	<3
(Dup.)	5/22/2009	MEI	<50	<1	<1	<10	<5	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	**290**	<5	**1.4**	<1	<1	<1	<1	<3
	11/11/2009	MEI	<50	<1	<1	<10	<5	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	**68**	<5	<1	<1	<1	<1	<1	<3
	3/30/2015	MEI	<50	<1	<1	<10	<5	<1	**4.2**	<1	<1	<1	<1	<10	<10	<1	<1	**11**	<5	**1.8**	<1	<1	<1	<1	<3

NOTES:

(1) 05-2009 to 2015 samples collected by Marion Environmental Inc. personnel. 07-2008 & 12-2008 samples split between MEI & UC. 2005-2006 samples collected by others.

(2) Analytical results presented in micrograms per liter (µg/L); equivalent to parts per billion ("ppb") units.

(3) Compounds listed in this table were detected in at least one monitor well. Other compounds not listed were "Below Detection Limits" or "BDL." "NA" means "not analyzed" & indicates sample not analyzed for listed analyte.

(4) The "less than" symbol (<) indicates that the compound was not detected above the given numerical Method Detection Limit (MDL). "BDL" means "Below Detection Limits" and indicates that the compound was not detected and the MDL is unknown.

(5) Wells MW-1, MW-10, MW-11 & MW-12 destroyed during 2007-2008 soil excavation project conducted by others.

TABLE 9
Fountain Oaks Shopping Center
Groundwater Analytical Results - VOCs Detected - All Sampling Events, 2005-2015
(All concentration units in micrograms per liter (µg/L))

Boring	Date	Consultant	Acetone	Benzene	n-Butylbenzene	sec-Butylbenzene	Chloroform	1,2-Dichloroethane (1,2DCA)	cis-1,2-Dichloroethene (cDCE)	trans-1,2-Dichloroethene (tDCE)	Di-isoproyl ether	Ethylbenzene	Isopropylbenzene (Cumene)	Methyl Ethyl Ketone (MEK) 2-Butanone	4-Methyl-2-pentanone (MIBK)	Methyl tert. Butyl Ether (MTBE)	n-Propylbenzene	Tetrachloroethene (PCE)	Toluene	Trichloroethene (TCE)	1,2,3-Trimethylbenzene (TMB)	1,2,4-Trimethylbenzene (TMB)	1,3,5-Trimethylbenzene (TMB)	Vinyl chloride (VC)	Xylenes
Groundwater Residential RRS - Types 1/2			**8.0E+03**	**5.4E+00**	**NR**	**NR**	**8.0E+01**	**5.0E+00**	**7.0E+01**	**1.0E+02**	**NR**	**7.0E+01**	**2.1E+02**	**3.0E+03**	**2.0E+03**	**NR**	**NR**	**1.1E+01**	**1.0E+03**	**5.0E+00**	**NR**	**NR**	**NR**	**2.0E+00**	**1.0E+04**
Groundwater Commercial RRS - Types 3/4			**4.6E+04**	**8.7E+00**	**NR**	**NR**	**3.4E+00**	**2.9E+00**	**3.6E+01**	**1.9E+02**	**NR**	**2.9E+01**	**1.0E+00**	**1.2E+04**	**4.2E+03**	**NR**	**NR**	**1.4E+01**	**5.2E+03**	**5.2E+00**	**NR**	**NR**	**NR**	**3.3E+00**	**1.0E+04**
MW-27	5/22/2009	MEI	<50	<1	<1	<1	<5	<1	**14**	<1	<1	<1	<1	<10	<10	**6.0**	<1	**190**	<5	**14**	<1	<1	<1	<1	<3
	11/11/2009	MEI	<50	<1	<1	<1	<5	<1	**11**	<1	<1	<1	<1	<10	<10	<1	<1	**61**	<5	**7**	<1	<1	<1	<1	<3
	3/11/2015	MEI	<50	<1	<1	<1	**12**	<1	**2.0**	<1	<1	<1	<1	<10	<10	<1	<1	**12**	<5	<1	<1	<1	<1	<1	<3
MW-28	5/20/2009	MEI	<50	**170**	<1	<1	**1.1**	**3.0**	**95**	**<1**	**21**	<1	**2.4**	<10	<10	**720**	<1	**19**	<5	**26**	<1	<1	<1	**9.2**	<3
	3/11/2015	MEI	**86**	**130**	<1	**1.5**	<5	<1	**48**	**<1**	**11**	<1	**2.6**	<10	<10	**820**	<1	**16**	<5	**7.0**	<2.5	<1	<1	**3.9**	<3
(Dup.)	3/11/2015	MEI	<50	**140**	<1	**1.9**	<5	<1	**58**	**<1**	**12**	<1	**3.2**	<10	<10	**890**	<1	**20**	<5	**8.9**	<1	<1	<1	**4.7**	<3
MW-29	5/21/2009	MEI	<50	<1	<1	<10	<5	<1	**7.4**	<1	<1	<1	<1	<10	<10	**4.8**	<1	<1	<5	**1.1**	<1	<1	<1	<1	<3
	3/11/2015	MEI	<50	<1	<1	<10	<5	<1	**7.9**	**<1**	**1.0**	<1	<1	<10	<10	**15**	<1	<1	<5	**1.1**	<1	<1	<1	<1	<3
MW-30	5/21/2009	MEI	<50	<1	<1	<10	<5	<1	**1.0**	<1	<1	<1	<1	<10	<10	<1	<1	**42**	<5	**1.4**	<1	<1	<1	<1	<3
	11/11/2009	MEI	<50	<1	<1	<10	<5	<1	**1.4**	<1	<1	<1	<1	<10	<10	<1	<1	**23**	<5	**1.4**	<1	<1	<1	<1	<3
	3/11/2015	MEI	<50	<1	<1	<10	<5	<1	**1.4**	<1	<1	<1	<1	<10	<10	<1	<1	**10**	<5	<1	<1	<1	<1	<1	<3
MW-31	5/21/2009	MEI	<50	<1	<1	<10	<5	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	<1	<5	<1	<1	<1	<1	<1	<3
	3/11/2015	MEI	<50	<1	<1	<10	<5	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	<1	<5	<1	<1	<1	<1	<1	<3
MW-32	5/21/2009	MEI	<50	<1	<1	<10	<5	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	<1	<5	<1	<1	<1	<1	<1	<3
	3/11/2015	MEI	<50	<1	<1	<10	<5	<1	<1	<1	<1	<1	<1	<10	<10	**1.9**	<1	<1	<5	<1	<1	<1	<1	<1	<3
MW-33	5/21/2009	MEI	<50	<1	<1	<10	<5	<1	<1	<1	<1	<1	<1	<10	<10	**1.9**	<1	**2.2**	<5	<1	<1	<1	<1	<1	<3
	3/10/2015	MEI	<50	<1	<1	<10	<5	<1	**17**	<1	<1	<1	<1	<10	<10	**3.3**	<1	<1	<5	**2.2**	<1	<1	<1	<1	<3

NOTES:

(1) 05-2009 to 2015 samples collected by Marion Environmental Inc. personnel. 07-2008 & 12-2008 samples split between MEI & UC. 2005-2006 samples collected by others.

(2) Analytical results presented in micrograms per liter (µg/L); equivalent to parts per billion ("ppb") units.

(3) Compounds listed in this table were detected in at least one monitor well. Other compounds not listed were "Below Detection Limits" or "BDL." "NA" means "not analyzed" & indicates sample not analyzed for listed analyte.

(4) The "less than" symbol (<) indicates that the compound was not detected above the given numerical Method Detection Limit (MDL). "BDL" means "Below Detection Limits" and indicates that the compound was not detected and the MDL is unknown.

(5) Wells MW-1, MW-10, MW-11 & MW-12 destroyed during 2007-2008 soil excavation project conducted by others.

TABLE 10
Fountain Oaks Shopping Center
Groundwater Analytical Results - VOCs Detected - March 2015 Sampling Event
(All concentration units in micrograms per liter (µg/L))

Well ID	Date	Acetone	Benzene	sec-Butylbenzene	0	Cumene (Isopropylbenzene)	cis-1,2-Dichloroethene (cDCE)	trans-1,2-Dichloroethene (tDCE)	Di-isoproyl ether	Methyl Ethyl Ketone (MEK) (2-Butanone)	Methyl tert. Butyl Ether (MTBE)	Tetrachloroethene (PCE)	Trichloroethene (TCE)	Vinyl chloride (VC)
Groundwater Residential RRS - Types 1/2		**8.0E+03**	**5.4E+00**	**NR**	**8.0E+01**	**2.1E+02**	**7.0E+01**	**1.0E+02**	**NR**	**3.0E+03**	**NR**	**1.1E+01**	**5.0E+00**	**2.0E+00**
Groundwater Commercial RRS - Types 3/4		**4.6E+04**	**8.7E+00**	**NR**	**3.4E+00**	**1.0E+03**	**3.6E+01**	**1.9E+02**	**NR**	**1.2E+04**	**NR**	**1.4E+01**	**5.2E+00**	**3.3E+00**
MW-2	3/12/2015	<50	<1	<1	**5.6**	<1	**65**	<1	<1	<10	**1.0**	**740**	**70**	<1
(Dup.)	3/12/2015	<50	<1	<1	**6.1**	<1	**68**	<1	<1	<10	<1	**810**	**73**	<1
MW-3	3/11/2015	<50	<1	<1	**10**	<1	**5.1**	<1	<1	<10	**1.0**	**33**	**2.5**	<1
MW-4	3/12/2015	<50	<1	<1	<5	<1	**210**	**1.2**	<1	<10	<1	<10	**120**	<1
MW-5	3/12/2015	<50	**1.5**	<1	<5	<1	**26**	<1	<1	<10	<1	**170**	**5.2**	**1.9**
MW-6	3/10/2015	<50	<1	<1	<5	<1	**26**	<1	**1.7**	<10	**45**	**3.9**	**5.5**	<1
MW-7	3/10/2015	<50	<1	<1	<5	<1	<1	<1	<1	<10	<1	<1	<1	<1
MW-8	3/11/2015	<50	<1	<1	**11**	<1	**2.5**	<1	<1	<50	<1	**14**	<1	<1
MW-9	3/12/2015	<50	<1	<1	**14**	<1	**1.9**	<1	<1	<10	<1	**18**	**1.1**	<1
MW-13D	3/11/2015	**89**	<1	<1	<5	<1	<1	<1	<1	**11**	<1	<1	<1	<1
MW-13S	3/10/2015	<50	<1	<1	**12**	<1	**3.0**	<1	<1	<10	<1	**21**	**1.8**	<1
(Dup.)	3/10/2015	<50	<1	<1	**11**	<1	**3.7**	<1	<1	<10	<1	**23**	**2.1**	<1
MW-14	3/11/2015	<50	<1	<1	**9.7**	<1	**6.0**	<1	<1	<10	<1	**40**	**2.8**	<1
MW-15	3/11/2015	<50	<1	<1	<5	<1	**22**	<1	<1	<10	<1	**1.9**	**3.7**	<1
MW-16	3/11/2015	**54**	**2.2**	<1	<5	<1	**100**	<1	**5.7**	<10	**340**	**19**	**35**	**11**
MW-17	3/11/2015	<50	<1	<1	<5	<1	<1	<1	<1	<10	<1	<1	<1	<1
MW-18	3/11/2015	<50	<1	<1	<5	<1	**4.9**	<1	<1	<1	<1	**3.4**	**3.3**	<1
MW-19	3/12/2015	<50	<1	<1	**11**	<1	<1	<1	<1	<10	<1	**7.5**	<1	<1
MW-20	3/12/2015	<50	**15**	<1	<5	<1	**43**	<1	<1	<10	**2.5**	**160**	**8.8**	**2.2**
MW-21	3/12/2015	<50	**24**	<1	<5	<1	**1.0**	<1	**46**	<10	**2500**	<1	<1	<1
MW-22	3/12/2015	<50	<1	<1	**8.9**	<1	**12**	<1	<1	<10	<1	**520**	**6.7**	<1
MW-23	3/11/2015	<50	<1	<1	**5.6**	<1	**10**	<1	<1	<10	<1	**120**	**2.8**	<1
MW-25	3/11/2015	<50	<1	<10	<5	<1	<1	<1	<1	<10	<1	<1	<1	<1
MW-26	3/30/2015	<50	<1	<10	<5	<1	**4.2**	<1	<1	<10	<1	**11**	**1.8**	<1
MW-27	3/11/2015	<50	<1	<1	**12**	<1	**2.0**	<1	<1	<10	<1	**12**	<1	<1
MW-28	3/11/2015	**86**	**130**	**1.5**	<5	**2.6**	**48**	<1	**11**	<10	**820**	**16**	**7.0**	**3.9**
(Dup.)	3/11/2015	<50	**140**	**1.9**	<5	**3.2**	**58**	<1	**12**	<10	**890**	**20**	**8.9**	**4.7**
MW-29	3/11/2015	<50	<1	<10	<5	<1	**7.9**	<1	**1.0**	<10	**15**	<1	**1.1**	<1
MW-30	3/11/2015	<50	<1	<10	<5	<1	**1.4**	<1	<1	<10	<1	**10**	<1	<1
MW-31	3/11/2015	<50	<1	<10	<5	<1	<1	<1	<1	<10	<1	<1	<1	<1
MW-32	3/11/2015	<50	<1	<10	<5	<1	<1	<1	<1	<10	**1.9**	<1	<1	<1
MW-33	3/10/2015	<50	<1	<10	<5	<1	**17**	<1	<1	<10	**3.3**	<1	**2.2**	<1

NOTES: (1) Well #'s 1, 10, 11 & 12 abandoned/destroyed during 2007-2008 soil remediation. Well #24 abandoned/destroyed during 2009 road paving.
(2) The "less than" symbol (<) indicates that the analyte was not detected above the given numerical method detection limit (MDL).

Table 11
Natural Attenuation Degradation/Decay Rate Summary
Fountain Oaks Shopping Center

Well ID	Benzene				cDCE				PCE				TCE				VC			
	slope ln(conc) v time method [1]			slope - 2-pt, 2008-2009 v. 03/2015	slope ln(conc) v time method [1]			slope - 2-pt, 2008-2009 v. 03/2015	slope ln(conc) v time method [1]			slope - 2-pt, 2008-2009 v. 03/2015	slope ln(conc) v time method [1]			slope - 2-pt, 2008-2009 v. 03/2015	slope ln(conc) v time method [1]			slope - 2-pt, 2008-2009 v. 03/2015
	k_{point} (λ) (day^{-1})	Start Date	R^2	k_{point} (λ) (day^{-1})	k_{point} (λ) (day^{-1})	Start Date	R^2	k_{point} (λ) (day^{-1})	k_{point} (λ) (day^{-1})	Start Date	R^2	k_{point} (λ) (day^{-1})	k_{point} (λ) (day^{-1})	Start Date	R^2	k_{point} (λ) (day^{-1})	k_{point} (λ) (day^{-1})	Start Date	R^2	k_{point} (λ) (day^{-1})
"Source Area" Wells - (Immediately Downgradient from On-Site Release Source)																				
MW-2					~~0.000045~~	4/20/06	**0.25**	~~0.000078~~	0.00032	4/20/06	0.75	0.00045	0.0003	4/20/06	0.96	0.00032				
MW-4									0.0026	6/21/05	0.8	0.0028	0.00038	12/15/08	0.95	0.00039				
MW-9					0.0019	12/15/08	0.72	0.0023	0.0019	11/21/06	0.8	0.0023	0.00038	12/15/08	0.95	0.0024				
MW-26									0.0013	5/22/09	0.85	0.0015								
MW-27					0.0009	5/22/09	0.99	0.00088	0.0011	5/22/09	0.88	0.00083	0.0026	2/22/09	0.99	0.0025				
Geometric Mean - Subset					0.00131			0.00142	0.00118			0.00129	0.00058			0.00093				
Downgradient & Cross Gradient Wells - Downgradient & Cross gradient from On-Site Release Source																				
MW-3					~~0.00028~~	12/15/08	**0.35**	~~0.000067~~	0.0004	12/15/08	0.67	0.00055	0.00053	12/15/08	0.82	0.0004				
MW-13S					0.00083	7/7/08	0.96	0.00093	0.0014	7/7/08	0.95	0.0016	0.0011	7/7/08	0.97	0.0011				
MW-14					0.00032	12/15/08	0.56	0.00016	0.00044	7/8/08	0.87	0.0005	0.0006	12/15/08	0.95	0.00052				
MW-18					0.00073	5/21/09	0.6	0.001	0.0024	7/7/08	0.92	0.0024	0.00089	12/15/08	0.68	0.00094				
MW-29					**Growth**			~~0.000031~~												
MW-30									0.00057	5/21/09	0.88	0.00043				0.0017				
Geometric Mean - Subset					0.00058			0.00053	0.00114			0.00124	0.00084			0.00081				
Wells Impacted from Off--Site Release Sources																				
MW-5	0.0021	12/15/08	0.99	0.00203																
MW-16	0.00099	12/15/08	0.95	0.0011													0.00029	12/15/08	0.99	0.00028
MW-20	0.00032	12/15/08	0.92	0.00039																
MW-21	0.0019	12/15/08	0.99	0.002																
MW-28	0.00011	5/20/09	1	0.00011													0.00036	5/20/09	1	0.00036
Geometric Mean - Subset	0.00067			0.00072													0.00032			0.00032
Geo. Mean - SITE WIDE	**0.00067**			**0.00072**	**0.00080**			**0.00079**	**0.00097**			**0.00105**	**0.00066**			**0.00087**	**0.00032**			**0.00032**
Howard, et al. (1991) [2] Slow Decay	0.00095			0.00095	0.00024			0.00024	0.00095			0.00095	0.00042			0.00042	0.00024			0.00024
Howard, et al. (1991) [2] Fast Decay	0.0693			0.0693	0.0124			0.0124	0.0019			0.0019	0.0022			0.0022	0.012			0.012

References: (1) USEPA. 2002. Ground Water Issue Paper - "Calculation and Use of First-Order Rate Constants for Monitored Natural Attenuation Studies". EPA/540/S-02/500.
(2) Howard, P.H., et al. 1991. Handbook of Environmental Degradation Rates, Lewis Publishers, CRC Press, Boca Raton, FL 33431.

Table 12
Domenico Fate & Transport/Attenutaion Model & Soil to Groundwater Leaching Calculations
Benzene - Fountain Oaks Shopping Center

Variable	Variable Definition	Value	Formula	Units	Parameter Type	Data Source
Soil to Ground Water Leaching						
W	Width of Source	**46.7**		ft	Site-specific	MEI CSR, 2015, Sect. 3.4.4.4.1
W	Width of Source	**1,423**	$W_{cm} = W_{ft}$ * 30.48 cm/ft	cm	Site-specific	
P	Avg. Annual Precipitation	**49.71**		in/yr	Site-specific	Natl. Weather Svc, Peachtree City
P	Avg. Annual Precipitation	**126**	$P_{cm} = P_{in}$ * 2.54 cm/in	cm/yr	Calculated	
k_i	Infiltration Factor	**0.0009**		dimensionless	Specific to Silty Soil	Weidemeier, et al., 1999, p. 52
I	Infiltration Rate	**14.3**	$I = P^2$*0.009	cm/year	Calculated	
δ_{gw}	GW Mixing Zone Thickness	**7.1**		ft	Site-specific	MEI CSR, Table 2
δ_{gw}	GW Mixing Zone Thickness	**216**	$\delta_{gw,\,cm} = \delta_{gw,\,ft}$ * 30.48 cm/ft	cm	Site-specific	
K_{sat}	Hydraulic conductivity (saturated)	**7.78E-05**		cm/sec	Site-specific	UC PPCAP, Pg 23
K_{sat}	Hydraulic conductivity (saturated)	**6.72E+00**	$K_{sat,(cm/day)} = K_{sat,(cm/s)}$* 86,400 sec/day	cm/day		
i	Groundwater Hydraulic Gradient	**0.03**	i = Δhead/Δdistance (along flow path)	cm/cm	Site-specific, Avg.	MEI CSR, Figure 17
U_{gw}	GW Darcy velocity	**73.61**	$U_{gw} = K_{sat}$ * i	cm/year	Calculated	ASTM E2081-00 (2015)
DAF	Dilution Attenutation Factor	**1.780**	DAF = 1 + (U_{gw}*δ_{gw})/(I*W)	dimensionless	Calculated	ASTM E2081-00 (2015)
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	**146**		cm^3-W/g-C	Compound-Specific	EPA RSL Table, 2015
f_{oc}	Fractional Org. Carbon	**3.58%**		%	Site-specific	UC PPCAP, Table 1
K_d	Soil-Water Partition/Sorption Coeff.	**5.2268**	$K_d = K_{oc}$ * f_{oc}	g-W/g-soil	Calculated	ASTM E2081-00 (2015)
ρ_s	Soil Bulk Density	**1.80**		g-S/cm^3-S	Site-specific	UC PPCAP, Table 1
Θ_w	Soil Volumetric Water Content	**0.258**		cm^3-W/cm^3-S	Site-specific	UC PPCAP, Table 1
Θ_a	Soil Volumetric Air Content	**0.26**		cm^3-A/cm^3-S	default	ASTM E2081-00 (2015)
H'	Henry's Law Constant	**0.23**		dimensionless	Compound-Specific	EPA RSL Table, 2015
K_{sw}	Soil to Leachate Partition Coeff.	**5.403**	$K_{sw} = [\Theta_w + (K_d*\rho_s) + (H_{eff} * \Theta_a)] / \rho_s$	mg/L-wtr/mg/kg-soil	Calculated	ASTM E2081-00 (2015)
LF_{sw}	Leaching Factor - Soil to Groundwater	**0.104**	$LF_{sw} = 1/(K_{sw}$ * DAF)	ppm/ppm	Calculated	ASTM E2081-00 (2015)
$C_{max,\,soil}$	Max soil concentration on-site	**0.016**		mg/kg	Site-specific	MEI CSR, 2015, Tables 7, 8 & 22
C_{leach}	Conc. in GW by leaching	**1.7E-03**	$C_{leach} = C_{max,\,soil}$ * LF_{sw}	mg/L	Calculated	ASTM E2081-00 (2015)
Domenico Ground Water Solute Transport Model						
$C_{max,gw}$	Max GW concentration on-site	**135**		µg/L	Site-specific	MEI CSR, 2015, Tbl 10
$C_{max,gw}$	Max GW concentration on-site	**0.135**		mg/L	Site-specific	
$C_{source,\,gw}$	Steady State GW concentration in source zone	**0.137**	$C_{source,\,gw} = C_{max,\,gw} + C_{leach}$	mg/L	Calculated	Calculated
x_{del}	Distance: Source to Downgrad. Delineated Edge of Plume	**130**		ft	Site & Compound-specific	MEI CSR, 2015, Figs. 21-25
x_{del}	Distance: Source to Downgrad. Delineated Edge of Plume	**3,962**	$x_{del,\,cm} = x_{del,\,ft}$ * 30.48 cm/ft	cm	Site & Compound-specific	
x_{POE}	Dist: Downgrad. Edge Delineated Plume to Pt. of Exposure	**1,000**		ft	Default	GA VRP Act, 12-8-102(11)(C)
x_{POE}	Dist: Downgrad. Edge Delineated Plume to Pt. of Exposure	**30,480**	$x_{POE,\,cm} = x_{POE,\,ft}$ * 30.48 cm/ft	cm	Default	
x_{total}	Distance - Total to Potential Receptor	**1,130**		ft	Calculated	
x_{total}	Distance - Total to Potential Receptor	**34,442**	$x_{total,\,cm} = x_{total,\,ft}$ * 30.48 cm/ft	cm	Calculated	
λ	Degradation rate const.	**0.00067**		day^{-1}	Geo. Mean of Site Specific	MEI CSR, 2015, Table 11
α_x	Longitudinal Dispersivity	**3444.24**	$\alpha_x = x_{total}$ * 0.1	cm	Calculated	ASTM E 1739
α_y	Transverse Dispersivity	**1148.08**	$\alpha_y = \alpha_x$ / 3	cm	Calculated	ASTM E 1739
α_z	Vertical Dispersivity	**172.212**	$\alpha_z = \alpha_x$ / 20	cm	Calculated	ASTM E 1739
u	Specific Discharge	**285.29**	u = (K_{sat} * i) / Θ_w	cm/day	Calculated	ASTM E2081-00 (2015)
W	Source width (Horiz.)	**46.7**		ft	Site-specific	MEI CSR, 2015, Sec. 3.4.4.1
W	Source width (Horiz.)	**1,423**	$W_{cm} = W_{ft}$ * 30.48 cm/ft	cm	Calculated	
S_d	Source thickness (Vertical)	**200**		cm	Default	EPA RSL Table, 2015
Domenico Steady-State Transport/Attenuation Equation: C(x) = Csource * {exp [x_{total}/(2 * α_x)*(1-sqrt(1+(4*λ*α_x/u)))] * [erf (W/(4*sqrt(αy * x_{total})))]						ASTM E 1739, EPA 2002
Intermed. calc.	Domenico - exponential term	-8.024E-02	(x_{total}/(2 * α_x)*(1-sqrt(1+(4*λ*α_x/u)))	dimensionless	Calculated	Calculated
Intermed. calc.	exp (exponential term)	9.229E-01	exp (exponential term)	dimensionless	Calculated	Calculated
Intermed. calc.	(1st term) - error function (erf) to be calc.	5.659E-02	(W/(4*sqrt(α_y * x_{total})))	dimensionless	Calculated	Calculated
Intermed. calc.	(2nd term) - error function (erf) to be calc.	2.053E-02	(S_d/(4*sqrt(α_z * x_{total})))	dimensionless	Calculated	Calculated
Intermed. calc.	erf (1st term)=	0.063787	erf (W/(4*sqrt(α_y * x_{total})))	dimensionless	Calculated	Calculated
Intermed. calc.	erf (2nd term)=	0.023163	erf (S_d/(4*sqrt(α_z * x_{total})))	dimensionless	Calculated	Calculated
Intermed. calc.	erf(1st Term) * erf (2nd Term}	1.477E-03		dimensionless	Calculated	Calculated
Intermed. calc.	Domenico Results {parenthetical term}	**1.364E-03**	{exp [exp. term] * [erf (1st term)] * [erf	dimensionless	Calculated	Calculated
C(x) =	**Downgradient Point of Exposure Concentration**	**1.9E-04**	$C_{(x)} = C_{source,\,gw}$ * {Domenico Eqn.}	**mg/L**	**Calculated**	**Calculated**
C(x) =	**Downgradient Point of Exposure Concentration**	**0.19**	$C_{(x)} = C_{source,\,gw}$ * {Domenico Eqn.}	**µg/L**	**Calculated**	**Calculated**
Type 1 RRS	**Residential RRS/ Drinking Water MCL**	**5**		**µg/L**	**Default**	**EPD Rule 391-5-.18(2)(b)**

Table 13
Domenico Fate & Transport/Attenutaion Model & Soil to Groundwater Leaching Calculations
cis-1,2-Dichloroethene (cDCE) - Fountain Oaks Shopping Center

Variable	Variable Definition	Value	Formula	Units	Parameter Type	Data Source
Soil to Ground Water Leaching						
W	Width of Source	**46.7**		ft	Site-specific	MEI CSR, 2015, Sect. 3.4.4.4.1
W	Width of Source	**1,423**	$W_{cm} = W_{ft}$ * 30.48 cm/ft	cm	Site-specific	
P	Avg. Annual Precipitation	**49.71**		in/yr	Site-specific	Natl. Weather Svc, Peachtree City
P	Avg. Annual Precipitation	**126**	$P_{cm} = P_{in}$ * 2.54 cm/in	cm/yr	Calculated	
k_i	Infiltration Factor/Coefficient	**0.0009**		dimensionless	Specific to Silty Soil	Weidemeier, et al., 1999, p. 52
I	Infiltration Rate	**14.3**	$I = P^2$*0.009	cm/year	Calculated	
δ_{gw}	GW Mixing Zone Thickness	**7.1**		ft	Site-specific	MEI CSR, Table 2
δ_{gw}	GW Mixing Zone Thickness	**216**	$\delta_{gw, cm} = \delta_{gw, ft}$ * 30.48 cm/ft	cm	Site-specific	
K_{sat}	Hydraulic conductivity (saturated)	**7.78E-05**		cm/sec	Site-specific	UC PPCAP, Pg 23
K_{sat}	Hydraulic conductivity (saturated)	**6.72E+00**	$K_{sat,(cm/day)} = K_{sat,(cm/s)}$* 86,400 sec/day	cm/day		
i	Groundwater Hydraulic Gradient	**0.03**	i = Δhead/Δdistance (along flow path)	cm/cm	Site-specific, Avg.	MEI CSR, Figure 17
U_{gw}	GW Darcy velocity	**73.61**	$U_{gw} = K_{sat}$ * i	cm/year	Calculated	ASTM E2081-00 (2015)
DAF	Dilution Attenutation Factor	**1.780**	DAF = 1 + (U_{gw}*δ_{gw})/(I*W)	dimensionless	Calculated	ASTM E2081-00 (2015)
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	**39.6**		cm^3-W/g-C	Compound-Specific	EPA RSL Table, 2015
f_{oc}	Fractional Org. Carbon	**3.58%**		%	Site-specific	UC PPCAP, Table 1
K_d	Soil-Water Partition/Sorption Coeff.	**1.41768**	$K_d = K_{oc}$ * f_{oc}	g-W/g-soil	Calculated	ASTM E2081-00 (2015)
ρ_s	Soil Bulk Density	**1.80**		g-S/cm^3-S	Site-specific	UC PPCAP, Table 1
Θ_w	Soil Volumetric Water Content	**0.258**		cm^3-W/cm^3-S	Site-specific	UC PPCAP, Table 1
Θ_a	Soil Volumetric Air Content	**0.26**		cm^3-A/cm^3-S	default	ASTM E2081-00 (2015)
H'	Henry's Law Constant	**0.17**		dimensionless	Compound-Specific	EPA RSL Table, 2015
K_{sw}	Soil to Leachate Partition Coeff.	**1.585**	$K_{sw} = [\Theta_w + (K_d*\rho_s) + (H_{eff} * \Theta_a)] / \rho_s$	mg/L-wtr/mg/kg-soil	Calculated	ASTM E2081-00 (2015)
LF_{sw}	Leaching Factor - Soil to Groundwater	**0.354**	$LF_{sw} = 1/(K_{sw}$ * DAF)	ppm/ppm	Calculated	ASTM E2081-00 (2015)
$C_{max, soil}$	Max soil concentration on-site	**0.3**		mg/kg	Site-specific	MEI CSR, 2015, Tables 7, 8 & 22
C_{leach}	Conc. in GW by leaching	**1.1E-01**		mg/L	Calculated	ASTM E2081-00 (2015)
Domenico Ground Water Solute Transport Model						
$C_{max,gw}$	Max GW concentration on-site	**210**		µg/L	Site-specific	MEI CSR, 2015, Tbl 10
$C_{max,gw}$	Max GW concentration on-site	**0.210**		mg/L	Site-specific	
$C_{source, gw}$	Steady State GW concentration in source zone	**0.316**	$C_{source, gw} = C_{max, gw} + C_{leach}$	mg/L	Calculated	Calculated
x_{del}	Distance: Source to Downgrad. Delineated Edge of Plume	**30**		ft	Site & Compound-specific	MEI CSR, 2015, Figs. 21-25
x_{del}	Distance: Source to Downgrad. Delineated Edge of Plume	**914**	$x_{del, cm} = x_{del, ft}$ * 30.48 cm/ft	cm	Site & Compound-specific	
x_{POE}	Dist: Downgrad. Edge Delineated Plume to Pt. of Exposure	**1,000**		ft	Default	GA VRP Act, 12-8-102(11)(C)
x_{POE}	Dist: Downgrad. Edge Delineated Plume to Pt. of Exposure	**30,480**	$x_{POE, cm} = x_{POE, ft}$ * 30.48 cm/ft	cm	Default	
x_{total}	Distance - Total to Potential Receptor	**1,030**		ft	Site-specific	
x_{total}	Distance - Total to Potential Receptor	**31,394**	$x_{total, cm} = x_{total, ft}$ * 30.48 cm/ft	cm	Site-specific	
λ	Degradation rate const.	**0.0008**		day^{-1}	Geo. Mean of Site Specific	MEI CSR, 2015, Table 11
α_x	Longitudinal Dispersivity	**3139.44**	$\alpha_x = x_{total}$ * 0.1	cm	Calculated	ASTM E 1739
α_y	Transverse Dispersivity	**1046.48**	$\alpha_y = \alpha_x$ / 3	cm	Calculated	ASTM E 1739
α_z	Vertical Dispersivity	**156.972**	$\alpha_z = \alpha_x$ / 20	cm	Calculated	ASTM E 1739
u	Specific Discharge	**285.29**	u = (K_{sat} * i) / Θ_w	cm/day	Calculated	ASTM E2081-00 (2015)
W	Source width (Horiz.)	**46.7**		ft	Site-specific	MEI CSR, 2015, Sec. 3.4.4.1
W	Source width (Horiz.)	**1,423**	$W_{cm} = W_{ft}$ * 30.48 cm/ft	cm	Calculated	
S_d	Source thickness (Vertical)	**200**		cm	Default	EPA RSL Table, 2015
Domenico Steady-State Transport/Attenuation Equation: C(x) = Csource * {exp [$x_{total}/(2 * \alpha_x)$*(1-sqrt(1+(4*λ*α_x/u)))] * [erf (W/(4*sqrt(αy * x_{total})))]						ASTM E 1739, EPA 2002
Intermed. calc.	Domenico - exponential term	-8.727E-02	$(x_{total}/(2 * \alpha_x)$*(1-sqrt(1+(4*λ*$\alpha_x$/u)))	dimensionless	Calculated	Calculated
Intermed. calc.	exp (exponential term)	9.164E-01	exp (exponential term)	dimensionless	Calculated	Calculated
Intermed. calc.	(1st term) - error function (erf) to be calc.	6.208E-02	(W/(4*sqrt(α_y * x_{total})))	dimensionless	Calculated	Calculated
Intermed. calc.	(2nd term) - error function (erf) to be calc.	2.252E-02	(S_d/(4*sqrt(α_z * x_{total})))	dimensionless	Calculated	Calculated
Intermed. calc.	erf (1st term)=	0.069964	erf (W/(4*sqrt(α_y * x_{total})))	dimensionless	Calculated	Calculated
Intermed. calc.	erf (2nd term)=	0.025411	erf (S_d/(4*sqrt(α_z * x_{total})))	dimensionless	Calculated	Calculated
Intermed. calc.	erf(1st Term) * erf (2nd Term}	1.778E-03		dimensionless	Calculated	Calculated
Intermed. calc.	Domenico Results {parenthetical term}	**1.629E-03**	{exp [exp. term] * [erf (1st term)] * [erf	dimensionless	Calculated	Calculated
C(x) =	**Downgradient Point of Exposure Concentration**	**5.2E-04**	$C_{(x)} = C_{source, gw}$ * {Domenico Eqn.}	**mg/L**	**Calculated**	**Calculated**
C(x) =	**Downgradient Point of Exposure Concentration**	**0.52**	$C_{(x)} = C_{source, gw}$ * {Domenico Eqn.}	**µg/L**	**Calculated**	**Calculated**
Type 1 RRS	**Residential RRS/ Drinking Water MCL**	**70**		**µg/L**	**Default**	**EPD Rule 391-5-.18(2)(b)**

Table 14
Domenico Fate & Transport/Attenutaion Model & Soil to Groundwater Leaching Calculations
Tetrachloroethene - Fountain Oaks Shopping Center

Variable	Variable Definition	Value	Formula	Units	Parameter Type	Data Source
Soil to Ground Water Leaching						
W	Width of Source	**46.7**		ft	Site-specific	MEI CSR, 2015, Sect. 3.4.4.4.1
W	Width of Source	**1,423**	$W_{cm} = W_{ft}$ * 30.48 cm/ft	cm	Site-specific	
P	Avg. Annual Precipitation	**49.71**		in/yr	Site-specific	Natl. Weather Svc, Peachtree City
P	Avg. Annual Precipitation	**126**	$P_{cm} = P_{in}$ * 2.54 cm/in	cm/yr	Calculated	
k_i	Infiltration Factor	**0.0009**		dimensionless	Specific to Silty Soil	Weidemeier, et al., 1999, p. 52
I	Infiltration Rate	**14.3**	$I = P^2$*0.009	cm/year	Calculated	
δ_{gw}	GW Mixing Zone Thickness	**7.1**		ft	Site-specific	MEI CSR, Table 2
δ_{gw}	GW Mixing Zone Thickness	**216**	$\delta_{gw,\,cm} = \delta_{gw,\,ft}$ * 30.48 cm/ft	cm	Site-specific	
K_{sat}	Hydraulic conductivity (saturated)	**7.78E-05**		cm/sec	Site-specific	UC PPCAP, Pg 23
K_{sat}	Hydraulic conductivity (saturated)	**6.72E+00**	$K_{sat,(cm/day)} = K_{sat,(cm/s)}$* 86,400 sec/day	cm/day		
i	Groundwater Hydraulic Gradient	**0.03**	i = Δhead/Δdistance (along flow path)	cm/cm	Site-specific, Avg.	MEI CSR, Figure 17
U_{gw}	GW Darcy velocity	**73.61**	$U_{gw} = K_{sat}$ * i	cm/year	Calculated	ASTM E2081-00 (2015)
DAF	Dilution Attenutation Factor	**1.780**	DAF = 1 + (U_{gw}*δ_{gw})/(I*W)	dimensionless	Calculated	ASTM E2081-00 (2015)
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	**94.94**		cm^3-W/g-C	Compound-Specific	EPA RSL Table, 2015
f_{oc}	Fractional Org. Carbon	**3.58%**		%	Site-specific	UC PPCAP, Table 1
K_d	Soil-Water Partition/Sorption Coeff.	**3.398852**	$K_d = K_{oc}$ * f_{oc}	g-W/g-soil	Calculated	ASTM E2081-00 (2015)
ρ_s	Soil Bulk Density	**1.80**		g-S/cm^3-S	Site-specific	UC PPCAP, Table 1
Θ_w	Soil Volumetric Water Content	**0.258**		cm^3-W/cm^3-S	Site-specific	UC PPCAP, Table 1
Θ_a	Soil Volumetric Air Content	**0.26**		cm^3-A/cm^3-S	default	ASTM E2081-00 (2015)
H'	Henry's Law Constant	**0.724**		dimensionless	Compound-Specific	EPA RSL Table, 2015
K_{sw}	Soil to Leachate Partition Coeff.	**3.647**	$K_{sw} = [\Theta_w + (K_d*\rho_s) + (H_{eff} * \Theta_a)] / \rho_s$	mg/L-wtr/mg/kg-soil	Calculated	ASTM E2081-00 (2015)
LF_{sw}	Leaching Factor - Soil to Groundwater	**0.154**	$LF_{sw} = 1/(K_{sw}$ * DAF)	ppm/ppm	Calculated	ASTM E2081-00 (2015)
$C_{max,\,soil}$	Max soil concentration on-site	**1.1**		mg/kg	Site-specific	MEI CSR, 2015, Tables 7, 8 & 22
C_{leach}	Conc. in GW by leaching	**1.7E-01**	$C_{leach} = C_{max,\,soil}$ * LF_{sw}	mg/L	Calculated	ASTM E2081-00 (2015)
Domenico Ground Water Solute Transport Model						
$C_{max,gw}$	Max GW concentration on-site	**135**		µg/L	Site-specific	MEI CSR, 2015, Tbl 10
$C_{max,gw}$	Max GW concentration on-site	**0.135**		mg/L	Site-specific	
$C_{source,\,gw}$	Steady State GW concentration in source zone	**0.304**	$C_{source,\,gw} = C_{max,\,gw} + C_{leach}$	mg/L	Calculated	Calculated
x_{del}	Distance: Source to Downgrad. Delineated Edge of Plume	**200**		ft	Site & Compound-specific	MEI CSR, 2015, Figs. 21-25
x_{del}	Distance: Source to Downgrad. Delineated Edge of Plume	**6,096**	$x_{del,\,cm} = x_{del,\,ft}$ * 30.48 cm/ft	cm	Site & Compound-specific	
x_{POE}	Dist: Downgrad. Edge Delineated Plume to Pt. of Exposure	**1,000**		ft	Default	GA VRP Act, 12-8-102(11)(C)
x_{POE}	Dist: Downgrad. Edge Delineated Plume to Pt. of Exposure	**30,480**	$x_{POE,\,cm} = x_{POE,\,ft}$ * 30.48 cm/ft	cm	Default	
x_{total}	Distance - Total to Potential Receptor	**1,200**		ft	Site-specific	
x_{total}	Distance - Total to Potential Receptor	**36,576**	$x_{total,\,cm} = x_{total,\,ft}$ * 30.48 cm/ft	cm	Site-specific	
λ	Degradation rate const.	**0.0014**		day^{-1}	Geo. Mean of Site Specific	MEI CSR, 2015, Table 11
α_x	Longitudinal Dispersivity	**3657.6**	$\alpha_x = x_{total}$ * 0.1	cm	Calculated	ASTM E 1739
α_y	Transverse Dispersivity	**1219.2**	$\alpha_y = \alpha_x$ / 3	cm	Calculated	ASTM E 1739
α_z	Vertical Dispersivity	**182.88**	$\alpha_z = \alpha_x$ / 20	cm	Calculated	ASTM E 1739
u	Specific Discharge	**285.29**	u = (K_{sat} * i) / Θ_w	cm/day	Calculated	ASTM E2081-00 (2015)
W	Source width (Horiz.)	**46.7**		ft	Site-specific	MEI CSR, 2015, Sec. 3.4.4.1
W	Source width (Horiz.)	**1,423**	$W_{cm} = W_{ft}$ * 30.48 cm/ft	cm	Calculated	
S_d	Source thickness (Vertical)	**200**		cm	Default	EPA RSL Table, 2015
Domenico Steady-State Transport/Attenuation Equation: C(x) = Csource * {exp [x_{total}/(2 * α_x)*(1-sqrt(1+(4*λ*α_x/u)))] * [erf (W/(4*sqrt(αy * x_{total})))]						ASTM E 1739, EPA 2002
Intermed. calc.	Domenico - exponential term	-1.764E-01	(x_{total}/(2 * α_x)*(1-sqrt(1+(4*λ*α_x/u)))	dimensionless	Calculated	Calculated
Intermed. calc.	exp (exponential term)	8.383E-01	exp (exponential term)	dimensionless	Calculated	Calculated
Intermed. calc.	(1st term) - error function (erf) to be calc.	5.329E-02	(W/(4*sqrt(α_y * x_{total})))	dimensionless	Calculated	Calculated
Intermed. calc.	(2nd term) - error function (erf) to be calc.	1.933E-02	(S_d/(4*sqrt(α_z * x_{total})))	dimensionless	Calculated	Calculated
Intermed. calc.	erf (1st term)=	0.060073	erf (W/(4*sqrt(α_y * x_{total})))	dimensionless	Calculated	Calculated
Intermed. calc.	erf (2nd term)=	0.021812	erf (S_d/(4*sqrt(α_z * x_{total})))	dimensionless	Calculated	Calculated
Intermed. calc.	erf(1st Term) * erf (2nd Term}	1.310E-03		dimensionless	Calculated	Calculated
Intermed. calc.	Domenico Results {parenthetical term}	**1.098E-03**	{exp [exp. term] * [erf (1st term)] * [erf	dimensionless	Calculated	Calculated
C(x) =	**Downgradient Point of Exposure Concentration**	**3.3E-04**	$C_{(x)} = C_{source,\,gw}$ * {Domenico Eqn.}	**mg/L**	**Calculated**	**Calculated**
C(x) =	**Downgradient Point of Exposure Concentration**	**0.33**	$C_{(x)} = C_{source,\,gw}$ * {Domenico Eqn.}	**µg/L**	**Calculated**	**Calculated**
Type 1 RRS	**Residential RRS/ Drinking Water MCL**	**5**		**µg/L**	**Default**	**EPD Rule 391-5-.18(2)(b)**

Table 15
Domenico Fate & Transport/Attenutaion Model & Soil to Groundwater Leaching Calculations
Trichloroethene - Fountain Oaks Shopping Center

Variable	Variable Definition	Value	Formula	Units	Parameter Type	Data Source
Soil to Ground Water Leaching						
W	Width of Source	**46.7**		ft	Site-specific	MEI CSR, 2015, Sect. 3.4.4.4.1
W	Width of Source	**1,423**	$W_{cm} = W_{ft}$ * 30.48 cm/ft	cm	Site-specific	
P	Avg. Annual Precipitation	**49.71**		in/yr	Site-specific	Natl. Weather Svc, Peachtree City
P	Avg. Annual Precipitation	**126**	$P_{cm} = P_{in}$ * 2.54 cm/in	cm/yr	Calculated	
k_i	Infiltration Factor	**0.0009**		dimensionless	Specific to Silty Soil	Weidemeier, et al., 1999, p. 52
I	Infiltration Rate	**14.3**	$I = P^2$*0.009	cm/year	Calculated	
δ_{gw}	GW Mixing Zone Thickness	**7.1**		ft	Site-specific	MEI CSR, Table 2
δ_{gw}	GW Mixing Zone Thickness	**216**	$\delta_{gw,\,cm} = \delta_{gw,\,ft}$ * 30.48 cm/ft	cm	Site-specific	
K_{sat}	Hydraulic conductivity (saturated)	**7.78E-05**		cm/sec	Site-specific	UC PPCAP, Pg 23
K_{sat}	Hydraulic conductivity (saturated)	**6.72E+00**	$K_{sat,(cm/day)} = K_{sat,(cm/s)}$* 86,400 sec/day	cm/day		
i	Groundwater Hydraulic Gradient	**0.03**	i = Δhead/Δdistance (along flow path)	cm/cm	Site-specific, Avg.	MEI CSR, Figure 17
U_{gw}	GW Darcy velocity	**73.61**	$U_{gw} = K_{sat}$ * i	cm/year	Calculated	ASTM E2081-00 (2015)
DAF	Dilution Attenutation Factor	**1.780**	DAF = 1 + (U_{gw}*δ_{gw})/(I*W)	dimensionless	Calculated	ASTM E2081-00 (2015)
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	**60.7**		cm^3-W/g-C	Compound-Specific	EPA RSL Table, 2015
f_{oc}	Fractional Org. Carbon	**3.58%**		%	Site-specific	UC PPCAP, Table 1
K_d	Soil-Water Partition/Sorption Coeff.	**2.17306**	$K_d = K_{oc}$ * f_{oc}	g-W/g-soil	Calculated	ASTM E2081-00 (2015)
ρ_s	Soil Bulk Density	**1.80**		g-S/cm^3-S	Site-specific	UC PPCAP, Table 1
Θ_w	Soil Volumetric Water Content	**0.258**		cm^3-W/cm^3-S	Site-specific	UC PPCAP, Table 1
Θ_a	Soil Volumetric Air Content	**0.26**		cm^3-A/cm^3-S	default	ASTM E2081-00 (2015)
H'	Henry's Law Constant	**0.403**		dimensionless	Compound-Specific	EPA RSL Table, 2015
K_{sw}	Soil to Leachate Partition Coeff.	**2.375**	$K_{sw} = [\Theta_w + (K_d*\rho_s) + (H_{eff} * \Theta_a)] / \rho_s$	mg/L-wtr/mg/kg-soil	Calculated	ASTM E2081-00 (2015)
LF_{sw}	Leaching Factor - Soil to Groundwater	**0.237**	$LF_{sw} = 1/(K_{sw}$ * DAF)	ppm/ppm	Calculated	ASTM E2081-00 (2015)
$C_{max,\,soil}$	Max soil concentration on-site	**0.18**		mg/kg	Site-specific	MEI CSR, 2015, Tables 7, 8 & 22
C_{leach}	Conc. in GW by leaching	**4.3E-02**	$C_{leach} = C_{max,\,soil}$ * LF_{sw}	mg/L	Calculated	ASTM E2081-00 (2015)
Domenico Ground Water Solute Transport Model						
$C_{max,gw}$	Max GW concentration on-site	**120**		µg/L	Site-specific	MEI CSR, 2015, Tbl 10
$C_{max,gw}$	Max GW concentration on-site	**0.120**		mg/L	Site-specific	
$C_{source,\,gw}$	Steady State GW concentration in source zone	**0.163**	$C_{source,\,gw} = C_{max,\,gw} + C_{leach}$	mg/L	Calculated	Calculated
x_{del}	Distance: Source to Downgrad. Delineated Edge of Plume	**60**		ft	Site & Compound-specific	MEI CSR, 2015, Figs. 21-25
x_{del}	Distance: Source to Downgrad. Delineated Edge of Plume	**1,829**	$x_{del,\,cm} = x_{del,\,ft}$ * 30.48 cm/ft	cm	Site & Compound-specific	
x_{POE}	Dist: Downgrad. Edge Delineated Plume to Pt. of Exposure	**1,000**		ft	Default	GA VRP Act, 12-8-102(11)(C)
x_{POE}	Dist: Downgrad. Edge Delineated Plume to Pt. of Exposure	**30,480**	$x_{POE,\,cm} = x_{POE,\,ft}$ * 30.48 cm/ft	cm	Default	
x_{total}	Distance - Total to Potential Receptor	**1,060**		ft	Site-specific	
x_{total}	Distance - Total to Potential Receptor	**32,309**	$x_{total,\,cm} = x_{total,\,ft}$ * 30.48 cm/ft	cm	Site-specific	
λ	Degradation rate const.	**0.00066**		day^{-1}	Geo. Mean of Site Specific	MEI CSR, 2015, Table 11
α_x	Longitudinal Dispersivity	**3230.88**	$\alpha_x = x_{total}$ * 0.1	cm	Calculated	ASTM E 1739
α_y	Transverse Dispersivity	**1076.96**	$\alpha_y = \alpha_x$ / 3	cm	Calculated	ASTM E 1739
α_z	Vertical Dispersivity	**161.544**	$\alpha_z = \alpha_x$ / 20	cm	Calculated	ASTM E 1739
u	Specific Discharge	**285.29**	u = (K_{sat} * i) / Θ_w	cm/day	Calculated	ASTM E2081-00 (2015)
W	Source width (Horiz.)	**46.7**		ft	Site-specific	MEI CSR, 2015, Sec. 3.4.4.1
W	Source width (Horiz.)	**1,423**	$W_{cm} = W_{ft}$ * 30.48 cm/ft	cm	Calculated	
S_d	Source thickness (Vertical)	**200**		cm	Default	EPA RSL Table, 2015
Domenico Steady-State Transport/Attenuation Equation: C(x) = Csource * {exp [x_{total}/(2 * α_x)*(1-sqrt(1+(4*λ*α_x/u)))] * [erf (W/(4*sqrt(αy * x_{total})))]						ASTM E 1739, EPA 2002
Intermed. calc.	Domenico - exponential term	-7.419E-02	(x_{total}/(2 * α_x)*(1-sqrt(1+(4*λ*α_x/u)))	dimensionless	Calculated	Calculated
Intermed. calc.	exp (exponential term)	9.285E-01	exp (exponential term)	dimensionless	Calculated	Calculated
Intermed. calc.	(1st term) - error function (erf) to be calc.	6.033E-02	(W/(4*sqrt(αy * x_{total})))	dimensionless	Calculated	Calculated
Intermed. calc.	(2nd term) - error function (erf) to be calc.	2.189E-02	(S_d/(4*sqrt(α_z * x_{total})))	dimensionless	Calculated	Calculated
Intermed. calc.	erf (1st term)=	0.067989	erf (W/(4*sqrt(αy * x_{total})))	dimensionless	Calculated	Calculated
Intermed. calc.	erf (2nd term)=	0.024692	erf (S_d/(4*sqrt(α_z * x_{total})))	dimensionless	Calculated	Calculated
Intermed. calc.	erf(1st Term) * erf (2nd Term}	1.679E-03		dimensionless	Calculated	Calculated
Intermed. calc.	Domenico Results {parenthetical term}	**1.559E-03**	{exp [exp. term] * [erf (1st term)] * [erf	dimensionless	Calculated	Calculated
C(x) =	**Downgradient Point of Exposure Concentration**	**2.53E-04**	$C_{(x)} = C_{source,\,gw}$ * {Domenico Eqn.}	**mg/L**	**Calculated**	**Calculated**
C(x) =	**Downgradient Point of Exposure Concentration**	**0.25**	$C_{(x)} = C_{source,\,gw}$ * {Domenico Eqn.}	**µg/L**	**Calculated**	**Calculated**
Type 1 RRS	**Residential RRS/ Drinking Water MCL**	**5**		**µg/L**	**Default**	**EPD Rule 391-5-.18(2)(b)**

Table 16
Domenico Fate & Transport/Attenutaion Model & Soil to Groundwater Leaching Calculations
Vinyl Chloride - Fountain Oaks Shopping Center

Variable	Variable Definition	Value	Formula	Units	Parameter Type	Data Source
Soil to Ground Water Leaching						
W	Width of Source	**46.7**		ft	Site-specific	MEI CSR, 2015, Sect. 3.4.4.4.1
W	Width of Source	**1,423**	$W_{cm} = W_{ft}$ * 30.48 cm/ft	cm	Site-specific	
P	Avg. Annual Precipitation	**49.71**		in/yr	Site-specific	Natl. Weather Svc, Peachtree City
P	Avg. Annual Precipitation	**126**	$P_{cm} = P_{in}$ * 2.54 cm/in	cm/yr	Calculated	
k_i	Infiltration Factor	**0.0009**		dimensionless	Specific to Silty Soil	Weidemeier, et al., 1999, p. 52
I	Infiltration Rate	**14.3**	$I = P^2$*0.009	cm/year	Calculated	
δ_{gw}	GW Mixing Zone Thickness	**7.1**		ft	Site-specific	MEI CSR, Table 2
δ_{gw}	GW Mixing Zone Thickness	**216**	$\delta_{gw,\,cm} = \delta_{gw,\,ft}$ * 30.48 cm/ft	cm	Site-specific	
K_{sat}	Hydraulic conductivity (saturated)	**7.78E-05**		cm/sec	Site-specific	UC PPCAP, Pg 23
K_{sat}	Hydraulic conductivity (saturated)	**6.72E+00**	$K_{sat,(cm/day)} = K_{sat,(cm/s)}$* 86,400 sec/day	cm/day		
i	Groundwater Hydraulic Gradient	**0.03**	i = Δhead/Δdistance (along flow path)	cm/cm	Site-specific, Avg.	MEI CSR, Figure 17
U_{gw}	GW Darcy velocity	**73.61**	$U_{gw} = K_{sat}$ * i	cm/year	Calculated	ASTM E2081-00 (2015)
DAF	Dilution Attenutation Factor	**1.780**	DAF = 1 + (U_{gw}*δ_{gw})/(I*W)	dimensionless	Calculated	ASTM E2081-00 (2015)
K_{oc}	Soil Organic Carbon-Water Partition Coefficient	**21.73**		cm^3-W/g-C	Compound-Specific	EPA RSL Table, 2015
f_{oc}	Fractional Org. Carbon	**3.58%**		%	Site-specific	UC PPCAP, Table 1
K_d	Soil-Water Partition/Sorption Coeff.	**0.777934**	$K_d = K_{oc}$ * f_{oc}	g-W/g-soil	Calculated	ASTM E2081-00 (2015)
ρ_s	Soil Bulk Density	**1.80**		g-S/cm^3-S	Site-specific	UC PPCAP, Table 1
Θ_w	Soil Volumetric Water Content	**0.258**		cm^3-W/cm^3-S	Site-specific	UC PPCAP, Table 1
Θ_a	Soil Volumetric Air Content	**0.26**		cm^3-A/cm^3-S	default	ASTM E2081-00 (2015)
H'	Henry's Law Constant	**1.14**		dimensionless	Compound-Specific	EPA RSL Table, 2015
K_{sw}	Soil to Leachate Partition Coeff.	**1.085**	$K_{sw} = [\Theta_w + (K_d*\rho_s) + (H_{eff} * \Theta_a)] / \rho_s$	mg/L-wtr/mg/kg-soil	Calculated	ASTM E2081-00 (2015)
LF_{sw}	Leaching Factor - Soil to Groundwater	**0.518**	$LF_{sw} = 1/(K_{sw}$ * DAF)	ppm/ppm	Calculated	ASTM E2081-00 (2015)
$C_{max,\,soil}$	Max soil concentration on-site	**0.0012**	NOT DETECTED - Subst. MDL	mg/kg	Site-specific	MEI CSR, 2015, Tables 7, 8 & 22
C_{leach}	Conc. in GW by leaching	**6.2E-04**	$C_{leach} = C_{max,\,soil}$ * LF_{sw}	mg/L	Calculated	ASTM E2081-00 (2015)
Domenico Ground Water Solute Transport Model						
$C_{max,gw}$	Max GW concentration on-site	**11**		µg/L	Site-specific	MEI CSR, 2015, Tbl 10
$C_{max,gw}$	Max GW concentration on-site	**0.011**		mg/L	Site-specific	
$C_{source,\,gw}$	Steady State GW concentration in source zone	**0.012**	$C_{source,\,gw} = C_{max,\,gw} + C_{leach}$	mg/L	Calculated	Calculated
x_{del}	Distance: Source to Downgrad. Delineated Edge of Plume	**70**		ft	Site & Compound-specific	MEI CSR, 2015, Figs. 21-25
x_{del}	Distance: Source to Downgrad. Delineated Edge of Plume	**2,134**	$x_{del,\,cm} = x_{del,\,ft}$ * 30.48 cm/ft	cm	Site & Compound-specific	
x_{POE}	Dist: Downgrad. Edge Delineated Plume to Pt. of Exposure	**1,000**		ft	Default	GA VRP Act, 12-8-102(11)(C)
x_{POE}	Dist: Downgrad. Edge Delineated Plume to Pt. of Exposure	**30,480**	$x_{POE,\,cm} = x_{POE,\,ft}$ * 30.48 cm/ft	cm	Default	
x_{total}	Distance - Total to Potential Receptor	**1,070**		ft	Site-specific	
x_{total}	Distance - Total to Potential Receptor	**32,614**	$x_{total,\,cm} = x_{total,\,ft}$ * 30.48 cm/ft	cm	Site-specific	
λ	Degradation rate const.	**0.00032**		day^{-1}	Geo. Mean of Site Specific	MEI CSR, 2015, Table 11
α_x	Longitudinal Dispersivity	**3261.36**	$\alpha_x = x_{total}$ * 0.1	cm	Calculated	ASTM E 1739
α_y	Transverse Dispersivity	**1087.12**	$\alpha_y = \alpha_x$ / 3	cm	Calculated	ASTM E 1739
α_z	Vertical Dispersivity	**163.068**	$\alpha_z = \alpha_x$ / 20	cm	Calculated	ASTM E 1739
u	Specific Discharge	**285.29**	u = (K_{sat} * i) / Θ_w	cm/day	Calculated	ASTM E2081-00 (2015)
W	Source width (Horiz.)	**46.7**		ft	Site-specific	MEI CSR, 2015, Sec. 3.4.4.1
W	Source width (Horiz.)	**1,423**	$W_{cm} = W_{ft}$ * 30.48 cm/ft	cm	Calculated	
S_d	Source thickness (Vertical)	**200**		cm	Default	EPA RSL Table, 2015
Domenico Steady-State Transport/Attenuation Equation: C(x) = Csource * {exp [x_{total}/(2 * α_x)*(1-sqrt(1+(4*λ*α_x/u)))] * [erf (W/(4*sqrt(αy * x_{total})))]						ASTM E 1739, EPA 2002
Intermed. calc.	Domenico - exponential term	-3.645E-02	(x_{total}/(2 * α_x)*(1-sqrt(1+(4*λ*α_x/u)))	dimensionless	Calculated	Calculated
Intermed. calc.	exp (exponential term)	9.642E-01	exp (exponential term)	dimensionless	Calculated	Calculated
Intermed. calc.	(1st term) - error function (erf) to be calc.	5.976E-02	(W/(4*sqrt(α_y * x_{total})))	dimensionless	Calculated	Calculated
Intermed. calc.	(2nd term) - error function (erf) to be calc.	2.168E-02	(S_d/(4*sqrt(α_z * x_{total})))	dimensionless	Calculated	Calculated
Intermed. calc.	erf (1st term)=	0.067355	erf (W/(4*sqrt(α_y * x_{total})))	dimensionless	Calculated	Calculated
Intermed. calc.	erf (2nd term)=	0.024461	erf (S_d/(4*sqrt(α_z * x_{total})))	dimensionless	Calculated	Calculated
Intermed. calc.	erf(1st Term) * erf (2nd Term}	1.648E-03		dimensionless	Calculated	Calculated
Intermed. calc.	Domenico Results {parenthetical term}	**1.589E-03**	{exp [exp. term] * [erf (1st term)] * [erf	dimensionless	Calculated	Calculated
C(x) =	**Downgradient Point of Exposure Concentration**	**1.8E-05**	$C_{(x)} = C_{source,\,gw}$ * {Domenico Eqn.}	**mg/L**	**Calculated**	**Calculated**
C(x) =	**Downgradient Point of Exposure Concentration**	**0.018**	$C_{(x)} = C_{source,\,gw}$ * {Domenico Eqn.}	**µg/L**	**Calculated**	**Calculated**
Type 1 RRS	**Residential RRS/ Drinking Water MCL**	**2**		**µg/L**	**Default**	**EPD Rule 391-5-.18(2)(b)**

TABLE 17

FOUNTAIN OAKS SHOPPING CENTER

JOHNSON & ETTINGER VAPOR INTRUSION MODEL - COMMERCIAL - INPUT DATA & SOURCE DOCUMENTATION

PARAMETER	Average soil/ groundwater temperature,	Depth below grade to bottom of enclosed space floor,	Depth below grade to water table,	Thickness of soil stratum A,	Thickness of soil stratum B, (Enter value or 0)	Thickness of soil stratum C, (Enter value or 0)	Soil stratum directly above water table,	SCS soil type directly above water table	Soil stratum A SCS Soil Type (used to estimate soil vapor perm.)	User-defined stratum A soil vapor perm.
SYMBOL	TS	LF	LWT	hA	hB	hC	(Enter A, B, or C)			kv
UNITS	(oC)	(cm)	(cm)	(cm)	(cm)	(cm)				(cm2)
VALUE	17.2	15	1067	457	610	0	B	SL	SL	1.00E-08
DATA SOURCE	**J&E Model User's Guide, Fig. 8**	**6" estimated**	**35' = approx. avg. DTW recorded near FOSC bldg MEI VRP CSR, Table 3**	**Boring Logs MW-1, MW-27**	**Boring Logs MW-1, MW-27**	**N/A**	**2/21/08 Vapr Intr Assmnt*, Tbl 3 & Tbl 4 *UC Document**	**2/21/08 Vapr Intr Assmnt*, Tbl 3 & Tbl 4 *UC Document**	**2/21/08 Vapr Intr Assmnt*, Tbl 3 & Tbl 4 *UC Document**	**N/A**

PARAMETER	Stratum A SCS soil type	Stratum A soil dry bulk density,	Stratum A soil total porosity,	Stratum A soil water-filled porosity,	Stratum B SCS soil type	Stratum B soil dry bulk density,	Stratum B soil total porosity,	Stratum B soil water-filled porosity,
SYMBOL		rbA	nA	qwA		rbB	nB	qwB
UNITS		(g/cm3)	(unitless)	(cm3/cm3)		(g/cm3)	(unitless)	(cm3/cm3)
VALUE	SL	1.52	0.386	0.315	SL	1.45	0.436	0.22
DATA SOURCE	**2/21/08 Vapor Intrusion Assmnt*, Tables 3 & 4 *UC Document**	**11/28/05 PPCAP*, p.8 & Tbl 1; 2/21/08 Vapr Intr Assmnt*, Tbl 3 & Tbl 4 *UC Document**	**11/28/05 PPCAP*, p.8 & Tbl 1; 2/21/08 Vapr Intr Assmnt*, Tbl 3 & Tbl 4 *UC Document**	**11/28/05 PPCAP*, p.8 & Tbl 1; 2/21/08 Vapr Intr Assmnt*, Tbl 3 & Tbl 4 *UC Document**	**SL=Conservative CL=Actual**	**11/28/05 PPCAP*, p.8 & Tbl 1; 2/21/08 Vapr Intr Assmnt*, Tbl 3 & 4 *UC Document**	**11/28/05 PPCAP*, p.8 & Tbl 1; 2/21/08 Vapr Intr Assmnt*, Tbl 3 & 4 *UC Document**	**2/21/08 Vapr Intr Assmnt*, Tbl 3 & 4 *UC Document**

PARAMETER	Enclosed space floor thickness,	Soil-bldg. pressure differential,	Enclosed space floor length,	Enclosed space floor width,	Enclosed space height,	Floor-wall seam crack width,	Indoor air exchange rate,
SYMBOL	Lcrack	DP	LB	WB	HB	w	ER
UNITS	(cm)	(g/cm-s2)	(cm)	(cm)	(cm)	(cm)	(1/h)
VALUE	15	40	1676.4	701	426.7	0.1	0.43
DATA SOURCE	**Measured: 2/21/08 Vapr Intr Assmnt*, Tbl 3 & Tbl 4 *UC Document**	**Default**	**2/21/08 Vapr Intr Assmnt*, Tbl 3, Tbl 4, & GW-ADV2-Feb04(PCE). Coin Shop? *UC Document**	**2/21/08 Vapr Intr Assmnt*, Tbl 3, Tbl 4, & GW-ADV2-Feb04(PCE). Coin Shop? *UC Document**	**2/21/08 Vapr Intr Assmnt*, Tbl 3, Tbl 4, & GW-ADV2-Feb04(PCE). Coin Shop? *UC Document**	**Program Default**	**2/21/08 Vapr Intr Assmnt*, Tbl 3, Tbl 4, & GW-ADV2-Feb04(PCE). Coin Shop *UC Document**

PARAMETER	Averaging time for carcinogens,	Averaging time for noncarcinogens,	Exposure duration,	Exposure frequency,	Target risk for carcinogens,	Target hazard quotient for noncarcinogens,
SYMBOL	ATC	ATNC	ED	EF	TR	THQ
UNITS	(yrs)	(yrs)	(yrs)	(days/yr)	(unitless)	(unitless)
VALUE	70	25	25	250	1.0E-05	1
DATA SOURCE	**Commercial/Indus. Value, RAGS Vol. I, Human Health Eval Manual - Suppl. Guidance, 1991, Ch. 3, p.9-10.**	**Commercial/Indus. Value, RAGS Vol. I, Human Health Eval Manual - Suppl. Guidance, 1991, Ch. 3, p.9-10.**	**Commercial/Indus. Value, RAGS Vol. I, Human Health Eval Manual - Suppl. Guidance, 1991, Ch. 3, p.9-10.**	**Commercial/Indus. Value, RAGS Vol. I, 1991, Ch. 3, p.9; Program Default**	**Type 4 RRS; GEPD Rule 391-3-19-.07 (9)(c)2**	**Type 4 RRS; GEPD Rule 391-3-19-.07 (9)(c)3**

TABLE 18

Fountain Oaks Shopping Center

J&E - Groundwater - Final Indoor Exposure vs Most Recent Detected Groundwater Concentrations

Chemical	CAS Number	Maximum On-Site Groundwater Concentration (Most Recently Detected)			J&E Final Indoor Exposure GW Concentration (µg/L)	J&E Final Indoor Exposure GW Concentration (mg/L)	Final Indoor Exposure GW Conc. NOTES (1)	Final Indoor Exposure GW Conc. NOTES (2)	J&E Indoor Exposure GW Conc. Exceeded On Site?
		Concentration (mg/L)	Location	Most Recent Date Detected					
Acetone	67-64-1	0.089	MW-13D	3/11/2015	1.0E+07	1.0E+04	**nc**		NO
Benzene	71-43-2	0.135	MW-28	3/11/2015	8.0E+03	8.0E+00	**ca**		NO
Chloroform	67-66-3	0.014	MW-9	3/12/2015	3.3E+03	3.3E+00	**ca**		NO
Cumene (Isopropylbenzene)	98-82-8	0.0029	MW-28	3/11/2015	5.9E+05	5.9E+02	**nc**	NOC	NO
Dichloroethane, 1,2-	107-06-2	0.003	MW-28	**5/20/2009**	8.9E+03	8.9E+00	**ca**		NO
Dichloroethylene, 1,2-cis- (cDCE)	156-59-2	0.210	MW-4	3/12/2015	1.2E+05	1.2E+02	**nc**		NO
Dichloroethylene, 1,2-trans- (tDCE)	156-60-5	0.0012	MW-4	3/12/2015	1.1E+05	1.1E+02	**nc**		NO
Ethylbenzene	100-41-4	0.0014	MW-4	**5/21/2009**	2.1E+06	2.1E+03	**nc**	NOC	NO
Methyl Ethyl Ketone (2-Butanone)	78-93-3	0.011	MW-13D	3/11/2015	1.7E+08	1.7E+05	**nc**		NO
Methyl Isobutyl Ketone (MIBK) (4-methyl-2-pentanone) (3)	108-10-1	ND	N/A	N/A	8.9E+07	8.9E+04	**nc**	NOC	NO
Tetrachloroethylene (PCE)	127-18-4	0.810	MW-2	3/12/2015	4.4E+03	4.4E+00	**ca**		NO
Toluene	108-88-3	0.011	MW-19	**5/21/2009**	8.1E+05	8.1E+02	**nc**	NOC	NO
Trichloroethylene (TCE)	79-01-6	0.120	MW-4	3/12/2015	3.6E+02	3.6E-01	**ca**		NO
Vinyl Chloride (VC)	75-01-4	0.011	MW-16	3/11/2015	1.1E+03	1.1E+00	**ca**		NO
Xylenes	1330-20-7	0.024	MW-19	**5/21/2009**	2.1E+05	2.1E+02	**nc**	NOC	NO

NOTES:

(1) concentrations that exceed a 10^{-5} cancer risk are indicated by 'ca'. Concentrations exceeding a hazard quotient of 1 for noncarcinogenic effects indicated by 'nc'.

(2) "NOC" means "Not of Concern." Indicates final indoor groundwater concentration exceeds the compound solubility limit.

(3) Methyl Isobutyl Ketone (MIBK) not detected in on-site groundwater. MIBK only detected in single off-site sample; 0.016 mg/L at MW-25, 22-MAY-09

TABLE 19

Fountain Oaks Shopping Center

Risk Reduction Standards - Exposure Parameter Values

Variable	Value
Target cancer risk (TR) - unitless	1.0E-05
Target hazard quotient (THQ) - unitless	1
Averaging time for carcinogens, resident adult ($AT_{c, ar}$) - years	70
Averaging time for carcinogens, resident child ($AT_{c, cr}$) - years	70
Averaging time for carcinogens, commercial ($AT_{c, c}$) - years	70
Averaging time for noncarcinogens, resident adult ($AT_{nc, ar}$) - years	30
Averaging time for noncarcinogens, resident child ($AT_{nc, cr}$) - years	6
Averaging time for noncarcinogens, commercial ($AT_{nc, c}$) - years	25
Averaging time - days/year	365
Body Weight - adult (BW_a) - kg	70
Body Weight - children 1-6 yr (BW_c) - kg	15
Exposure frequency (EF), residential - days/yr	350
Exposure frequency (EF), commercial - days/yr	250
Exposure duration, resident adult (ED_{ar}) - years	30
Exposure duration, resident child (ED_{cr}) - years	6
Exposure duration, commercial (ED_c) - years	25
Exposure Time (ET) hours/day	24
Ingestion Rate, Soil, resident ($IR_{soil, r}$) - mg/day	200
Inhalation Rate, resident adult ($IR_{air, ar}$) - m3/day	15
Inhalation Rate, resident child ($IR_{air, cr}$) - m3/day	15
Inhalation Rate, Commercial ($IR_{air, c}$) - m3/day	20
Inhalation Rate, Commercial ($IR_{air, c}$) - m3/day	20
Ingestion Rate, Water - resident child (IRW_{cr}) - L/day	1
Ingestion Rate, Water - commercial (IRW_c) - L/day	1
Particulate Emission Factor (PEF) - mg/kg	1.36E+09
Volatilization factor of Andelman (K) - L/m3	0.5

TABLE 20

Fountain Oaks Shopping Center

Risk Reduction Standards - Chemical-Specific Parameter Values

Chemical	CAS Number	Ingestion Cancer Slope Factor SFo (mg/kg-day)-1	Inhalation Unit Risk (ug/m^3)-1	Inhalation Cancer Slope Factor SFi (mg/kg-day)-1	Oral Chronic Reference Dose RfDo (mg/kg-day)	Inhalation Chronic Reference Concentration RfC (mg/m^3)	Inhalation Chronic Reference Dose RfDi (mg/kg-day)	Volatilization Factor - VF (m^3/kg)
Acetone	67-64-1	-	-	-	9.0E-01	3.1E+01	8.8E+00	3.88E+03
Benzene	71-43-2	5.5E-02	7.8E-06	2.7E-02	4.0E-03	3.0E-02	8.6E-03	3.54E+03
Chloroform	67-66-3	3.1E-02	2.3E-05	8.1E-02	1.0E-02	9.8E-02	2.8E-02	3.62E+03
Cumene (Isopropylbenzene)	98-82-8	-	-	-	1.0E-01	4.0E-01	1.1E-01	6.20E+03
Dichloroethane, 1,2-	107-06-2	9.1E-02	2.6E-05	9.1E-02	6.0E-03	7.0E-03	2.0E-03	4.60E+03
Dichloroethylene, 1,2-cis- (cDCE)	156-59-2	-	-	-	2.0E-03	7.0E-03	2.0E-03	3.84E+03
Dichloroethylene, 1,2-trans- (tDCE)	156-60-5	-	-	-	2.0E-02	7.0E-02	2.0E-02	1.70E+03
Ethylbenzene	100-41-4	1.1E-02	2.5E-06	8.8E-03	1.0E-01	1.0E+00	2.9E-01	5.70E+03
Methyl Ethyl Ketone (MEK) (2-Butanone)	78-93-3	-	-	-	6.0E-01	5.0E+00	1.4E+00	1.22E+04
Methyl Isobutyl Ketone (MIBK) (4-metyl-2-pentanone)	108-10-1	-	-	-	8.0E-02	3.0E+00	8.6E-01	1.10E+04
Tetrachloroethylene (PCE)	127-18-4	2.1E-03	5.9E-06	2.1E-02	6.0E-03	4.0E-02	1.1E-02	3.83E+03
Toluene	108-88-3	-	-	-	8.0E-02	5.0E+00	1.4E+00	6.34E+03
Trichloroethylene (TCE)	79-01-6	4.6E-02	4.1E-06	7.0E-03	5.0E-04	2.0E-03	5.7E-04	5.03E+03
Vinyl Chloride (VC)	75-01-4	7.2E-01	4.4E-06	1.5E-02	3.0E-03	1.0E-01	2.9E-02	9.60E+02
Xylenes	1330-20-7	-	-	-	2.0E-01	1.0E-01	2.9E-02	1.01E+04

Table 21 - Residual Soil COC Concentrations Versus Soil RRS

Compound	On-Site Maximum Residual Soil Concentration [3] (mg/kg)	Off-Site Maximum Soil Concentration [3] (mg/kg)	Soil RRS - Type 3/4 (mg/kg)
acetone	0.29	0.081 [2]	400
benzene [1]	0.016	ND	53.1
chlorobenzene	0.0078	ND	10
chloroform	ND	ND	6.38
cumene (isopropylbenzene)	ND	ND	22
cis-1,2-dichloroethene (cDCE)	0.3	ND	1.84
trans-1,2-dichloroethene (tDCE)	ND	ND	10
methyl ethyl ketone (MEK) [1]	0.12	ND	22400
tetrachloroethene (PCE)	1.1	ND	1.18
trichloroethene (TCE)	0.18	ND	0.7
vinyl chloride (VC)	ND	ND	0.2

[1] Indicates RRS calculated by MEI (Using RAGS Equations 6 & 7 with up-to-date toxicity information). Eqn 6 & 7 input values utilized are listed in Tables 10 & 11 in this VRP Application document.

All other RRS calculated by UC (UC PPCAP, 28-NOV-05, Table 5)

[2] Type 1/Type 2 RRS for Acetone in residential soil is 115,000 mg/kg

"ND" means "not detected"

[3] Soil analytical information taken from UC PPCSR, Table 7 - "Soil Verification Analytical Testing Summary" and Table 8 "Marion Split Verification Sample Test Results" and from MEI 10-JAN-10 CSR, Table 3 "Soil Analytical Results"

TABLE 22
Fountain Oaks Shopping Center
Risk Reduction Standards - Groundwater - Residential Type 1 and Type 2 RRS Summary Table

Chemical	CAS Number	Maximum Off-Site Groundwater Concentration (Most Recently Detected)			Maximum On-Site Groundwater Concentration (Most Recently Detected)			Potential Type 2 Risk Reduction Standards				TYPE 2 RRS (Min. EQN 1 or EQN 2 Value)	Type 2 RRS Notes	Type 1 RRS	Final RRS Groundwater Residential (mg/L)	Most Recent Sampling Event (March 2015)	
		Concentration (mg/L)	Location	Most Recent Date Detected	Concentration (mg/L)	Location	Most Recent Date Detected	RAGS EQN 1 ADULT TR=1.0E-5 (mg/L)	RAGS EQN 1 CHILD TR=1.0E-5 (mg/L)	RAGS EQN 2 ADULT HQ=1 (mg/L)	RAGS EQN 2 CHILD HQ=1 (mg/L)			Type 1 Groundwater Criteria (mg/L)		Residential RRS Exceeded Off Site?	Residential RRS Exceeded On Site?
Acetone	67-64-1	0.061	MW-25	5/22/2009	0.089	MW-13D	3/11/2015	-	-	2.4E+01	8.0E+00	**8.0E+00**	**nc**	4.0E+00	**8.0E+00**	NO	NO
Benzene	71-43-2	ND	N/A	N/A	0.135	MW-28	3/11/2015	5.4E-03	7.0E-03	5.3E-02	1.4E-02	**5.4E-03**	**ca**	5.0E-03	**5.4E-03**	NO	**YES**
Chloroform	67-66-3	0.078	MW-24	5/21/2009	0.014	MW-9	3/12/2015	2.6E-03	2.9E-03	1.6E-01	4.2E-02	**2.6E-03**	**ca**	1.0E-01	**1.0E-01**	NO	NO
Cumene (Isopropylbenzene) (2)	98-82-8	ND	N/A	N/A	0.0029	MW-28	3/11/2015	-	-	8.5E-01	2.1E-01	**2.1E-01**	**nc**	1.0E-03	**2.1E-01**	NO	NO
Dichloroethane, 1,2-	107-06-2	ND	N/A	N/A	0.003	MW-28	**5/20/2009**	2.0E-03	2.4E-03	1.8E-02	4.0E-03	**2.0E-03**	**ca**	5.0E-03	**5.0E-03**	NO	NO
Dichloroethylene, 1,2-cis- (cDCE)	156-59-2	0.0079	MW-29	3/11/2015	0.210	MW-4	3/12/2015	-	-	5.2E+01	3.6E-02	**3.6E-02**	**nc**	7.0E-02	**7.0E-02**	NO	**YES**
Dichloroethylene, 1,2-trans- (tDCE)	156-60-5	ND	N/A	N/A	0.0012	MW-4	3/12/2015	-	-	1.5E-01	3.7E-02	**3.7E-02**	**nc**	1.0E-01	**1.0E-01**	NO	NO
Ethylbenzene	100-41-4	ND	N/A	N/A	0.0014	MW-4	**5/21/2009**	1.9E-02	2.4E-02	1.6E+00	4.3E-01	**1.9E-02**	**ca**	7.0E-01	**7.0E-01**	NO	NO
Methyl Ethyl Ketone (2-Butanone)	78-93-3	ND	N/A	N/A	0.011	MW-13D	3/11/2015	-	-	8.5E+00	3.0E+00	**3.0E+00**	**nc**	2.0E+00	**3.0E+00**	NO	NO
Methyl Isobutyl Ketone (MIBK) (4-methyl-2-pentanone)	108-10-1	0.016	MW-25	5/22/2009	ND	N/A	N/A	-	-	2.2E+00	7.4E-01	**7.4E-01**	**nc**	2.0E+00	**2.0E+00**	NO	NO
Tetrachloroethylene (PCE)	127-18-4	0.010	MW-30	3/11/2015	0.810	MW-2	3/12/2015	1.1E-02	1.2E-02	2.2E-01	9.1E-02	**1.1E-02**	**ca**	5.0E-03	**1.1E-02**	NO	**YES**
Toluene	108-88-3	ND	N/A	N/A	0.011	MW-19	5/21/2009	-	-	2.4E+00	8.8E-01	**8.8E-01**	**nc**	1.0E+00	**1.0E+00**	NO	NO
Trichloroethylene (TCE)	79-01-6	0.0022	MW-33	3/10/2015	0.120	MW-4	3/12/2015	1.2E-02	1.9E-02	4.3E-03	1.0E-03	**1.0E-03**	**ca**	5.0E-03	**5.0E-03**	NO	**YES**
Vinyl Chloride (VC)	75-01-4	ND	N/A	N/A	0.011	MW-16	3/11/2015	1.1E-03	2.2E-03	7.9E-02	2.6E-02	**1.1E-03**	**nc**	2.0E-03	**2.0E-03**	NO	**YES**
Xylenes	1330-20-7	ND	N/A	N/A	0.024	MW-19	5/21/2009	-	-	2.7E-01	5.8E-02	**5.8E-02**	**nc**	1.0E+01	**1.0E+01**	NO	NO

NOTES: (1) RRS concentrations that equate to a 10^{A-5} cancer risk are indicated by 'ca'. RRS concentrations that equate to a hazard quotient of 1 for noncarcinogenic effects are indicated by 'nc'.

(2) Type 1 RRS with a "(2)" superscript indicates that the compound is not listed in Table 1 of Appendix III and the method detection limit (MDL) has been substituted.

NOTE: The calculated Type 2 RRS for cumene are TWO ORDERS OF MAGNITUDE greater than the default Type 1/Type 3 RRS based on the detection limit.

(3) Type 2 RRS concentrations could not be calculated for the non-carcinogen Diisopropyl ether, since no Oral Chronic Reference Dose (RfDo) is available from the U.S. EPA and the compound is not listed in Georgia EPD Rule 391-3-19-.07, Appendix III, Table 1. The listed RRS is the U.S. EPA RSL for tapwater ingestion.

TABLE 23

Fountain Oaks Shopping Center

Risk Reduction Standards - Groundwater - Commercial Type 3 and Type 4 RRS Summary Table

Chemical	CAS Number	Maximum Off-Site Groundwater Concentration (Most Recently Detected)			Maximum On-Site Groundwater Concentration (Most Recently Detected)			Potential Type 4 Risk Reduction Standards		TYPE 4 RRS (Min. EQN 1 or EQN 2 Value)	Type 4 RRS Notes	Type 3 RRS	Final Commercial RRS (mg/L)	Commercial RRS Exceeded On Site?
		Concentration (mg/L)	Location	Most Recent Date Detected	Concentration (mg/L)	Location	Most Recent Date Detected	RAGS EQN 1 Commercial TR=1.0E-5 (mg/L)	RAGS EQN 2 Commercial HQ=1 (mg/L)			Type 3 Groundwater Criteria (mg/L)		
Acetone	67-64-1	0.061	MW-25	5/22/2009	0.089	MW-13D	3/11/2015	-	4.6E+01	4.6E+01	**nc**	4.0E+00	**4.6E+01**	NO
Benzene	71-43-2	ND	N/A	N/A	0.135	MW-28	3/11/2015	8.7E-03	7.2E-02	8.7E-03	**ca**	5.0E-03	**8.7E-03**	**YES**
Chloroform	67-66-3	0.078	MW-24	5/21/2009	0.014	MW-9	3/12/2015	3.4E-03	2.2E-01	3.4E-03	**ca**	1.0E-01	**1.0E-01**	NO
Cumene (Isopropylbenzene) (2)	98-82-8	ND	N/A	N/A	0.0029	MW-28	3/11/2015	-	1.0E+00	1.0E+00	**nc**	1.0E-03 (2)	**1.0E+00**	NO
Dichloroethane, 1,2-	107-06-2	ND	N/A	N/A	0.003	MW-28	**5/20/2009**	2.9E-03	2.0E-02	2.9E-03	**ca**	2.0E-03	**2.9E-03**	NO
Dichloroethylene, 1,2-cis- (cDCE)	156-59-2	0.0079	MW-29	3/11/2015	0.210	MW-4	3/12/2015	-	1.9E-02	1.9E-02	**nc**	3.6E-02	**3.6E-02**	**YES**
Dichloroethylene, 1,2-trans- (tDCE)	156-60-5	ND	N/A	N/A	0.0012	MW-4	3/12/2015	-	1.9E-01	1.9E-01	**nc**	3.7E-02	**1.9E-01**	NO
Ethylbenzene	100-41-4	ND	N/A	N/A	0.0014	MW-4	**5/21/2009**	2.9E-02	2.3E+00	2.9E-02	**ca**	1.9E-02	**2.9E-02**	NO
Methyl Ethyl Ketone (2-Butanone)	78-93-3	ND	N/A	N/A	0.011	MW-13D	3/11/2015	-	1.2E+01	1.2E+01	**nc**	2.0E+00	**1.2E+01**	NO
Methyl Isobutyl Ketone (MIBK) (4-methyl-2-pentanone)	108-10-1	0.016	MW-25	5/22/2009	ND	N/A	N/A	-	4.2E+00	4.2E+00	**ca**	7.4E-01	**4.2E+00**	NO
Tetrachloroethylene (PCE)	127-18-4	0.010	MW-30	3/11/2015	0.810	MW-2	3/12/2015	1.4E-02	5.9E-01	1.4E-02	**ca**	5.0E-03	**1.4E-02**	**YES**
Toluene	108-88-3	ND	N/A	N/A	0.011	MW-19	**5/21/2009**	-	5.2E+00	5.2E+00	**nc**	8.8E-01	**5.2E+00**	NO
Trichloroethylene (TCE)	79-01-6	0.0022	MW-33	3/10/2015	0.120	MW-4	3/12/2015	2.5E-02	5.2E-03	5.2E-03	**ca**	5.0E-03	**5.2E-03**	**YES**
Vinyl Chloride (VC)	75-01-4	ND	N/A	N/A	0.011	MW-16	3/11/2015	3.3E-03	1.5E-01	3.3E-03	**ca**	2.0E-03	**3.3E-03**	**YES**
Xylenes	1330-20-7	ND	N/A	N/A	0.024	MW-19	5/21/2009	-	2.9E-01	2.9E-01	**nc**	1.0E+01	**1.0E+01**	NO

NOTES: (1) RRS concentrations that equate to a $10^{\wedge -5}$ cancer risk are indicated by 'ca'. RRS concentrations that equate to a hazard quotient of 1 for noncarcinogenic effects are indicated by 'nc'.

(2) Type 1 & Type 3 RRS for cumene (isopropylbenzene) is the most recent (March 2015) 0.0010 mg/L (1 ug/L) detection limit in accordance with EPD Rule Rule 391-3-19-.07(6)(b).

(3) RRS concentrations could not be calculated for the non-carcinogen Diisopropyl ether, since no Oral Chronic Reference Dose (RfDo) is available from the U.S. EPA and the compound is not listed in Georgia EPD Rule 391-3-19-.07, Appendix III, Table 1. The listed RRS is the U.S. EPA RSL for tapwater ingestion.

TABLE 24
Fountain Oaks Shopping Center
Commercial Risk Reduction Standards - Groundwater - Exceedance Locations & Release Sources

Compounds in On-Site Groundwater Exceeding Type 3 / Type 4 Commercial RRS	CAS Number	Final Commercial RRS (mg/L)	Final Commercial RRS (µg/L)	Release Sources for RRS Exceedances at Individual Wells					
				Former On-Site Drycleaner		Off-Site Drycleaner		Off-Site Gas Station	
				Well ID	March-2015 Concentration (µg/L)	Well ID	March-2015 Concentration (µg/L)	Well ID	March-2015 Concentration (µg/L)
Benzene	71-43-2	**0.0087**	**8.7**					MW-20	15
								MW-21	24
								MW-28	135
Dichloroethylene, 1,2-cis- (cDCE)	156-59-2	**0.036**	**36**	MW-2	66.5	MW-16	100		
				MW-4	210	MW-20	43		
						MW-28	43		
Tetrachloroethylene (PCE)	127-18-4	**0.014**	**14**	MW-2	775	MW-5	170		
				MW-3	33	MW-16	19		
				MW-9	18	MW-20	160		
				MW-13S	22	MW-22	520		
				MW-14	40	MW-23	120		
						MW-28	18		
Trichloroethylene (TCE)	79-01-6	**0.0052**	**5.2**	MW-2	71.5	MW-6	5.5		
				MW-4	120	MW-16	35		
						MW-20	8.8		
						MW-28	7.95		
Vinyl Chloride (VC)	75-01-4	**0.0033**	**3.3**			MW-16	11		
						MW-28	4.3		

Appendix D

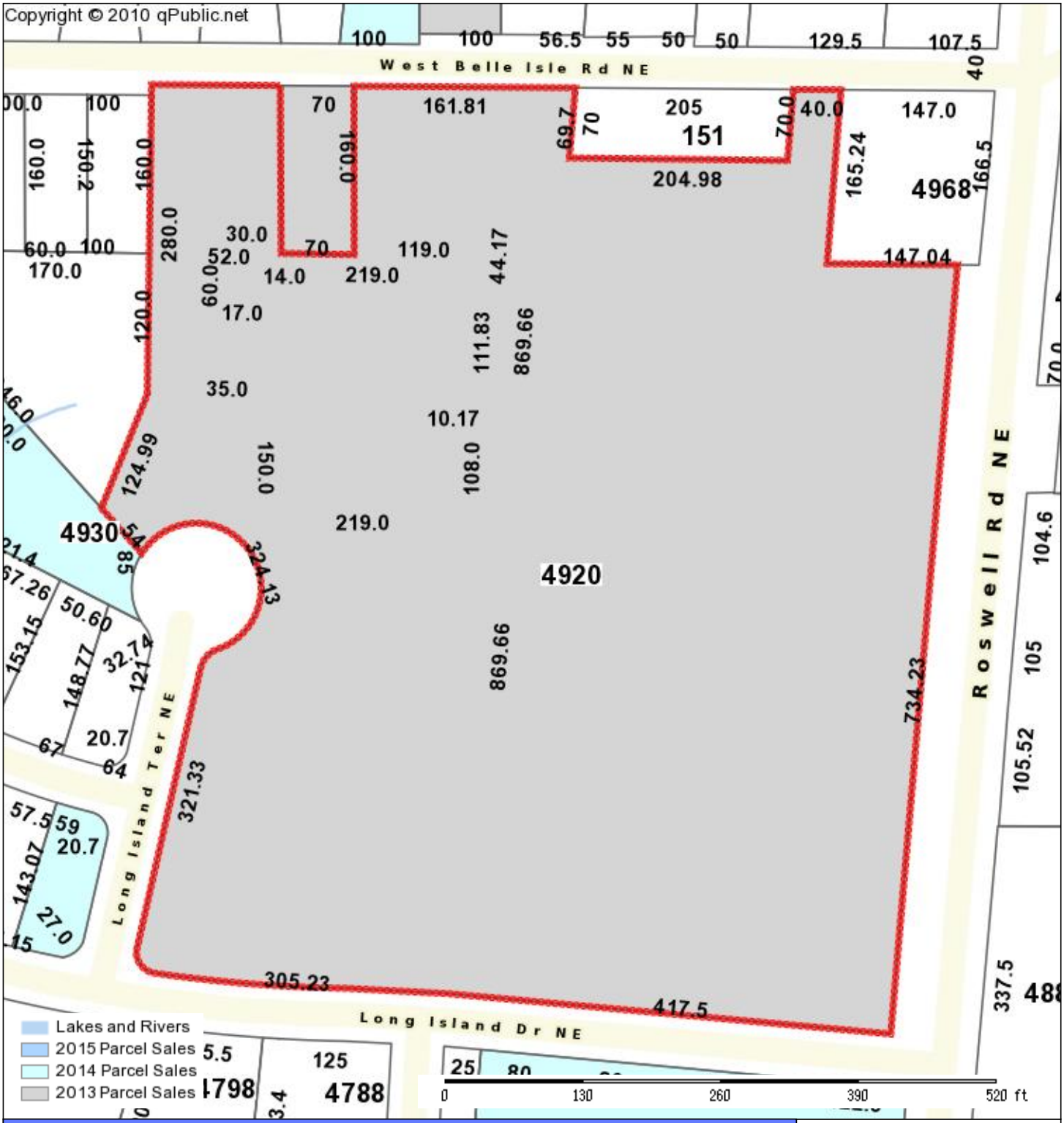
Milestone Schedule
Gantt Chart

Milestone Schedule Gantt Chart

TASK	Time to Accomplish Task (Months from Acceptance in VRP)									
	0-6	6 - 12	12 - 18	18 - 24	24 - 30	30 - 36	36 - 42	42 - 48	48 - 54	54 - 60
Abandon 13 Monitor Wells										
Horizontal Delineation of Release Site - COMPLETED										
Horizontal Delineation of Release Off Site- COMPLETED										
Update CSM - COMPLETED										
Submit Compliance Status Reoprt (CSR) - COMPLETED										

Appendix E

Warranty Deeds, Tax Plats
&
Property Owner Authorizations



Fountain Oaks Shopping Center

Parcel: 17 009300061319 Acres: 13.47

Name:	AMREIT FOUNTAIN OAKS LP	Land Value:	14547600
Site:	4920 ROSWELL RD	Building Value:	12186000
Sale:	$27650000 on 2013-06-24 Reason=0 Qual=U	Misc Value:	
Mail:	8 GREENWAY PLZ SUITE 1000 HOUSTON, TX 77046	Total Value:	26733600

Date printed: 09/08/15 : 17:28:40

Recent Sales in Neighborhood | Recent Sales in Area | Previous Parcel | Next Parcel | Field Definitions | Return to Main Search | Fulton Home

Owner and Parcel Information

Owner Name	AMREIT FOUNTAIN OAKS LP	**Today's Date**	September 24, 2015
Mailing Address	8 GREENWAY PLZ SUITE 1000	**Parcel Number**	17 009300061319
	HOUSTON, TX 77046	**Tax District**	59
Location Address	4920 ROSWELL RD	**Zoning**	C2
Legal Description	C2	**Acres**	13.47
Property Class	C5-Commercial Large Tracts	**Parcel Map**	Show Parcel Map
Neighborhood	C202	**Homestead**	N
Legal Description			

Assessment Information Show Historical Assessments Show Assessment Notice

Year	LUC	CLASS	Land Value	Building Value	Total Value	Assessed Value
2015	343	C4	$ 14,547,600	$ 12,186,000	$ 26,733,600	$ 10,693,440

Land Information

Land Type	Land Code	Description	Square Feet	Acreage	Price
A	21		586,753	13.47	$ 14,547,600

Commercial Improvement Information

Card	Building Type	Structure Code/Desc	Units	Year Built	Total Square Footage
1	01	343-343 NBHD SHOPPING CENTER		1988	33,150
2	02	343-343 NBHD SHOPPING CENTER		1988	60,750
3	03	347-347 SUPERMARKET		1988	61,553
4	04	343-343 NBHD SHOPPING CENTER		1988	9,120

Accessory Information

Description	Year Built	Area	Grade	Value
PAVING-ASPHALT PARK	1988	325000		$ 404,513

Sale Information

Sale Date	Sale Price	Instrument	Deed Book	Deed Page	Sale Qualification	Validity	Grantee	Grantor
2013-06-24	$ 27,650,000		52795	503	Unqualified	0-Valid Sale	AMREIT FOUNTAIN OAKS LP	SHOPPES OF FOUNTAIN OAKS, L.P.
2010-12-23	$ 19,000,000		49684	138	Unqualified	M-Sale Includes Multiple Parcels	SHOPPES OF FOUNTAIN OAKS LP	US RETAIL INCOME FUND VIIID LIMITED
2003-12-31		QUIT CLAIM DEED	36860	617	Unqualified	M-Sale Includes Multiple Parcels	U S RETAIL INCOME FUND VIII D	FLETCHER BRIGHT PTNRS I LTD &
2003-12-31		QUIT CLAIM DEED	36860	606	Unqualified	M-Sale Includes Multiple Parcels	U S RETAIL INCOME FUND VIII D	LONG ISLAND ASSOC LTD
2003-12-31	$ 18,000,000	LW	36860	599	Unqualified	9-Unvalidated/Deed Stamps	U S RETAIL INCOME FUND VIII D	LONG ISLAND ASSOC LTD

Recent Sales in Neighborhood | Recent Sales in Area | Previous Parcel | Next Parcel | Field Definitions | Return to Main Search Page | Fulton Home

Deed Book 52795 Pg 503
Filed and Recorded Jun-25-2013 02:57pm
2013-0178252
Real Estate Transfer Tax $27,650.00
Cathelene Robinson
Clerk of Superior Court
Fulton County, Georgia

After Recording Return to:

Return To:
Fidelity National Title Group
5565 Glenridge Connector, STE 300
Atlanta, GA 30342
Attn: Cheryl Green

LIMITED WARRANTY DEED

STATE OF GEORGIA
COUNTY OF FULTON

THIS INDENTURE, made this 24th day of June 2013, between **SHOPPES OF FOUNTAIN OAKS, L.P.**, a Georgia limited partnership (**"Grantor"**), and **AMREIT FOUNTAIN OAKS, LP**, a Texas limited partnership, and (**"Grantee"**).

WITNESSETH: That the said GRANTOR, for and in consideration of the sum of TEN AND NO/100THS DOLLARS ($10.00) and other good and valuable consideration, in hand paid at and before the sealing and delivery of these presents, the receipt whereof is hereby acknowledged, has granted, bargained, sold and conveyed and by these presents does grant, bargain, sell and convey unto the said GRANTEE, its successors and assigns, all that tract or parcel of land described as follows:

See Exhibit "A" attached hereto and by this reference made a part hereof.

The above-described property is conveyed subject only to those matters set forth on Exhibit "B" attached hereto and by this reference made a part hereof (herein the "Permitted Exceptions").

TO HAVE AND TO HOLD the said bargained premises, together with all and singular the rights, members and appurtenances thereof, to the only proper use, benefit and behoof of the said GRANTEE, its successors and assigns, forever, IN FEE SIMPLE.

And the said GRANTOR, subject only to the Permitted Exceptions, for itself, its successors and assigns, will warrant and forever defend the right and title to the above described property unto the said GRANTEE, its successors and assigns, against the lawful claims of all persons claiming by, through or under the undersigned.

This property has been listed on the state's hazardous site inventory and has been designated as needing corrective action due to the presence of hazardous wastes, hazardous constituents, or hazardous substances regulated under state law. Contact the

property owner or the Georgia Environmental Protection Division for further information concerning this property. This notice is provided in compliance with the Georgia Hazardous Site Response Act. This notice is included in this deed pursuant to Section 391-3-19-.08 of the Rules for Hazardous Site Response promulgated by the Georgia Environmental Protection Division

IN WITNESS WHEREOF, the said GRANTOR, by and through its duly appointed officers, has hereunto set its hand and affixed its seal the day and year first above written.

"GRANTOR"

Signed, sealed and delivered

Unofficial Witness

SHOPPES OF FOUNTAIN OAKS, L.P., a Georgia limited partnership

By: Shoppes of Fountain Oaks GP, LLC, a Georgia limited liability company, its general partner

By: _____ (SEAL)

Name: Ewoud N. Swaak

Title: Manager

Annette Marie Stawasz

Notary Public

My Commission Expires: 01/27/2017

ANNETTE MARIE STAWASZ
Notary Public, Georgia
Fulton County
My Commission Expires
January 27, 2017

EXHIBIT "A"

Legal Description

All that tract or parcel of land lying and being in Land Lot 93, 17th Land District of Fulton County, Georgia and being more particularly described as follows:

Commencing at a point located at the intersection of the westerly right of way of Roswell Road (R/W being 55' from centerline) with the northerly right of way of Long Island Drive (50' R/W), if said right of way lines were extended to intersect at a point; thence North 84 degrees 24 minutes 39 seconds West, a distance of 22.50 feet to a 5/8" rebar set on the northerly right of way of Long Island Drive, said point being the POINT OF BEGINNING; thence along said right of way of Long Island Drive North 84 degrees 24 minutes 39 seconds West, a distance of 450.84 feet to a point; thence continuing along said right of way North 84 degrees 20 minutes 33 seconds West, a distance of 220.36 feet to a point; thence along a curve to the right, said curve having an arc distance of 42.95 feet, with a radius of 25.00 feet, at a chord bearing and distance of North 35 degrees 07 minutes 45 seconds West at 37.86 feet to a 5/8" rebar set on the easterly right of way of Long Island Terrace (50' R/W); thence along said right of way of Long Island Terrace North 14 degrees 05 minutes 04 seconds East, a distance of 292.39 feet to a 5/8" rebar set; thence continuing along said right of way along a curve to the left, said curve having an arc distance of 224.10 feet, with a radius of 60.00 feet, at a chord bearing and distance of North 30 degrees 33 minutes 12 seconds West, at 114.76 feet to a point; thence leaving said right of way North 41 degrees 06 minutes 09 seconds West, a distance of 54.00 feet to a 5/8" rebar set; North 22 degrees 52 minutes 52 seconds East, a distance of 124.99 feet to a 5/8" rebar set; thence North 01 degrees 50 minutes 15 seconds East, a distance of 280.00 feet to a PK nail set on the southerly right of way of Belle Isle Road (40' R/W); thence along said right of way South 88 degrees 09 minutes 45 seconds East, a distance of 400.69 feet to a 1-1/2" open top pipe found; thence leaving said right of way South 05 degrees 42 minutes 46 seconds West, a distance of 69.74 feet to a 5/8" rebar set; thence South 88 degrees 05 minutes 22 seconds East, a distance of 205.39 feet to a 5/8" rebar set; thence North 05 degrees 29 minutes 06 seconds East, a distance of 71.73 feet to a ¾" crimped top pipe found on the southerly right of way of Belle Isle Road; thence along said right of way South 88 degrees 23 minutes 25 seconds East, a distance of 27.10 feet to a 1-1/4" open top pipe found; thence leaving said right of way South 05 degrees 33 minutes 53 seconds West, a distance of 165.43 feet to a 1" open top pipe found; thence South 89 degrees 20 minutes 32 seconds East, a distance of 139.37 feet to a 5/8" rebar set on the westerly right of way of Roswell Road; thence along said right of way South 06 degrees 08 minutes 39 seconds West, a distance of 731.06 feet to a 5/8" rebar set; thence along a curve to the right, said curve having an arc distance of 23.39 feet, with a radius of 50.00 feet, at a chord bearing and distance of South 82 degrees 11 minutes 02 seconds West at 23.18 feet to a 5/8" rebar set, said point being the POINT OF BEGINNING.

Said tract or parcel containing 596,266 square feet or 13.688 acres.

TOGETHER WITH rights and benefits pursuant to that certain Easement by and between Fletcher Bright Partners I, Ltd., a Georgia limited partnership, Michael O. Savage d/b/a Long Island Associates, a joint venture and Long Island Associates, Ltd., a Tennessee limited partnership, dated June 30, 1988, filed July 6, 1988 and recorded in Deed Book 11690, Page 167, records of the Superior Court of Fulton County, Georgia.

TOGETHER WITH rights and benefits pursuant to that certain Easement by and between Fletcher Bright Partners I, Ltd., a Georgia limited partnership, Michael O. Savage d/b/a Long Island Associates, a joint venture and Long Island Associates, Ltd., a Tennessee limited partnership, dated January 13, 2003, filed January 13, 2003 and recorded in Deed Book 36860, Page 594, records of the Superior Court of Fulton County, Georgia.

EXHIBIT B

1. Taxes for 2013 and subsequent years, not yet due and payable.
2. Easement from D. W. McCoy to Georgia Power Company, recorded in Deed Book 2525, Page 299 in the records of the Clerk of the Superior Court of Fulton County, Georgia;
3. Easement from D. W. McCoy to Georgia Power Company, recorded in Deed Book 3157, Page 659 in the aforesaid records;
4. Easement from D. W. McCoy to Georgia Power Company, recorded in Deed Book 2162, Page 321 in the aforesaid records;
5. Easement from D. W. McCoy to Georgia Power Company, recorded in Deed Book 4067, Page 31 in the aforesaid records;
6. Easement from D. W. McCoy to Georgia Power Company, recorded in Deed Book 4303, Page 447 in the aforesaid records;
7. Easement from Paul E. Harrison to Georgia Power Company, recorded in Deed Book 4067, Page 31 in the aforesaid records;
8. Easement from E.H. Foster to Georgia Power Company, recorded in Deed Book 6197, Page 201 in the aforesaid records;
9. Easement from Long Island Associates to Georgia Power Company, recorded in Deed Book 11147, Page 109 in the aforesaid records;
10. Dual Exit Driveway Agreement from Long Island Associates to Georgia Department of Transportation and recorded in Deed Book 10370, Page 39 in the aforesaid records;
11. Conveyance of Access Rights from Long Island Associates to Georgia Department of Transportation recorded in Deed Book 10370, Page 40 in the aforesaid records;
12. Terms and conditions of that certain Lease Agreement for Kroger Co. as evidenced by that certain Memorandum of Lease dated June 30, 1988, filed July 6, 1099 and recorded in Deed Book 11690, Page 174, aforesaid records; as affected by that certain Lease Amendment No. 1 dated December 19, 2003 and recorded in Deed Book 39171, Page 683, aforesaid records;
13. Declaration and Agreement of Restriction from Fletcher Bright Partners I, Ltd., and Michael O. Savage d/b/a Long Island Associates to Long Island Associates, Ltd. recorded in Deed Book 11690, Page 171 in the aforesaid records;
14. Easement from Long Island Associates, Ltd. to Georgia Power Company recorded in Deed Book 21882, Page 156 in the aforesaid records;

15. Terms and conditions contained in that certain Quit-Claim Deed, Agreement and Consent by and between Long Island Associates, Ltd. and Fletcher Bright Partners I, Ltd. and Michael O. Savage recorded in Deed Book 13263, Page 111 in the aforesaid records;

16. All matters shown on plat recorded at Plat Book 55, Page 23 in the aforesaid records;

17. Hazardous Site Inventory Affidavit by U.S. Retain Income Fund VIII-D, Limited Partnership, recorded in Deed Book 47775, Page 582 in the aforesaid records; and

18. Rights of tenants in possession under unrecorded leases.

00103940

GEORGIA, Fulton County, Clerk's Office Superior Court
Filed & Recorded, JUL 6 1988 at 4:08 Barbara J. Price CLERK

STATE OF GEORGIA

COUNTY OF FULTON

EASEMENT

THIS EASEMENT made and entered into this 30th day of June, 1988, by and between FLETCHER BRIGHT PARTNERS I, LTD., a Georgia limited partnership with Fletcher Bright and Fletcher Bright Company as its General Partners, and MICHAEL O. SAVAGE, d/b/a Long Island Associates, a joint venture (herein "Grantor"), and LONG ISLAND ASSOCIATES, LTD., a Tennessee limited partnership, formerly a Georgia limited partnership (herein "Grantee").

W I T N E S S E T H T H A T:

WHEREAS, Grantee is the owner of property in Land Lot 93 of the 17th District, Fulton County, Georgia, more particularly described in Exhibit "A" attached hereto (herein the "Benefitted Land"); and

WHEREAS, Grantor is the owner of all that part of Lot 3 of the Addition to Long Island Heights Subdivision, according to the Plat recorded in Plat Book 55, Page 23, Fulton County land records, which is not contained within the Benefitted Land (herein said remaining portion of said Lot 3 is referred to as the "Burdened Property"); and

WHEREAS, the parties have agreed, for the consideration hereinafter stated, that Grantor will grant and convey to Grantee a non-exclusive easement over the Burdened Property for the benefit of the Benefitted Property upon the terms hereinafter contained;

NOW, THEREFORE, for Ten and 00/100 Dollars ($10.00) and other good and valuable consideration in hand paid to Grantor, the receipt and sufficiency of which is hereby acknowledged, Grantor does hereby bargain, sell, grant and convey to Grantee, its successors and assigns, a non-exclusive, perpetual easement for the benefit of the Benefitted Property over and across portions of the Burdened Property for the following purposes:

(1) To flow and discharge surface and storm water from the Benefitted Property onto the Burdened Property across the easterly property of the Burdened Property, and through existing pipes and drainage facilities.

(2) The right to maintain fences presently existing on the Burdened Property for the benefit of the Benefitted Property.

(3) A slope easement to provide lateral support to the detention pond located on the Benefitted Property in substantially its existing configuration.

TOGETHER WITH the right at all times to maintain and replace said slopes, detention ponds, fences and drainage facilities.

The easements herein granted shall bind and inure to the benefit of the parties, their successors and assigns, and can be modified or amended only by the written consent of the parties. For reference, the approximate location of the existing fences and drainage pipe is shown on an As-Built Survey for Fountain Oaks Shopping Center dated May 18, 1988, by H. E. Harper, Land Surveyor, Atlanta, Georgia, a copy of a portion of which is attached hereto as Exhibit "B".

00103940

IN WITNESS WHEREOF, the parties have signed, sealed and delivered this Easement on the date above written.

GRANTOR:

LONG ISLAND ASSOCIATES,
a joint venture

BY: FLETCHER BRIGHT PARTNERS I, LTD.

By: _____ (SEAL)
FLETCHER BRIGHT, Partner

By: FLETCHER BRIGHT COMPANY,
Partner

By: _____
President

CORP. SEAL

(CORPORATE SEAL)

BY: _____ (SEAL)
MICHAEL O. SAVAGE, Partner

GRANTEE:

LONG ISLAND ASSOCIATES, LTD.,
a Tennessee limited partnership

By: _____
General Partner

By: _____
General Partner

Signed, sealed and delivered
in the presence of:

_____
Witness

_____
Notary Public

N.P. SEAL

Doreen W Chandler
Notary Public, Fulton County, Georgia
My Commission Expires Jan. 26, 1992.

My commission expires:

(NOTARIAL SEAL)

4863r

00103940

LEGAL DESCRIPTION

ENTIRE TRACT

ALL THAT TRACT or parcel of land lying and being in Land Lot 93 of the 17th Land District, Fulton County, Georgia, and being more particularly described as follows:

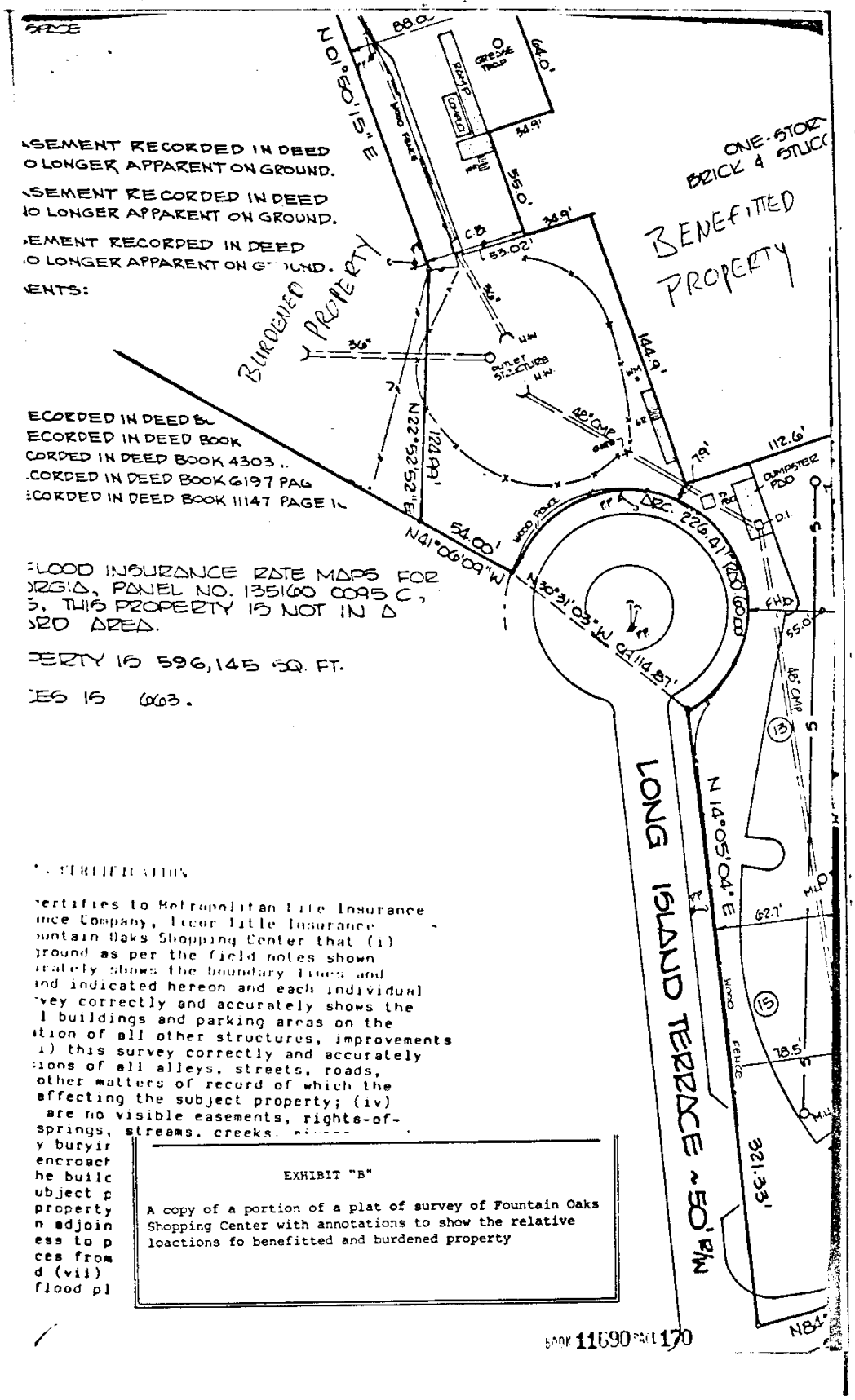
To find the POINT OF BEGINNING, commence at an iron pin located at the intersection of the westerly edge of the right-of-way of Roswell Road (a 90 foot wide right-of-way -- 55 feet on the west side of centerline) with the northerly edge of the right-of-way of Long Island Drive (a 50 foot wide right-of-way), if said right-of-way lines were extended to intersect at a point; and from thence run North 84°24'39" West a distance of 22.5 feet to a point on the northerly edge of the right-of-way of Long Island Drive, which point is the POINT OF BEGINNING; thence from said POINT OF BEGINNING the property is described by continuing North 84°24'39" West a distance of 450.84 feet along the northerly right-of-way line of Long Island Drive to an iron pin; thence continuing along the northerly right-of-way of said road North 84°20'33" West a distance of 220.36 feet to a point; thence westerly and northwesterly and northerly along the arc of a circular curve to the right (said arc having a radius of 25 feet and being subtended by a chord bearing North 35°07'45" West with a chord length of 37.86 feet) an arc distance of 42.95 feet to a point located on the easterly edge of the right-of-way of Long Island Terrace (a 50 foot wide right-of-way); thence North 14°05'04" East a distance of 292.39 feet along the easterly edge of the right-of-way of Long Island Terrace to an iron pin; thence northeasterly, northerly, westerly and southwesterly along the arc of the cul-de-sac of Long Island Terrace, and following the curvature thereof (said cul-de-sac having a radius of 60 feet) an arc distance of 226.41 feet, to the northeasterly corner of Lot 2 of the Addition to Long Island Heights Subdivision, according to a Plat thereof recorded at Plat Book 55, Page 23, Fulton County Land Records; thence leaving said cul-de-sac run North 41°06'09" West along the northeasterly line of said Lot 2 of the Addition to Long Island Heights Subdivision a distance of 54 feet to a point; thence North 22°52'52" East a distance of 124.99 feet to a point; thence North 01°50'15" East a distance of 280 feet to the southerly edge of the right-of-way of Belle Isle Road (a 40 foot wide right-of-way); thence South 88°09'45" East a distance of 400.69 feet along the southerly edge of the right-of-way of Belle Isle Road to an iron pin; thence leaving said right-of-way run South 05°42'46" West a distance of 69.74 feet to an iron pin; thence South 88°05'22" East a distance of 204.98 feet to an iron pin; thence North 05°42'46" East a distance of 70 feet to an iron pin located on the southerly edge of the right-of-way of Belle Isle Road; thence South 88°09'45" East a distance of 27.02 feet along the southerly right-of-way of Belle Isle Road to an iron pin; thence leaving said right-of-way run South 05°42'46" West a distance of 165.47 feet to an iron pin; thence South 89°11'39" East a distance of 139.95 feet to an iron pin located on the westerly edge of the right-of-way of Roswell Road (being at the southeast corner of a lot leased to or owned by Tenneco Oil Company and being the northeasterly corner of property formerly owned by Gardencourt, Ltd.); thence South 06°08'39" West a distance of 728.85 feet along the westerly edge of the right-of-way of Roswell Road to a point; thence westerly along the arc of a circular curve to the right (said arc having a radius of 50 feet and being subtended by a chord bearing South 82°11'02" West with a chord length of 23.18 feet) an arc distance of 23.39 feet to the POINT OF BEGINNING. Said property is shown on an As-Built Survey of Fountain Oaks Shopping Center dated 5/18/88, last revised 6/29/88, by E. E. Harper, Land Surveyor, Atlanta, Georgia.

4862r(1)

EXHIBIT "A"

BOOK 11690 PAGE 169

00103940



SEMENT RECORDED IN DEED
O LONGER APPARENT ON GROUND.

SEMENT RECORDED IN DEED
IO LONGER APPARENT ON GROUND.

EMENT RECORDED IN DEED
O LONGER APPARENT ON GROUND.

ENTS:

ECORDED IN DEED BC
ECORDED IN DEED BOOK
CORDED IN DEED BOOK 4303 ..
CORDED IN DEED BOOK 6197 PAG
ECORDED IN DEED BOOK 11147 PAGE 1

FLOOD INSURANCE RATE MAPS FOR
ORGIA, PANEL NO. 135160 0095 C,
5, THIS PROPERTY IS NOT IN A
SPD AREA.

PERTY IS 596,145 SQ. FT.

ES IS 0603.

CERTIFICATION:

ertifies to Metropolitan Life Insurance
nce Company, Ticor Title Insurance
ountain Oaks Shopping Center that (i)
ground as per the field notes shown
rately shows the boundary lines and
and indicated hereon and each individual
vey correctly and accurately shows the
l buildings and parking areas on the
tion of all other structures, improvements
i) this survey correctly and accurately
ions of all alleys, streets, roads,
other matters of record of which the
affecting the subject property; (iv)
are no visible easements, rights-of-
springs, streams, creeks,
y burying
encroach
he build
ubject p
property
n adjoin
ess to p
ces from
d (vii)
flood pl

EXHIBIT "B"

A copy of a portion of a plat of survey of Fountain Oaks Shopping Center with annotations to show the relative loactions fo benefitted and burdened property

Record and Return to:
Karen Kirspel
Fidelity National Title
1800 Parkway Place, Suite 700
Marietta, GA 30067

R.E. Hodges, Jr., Esq.
2230 Towne Lake Parkway
Bldg. 200, Ste. 120
Woodstock, Georgia 30189

STATE OF GEORGIA

COUNTY OF FULTON

H0961S3

EASEMENT

THIS EASEMENT made and entered into this 31 day of December, 2003, by and between FLETCHER BRIGHT PARTNERS I, LTD., a Georgia limited partnership with Fletcher Bright and Fletcher Bright Company as its General Partners, and MICHAEL O. SAVAGE, d/b/a Long Island Associates, a joint venture (herein "Grantor") and LONG ISLAND ASSOCIATES, LTD., a Tennessee limited partnership, formerly a Georgia limited partnership (herein "Grantee").

WITNESSETH THAT:

WHEREAS, Grantee is the owner of property in Land Lot 93 of the 17th District, Fulton County, Georgia, more particularly described in Exhibit "A" attached hereto (herein the "Benefited Land"); and

WHEREAS, Grantor is the owner of property in Land Lot 93 of the 17th District, Fulton County, Georgia, more particularly described in Exhibit "B" attached hereto; and

WHEREAS, the parties have agreed, for the consideration hereinafter stated, that Grantor will grant and convey to Grantee a non-exclusive easement over the Burdened Property for the benefit of the Benefited Property upon the terms hereinafter contained;

NOW, THEREFORE, for Ten and 00/100 ($10.00) and other good and valuable consideration in hand paid to Grantor, the receipt and sufficiency of which is hereby acknowledged, Grantor does hereby bargain, sell, grant and convey to Grantee, its successors and assigns, a non-exclusive, perpetual easement for the benefit of the Benefited Property over and across portions of the Burdened Property for the following purposes:

(1) To flow and discharge surface and storm water from the Benefited Property onto the Burdened Property across the easterly property of the Burdened Property, and through existing pipes and drainage facilities.

(2) The right to maintain fences presently existing on the Burdened Property for the benefit of the Benefited Property.

(3) A slope easement to provide lateral support to the detention pond located on the Benefited Property in substantially its existing configuration.

TOGETHER WITH the right at all times to maintain and replace said slopes, detention ponds, fences and drainage facilities.

The easements herein granted shall bind and inure to the benefit of the parties, their successors and assigns, and can be modified or amended only by written consent of the parties. For reference, the approximate location of the existing fences and drainage pipe is shown on an As-Built Survey for Fountain Oaks Shopping Center dated May 18, 1988, by H.E. Harper, Land Surveyor, Atlanta, Georgia, a copy of a portion of which is attached hereto as Exhibit "C".

IN WITNESS WHEREOF, the parties have signed, sealed and delivered this Easement on the date above written.

GRANTOR:

LONG ISLAND ASSOCIATES, a joint venture

BY: FLETCHER BRIGHT PARTNERS I, LTD.

By: _____
Fletcher Bright, General Partner

Signed, sealed and delivered in the presence of:

_____
Witness

_____
Notary Public

My Commission Expires: April 8, 2006

[NOTARIAL SEAL]

[SIGNATURES CONTINUED ON FOLLOWING PAGE]

GRANTEE:

LONG ISLAND ASSOCIATES, LTD., a
Tennessee limited partnership

By: _____
Fletcher Bright, General Partner

Signed, sealed and delivered in the
presence of:

_____
Witness

_____
Notary Public

My Commission Expires: April 8, 2006

[NOTARIAL SEAL]

\\REA\195624.2

EXHIBIT "A"

Legal Description

PARCEL ONE

All that tract or parcel of land lying and being in Land Lot 93, 17th District of Fulton County, Georgia being Lot 3 of the Addition to Long Island Heights Subdivision as per plat recorded at Plat Book 55, Page 23, in the Office of the Clerk, Superior Court of Fulton County, Georgia.

Being the same property conveyed to Hugh H. Gibert by Warranty Deed recorded at Deed Book 7532, Page 336, aforesaid public records, a one-half interest in same having subsequently been conveyed to Anne J. Gibert by Warranty Deed of Deed Book 7590, Page 289, aforesaid records, which previous deeds are incorporated herein by reference. Said property is improved property known as 4940 Long Island Terrace according to the present system of numbering houses and naming streets in Fulton County, Georgia.

PARCEL TWO

All that tract of parcel of land lying and being in Land Lot 93, 17th District of Fulton County, Georgia, being all of Lot 19 of the easterly portion of Lot 20 of Block B of Long Island Heights Subdivision, according to a Plat thereof recorded at Plat Book 35, Page 1", in the Office of the Clerk, Superior Court of Fulton County, Georgia, said property being more particularly described as follows:

BEGINNING at an iron pin on the northerly edge of the right-of-way of Long Island Drive (a 50 foot wide right-of-way), said point being the southeasterly corner of Lot 19, Block B, aforesaid subdivision, and the southwesterly corner of Lot 18, Block B, aforesaid subdivision; and from thence run northwesterly along the northerly edge of the right-of-way of Long Island Drive and following the curvature thereof a distance of 148 feet to an iron pin; thence North 35 degrees 18 minutes East a distance of 262.2 feet to an iron pin on the northerly boundary of Lot 20, Block B, aforesaid subdivision; thence southeasterly along the northerly boundary of Lot 20 and Lot 19 of Block B of the aforesaid subdivision, a distance of 105.0 feet to an iron pin located at the northwesterly corner of Lot 18 of Block B of said subdivision, and the northeasterly corner of Lot 19; thence southwesterly along the westerly line of said Lot 18, Block B, a distance of 274.7 feet to the POINT OF BEGINNING. Said property is improved property having a house thereon known as 4855 Long Island Drive, according to the present system of naming streets and numbering houses in Fulton County, Georgia Said property is that same property that was conveyed to R. Benton Odom, deceased husband of the Grantor, by Warranty Deed dated October 26, 1954, recorded at Deed Book 2935, Page 204, in the Fulton County Land Records.

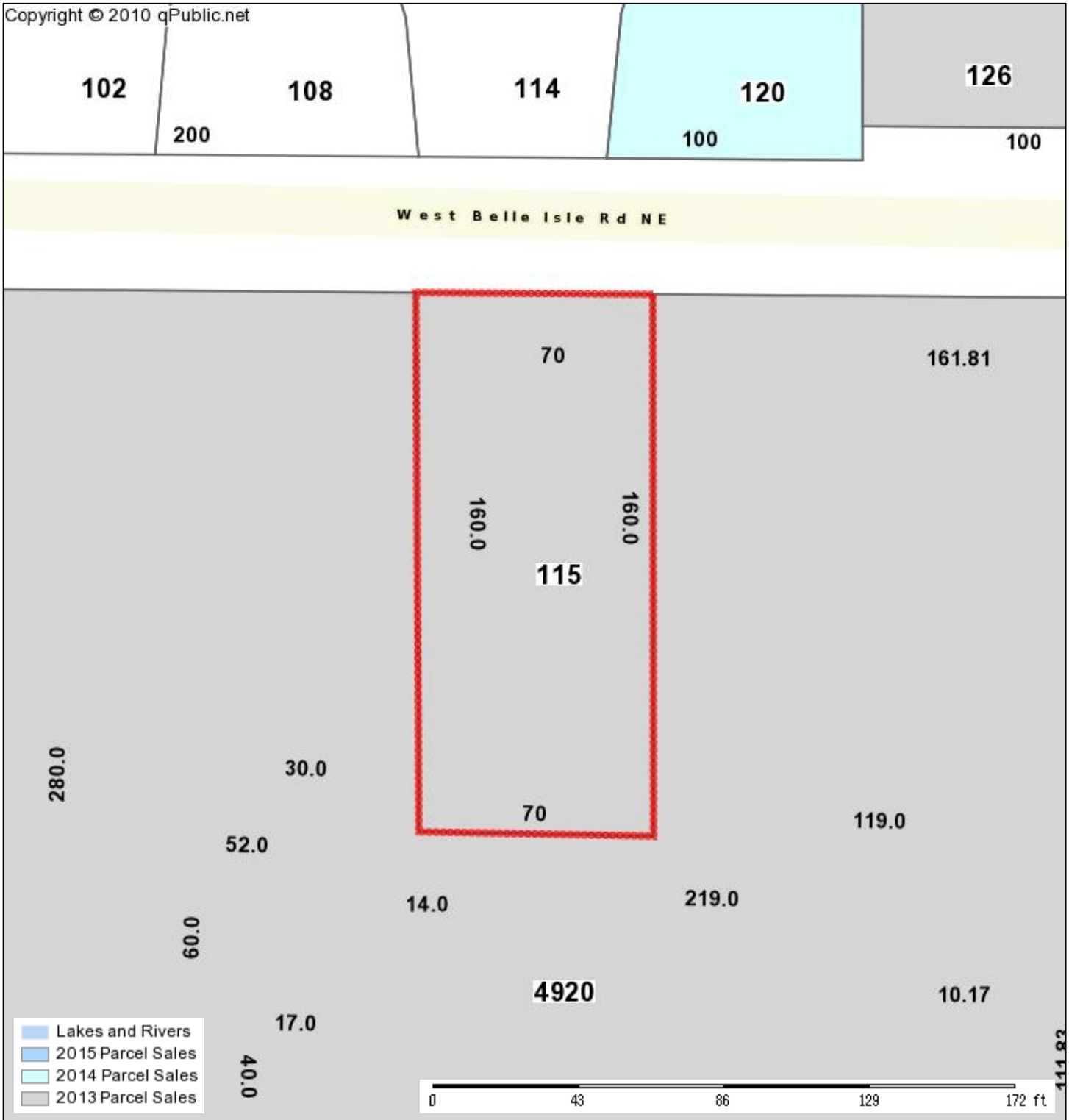
Deed Book 36860 Pg 598
Juanita Hicks
Clerk of Superior Court
Fulton County, Georgia

EXHIBIT "B"

PARCEL THREE

Land Lot 82 of the 17th District of Fulton County, Georgia, being all of Lot No. 15 and part of Lot No. 16 in Block B of Long Island Heights Subdivision, as per plat recorded in Plat Book 33, page 37, Fulton County Records, more particularly described as follows:

BEGINNING at a point on the northeastern side of Long Island Drive at the southeastern corner of Lot No. 15 in said block and subdivision, which point is eight hundred (800) feet northwesterly from the northwestern corner of Long Island Drive and Roswell Road; said beginning point also being at the west side of a proposed street; thence northwesterly along the northeastern side of Long Island Drive one hundred seventeen (117) feet; thence northeasterly two hundred twenty-nine (229) feet to an iron pin on the rear line of Lot No. 16; thence southeasterly one hundred ten and seven-tenths (110.7) feet to an iron pin at the northeast corner of Lot No. 15; thence southwesterly along the line of said Lot two hundred eleven (211) feet to Long Island Drive at the point of beginning, being improved property known as No. 4817 Long Island Drive, N.W. This being the same property conveyed December 4, 1981 by Warranty Deed from LOUISE BURNS CARLSON to Monique W. Garnet and recorded in Deed Book 5818, page 127, Fulton County Records.



FOSC Outparcel			
Parcel: 17 009300021073 Acres: 0.2571			
Name:	AMREIT FOUNTAIN OAKS LP	Land Value:	266800
Site:	115 WEST BELLE ISLE RD	Building Value:	9700
Sale:	$27650000 on 2013-06-24 Reason=MA Qual=U	Misc Value:	
Mail:	8 GREENWAY PLZ SUITE 1000 HOUSTON, TX 77046	Total Value:	276500

Date printed: 09/08/15 : 17:25:23

Recent Sales in Neighborhood | Recent Sales in Area | Previous Parcel | Next Parcel | Field Definitions | Return to Main Search | Fulton Home

Owner and Parcel Information			
Owner Name	AMREIT FOUNTAIN OAKS LP	**Today's Date**	September 24, 2015
Mailing Address	8 GREENWAY PLZ SUITE 1000	**Parcel Number**	17 009300021073
	HOUSTON, TX 77046	**Tax District**	59
Location Address	115 WEST BELLE ISLE RD	**Zoning**	C2
Legal Description	C2	**Acres**	0.2571
Property Class	C3-Commercial Lots	**Parcel Map**	Show Parcel Map
Neighborhood	C202	**Homestead**	N
Legal Description			

Assessment Information Show Historical Assessments Show Assessment Notice

Year	LUC	CLASS	Land Value	Building Value	Total Value	Assessed Value
2015	339	C3	$ 266,800	$ 9,700	$ 276,500	$ 110,600

Land Information

Land Type	Land Code	Description	Square Feet	Acreage	Price
S	21		11,200	0.2571	$ 424,390

Improvement Information

No improvement information available for this parcel

Accessory Information

Description	Year Built	Area	Grade	Value
PAVING-ASPHALT PARK	1987	11200		$ 13,938

Sale Information

Sale Date	Sale Price	Instrument	Deed Book	Deed Page	Sale Qualification	Validity	Grantee	Grantor
2013-06-24	$ 27,650,000		52795	503	Unqualified	MA-Multi - Owned Adjacent	AMREIT FOUNTAIN OAKS LP	SHOPPES OF FOUNTAIN OAKS, L.P.
2010-12-23	$ 19,000,000		49684	138	Unqualified	M-Sale Includes Multiple Parcels	SHOPPES OF FOUNTAIN OAKS LP	US RETAIL INCOME FUND VIIID LIMITED
2003-12-31		QUIT CLAIM DEED	36860	606	Unqualified	M-Sale Includes Multiple Parcels	U S RETAIL INCOME FUND VIII D	LONG ISLAND ASSOC LTD
2003-12-31		QUIT CLAIM DEED	36860	617	Unqualified	M-Sale Includes Multiple Parcels	U S RETAIL INCOME FUND VIII D	FLETCHER BRIGHT PTNRS I LTD &
2003-12-31	$ 1,000,000	LW	36860	611	Unqualified	D-Duplicate sale	U S RETAIL INCOME FUND VIII D	FLETCHER BRIGHT PTNRS I LTD &
1986-07-03	$ 150,000		10193	158	Unqualified	*-		

Recent Sales in Neighborhood | Recent Sales in Area | Previous Parcel | Next Parcel | Field Definitions | Return to Main Search Page | Fulton Home

Deed Book 52795 Pg 503
Filed and Recorded Jun-25-2013 02:57pm
2013-0178252
Real Estate Transfer Tax $27,650.00
Cathelene Robinson
Clerk of Superior Court
Fulton County, Georgia

After Recording Return to:

Return To:
Fidelity National Title Group
5565 Glenridge Connector, STE 300
Atlanta, GA 30342
Attn: Cheryl Green

LIMITED WARRANTY DEED

STATE OF GEORGIA
COUNTY OF FULTON

THIS INDENTURE, made this 24th day of June 2013, between **SHOPPES OF FOUNTAIN OAKS, L.P.**, a Georgia limited partnership (**"Grantor"**), and **AMREIT FOUNTAIN OAKS, LP**, a Texas limited partnership, and (**"Grantee"**).

WITNESSETH: That the said GRANTOR, for and in consideration of the sum of TEN AND NO/100THS DOLLARS ($10.00) and other good and valuable consideration, in hand paid at and before the sealing and delivery of these presents, the receipt whereof is hereby acknowledged, has granted, bargained, sold and conveyed and by these presents does grant, bargain, sell and convey unto the said GRANTEE, its successors and assigns, all that tract or parcel of land described as follows:

See Exhibit "A" attached hereto and by this reference made a part hereof.

The above-described property is conveyed subject only to those matters set forth on Exhibit "B" attached hereto and by this reference made a part hereof (herein the "Permitted Exceptions").

TO HAVE AND TO HOLD the said bargained premises, together with all and singular the rights, members and appurtenances thereof, to the only proper use, benefit and behoof of the said GRANTEE, its successors and assigns, forever, IN FEE SIMPLE.

And the said GRANTOR, subject only to the Permitted Exceptions, for itself, its successors and assigns, will warrant and forever defend the right and title to the above described property unto the said GRANTEE, its successors and assigns, against the lawful claims of all persons claiming by, through or under the undersigned.

This property has been listed on the state's hazardous site inventory and has been designated as needing corrective action due to the presence of hazardous wastes, hazardous constituents, or hazardous substances regulated under state law. Contact the

property owner or the Georgia Environmental Protection Division for further information concerning this property. This notice is provided in compliance with the Georgia Hazardous Site Response Act. This notice is included in this deed pursuant to Section 391-3-19-.08 of the Rules for Hazardous Site Response promulgated by the Georgia Environmental Protection Division

IN WITNESS WHEREOF, the said GRANTOR, by and through its duly appointed officers, has hereunto set its hand and affixed its seal the day and year first above written.

"GRANTOR"

Signed, sealed and delivered

Unofficial Witness

SHOPPES OF FOUNTAIN OAKS, L.P., a Georgia limited partnership

By: Shoppes of Fountain Oaks GP, LLC, a Georgia limited liability company, its general partner

By: _____ (SEAL)

Name: Ewoud N. Swaak

Title: Manager

Annette Marie Stawasz

Notary Public

My Commission Expires: 01/27/2017

ANNETTE MARIE STAWASZ
Notary Public, Georgia
Fulton County
My Commission Expires
January 27, 2017

EXHIBIT "A"

Legal Description

All that tract or parcel of land lying and being in Land Lot 93, 17th Land District of Fulton County, Georgia and being more particularly described as follows:

Commencing at a point located at the intersection of the westerly right of way of Roswell Road (R/W being 55' from centerline) with the northerly right of way of Long Island Drive (50' R/W), if said right of way lines were extended to intersect at a point; thence North 84 degrees 24 minutes 39 seconds West, a distance of 22.50 feet to a 5/8" rebar set on the northerly right of way of Long Island Drive, said point being the POINT OF BEGINNING; thence along said right of way of Long Island Drive North 84 degrees 24 minutes 39 seconds West, a distance of 450.84 feet to a point; thence continuing along said right of way North 84 degrees 20 minutes 33 seconds West, a distance of 220.36 feet to a point; thence along a curve to the right, said curve having an arc distance of 42.95 feet, with a radius of 25.00 feet, at a chord bearing and distance of North 35 degrees 07 minutes 45 seconds West at 37.86 feet to a 5/8" rebar set on the easterly right of way of Long Island Terrace (50' R/W); thence along said right of way of Long Island Terrace North 14 degrees 05 minutes 04 seconds East, a distance of 292.39 feet to a 5/8" rebar set; thence continuing along said right of way along a curve to the left, said curve having an arc distance of 224.10 feet, with a radius of 60.00 feet, at a chord bearing and distance of North 30 degrees 33 minutes 12 seconds West, at 114.76 feet to a point; thence leaving said right of way North 41 degrees 06 minutes 09 seconds West, a distance of 54.00 feet to a 5/8" rebar set; North 22 degrees 52 minutes 52 seconds East, a distance of 124.99 feet to a 5/8" rebar set; thence North 01 degrees 50 minutes 15 seconds East, a distance of 280.00 feet to a PK nail set on the southerly right of way of Belle Isle Road (40' R/W); thence along said right of way South 88 degrees 09 minutes 45 seconds East, a distance of 400.69 feet to a 1-1/2" open top pipe found; thence leaving said right of way South 05 degrees 42 minutes 46 seconds West, a distance of 69.74 feet to a 5/8" rebar set; thence South 88 degrees 05 minutes 22 seconds East, a distance of 205.39 feet to a 5/8" rebar set; thence North 05 degrees 29 minutes 06 seconds East, a distance of 71.73 feet to a ¾" crimped top pipe found on the southerly right of way of Belle Isle Road; thence along said right of way South 88 degrees 23 minutes 25 seconds East, a distance of 27.10 feet to a 1-1/4" open top pipe found; thence leaving said right of way South 05 degrees 33 minutes 53 seconds West, a distance of 165.43 feet to a 1" open top pipe found; thence South 89 degrees 20 minutes 32 seconds East, a distance of 139.37 feet to a 5/8" rebar set on the westerly right of way of Roswell Road; thence along said right of way South 06 degrees 08 minutes 39 seconds West, a distance of 731.06 feet to a 5/8" rebar set; thence along a curve to the right, said curve having an arc distance of 23.39 feet, with a radius of 50.00 feet, at a chord bearing and distance of South 82 degrees 11 minutes 02 seconds West at 23.18 feet to a 5/8" rebar set, said point being the POINT OF BEGINNING.

Said tract or parcel containing 596,266 square feet or 13.688 acres.

TOGETHER WITH rights and benefits pursuant to that certain Easement by and between Fletcher Bright Partners I, Ltd., a Georgia limited partnership, Michael O. Savage d/b/a Long Island Associates, a joint venture and Long Island Associates, Ltd., a Tennessee limited partnership, dated June 30, 1988, filed July 6, 1988 and recorded in Deed Book 11690, Page 167, records of the Superior Court of Fulton County, Georgia.

TOGETHER WITH rights and benefits pursuant to that certain Easement by and between Fletcher Bright Partners I, Ltd., a Georgia limited partnership, Michael O. Savage d/b/a Long Island Associates, a joint venture and Long Island Associates, Ltd., a Tennessee limited partnership, dated January 13, 2003, filed January 13, 2003 and recorded in Deed Book 36860, Page 594, records of the Superior Court of Fulton County, Georgia.

EXHIBIT B

1. Taxes for 2013 and subsequent years, not yet due and payable.
2. Easement from D. W. McCoy to Georgia Power Company, recorded in Deed Book 2525, Page 299 in the records of the Clerk of the Superior Court of Fulton County, Georgia;
3. Easement from D. W. McCoy to Georgia Power Company, recorded in Deed Book 3157, Page 659 in the aforesaid records;
4. Easement from D. W. McCoy to Georgia Power Company, recorded in Deed Book 2162, Page 321 in the aforesaid records;
5. Easement from D. W. McCoy to Georgia Power Company, recorded in Deed Book 4067, Page 31 in the aforesaid records;
6. Easement from D. W. McCoy to Georgia Power Company, recorded in Deed Book 4303, Page 447 in the aforesaid records;
7. Easement from Paul E. Harrison to Georgia Power Company, recorded in Deed Book 4067, Page 31 in the aforesaid records;
8. Easement from E.H. Foster to Georgia Power Company, recorded in Deed Book 6197, Page 201 in the aforesaid records;
9. Easement from Long Island Associates to Georgia Power Company, recorded in Deed Book 11147, Page 109 in the aforesaid records;
10. Dual Exit Driveway Agreement from Long Island Associates to Georgia Department of Transportation and recorded in Deed Book 10370, Page 39 in the aforesaid records;
11. Conveyance of Access Rights from Long Island Associates to Georgia Department of Transportation recorded in Deed Book 10370, Page 40 in the aforesaid records;
12. Terms and conditions of that certain Lease Agreement for Kroger Co. as evidenced by that certain Memorandum of Lease dated June 30, 1988, filed July 6, 1099 and recorded in Deed Book 11690, Page 174, aforesaid records; as affected by that certain Lease Amendment No. 1 dated December 19, 2003 and recorded in Deed Book 39171, Page 683, aforesaid records;
13. Declaration and Agreement of Restriction from Fletcher Bright Partners I, Ltd., and Michael O. Savage d/b/a Long Island Associates to Long Island Associates, Ltd. recorded in Deed Book 11690, Page 171 in the aforesaid records;
14. Easement from Long Island Associates, Ltd. to Georgia Power Company recorded in Deed Book 21882, Page 156 in the aforesaid records;

15. Terms and conditions contained in that certain Quit-Claim Deed, Agreement and Consent by and between Long Island Associates, Ltd. and Fletcher Bright Partners I, Ltd. and Michael O. Savage recorded in Deed Book 13263, Page 111 in the aforesaid records;

16. All matters shown on plat recorded at Plat Book 55, Page 23 in the aforesaid records;

17. Hazardous Site Inventory Affidavit by U.S. Retain Income Fund VIII-D, Limited Partnership, recorded in Deed Book 47775, Page 582 in the aforesaid records; and

18. Rights of tenants in possession under unrecorded leases.

00103940

GEORGIA, Fulton County, Clerk's Office Superior Court
Filed & Recorded, JUL 6 1988 at 4:08 Barbara J. Price CLERK

STATE OF GEORGIA

COUNTY OF FULTON

EASEMENT

THIS EASEMENT made and entered into this 30th day of June, 1988, by and between FLETCHER BRIGHT PARTNERS I, LTD., a Georgia limited partnership with Fletcher Bright and Fletcher Bright Company as its General Partners, and MICHAEL O. SAVAGE, d/b/a Long Island Associates, a joint venture (herein "Grantor"), and LONG ISLAND ASSOCIATES, LTD., a Tennessee limited partnership, formerly a Georgia limited partnership (herein "Grantee").

W I T N E S S E T H T H A T:

WHEREAS, Grantee is the owner of property in Land Lot 93 of the 17th District, Fulton County, Georgia, more particularly described in Exhibit "A" attached hereto (herein the "Benefitted Land"); and

WHEREAS, Grantor is the owner of all that part of Lot 3 of the Addition to Long Island Heights Subdivision, according to the Plat recorded in Plat Book 55, Page 23, Fulton County land records, which is not contained within the Benefitted Land (herein said remaining portion of said Lot 3 is referred to as the "Burdened Property"); and

WHEREAS, the parties have agreed, for the consideration hereinafter stated, that Grantor will grant and convey to Grantee a non-exclusive easement over the Burdened Property for the benefit of the Benefitted Property upon the terms hereinafter contained;

NOW, THEREFORE, for Ten and 00/100 Dollars ($10.00) and other good and valuable consideration in hand paid to Grantor, the receipt and sufficiency of which is hereby acknowledged, Grantor does hereby bargain, sell, grant and convey to Grantee, its successors and assigns, a non-exclusive, perpetual easement for the benefit of the Benefitted Property over and across portions of the Burdened Property for the following purposes:

(1) To flow and discharge surface and storm water from the Benefitted Property onto the Burdened Property across the easterly property of the Burdened Property, and through existing pipes and drainage facilities.

(2) The right to maintain fences presently existing on the Burdened Property for the benefit of the Benefitted Property.

(3) A slope easement to provide lateral support to the detention pond located on the Benefitted Property in substantially its existing configuration.

TOGETHER WITH the right at all times to maintain and replace said slopes, detention ponds, fences and drainage facilities.

The easements herein granted shall bind and inure to the benefit of the parties, their successors and assigns, and can be modified or amended only by the written consent of the parties. For reference, the approximate location of the existing fences and drainage pipe is shown on an As-Built Survey for Fountain Oaks Shopping Center dated May 18, 1988, by H. E. Harper, Land Surveyor, Atlanta, Georgia, a copy of a portion of which is attached hereto as Exhibit "B".

00103940

IN WITNESS WHEREOF, the parties have signed, sealed and delivered this Easement on the date above written.

GRANTOR:

LONG ISLAND ASSOCIATES,
a joint venture

BY: FLETCHER BRIGHT PARTNERS I, LTD.

By: _____ (SEAL)
FLETCHER BRIGHT, Partner

By: FLETCHER BRIGHT COMPANY,
Partner

By: _____
President

CORP. SEAL

(CORPORATE SEAL)

BY: _____ (SEAL)
MICHAEL O. SAVAGE, Partner

GRANTEE:

LONG ISLAND ASSOCIATES, LTD.,
a Tennessee limited partnership

By: _____
General Partner

By: _____
General Partner

Signed, sealed and delivered
in the presence of:

_____
Witness

_____
Notary Public

N.P. SEAL

Doreen W Chandler
Notary Public, Fulton County, Georgia
My Commission Expires Jan. 26, 1992.

My commission expires:

(NOTARIAL SEAL)

4863r

00103940

LEGAL DESCRIPTION

ENTIRE TRACT

ALL THAT TRACT or parcel of land lying and being in Land Lot 93 of the 17th Land District, Fulton County, Georgia, and being more particularly described as follows:

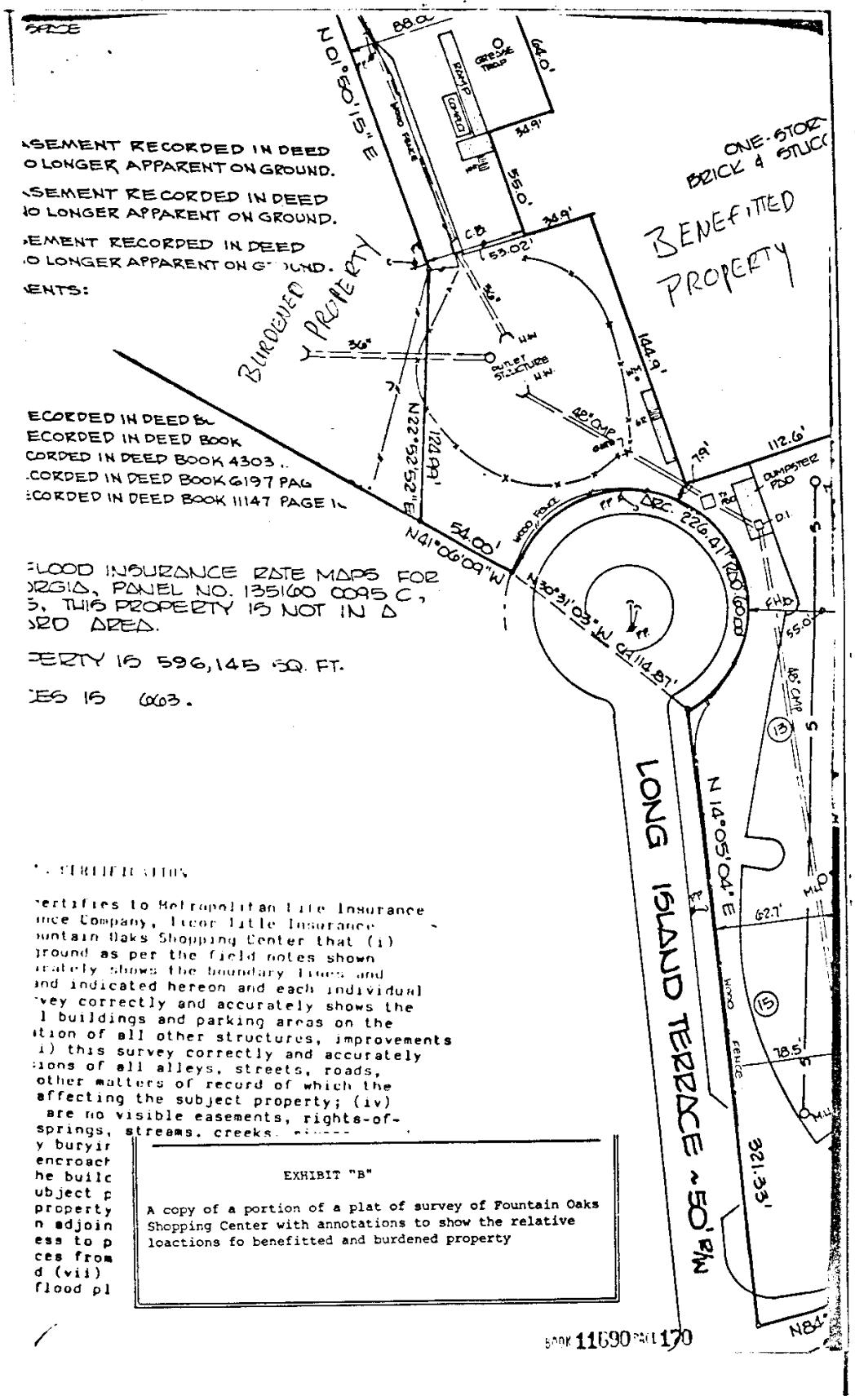
To find the POINT OF BEGINNING, commence at an iron pin located at the intersection of the westerly edge of the right-of-way of Roswell Road (a 90 foot wide right-of-way -- 55 feet on the west side of centerline) with the northerly edge of the right-of-way of Long Island Drive (a 50 foot wide right-of-way), if said right-of-way lines were extended to intersect at a point; and from thence run North 84°24'39" West a distance of 22.5 feet to a point on the northerly edge of the right-of-way of Long Island Drive, which point is the POINT OF BEGINNING; thence from said POINT OF BEGINNING the property is described by continuing North 84°24'39" West a distance of 450.84 feet along the northerly right-of-way line of Long Island Drive to an iron pin; thence continuing along the northerly right-of-way of said road North 84°20'33" West a distance of 220.36 feet to a point; thence westerly and northwesterly and northerly along the arc of a circular curve to the right (said arc having a radius of 25 feet and being subtended by a chord bearing North 35°07'45" West with a chord length of 37.86 feet) an arc distance of 42.95 feet to a point located on the easterly edge of the right-of-way of Long Island Terrace (a 50 foot wide right-of-way); thence North 14°05'04" East a distance of 292.39 feet along the easterly edge of the right-of-way of Long Island Terrace to an iron pin; thence northeasterly, northerly, westerly and southwesterly along the arc of the cul-de-sac of Long Island Terrace, and following the curvature thereof (said cul-de-sac having a radius of 60 feet) an arc distance of 226.41 feet, to the northeasterly corner of Lot 2 of the Addition to Long Island Heights Subdivision, according to a Plat thereof recorded at Plat Book 55, Page 23, Fulton County Land Records; thence leaving said cul-de-sac run North 41°06'09" West along the northeasterly line of said Lot 2 of the Addition to Long Island Heights Subdivision a distance of 54 feet to a point; thence North 22°52'52" East a distance of 124.99 feet to a point; thence North 01°50'15" East a distance of 280 feet to the southerly edge of the right-of-way of Belle Isle Road (a 40 foot wide right-of-way); thence South 88°09'45" East a distance of 400.69 feet along the southerly edge of the right-of-way of Belle Isle Road to an iron pin; thence leaving said right-of-way run South 05°42'46" West a distance of 69.74 feet to an iron pin; thence South 88°05'22" East a distance of 204.98 feet to an iron pin; thence North 05°42'46" East a distance of 70 feet to an iron pin located on the southerly edge of the right-of-way of Belle Isle Road; thence South 88°09'45" East a distance of 27.02 feet along the southerly right-of-way of Belle Isle Road to an iron pin; thence leaving said right-of-way run South 05°42'46" West a distance of 165.47 feet to an iron pin; thence South 89°11'39" East a distance of 139.95 feet to an iron pin located on the westerly edge of the right-of-way of Roswell Road (being at the southeast corner of a lot leased to or owned by Tenneco Oil Company and being the northeasterly corner of property formerly owned by Gardencourt, Ltd.); thence South 06°08'39" West a distance of 728.85 feet along the westerly edge of the right-of-way of Roswell Road to a point; thence westerly along the arc of a circular curve to the right (said arc having a radius of 50 feet and being subtended by a chord bearing South 82°11'02" West with a chord length of 23.18 feet) an arc distance of 23.39 feet to the POINT OF BEGINNING. Said property is shown on an As-Built Survey of Fountain Oaks Shopping Center dated 5/18/88, last revised 6/29/88, by E. E. Harper, Land Surveyor, Atlanta, Georgia.

4862r(1)

EXHIBIT "A"

BOOK 11690 PAGE 169

00103940



SEMENT RECORDED IN DEED
O LONGER APPARENT ON GROUND.

SEMENT RECORDED IN DEED
IO LONGER APPARENT ON GROUND.

EMENT RECORDED IN DEED
O LONGER APPARENT ON GROUND.

ENTS:

ECORDED IN DEED BC
ECORDED IN DEED BOOK
CORDED IN DEED BOOK 4303 ..
CORDED IN DEED BOOK 6197 PAG
ECORDED IN DEED BOOK 11147 PAGE 1

FLOOD INSURANCE RATE MAPS FOR
ORGIA, PANEL NO. 135160 0095 C,
5, THIS PROPERTY IS NOT IN A
SPD AREA.

PERTY IS 596,145 SQ. FT.

ES IS 0603.

CERTIFICATION:

ertifies to Metropolitan Life Insurance
nce Company, Ticor Title Insurance
ountain Oaks Shopping Center that (i)
ground as per the field notes shown
rately shows the boundary lines and
and indicated hereon and each individual
vey correctly and accurately shows the
l buildings and parking areas on the
tion of all other structures, improvements
i) this survey correctly and accurately
ions of all alleys, streets, roads,
other matters of record of which the
affecting the subject property; (iv)
are no visible easements, rights-of-
springs, streams, creeks,
y burying
encroach
he build
ubject p
property
n adjoin
ess to p
ces from
d (vii)
flood pl

EXHIBIT "B"

A copy of a portion of a plat of survey of Fountain Oaks Shopping Center with annotations to show the relative loactions fo benefitted and burdened property

Record and Return to:
Karen Kirspel
Fidelity National Title
1800 Parkway Place, Suite 700
Marietta, GA 30067

R.E. Hodges, Jr., Esq.
2230 Towne Lake Parkway
Bldg. 200, Ste. 120
Woodstock, Georgia 30189

STATE OF GEORGIA

COUNTY OF FULTON

H0961S3

EASEMENT

THIS EASEMENT made and entered into this 31 day of December, 2003, by and between FLETCHER BRIGHT PARTNERS I, LTD., a Georgia limited partnership with Fletcher Bright and Fletcher Bright Company as its General Partners, and MICHAEL O. SAVAGE, d/b/a Long Island Associates, a joint venture (herein "Grantor") and LONG ISLAND ASSOCIATES, LTD., a Tennessee limited partnership, formerly a Georgia limited partnership (herein "Grantee").

WITNESSETH THAT:

WHEREAS, Grantee is the owner of property in Land Lot 93 of the 17th District, Fulton County, Georgia, more particularly described in Exhibit "A" attached hereto (herein the "Benefited Land"); and

WHEREAS, Grantor is the owner of property in Land Lot 93 of the 17th District, Fulton County, Georgia, more particularly described in Exhibit "B" attached hereto; and

WHEREAS, the parties have agreed, for the consideration hereinafter stated, that Grantor will grant and convey to Grantee a non-exclusive easement over the Burdened Property for the benefit of the Benefited Property upon the terms hereinafter contained;

NOW, THEREFORE, for Ten and 00/100 ($10.00) and other good and valuable consideration in hand paid to Grantor, the receipt and sufficiency of which is hereby acknowledged, Grantor does hereby bargain, sell, grant and convey to Grantee, its successors and assigns, a non-exclusive, perpetual easement for the benefit of the Benefited Property over and across portions of the Burdened Property for the following purposes:

(1) To flow and discharge surface and storm water from the Benefited Property onto the Burdened Property across the easterly property of the Burdened Property, and through existing pipes and drainage facilities.

(2) The right to maintain fences presently existing on the Burdened Property for the benefit of the Benefited Property.

(3) A slope easement to provide lateral support to the detention pond located on the Benefited Property in substantially its existing configuration.

TOGETHER WITH the right at all times to maintain and replace said slopes, detention ponds, fences and drainage facilities.

The easements herein granted shall bind and inure to the benefit of the parties, their successors and assigns, and can be modified or amended only by written consent of the parties. For reference, the approximate location of the existing fences and drainage pipe is shown on an As-Built Survey for Fountain Oaks Shopping Center dated May 18, 1988, by H.E. Harper, Land Surveyor, Atlanta, Georgia, a copy of a portion of which is attached hereto as Exhibit "C".

IN WITNESS WHEREOF, the parties have signed, sealed and delivered this Easement on the date above written.

GRANTOR:

LONG ISLAND ASSOCIATES, a joint venture

BY: FLETCHER BRIGHT PARTNERS I, LTD.

By: _____
Fletcher Bright, General Partner

Signed, sealed and delivered in the presence of:

_____
Witness

_____
Notary Public

My Commission Expires: April 8, 2006

[NOTARIAL SEAL]

[SIGNATURES CONTINUED ON FOLLOWING PAGE]

GRANTEE:

LONG ISLAND ASSOCIATES, LTD., a
Tennessee limited partnership

By: _____
Fletcher Bright, General Partner

Signed, sealed and delivered in the
presence of:

_____
Witness

_____
Notary Public

My Commission Expires: April 8, 2006

[NOTARIAL SEAL]

\\REA\195624.2

EXHIBIT "A"

Legal Description

PARCEL ONE

All that tract or parcel of land lying and being in Land Lot 93, 17th District of Fulton County, Georgia being Lot 3 of the Addition to Long Island Heights Subdivision as per plat recorded at Plat Book 55, Page 23, in the Office of the Clerk, Superior Court of Fulton County, Georgia.

Being the same property conveyed to Hugh H. Gibert by Warranty Deed recorded at Deed Book 7532, Page 336, aforesaid public records, a one-half interest in same having subsequently been conveyed to Anne J. Gibert by Warranty Deed of Deed Book 7590, Page 289, aforesaid records, which previous deeds are incorporated herein by reference. Said property is improved property known as 4940 Long Island Terrace according to the present system of numbering houses and naming streets in Fulton County, Georgia.

PARCEL TWO

All that tract of parcel of land lying and being in Land Lot 93, 17th District of Fulton County, Georgia, being all of Lot 19 of the easterly portion of Lot 20 of Block B of Long Island Heights Subdivision, according to a Plat thereof recorded at Plat Book 35, Page 1", in the Office of the Clerk, Superior Court of Fulton County, Georgia, said property being more particularly described as follows:

BEGINNING at an iron pin on the northerly edge of the right-of-way of Long Island Drive (a 50 foot wide right-of-way), said point being the southeasterly corner of Lot 19, Block B, aforesaid subdivision, and the southwesterly corner of Lot 18, Block B, aforesaid subdivision; and from thence run northwesterly along the northerly edge of the right-of-way of Long Island Drive and following the curvature thereof a distance of 148 feet to an iron pin; thence North 35 degrees 18 minutes East a distance of 262.2 feet to an iron pin on the northerly boundary of Lot 20, Block B, aforesaid subdivision; thence southeasterly along the northerly boundary of Lot 20 and Lot 19 of Block B of the aforesaid subdivision, a distance of 105.0 feet to an iron pin located at the northwesterly corner of Lot 18 of Block B of said subdivision, and the northeasterly corner of Lot 19; thence southwesterly along the westerly line of said Lot 18, Block B, a distance of 274.7 feet to the POINT OF BEGINNING. Said property is improved property having a house thereon known as 4855 Long Island Drive, according to the present system of naming streets and numbering houses in Fulton County, Georgia Said property is that same property that was conveyed to R. Benton Odom, deceased husband of the Grantor, by Warranty Deed dated October 26, 1954, recorded at Deed Book 2935, Page 204, in the Fulton County Land Records.

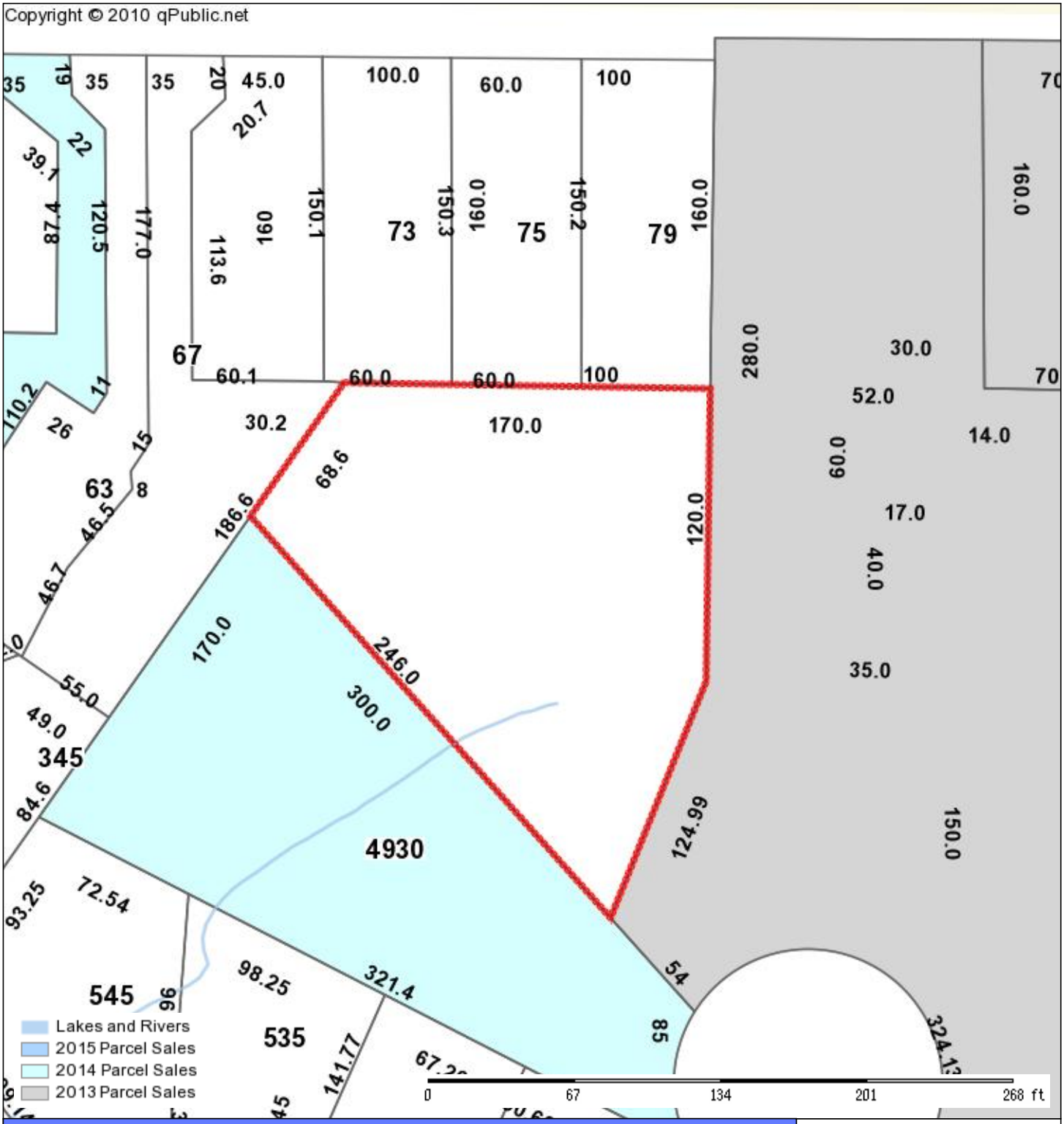
Deed Book 36860 Pg 598
Juanita Hicks
Clerk of Superior Court
Fulton County, Georgia

EXHIBIT "B"

PARCEL THREE

Land Lot 82 of the 17th District of Fulton County, Georgia, being all of Lot No. 15 and part of Lot No. 16 in Block B of Long Island Heights Subdivision, as per plat recorded in Plat Book 33, page 37, Fulton County Records, more particularly described as follows:

BEGINNING at a point on the northeastern side of Long Island Drive at the southeastern corner of Lot No. 15 in said block and subdivision, which point is eight hundred (800) feet northwesterly from the northwestern corner of Long Island Drive and Roswell Road; said beginning point also being at the west side of a proposed street; thence northwesterly along the northeastern side of Long Island Drive one hundred seventeen (117) feet; thence northeasterly two hundred twenty-nine (229) feet to an iron pin on the rear line of Lot No. 16; thence southeasterly one hundred ten and seven-tenths (110.7) feet to an iron pin at the northeast corner of Lot No. 15; thence southwesterly along the line of said Lot two hundred eleven (211) feet to Long Island Drive at the point of beginning, being improved property known as No. 4817 Long Island Drive, N.W. This being the same property conveyed December 4, 1981 by Warranty Deed from LOUISE BURNS CARLSON to Monique W. Garnet and recorded in Deed Book 5818, page 127, Fulton County Records.



Savage/Bright Parcel			
Parcel: 17 009300060881 Acres: 0.74			
Name:	SAVAGE MICHAEL O	Land Value:	71600
Site:	LONG ISLAND TER	Building Value:	0
Sale:	$275000 on 1984-03-01 Reason=9 Qual=U	Misc Value:	
Mail:	537 MARKET ST S # 400 CHATTANOOGA, TN 37402	Total Value:	71600

Date printed: 09/08/15 : 17:23:20

Recent Sales in Neighborhood | Recent Sales in Area | Previous Parcel | Next Parcel | Field Definitions | Return to Main Search | Fulton Home

Owner and Parcel Information			
Owner Name	SAVAGE MICHAEL O	**Today's Date**	September 24, 2015
Mailing Address	537 MARKET ST S # 400	**Parcel Number**	17 009300060881
	CHATTANOOGA, TN 37402	**Tax District**	59
Location Address	LONG ISLAND TER	**Zoning**	R3
Legal Description	R3	**Acres**	0.74
Property Class	R3-Residential Lots	**Parcel Map**	Show Parcel Map
Neighborhood	17142	**Homestead**	N
Legal Description			

Assessment Information Show Historical Assessments Show Assessment Notice

Year	LUC	CLASS	Land Value	Building Value	Total Value	Assessed Value
2015	300	R3	$ 71,600	$ 0	$ 71,600	$ 28,640

Land Information

Land Type	Land Code	Description	Square Feet	Acreage	Price
S	6		32,234	0.74	$ 71,590

Improvement Information

No improvement information available for this parcel

Accessory Information

Description	Year Built	Area	Grade	Value
No accessory information associated with this parcel.				

Sale Information

Sale Date	Sale Price	Instrument	Deed Book	Deed Page	Sale Qualification	Validity	Grantee	Grantor
1984-03-01	$ 275,000		08868	474	Unqualified	9-Unvalidated/Deed Stamps		

Recent Sales in Neighborhood | Recent Sales in Area | Previous Parcel | Next Parcel | Field Definitions | Return to Main Search Page | Fulton Home

00103941

GEORGIA, Fulton County, Clerk's Office Superior Court
Filed & Recorded JUL 6 1989 at 4:08 Barbara J. Price CLERK

STATE OF GEORGIA

COUNTY OF FULTON

DECLARATION AND AGREEMENT OF RESTRICTIONS

THIS DECLARATION AND AGREEMENT made and entered into this 30th day of June, 1988, by and between FLETCHER BRIGHT PARTNERS I, LTD., a Georgia limited partnership with Fletcher Bright and Fletcher Bright Company as its General Partners, and MICHAEL O. SAVAGE, d/b/a Long Island Associates, a joint venture (herein "Grantor"), and LONG ISLAND ASSOCIATES, LTD., a Tennessee limited partnership, formerly a Georgia limited partnership (herein "Grantee").

W I T N E S S E T H T H A T:

WHEREAS, Grantee is the owner of property in Land Lot 93 of the 17th District, Fulton County, Georgia, more particularly described in Exhibit "A" attached hereto (herein the "Benefitted Land"); and

WHEREAS, Grantor is the owner of all that part of Lot 3 of the Addition to Long Island Heights Subdivision, according to the Plat recorded in Plat Book 55, Page 23, Fulton County land records, which is not contained within the Benefitted Land (herein said remaining portion of said Lot 3 is referred to as the "Burdened Property"); and

WHEREAS, the parties have agreed, for the consideration hereinafter stated, that Grantor will impose on the Burdened Property certain restrictions as to the use thereof for the benefit of the Benefitted Property upon the terms hereinafter contained;

NOW, THEREFORE, for Ten and 00/100 Dollars ($10.00) and other good and valuable consideration in hand paid to Grantor, the receipt and sufficiency of which is hereby acknowledged, Grantor does hereby declare and impose the following restrictions on the Burdened Property, and the parties hereby covenant and agree as follows:

1. No portion of the Burdened Property shall be used as a drug store or a business principally devoted to the sale of health and beauty aids, or for a pharmacy requiring the services of a registered pharmacist.

2. No portion of the Burdened Property shall be used as a food store or food department, or for the sale of groceries, meats, fish, produce, dairy products, bakery products or any of them, for off-premises consumption, provided that nothing herein shall prevent any occupant of the Shopping Center from selling such products as an incidental part of another principal business so long as the total number of square feet of building area devoted to the display for the sale thereof does not exceed five percent (5%) of the total number of square feet of building area occupied by same or five hundred (500) square feet, including, in either case, one-half (1/2) of the aisle space adjacent to any such display area, whichever is smaller.

3. No part of the Burdened Property shall be used as a disco, nightclub, health club, fitness center or similar activity, theatre or bowling alley which requires extensive parking, or as a business which principally features sexually explicit products or drug paraphernalia. Further, no part of the Burdened Property shall be used or occupied as a restaurant if such restaurant has a floor area exceeding 1,500 square feet.

4. The foregoing restrictions shall be for the benefit of the owner of the Benefitted Property, its successors and assigns, and may be enforced by such owner and any holder of a first priority security deed, deed to secure debt or similar instrument encumbering the Benefitted Property (herein "First Mortgagee") or any part thereof, and by no others. Said restrictions may be amended, modified, terminated or waived (in whole or in part) only by written agreement of the owner and First Mortgagee of the Benefitted Property.

00103941

5. This Agreement shall bind and inure to the parties, their successors and assigns, and is appurtenant to and runs with the land.

IN WITNESS WHEREOF, the parties have signed, sealed and delivered this Declaration and Agreement on the date above written.

GRANTOR:

LONG ISLAND ASSOCIATES,
a joint venture

Bi. FLETCHER BRIGHT PARTNERS I, LTD.

By: _____ (SEAL)
FLETCHER BRIGHT, Partner

By: FLETCHER BRIGHT COMPANY,
Partner

By: _____
President

CORP. SEAL

(CORPORATE SEAL)

BY: _____ (SEAL)
MICHAEL O. SAVAGE, Partner

GRANTEE:

LONG ISLAND ASSOCIATES, LTD.,
a Tennessee limited partnership

By: _____
General Partner

By _____
General Partner

Signed, sealed and delivered
in the presence of:

_____
Witness

_____
Notary Public

N.P. SEAL

My commission expires:
Doreen W. Chandler
Notary Public, Fulton County, Georgia
My Commission Expires Jan. 30, 1992.

(NOTARIAL SEAL)

4919r

BOOK 11690 PAGE 172

00103941

LEGAL DESCRIPTION

ENTIRE TRACT

ALL THAT TRACT or parcel of land lying and being in Land Lot 93 of the 17th Land District, Fulton County, Georgia, and being more particularly described as follows:

To find the POINT OF BEGINNING, commence at an iron pin located at the intersection of the westerly edge of the right-of-way of Roswell Road (a 90 foot wide right-of-way -- 55 feet on the west side of centerline) with the northerly edge of the right-of-way of Long Island Drive (a 50 foot wide right-of-way), if said right-of-way lines were extended to intersect at a point; and from thence run North 84°24'39" West a distance of 22.5 feet to a point on the northerly edge of the right-of-way of Long Island Drive, which point is the POINT OF BEGINNING; thence from said POINT OF BEGINNING the property is described by continuing North 84°24'39" West a distance of 450.84 feet along the northerly right-of-way line of Long Island Drive to an iron pin; thence continuing along the northerly right-of-way of said road North 84°20'33" West a distance of 220.36 feet to a point; thence westerly and northwesterly and northerly along the arc of a circular curve to the right (said arc having a radius of 25 feet and being subtended by a chord bearing North 35°07'45" West with a chord length of 37.86 feet) an arc distance of 42.95 feet to a point located on the easterly edge of the right-of-way of Long Island Terrace (a 50 foot wide right-of-way); thence North 14°05'04" East a distance of 292.39 feet along the easterly edge of the right-of-way of Long Island Terrace to an iron pin; thence northeasterly, northerly, westerly and southwesterly along the arc of the cul-de-sac of Long Island Terrace, and following the curvature thereof (said cul-de-sac having a radius of 60 feet) an arc distance of 226.41 feet, to the northeasterly corner of Lot 2 of the Addition to Long Island Heights Subdivision, according to a Plat thereof recorded at Plat Book 55, Page 23, Fulton County Land Records; thence leaving said cul-de-sac run North 41°06'09" West along the northeasterly line of said Lot 2 of the Addition to Long Island Heights Subdivision a distance of 54 feet to a point; thence North 22°52'52" East a distance of 124.99 feet to a point; thence North 01°50'15" East a distance of 280 feet to the southerly edge of the right-of-way of Belle Isle Road (a 40 foot wide right-of-way); thence South 88°09'45" East a distance of 400.69 feet along the southerly edge of the right-of-way of Belle Isle Road to an iron pin; thence leaving said right-of-way run South 05°42'46" West a distance of 69.74 feet to an iron pin; thence South 88°05'22" East a distance of 204.98 feet to an iron pin; thence North 05°42'46" East a distance of 70 feet to an iron pin located on the southerly edge of the right-of-way of Belle Isle Road; thence South 88°09'45" East a distance of 27.02 feet along the southerly right-of-way of Belle Isle Road to an iron pin; thence leaving said right-of-way run South 05°42'46" West a distance of 165.47 feet to an iron pin; thence South 89°11'39" East a distance of 139.95 feet to an iron pin located on the westerly edge of the right-of-way of Roswell Road (being at the southeast corner of a lot leased to or owned by Tenneco Oil Company and being the northeasterly corner of property formerly owned by Gardencourt, Ltd.); thence South 06°08'39" West a distance of 728.85 feet along the westerly edge of the right-of-way of Roswell Road to a point; thence westerly along the arc of a circular curve to the right (said arc having a radius of 50 feet and being subtended by a chord bearing South 82°11'02" West with a chord length of 23.18 feet) an arc distance of 23.39 feet to the POINT OF BEGINNING. Said property is shown on an As-Built Survey of Fountain Oaks Shopping Center dated 5/18/88, last revised 6/29/88, by H. E. Harper, Land Surveyor, Atlanta, Georgia.

4862r(1)

EXHIBIT "A"

00103942

GEORGIA, Fulton County, Clerk's Office Superior Court
Filed & Recorded JUL 6 1988 at 4:08 LEASE Barbara J. Price CLERK

THIS LEASE made as of the 30 day of June, 1988, by and between LONG ISLAND ASSOCIATES, LTD., a Tennessee limited partnership ("Landlord"), and THE KROGER CO., an Ohio corporation ("Tenant").

FOR AND IN CONSIDERATION of Ten and 00/100 Dollars ($10.00), the receipt and sufficiency of which are hereby acknowledged, Landlord does hereby demise unto Tenant, subject to the provisions of that certain Lease Agreement (the "Lease Agreement") between Landlord and Tenant of even date herewith, which Lease Agreement is incorporated herein by reference and made a part hereof, the storeroom which is or shall be two hundred nineteen feet by two hundred sixty-four feet (219' x 264'), outside dimensions (the "Demised Premises"), being situated in Fountain Oaks Shopping Center (the "Shopping Center"), which is shown in the plot plan (the "Plot Plan") attached to the Lease Agreement, with the Demised Premises being outlined in red therein, together with all rights, privileges and appurtenances thereunto appertaining.

The Shopping Center is situated in the County of Fulton and State of Georgia, and more particularly described in Exhibit "A" attached hereto and made a part hereof.

TOGETHER WITH a non-exclusive easement over that improved portion of the Shopping Center not occupied by building area as shown in the Plot Plan (the "Common Area") for parking and unobstructed vehicular and pedestrian passage by Tenant and its employees, agents, contractors, invitees and licensees.

The Lease shall be for a term of twenty (20) years commencing on the 30th day of June, 1988, and expiring on the 30th day of June, 2008, at midnight, together with six (6) successive renewals hereof, each for a term of five (5) years, upon the same terms and conditions set forth herein, except as to term and number of renewals. Tenant shall be deemed automatically to have availed itself of an ensuing renewal term unless it shall furnish Landlord notice of its intention not to renew the Lease within ninety (90) days prior to the expiration date of the term then in effect. In the event that Tenant notifies Landlord of its intention not to renew the Lease, all successive renewal terms thereupon shall terminate.

Landlord hereby imposes the following restrictions over the Shopping Center:

(1) Without the prior written consent of Tenant, no portion of the Shopping Center, except the Demised Premises, shall be used as a drug store or a business principally devoted to the sale of health and beauty aids, or for a pharmacy requiring the services of a registered pharmacist, provided that this restriction shall cease to be in force and effect if the Demised Premises are not used as a drug store and do not contain a pharmacy department for a period of three hundred sixty-five (365) consecutive days or longer, except when such failure is caused by labor disputes, force majeure (including reconstruction as a result of fire or other casualty) or conditions beyond the control of Tenant or its sub-tenant or assignee.

(2) Without the prior written consent of Tenant, no portion of the Shopping Center, except the Demised Premises, shall be used as a food store or food department, or for the sale of groceries, meats, fish, produce, dairy products, bakery products or any of them, for off-premises consumption, provided that nothing herein shall prevent any occupant of the Shopping Center from selling such products as an incidental part of another principal business so long as the total number of square feet of building area devoted to the display for the sale thereof does not exceed five percent (5%) of the total number of square feet of building area occupied by same or five hundred (500) square feet, including, in either case, one-half (1/2) of the aisle space adjacent to any such display area, whichever is smaller, and further provided that this restriction shall cease to be in force and effect if the Demised Premises are not used as a business for the sale of groceries, meats, fish, produce, dairy products, bakery goods or any of them, for off-premises consumption, for a period of three hundred sixty-five (365) consecutive days or longer, except when such failure is caused by labor disputes, force majeure (including reconstruction as a result of fire or other casualty) or conditions beyond the control of Tenant or its sub-tenant or assignee.

00103942

(3) Without the prior written consent of Tenant, no part of the Shopping Center shall be used as a disco, nightclub, health club, fitness center or similar activity, theatre or bowling alley which requires extensive parking, or as a business which principally features sexually explicit products or drug paraphernalia. Further, no part of the Shopping Center located north of the Demised Premises shall be used or occupied as a restaurant if such restaurant has a floor area exceeding 1,500 square feet, and no part of the Shopping Center located south of the Demised Premises may be used or occupied as a restaurant if such restaurant is located closer than one hundred fifty feet (150') from the south boundary of the Demised Premises. In no event shall a restaurant exceed 4,500 square feet. If a restaurant is constructed and, in Tenant' sole judgment, parking for Tenant's customers is encroached on by patrons of the restaurant, then ---------- Landlord agrees, at Landlord's expense, to hire a security guard to police the parking lot as Kroger deems necessary, not to exceed thirty-five (35) hours per week.

(4) No portion of the Common Area shall be improved with building area, or shall be altered or removed without prior written consent of Tenant.

(5) No portion of the Common Area shall be encumbered by any easement, right-of-way, license or other servitude for the purpose of parking on or vehicular passage across the Common Area benefitting property outside of the Shopping Center without the prior written consent of Tenant, such consent not to be unreasonably withheld.

In the event that commercial property contiguous to the Shopping Center is developed or owned, directly or indirectly, by Landlord, the restrictions set forth in Paragraphs (1), (2) and (3) above shall extend to such property. If any of the restrictions set forth herein are violated, Tenant shall be entitled to terminate the Lease in addition to all remedies available at law or in equity, provided that Tenant first serves notice of the violation to Landlord and any mortgagee of Landlord, the name and address of which Tenant previously has been furnished written notice, and permits same to remedy such violation within sixty (60) days after receipt of notice. If Landlord's mortgagee notifies Tenant that it elects to cure the violation and thereafter commences and duly prosecutes efforts in good faith to cure the violation, including prosecution of a foreclosure under its mortgage or security interest, then the sixty (60) day time period stated herein shall be extended, as to the termination remedy only, to a time period reasonably necessary to allow the mortgagee to cure or cause a cure of the default. Landlord acknowledges that if it violates any of the restrictions set forth above, the remedy at law for such breach would be inadequate, and Tenant shall be entitled to equitable or injunctive relief.

Should Tenant remain in possession of the Demised Premises after the expiration or termination of the Lease, it shall be deemed a tenant from month-to-month upon the same terms and conditions, except as to term, as herein provided.

Landlord shall record one (1) counterpart of the Lease and furnish same, with the recordation information affixed, to Tenant within thirty (30) days from the date hereof.

The provisions hereof shall run with the land so long as the Lease remains in effect, and shall bind and inure to the benefit of each party hereto and its heirs, executors, administrators, trustees, successors and assigns.

IN WITNESS WHEREOF, this Lease has been duly executed in three (3) counterparts, each of which constitutes a separate and binding agreement.

Signed, sealed & delivered in the presence of:

Witnesses for Landlord:

N.P. SEAL

Witness

Notary

Witness

Doreen W. Chandler
Notary Public, Fulton County, Georgia
My Commission Expires Jan. 26 1992

LANDLORD:

LONG ISLAND ASSOCIATES, LTD.

By: _____
General Partner

By: _____
General Partner

BOOK 11690 PAGE 175

00103942

Signed Sealed + Delivered
In the presence of:
Witnesses for Tenant:

Jackie Murray
Witness

Notary
Brenda R. Gardner
Witness

4898r

TENANT:

THE KROGER CO.

By: [signature]

Title: Vice President

N.P.
SEAL

BOOK 11690 PAGE 176

00103942

LEGAL DESCRIPTION

ENTIRE TRACT

ALL THAT TRACT or parcel of land lying and being in Land Lot 93 of the 17th Land District, Fulton County, Georgia, and being more particularly described as follows:

BEGINNING at an iron pin located at the intersection of the westerly edge of the right-of-way of Roswell Road (a 90 foot wide right-of-way) with the northerly edge of the right-of-way of Long Island Drive (a 50 foot wide right-of-way), and from thence run North 84°24'39" West a distance of 473.34 feet along the northerly right-of-way line of Long Island Drive to an iron pin; thence continuing along the northerly right-of-way of said road North 84°20'33" West a distance of 249.39 feet to an iron pin located at the intersection of the northerly right-of-way of Long Island Drive and the easterly edge of the right-of-way of Long Island Terrace (a 50 foot wide right-of-way); thence North 14°05'04" East a distance of 321.33 feet along the easterly edge of the right-of-way of Long Island Terrace to an iron pin; thence northeasterly, northerly, westerly and southwesterly along the arc of the cul-de-sac of Long Island Terrace, and following the curvature thereof (said cul-de-sac having a radius of 60 feet) an arc distance of 226.41 feet, to the northeasterly corner of Lot 2 of the Addition to Long Island Heights Subdivision, according to a Plat thereof recorded at Plat Book 55, Page 23, Fulton County Land Records; thence leaving said cul-de-sac run North 41°06'09" West along the northeasterly line of said Lot 2 of the Addition to Long Island Heights Subdivision a distance of 54 feet to a point; thence North 22°52'52" East a distance of 124.99 feet to a point; thence North 01°50'15" East a distance of 280 feet to the southerly edge of the right-of-way of Belle Isle Road (a 40 foot wide right-of-way); thence South 88°09'45" East a distance of 400.69 feet along the southerly edge of the right-of-way of Belle Isle Road to an iron pin; thence leaving said right-of-way run South 05°42'46" West a distance of 69.74 feet to an iron pin; thence South 88°05'22" East a distance of 204.98 feet to an iron pin; thence North 05°42'46" East a distance of 70 feet to an iron pin located on the southerly edge of the right-of-way of Belle Isle Road; thence South 88°09'45" East a distance of 27.02 feet along the southerly right-of-way of Belle Isle Road to an iron pin; thence leaving said right-of-way run South 05°42'46" West a distance of 165.47 feet to an iron pin; thence South 89°11'39" East a distance of 139.95 feet to an iron pin located on the westerly edge of the right-of-way of Roswell Road (being at the southeast corner of a lot leased to or owned by Tenneco Oil Company and being the northeasterly corner of property formerly owned by Gardencourt, Ltd.); thence South 06°08'39" West a distance of 734.25 feet along the westerly edge of the right-of-way of Roswell Road to the POINT OF BEGINNING. Said property is shown on an As-Built Survey of Fountain Oaks Shopping Center dated 5/18/88, last revised 5/20/88, by H. E. Harper, Land Surveyor, Atlanta, Georgia.

4862r

NOTE: This description assumes that the intersections of the rights-of-way of Roswell Road with Long Island Drive and of Long Island Drive and Long Island Terrace are extended and intersect at a point rather than intersecting at arcs as shown on the Plat recorded at Plat Book 35, Page 37, Fulton County records.

BOOK 11690 PAGE 177

EXHIBIT A

00103943

STATE OF OHIO

COUNTY OF HAMILTON

Fulton County, Georgia
Real Estate Transfer Tax
Paid $ 5,365.44
Date JUL 6 1988
BARBARA J. PRICE
Clerk, Superior Court
By _____ Deputy Clerk

LIMITED WARRANTY DEED

This Deed made this 29 day of June, in the Year of Our Lord One Thousand Nine Hundred Eighty-Eight, between, THE KROGER CO., an Ohio corporation ("Grantor") and LONG ISLAND ASSOCIATES, LTD., a Tennessee limited partnership (formerly a Georgia limited partnership), having as its general partners Fletcher Bright and Michael O. Savage ("Grantee") (the terms "Grantor" and "Grantee" to include their respective heirs, successors and assigns where the context hereof requires or permits).

W I T N E S S E T H T H A T:

Grantor, for and in consideration of the sum of Ten and 00/100 Dollars ($10.00) and other good and valuable consideration, in hand paid at and before the sealing and delivering of these presents, the receipt, adequacy and sufficiency of which being hereby acknowledged by Grantor, has granted, bargained, sold and conveyed, and by these presents does hereby grant, bargain, sell and convey unto Grantee the following described real property, to-wit:

All that tract or parcel of land lying and being in Land Lot 93, 17th District of Fulton County, Georgia, and being more particularly described on Exhibit "A" attached hereto.

TOGETHER WITH all fixtures (other than trade fixtures), structures and improvements thereon.

By giving and accepting this Deed, the parties agree as follows:

(1) The Reciprocal Easement Agreement dated December 22, 1987, between the parties, recorded at Deed Book 10530, Page 187, in the Fulton County land records, shall be merged and extinguished by this document, and hereby cancelled and terminated.

(2) The Site Development Agreement between the parties dated December 22, 1987, recorded at Deed Book 10518, Page 408, has been performed and is cancelled.

TO HAVE AND TO HOLD the above-described tract or parcel of land, together with all and singular the rights, members and appurtenances thereof, to the same being, belonging or in any wise appertaining to the only proper use, benefit and behoof of Grantee, forever in FEE SIMPLE.

And except for the title matters set forth on Exhibit "B" attached hereto, Grantor will warrant and forever defend the right and title to the above-described tract or parcel of land unto Grantee, its successors and assigns, against the claims of all persons claiming by, through or under Grantor, but not otherwise.

IN WITNESS WHEREOF, Grantor has signed, sealed and delivered this Deed the day and year first above written.

Signed, sealed and delivered in the presence of:

Unofficial Witness

Notary Public

My commission expires:

(NOTARIAL SEAL)

N.P. SEAL

THE KROGER CO.

By: _____ President

By: _____ Vice President

Attest: _____ Assistant Secretary

CORP. SEAL

(CORPORATE SEAL)

4858r(1)

GEORGIA, Fulton County, Clerk's Office Superior Court
Filed & Recorded JUL 6 1988 at 4:08
CLERK

BOOK 11690 PAGE 178

00103943

EXHIBIT "A"

LEGAL DESCRIPTION

KROGER PAD

ALL THAT TRACT or parcel of land lying and being in Land Lot 93, 17th District of Fulton County, Georgia, and being more particularly described as follows:

To locate the POINT OF BEGINNING, commence at an iron pin located at the intersection of the westerly edge of the right-of-way of Roswell Road (a 90 foot wide right-of-way) and the northerly edge of the right-of-way of Long Island Drive (a 50 foot wide right-of-way), and from thence run North 84°24'39" West a distance of 473.34 feet along the northerly right-of-way of Long Island Drive to an iron pin; thence continuing along said right-of-way run North 84°20'33" West a distance of 249.39 feet to an iron pin at the intersection of the northerly right-of-way line of Long Island Drive with the easterly edge of the 50 foot wide right-of-way of Long Island Terrace; thence North 14°05'04" East a distance of 321.33 feet along the easterly right-of-way of Long Island Terrace to an iron pin; thence in a counterclockwise direction along the cul-de-sac of Long Island Terrace (which is the arc of a circular curve to the left having a radius of 60 feet) an arc distance of 226.41 feet to a point; thence leaving said cul-de-sac run North 41°06'09" West a distance of 54 feet to a point; thence North 22°52'52" East a distance of 124.99 feet to a point; thence North 01°50'15" East a distance of 280 feet to a point on the southerly edge of the right-of-way of Belle Isle Road (a 40 foot wide right-of-way); thence South 88°09'45" East a distance of 120.36 feet along said right-of-way to an iron pin; thence leaving said right-of-way run South 02°36'15" West a distance of 160 feet to a point which is the POINT OF BEGINNING of the property herein described; thence from said POINT OF BEGINNING the property is described by running North 88°09'45" West a distance of 30 feet to a point; thence South 01°50'15" West a distance of 14 feet to a point; thence North 88°09'45" West a distance of 52 feet to a point; thence South 01°50'15" West a distance of 60 feet to a point; thence South 88°09'45" East a distance of 17 feet to a point; thence South 01°50'15" West a distance of 40 feet to a point; thence South 88°09'45" East a distance of 35 feet to a point; thence South 01°50'15" West a distance of 150 feet to a point; thence South 88°09'45" East a distance of 219 feet to a point; thence North 01°50'15" East a distance of 108 feet to a point; thence South 88°09'45" East a distance of 10.17 feet to a point; thence North 01°50'15" East a distance of 111.83 feet to a point; thence North 88°09'45" West a distance of 10.17 feet to a point; thence North 01°50'15" East a distance of 44.17 feet to a point; thence North 88°09'45" West a distance of 189 feet to the POINT OF BEGINNING. Said property is labeled "Kroger Site" on a plat of Survey for Long Island Associates, Ltd. and Bank South, N.A., of land in Land Lot 93, 17th District, Fulton County, Georgia, dated February 24, 1984, with its last revision dated January 8, 1987, by Henry E. Harper, Registered Land Surveyor.

Being the same property conveyed to The Kroger Co. by a Warranty Deed dated December 23, 1986, recorded at Deed Book 10530, Page 184, Fulton County, Georgia records.

4861r

NOTE: This description assumes that the intersections of the rights-of-way of Roswell Road with Long Island Drive and of Long Island Drive and Long Island Terrace are extended and intersect at a point rather than intersecting at arcs as shown on the Plat recorded at Plat Book 35, Page 37, Fulton County records.

EXHIBIT "B"

1. Taxes and assessments for the year 1988 and subsequent years.

2. Building setback line from the right-of-way of the cul-de-sac of Long Island Terrace as shown on the Plat of the Addition to Long Island Heights Subdivision recorded at Plat Book 55, Page 23, in the Office of the Clerk of the Superior Court of Fulton County, Georgia.

3. 40' building setback line from the right-of-way of Roswell Road and from the right-of-way of Long Island Drive as shown on the Plat of Long Island Heights Subdivision recorded at Plat Book 35, Page 37, in the aforesaid public records.

4. Description of the property attached as Exhibit "A" assumes that the northerly right-of-way of Long Island Drive and the easterly right-of-way of Long Island Terrace and the northerly right-of-way of Long Island Drive and the westerly right-of-way of Roswell Road intersect at a point, whereas the aforesaid plats show such street intersections as an arc of a curve. Therefore, exception is taken to that portion of the property described on Exhibit "A" outside of the intersection of the northerly right-of-way of Long Island Drive and the easterly right-of-way of Long Island Terrace and outside of the intersection of the northerly right-of-way of Long Island Drive and the easterly right-of-way of Roswell Road.

5. The following easements to Fulton County, Georgia, for slopes, banks and fills adjacent to the right-of-way of Roswell Road, as is necessary for the construction and maintenance of said road:

(a) From Ray Sewell, et al., dated May 24, 1960, in Deed Book 3572, Page 180, with slope easement adjacent to the right-of-way of Roswell Road.

(b) From Mrs. Mae Wood, dated June 11, 1959, recorded in Deed Book 3466, Page 462, with slope easement adjacent to the right-of-way of Roswell Road.

(c) From Paul E. Harrison, dated October 19, 1959, recorded in Deed Book 3508, Page 638.

6. The following easements in favor of Georgia Power Company:

(a) From D. W. McCoy, recorded at Deed Book 2525, Page 299.

(b) From Dean McCoy, dated August 22, 1956, recorded in Deed Book 3157, Page 659.

(c) From D. D. McCoy, dated August 18, 1953, recorded in Deed Book 2162, Page 321.

(d) From Paul E. Harrison, dated May 7, 1963, recorded in Deed Book 4067, Page 31.

(e) From Paul E. Harrison, dated December 12, 1964, recorded in Deed Book 4303, Page 447.

(f) From E. H. Foster, dated November 17, 1954, recorded in Deed Book 2955, Page 119.

(g) From E. H. Foster, dated November 15, 1974, recorded in Deed Book 6197, Page 201.

7. The following documents from Long Island Associates to Georgia Department of Transportation, dated October 7, 1986, recorded as indicated:

(a) Right-of-Way Deed, Deed Book 10370, Page 38, Fulton County records.

(b) Dual Exit Driveway Agreement, Deed Book 10370, Page 39, aforesaid records.

(c) Conveyance of Access Rights, Deed Book 10370, Page 40, aforesaid records.

4858r(2)

Steve Wild <swild@marionenv.com>

Fwd: FOSC/ VRP app.

Phil Lutin <palce@aol.com> Thu, Dec 10, 2015 at 7:09 AM
To: Steve Wild <swild@marionenv.com>

FYI!
We're on GO! Fletcher can sign at our meeting Friday morning.

Sent from my iPhone

Begin forwarded message:

From: "Gerald L. Pouncey Jr." <Glp@mmmlaw.com>
Date: December 10, 2015 at 6:52:51 AM EST
To: Phil Lutin <palce@aol.com>
Cc: "Gerald L. Pouncey Jr." <Glp@mmmlaw.com>, Cody Goff <cgoff@mmmlaw.com>
Subject: FW: FOSC/ VRP app.

Phil,

We have discussed the submittal with EPD and the current owner (AmREIT Fountain Oaks, LP) and you are authorized to submit the Application and CSR now. We will provide a formal letter from the owner in the next few days.

Thanks,
Gerald

-----Original Message-----
From: Phil Lutin [mailto:palce@aol.com]
Sent: Wednesday, December 09, 2015 2:44 PM
To: Cody Goff
Cc: Gerald L. Pouncey Jr.; Steve Wild; Mr Fletcher Bright
Subject: FOSC/ VRP app.

Hi Cody:
We are ready to submit the application but need to include something in an appendix that authorizes us to file on behalf of AMREIT. We already have Fletcher's permission document.
Thanks!
Phil

Sent from my iPhone

FLETCHER BRIGHT COMPANY

September 24, 2015

Mr. Phil Lutin
Marion Environmental, Inc.
115 Paramenas Lane
Chattanooga, Tennessee 37405

Re: Fountain Oaks Shopping Center
Georgia Voluntary Remediation Program (VRP)

Dear Mr. Lutin:

We acknowledge and consent for Marion Environmental, Inc., to prepare and present the application for the Georgia Voluntary Remediation Program.

This approval is given on behalf of Long Island Associates and Fletcher Bright Partners I, Ltd. Long Island Associates is the former owner of the shopping center anchored by Kroger and Fletcher Bright Partners I, Ltd., owns a vacant parcel to the west of the shopping center.

Sincerely,

Fletcher Bright

FB/ms

537 Market Street Suite 400 Chattanooga, TN 37402
Phone: 423-755-8830 Fax: 423-756-1780
www.fletcherbright.com

Appendix F

EPD Letter of March 9, 2015

Georgia Department of Natural Resources

Environmental Protection Division-Land Protection Branch

2 Martin Luther King Jr., Dr., Suite 1054, Atlanta, Georgia 30334

(404) 657-8600; Fax (404) 657-0807

Judson H. Turner, Director

March 9, 2015

Long Island Associates, Ltd.
c/o Mr. Fletcher Bright
537 Market Street, Suite 400
Chattanooga, TN 37402

Subject: Fountain Oaks Shopping Center (HSI 10807)
4920 Roswell Road, NE
Atlanta, Fulton County, Georgia

Dear Mr. Bright:

The Georgia Environmental Protection Division (EPD) has reviewed the January 14, 2010 Compliance Status Report (CSR) for the referenced site. The CSR certified that the site was not in compliance with Risk Reduction Standards (RRS) for groundwater and proposed monitored natural attenuation to obtain compliance. EPD comments are as follows:

1. *Groundwater Sampling Event*. A site-wide groundwater sampling event is needed to characterize current groundwater quality and assess the effectiveness of natural attenuation.
2. *Groundwater Sampling Comments*:
    a. Groundwater sampling should be conducted in accordance with the March 6, 2013 United States Environmental Protection Agency (USEPA) Region 4 SESD "Groundwater Sampling" operating procedure. This document is available at: http://www.epa.gov/region4/sesd/fbqstp/Groundwater-Sampling.pdf
    b. Purging and sampling information should be recorded on Groundwater Sampling Forms. The forms should include information such as the pumping rate, depth to pump/intake, screened interval, water level, groundwater parameter measurements (e.g., pH, turbidity, etc.), and purge volume.
    c. During the May 2009 groundwater sampling event, groundwater elevations were measured over a three day period. For the purpose of constructing the potentiometric surface map, it is recommended that groundwater elevations be measured on the same day.
3. *Geologic Cross-Sections*. Geologic cross-sections are needed to support the conceptual site model. Cross-sections should depict monitoring wells with screened intervals, the water table, lithology, and contaminant concentrations. Cross-sections are specifically requested through MW-29, MW-14, MW-3, MW-2, MW-17, MW-26, MW-18, and MW-25, and through MW-9, MW-4, MW-27, MW- 2, MW-17, MW-13s, and MW-13d.
4. *Vapor Intrusion Pathway*. The vapor intrusion pathway should be evaluated based on current groundwater quality. Information regarding the evaluation of the vapor intrusion pathway is available at: https://epd.georgia.gov/vapor-intrusion-technical-guidance
5. *Risk Reduction Standards*. Updated Risk Reduction Standards should be calculated based on current toxicity values. Note that the default child inhalation rate used by EPD is 15 m^3/day. Updated toxicity values are available from the USEPA Regional Screening Level Tables at: http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/

Please submit a groundwater monitoring report that addresses these comments by July 1, 2015. These comments may be addressed as part of a Voluntary Remediation Program application in lieu of a groundwater monitoring report. Information about the Voluntary Remediation Program is available at: http://epd.georgia.gov/voluntary-remediation

If you have any questions, please contact David Hayes at 404-657-8600.

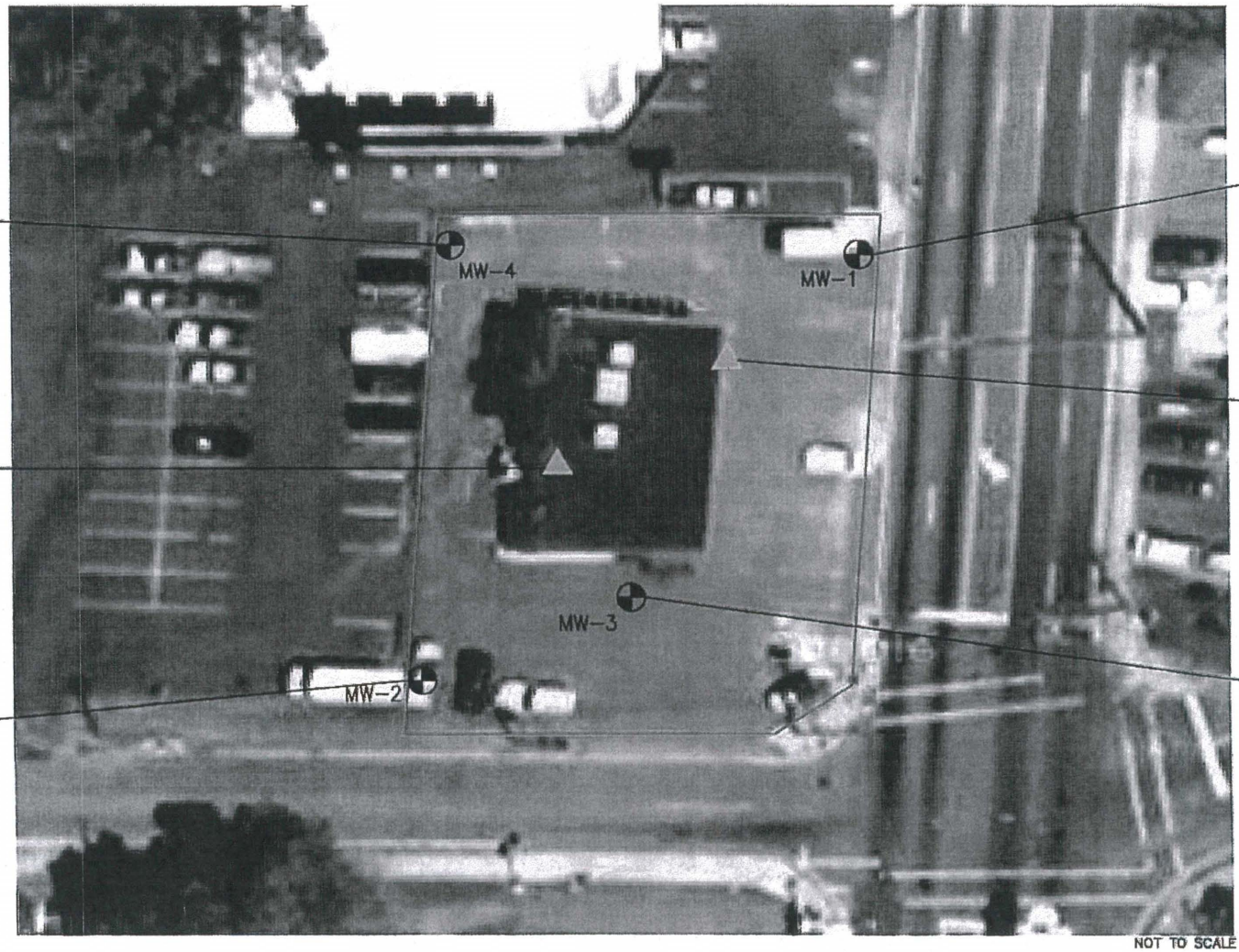
Sincerely,

David Reuland
Unit Coordinator
Response and Remediation Program

cc: Steve Wild, Marion Environmental (via email)

Appendix G

Off-Site Source Review Documents



MW-4	
11/06/2009	
Groundwater	
Compound (ug/L)	
PCE	64
TCE	<5
cis-DCE	<5
VC	<2

HA-1	
10/25/2009	
Soil	
Compound (mg/kg)	
PCE	0.12
TCE	<0.0037
cis-DCE	<0.0037
VC	<0.0074

MW-2	
10/26/2009	
Groundwater	
Compound (ug/L)	
PCE	200
TCE	21
cis-DCE	180
VC	9.3

MW-1	
10/26/2009	
Groundwater	
Compound (ug/L)	
PCE	10
TCE	<5
cis-DCE	<5
VC	<2

HA-1	
10/25/2009	
Soil	
Compound (mg/kg)	
PCE	0.042
TCE	<0.0038
cis-DCE	<0.0038
VC	<0.0076

MW-3	
10/26/2009	
Groundwater	
Compound (ug/L)	
PCE	20
TCE	23
cis-DCE	220
VC	14

NOT TO SCALE

Legend

- Property Boundary
- Monitoring Well
- Hand Auger Sample

PCE : Tetrachloroethene
TCE : Trichloroethene
cis-DCE : cis 1,2 dichloroethene
VC : Vinyl Chloride
(ug/L) : micrograms per liter
(mg/kg) : milligrams per kilogram

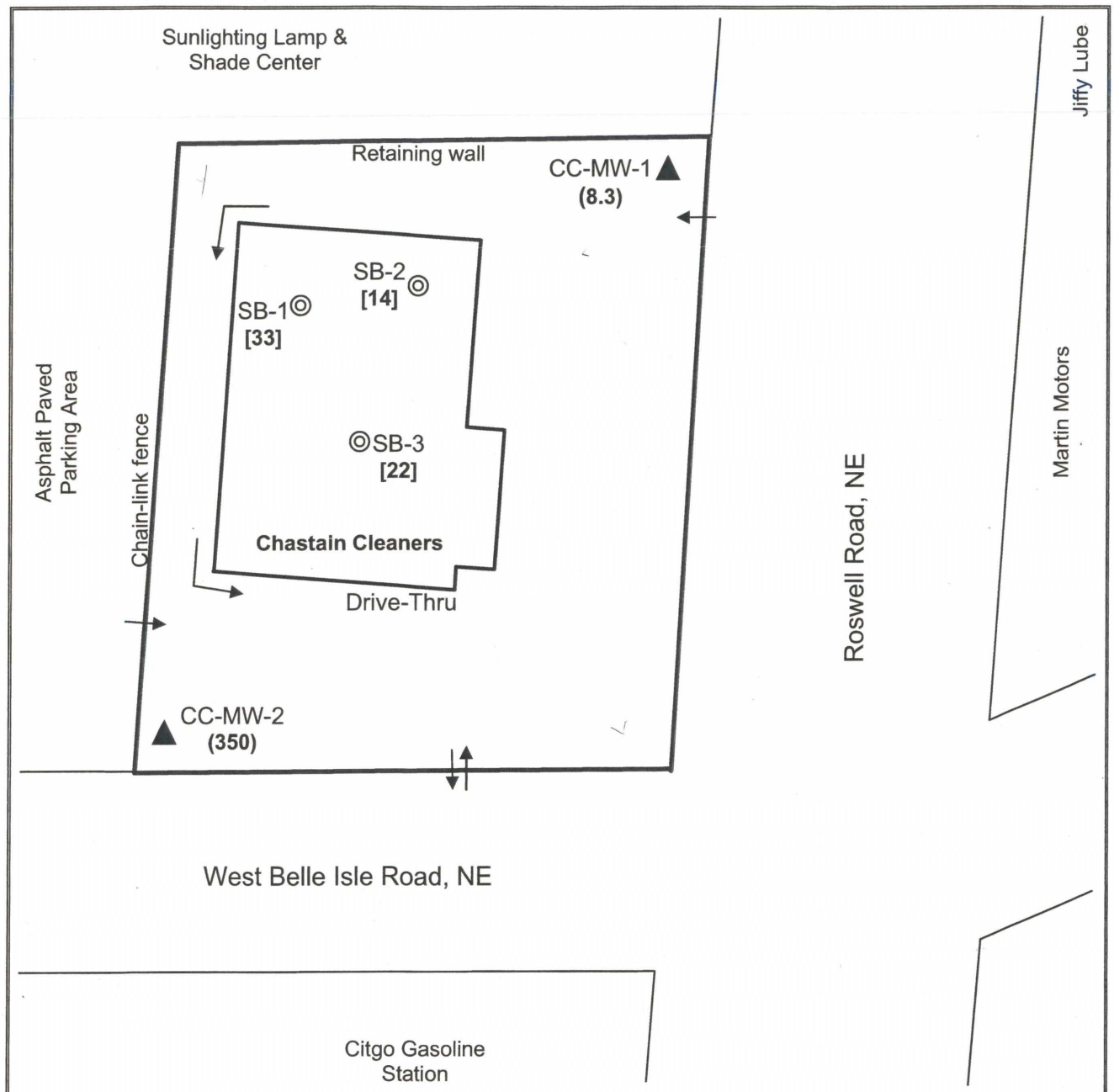
EPS
Environmental Planning Specialists, Inc.
900 Ashwood Parkway, Suite 350
Atlanta, GA 30338
Phone: (404) 315-9113
Fax: (404) 315-8509

DES	GH	11/2009	PROJECT NO.:	DATE: November 2009	
DRN	GH	11/2009	Chastain Cleaners 4980 Roswell Road Atlanta, GA 30342		
CHK					
REV					
APP					
PRJ MGR					
OPER					

Soil & Groundwater Data
10/25-26/09 & 11/06/09

FIGURE
EPS 1

FIGURE AC2

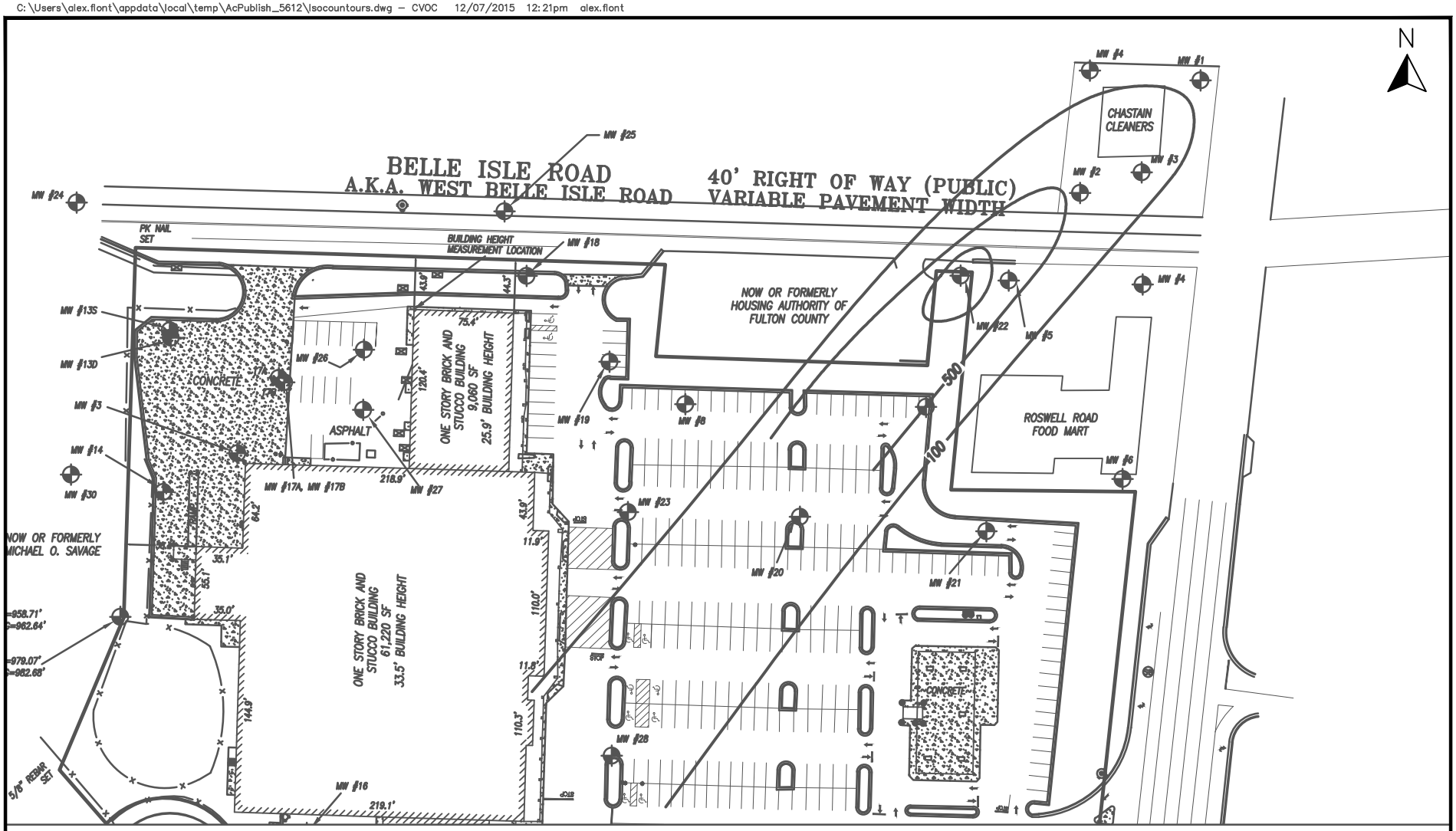


Legend:

→ Traffic flow direction
▲ Approximate location of ground water monitoring well location
◎ Approximate location of hand auger soil boring location
(xx) Concentration of PCE in ground water (11/30/2008)
[xx] Concentration of PCE in soil 1-2 foot interval (11/30/2008)

Figure 2 - Site Plan	**DRAWING NOT TO SCALE** N↑
ALL CLEAN ENVIRONMENTAL	**Site Name:** Chastain Cleaners 4980 Roswell Road, NE Sandy Springs, Georgia 30342 **Project Number:** 08-1259.1

C:\Users\alex.flont\appdata\local\temp\AcPublish_5612\Isocountours.dwg – CVOC 12/07/2015 12:21pm alex.flont



CVOCs – Chlorinated Volatile Organic Compounds (PCE, TCE, cis-DCE, VC)

SCALE IN FEET
0 60 120

CVOC CONTRIBUTION
FROM CHASTAIN CLEANERS
ONTO FOUNTAIN OAKS

amec foster wheeler
Environment & Infrastructure, Inc.
2677 BUFORD HWY
ATLANTA, GEORGIA 30324 (404) 873-4761

CONTOUR
PLOT OF CVOC PLUME
IN GROUNDWATER (ug/L)

JOB NO. 6121-15-0100 **FIGURE** G1

ESCM Technology, Inc.

Environmental & Engineering Consultants

1781 Mars Hill Road
Watkinsville, Georgia 30677
phone: (706) 769-4434
fax: (706) 769-1431
e-mail: escm@negia.net

February 3, 1998

Corrective Action Unit I, USTMP
Georgia Environmental Protection Division
4244 International Parkway, Suite 104
Atlanta, GA 30354

Attention: Mr. Deepak Mandavia

Subject: Final Sampling/Closure
Former Tenneco Station #142-09
4968 Roswell Road
Atlanta, GA; Fulton County
Facility ID: 9000005*1

Dear Mr. Mandavia:

ESCM Technology, Inc. has prepared the following information as follow up to our correspondence dated April 25, 1997, to the Georgia EPD and to the notice to implement corrective action by Mr. Darnell Manning dated October 29, 1997. On November 17, 1997, groundwater samples were collected from the monitor wells at this facility. Samples were collected from all monitor wells except MW-5 which was blocked by a parked car. However, this well has never had hydrocarbon constituents in excess of the drinking water or in-stream standards.

The groundwater samples from all wells were analyzed for BTEX and PAH. All sample results were below the in stream standards (Table 1). In accordance with the information proposed in the April 25, 1997, letter approved by the GAEPD, this facility meets the requirements for closure. We have scheduled the closure of all on monitor wells at this facility by March 1, 1998. A final reimbursement package will be submitted with the well closure confirmation within 30 days after the well closure. If you have any questions regarding this facility, please contact us at (706) 769-4434.

Sincerely,

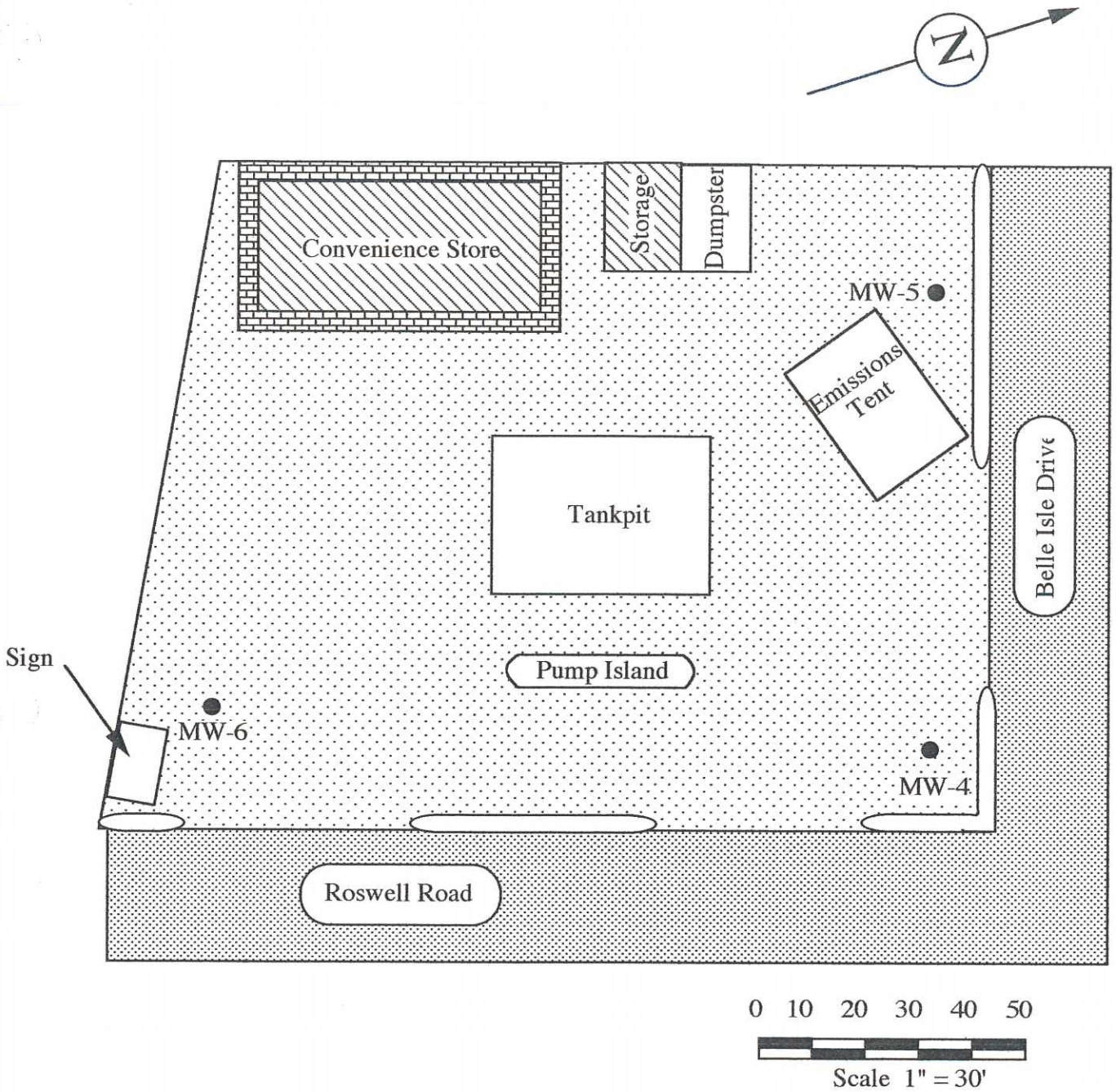
Edward A. Shaw, P.E.
President

cc: Brian Cobb, Cobb Environmental
Dan Waters, E-Z Serve
Chris Gotwald, ESCM

Table 1
Soil and Groundwater Analytical Results

Soil					
Well (Date)	Benzene	Toluene	Ethylbenzene	Total Xylenes	
MW-4 (3-22-95)	ND	ND	ND	0.001 mg/Kg	
MW-5 (3-23-95)	ND	0.002 mg/Kg	ND	0.003 mg/Kg	
MW-6 (3-22-95)	ND	0.001 mg/Kg	ND	0.002 mg/Kg	
Groundwater					TOTAL BTEX
MW-4 (4-28-95)	200 µg/L	65 µg/L	280 µg/L	1200 µg/L	1745
(7-20-95)	130 µg/L	30 µg/L	280 µg/L	630 µg/L	1070
(11-17-97)	35.1 µg/L	10.6 µg/L	195 µg/L	526 µg/L	767
MW-5 (4-28-95)	ND	ND	ND	ND	ND
(7-20-95)	ND	ND	ND	ND	ND
(11-17-97)	Not Sampled	Not Sampled	Not Sampled	Not Sampled	
MW-6 (4-28-95)	ND	1 µg/L	ND	2 µg/L	3
(7-20-95)	ND	ND	ND	ND	ND
(11-17-97)	5.77 µg/L	ND	ND	1.15 µg/L	7

ND -- Non Detect



E-Z Serve Convenience Stores Inc. # 142-09		Facility Base Map
Location: 4968 Roswell Road Atlanta, Fulton County, Georgia	4/7/95	Drafted by: Chris Gotwald
ESCM - P.O. Box 7484 Athens, GA 30604	Proprietary Drawing Property of ESCM	Figure 1

ENVIRONMENTAL TESTING & CONSULTING, INC.
2924 Walnut Grove Road • Memphis, TN 38111 • (901) 327-2750 • FAX (901) 327-6334
Founded 1972

December 3, 1997

Mr. Chris Gotwald
ESCM Technology, Inc.
1781 Mars Hill Road
Watkinsville, GA 30677

Ref: Analytical Testing
ETC Order # 9711698
Project Description E-Z Serve 8142

Project # 8142

The above referenced project has been analyzed per your instructions. The analyses were performed in our laboratory in accordance with Standard Methods 17th/18th Edition; The Solid Waste Manual SW-846; EPA Methods for the Analysis of Water and Wastes and/or 40 CFR part 136.

The results are shown on the attached analysis sheet(s).

Please do not hesitate to contact our office if you have any questions.

Sincerely,

Nathan A. Pera, IV
Chief Executive Officer

rt
Attachment

ESCM

Certifications

Tennessee	*#02027*	*New Jersey*	*#81617*
Arkansas		*Mississippi*	
Alabama	*#40730*	*Oklahoma*	*#9311*
Kentucky	*#90047*	*Virginia*	*#00106*
North Carolina	*#415*	*Washington*	*#C248*
South Carolina	*#84002002*	*US Army Corps of Engineers*	
	#84002001		

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

ORGANIC ANALYSIS DATA SHEET

Client Name **ESCM Technology, Inc.**

1781 Mars Hill Road
Watkinsville, GA 30677

Project # 8142
FID #

Site ID E-Z Serve 8142

Date Arrived 11/24/97
ETC Order Number 9711698

ETC Lab ID **9711698-01**
Sample ID: MW4

Matrix :AQUEOUS
Sample Date :11/17/97

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
Volatile Organics							8020/5030
					11/26/97	QM	
Benzene	35.1	ug/L	1.00				
Toluene	10.6	ug/L	1.00				
Ethyl Benzene	195	ug/L	1.00				
Xylenes (Total)	526	ug/L	1.00				

Surrogate Standard	% Recovery	QC Limits	
S1 - Bromofluorobenzene	Q	50	150

LABORATORY MANAGER

ND - Not Detected

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

ORGANIC ANALYSIS DATA SHEET

Client Name **ESCM Technology, Inc.**

1781 Mars Hill Road
Watkinsville, GA 30677

Project # 8142
FID #

Site ID E-Z Serve 8142

Date Arrived 11/24/97
ETC Order Number 9711698

ETC Lab ID **9711698-02**
Sample ID: MW6

Matrix :AQUEOUS
Sample Date :11/17/97

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
Volatile Organics							8020/5030
					11/26/97	QM	
Benzene	5.77	ug/L	1.00				
Toluene	ND	ug/L	1.00				
Ethyl Benzene	ND	ug/L	1.00				
Xylenes (Total)	1.15	ug/L	1.00				

Surrogate Standard	% Recovery	QC Limits
S1 - Bromofluorobenzene	100	50 150

LABORATORY MANAGER

ND - Not Detected

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

ORGANIC ANALYSIS DATA SHEET

ient Name **ESCM Technology, Inc.**

1781 Mars Hill Road
Watkinsville, GA 30677

Project # 8142
FID #

Site ID E-Z Serve 8142

Date Arrived 11/24/97
ETC Order Number 9711698

ETC Lab ID **9711698-01**
Sample ID: MW4

Matrix :AQUEOUS
Sample Date :11/17/97

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
PAH				11/24/97	12/01/97	RR	8270B
Acenaphthene	ND	ug/L	5.00				
Acenaphthylene	ND	ug/L	5.00				
Anthracene	ND	ug/L	5.00				
Benzo(a)anthracene	ND	ug/L	5.00				
Benzo(b)fluoranthene	ND	ug/L	5.00				
Benzo(k)fluoranthene	ND	ug/L	5.00				
Benzo(g,h,i)perylene	ND	ug/L	5.00				
Benzo(a)pyrene	ND	ug/L	5.00				
Chrysene	ND	ug/L	5.00				
Dibenzo(a,h)anthracene	ND	ug/L	5.00				
Fluoranthene	ND	ug/L	5.00				
Fluorene	ND	ug/L	5.00				
Indeno(1,2,3-cd)pyrene	ND	ug/L	5.00				
Naphthalene	134	ug/L	5.00				
Phenanthrene	ND	ug/L	5.00				
Pyrene	ND	ug/L	5.00				

Surrogate Standard	% Recovery	QC Limits	
S1 - Nitrobenzene-d5	48	35	85
S2 - 2-Fluorobiphenyl	68	46	84
S3 - 4-Terphenyl-d14	79	33	113

LABORATORY MANAGER

ND - Not Detected

ENVIRONMENTAL TESTING & CONSULTING, INC.

2924 Walnut Grove Road - Memphis, TN 38111 - (901)327-2750

ORGANIC ANALYSIS DATA SHEET

lient Name **ESCM Technology, Inc.**

1781 Mars Hill Road
Watkinsville, GA 30677

Project # 8142
FID #

Site ID E-Z Serve 8142

Date Arrived 11/24/97
ETC Order Number 9711698

ETC Lab ID **9711698-02**
Sample ID: MW6

Matrix :AQUEOUS
Sample Date :11/17/97

TEST	RESULT	UNITS	DETECTION LIMIT	DATE EXTRACTED	DATE ANALYZED	BY	METHOD
PAH				11/24/97	12/01/97	RR	8270B
Acenaphthene	ND	ug/L	5.00				
Acenaphthylene	ND	ug/L	5.00				
Anthracene	ND	ug/L	5.00				
Benzo(a)anthracene	ND	ug/L	5.00				
Benzo(b)fluoranthene	ND	ug/L	5.00				
Benzo(k)fluoranthene	ND	ug/L	5.00				
Benzo(g,h,i)perylene	ND	ug/L	5.00				
Benzo(a)pyrene	ND	ug/L	5.00				
Chrysene	ND	ug/L	5.00				
Dibenzo(a,h)anthracene	ND	ug/L	5.00				
Fluoranthene	ND	ug/L	5.00				
Fluorene	ND	ug/L	5.00				
Indeno(1,2,3-cd)pyrene	ND	ug/L	5.00				
Naphthalene	ND	ug/L	5.00				
Phenanthrene	ND	ug/L	5.00				
Pyrene	ND	ug/L	5.00				

Surrogate Standard	% Recovery	QC Limits	
S1 - Nitrobenzene-d5	55	35	85
S2 - 2-Fluorobiphenyl	63	46	84
S3 - 4-Terphenyl-d14	80	33	113

Michael Kaufman
LABORATORY MANAGER

ND - Not Detected

CHAIN OF CUSTODY RECORD

Environmental Testing & Consulting, Inc.
2924 Walnut Grove Rd.
Memphis, TN 38111
(901)327-2750 FAX (901)327-6334

ETC Work Order : 9711-698

Company Name	Phone # : 706-769-4437	Fax Results	X
ESCM	Fax # : 706-769-1431	RUSH	
Project/Site EZ Serve 8142	FID # :	Ice	X
	PO # : 8142		
Project # 8142	Matrix: 1 Wastewater, 2 Aqueous, 3 Soil/Sediment, 4 Sludge, 5 Oil/Solvent, 6 Other		
Project Manager/Contact			

Analysis Requested (Note special detection limits or methods)

# of cont.	Sample ID/ Number	Depth	Sample Date	Sample Time	Matrix	Type Grab/Comp	DRH	BTEX	Comments
3	MW 1		11/17/97	12:50	Aqueous		X	X	
3	MW 6		↓	1:15	Aqueous		X	X	

Sampled By	Method of Shipment	Blank/Cooler Temp	Remarks
Allen M. Lain	FedEX	4°C	

RELINQUISHED BY (sign)	DATE	TIME	RECEIVED BY (sign)	DATE	TIME	Sample Delivery Group ID
[signature]	11-21-97	17:30				
RELINQUISHED BY (sign)	DATE	TIME	RECEIVED BY (sign)	DATE	TIME	
RELINQUISHED BY (sign)	DATE	TIME	RECEIVED BY LAB (print/sign)	DATE	TIME	
			[signature]	11/21/97	0930	

Distribution: Original and Yellow accompany samples to the laboratory. Pink copy for Field Crew.
Original copy returned with results. Yellow copy for ETC log files.

Georgia Department of Natural Resources

Environmental Protection Division
Underground Storage Tank Management Program
4244 International Parkway, Suite 104, Atlanta, Georgia 30354
Lonice C. Barrett, Commissioner
Harold F. Reheis, Director
(404)362-2687

May 19, 1998

Mr. Brian Cobb
E-Z Serve Convenience Stores
2550 North Loop West
Suite 600
Houston, TX 77092

SUBJECT: Corrective Action Plan (CAP - Part A) Addendum
Final Sampling/Closure
No Further Action Required
Former Tenneco #142/E-Z Serve #8142
4968 Roswell Road
Atlanta, GA; Fulton County
Facility ID: 9000005*1

Dear Mr. Cobb:

This is to acknowledge your consultant's CAP-Part A Addendum, dated April 25, 1997, and subsequent Sampling/Closure reports prepared by ESCM Technology, Inc. for our review.

Based on current requirements of the Georgia Underground Storage Tank Act and the Georgia Rules for Underground Storage Tank Management (GUST Rules) revised 1996, and the data contained in your referenced report, the Georgia Environmental Protection Division (EPD) has determined that, for the current release, **no further action is required at this time.**

This site could be subject to further corrective action in the future if mandated through more stringent State or Federal statutory or regulatory changes, or if surface water bodies are impacted by the dissolved contaminant plume, or if additional soil contamination is identified or if free product on, and/or dissolved contamination in groundwater are identified as originating from this site.

Please note that the CAA mailed to you on March 27, 1998 has not been received by the Division. Please have an authorized representative sign and submit this as soon as possible.

If you have any questions, please contact me at (404)362-2687.

Sincerely,

Deepak C. Mandavia
Environmental Engineer
Corrective Action Unit I

DCM:jfe/9000005.34

cc: Ed Shaw, ESCM Technology, Inc.
Darnell Manning, GA EPD
Dick Swanson, GA EPD

File (CA): Fulton; 9000005

*** UST Upgrade Deadline - December 22, 1998 ***

Georgia Department of Natural Resources

Environmental Protection Division
Underground Storage Tank Management Program
4244 International Parkway, Suite 104, Atlanta, Georgia 30354
Lonice C. Barrett, Commissioner
Harold F. Reheis, Director
(404)362-2687

May 19, 1998

MEMORANDUM

TO: Darnell Manning

FROM: Deepak Mandavia

SUBJECT: Review Information Leading to Determination of NFA
Corrective Action Plan
Former Tenneco #142/E-Z Serve #8142
4968 Roswell Road
Atlanta, GA; Fulton County
Facility ID: 9000005*1

The CAP (old format submitted in 95). Revised CAP (old format submitted 97) approved with additional limited field work. No remediation system installed. In Dec 97 final sampling/closure report submitted warranting NFA:

Free Product

1. No Free Product Identified

Soil Contamination

1. Soil sample indicate BDL BTEX and TPH conc.

Groundwater Contamination

1. Three wells currently exist and indicate highest dissolved conc. of 35.1 ppb in Dec 97
2. No receptor within 0.5 mile radii

Modeling

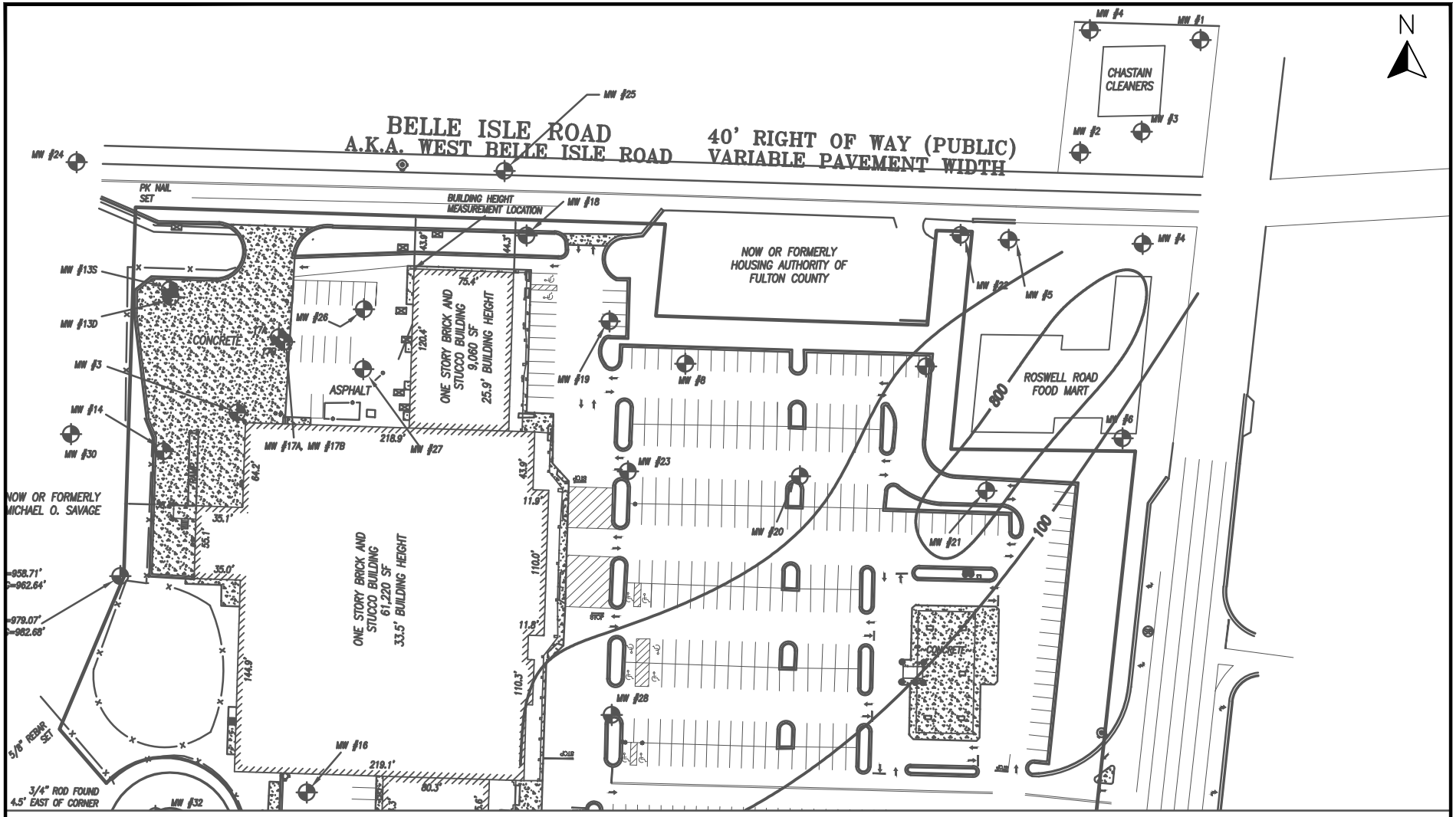
Not addressed

Therefore, I recommend NFA.

DCM:dcm

File (CA): Fulton, 9000005

M:\Projects\Chastain Cleaners\Isocountours.dwg – BTEX 12/07/2015 12:21pm alex.flont



BTEX – Benzene, Toluene, Ethylbenzene, & Xylenes

SCALE IN FEET
0 60 120

BTEX CONTRIBUTION
FROM ROSWELL FOOD MART
ONTO FOUNTAIN OAKS

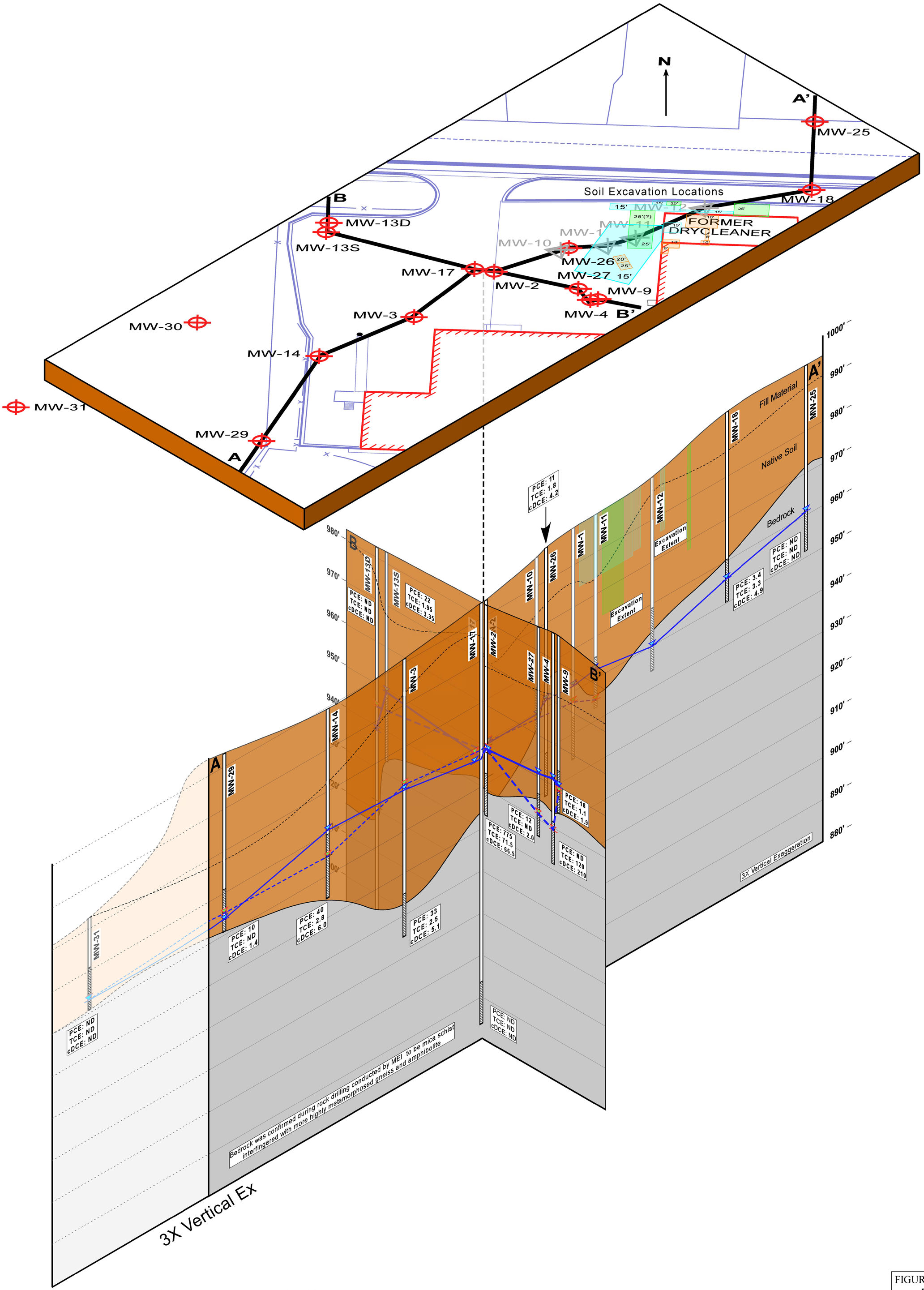
amec foster wheeler
Environment & Infrastructure, Inc.
2677 BUFORD HWY
ATLANTA, GEORGIA 30324 (404) 873-4761

CONTOUR
PLOT OF BTEX PLUME
IN GROUNDWATER (ug/L)

JOB NO. 6121-15-0100 **FIGURE** G2

Appendix H

Plate 1 – Graphic 3-D Conceptual Site Model



Note: Cross sections shown were chosen by the EPD in letter dated March 9th, 2015

FIGURE: PLATE 1

Marion Environmental, Inc.
115 Parmenas Lane
Chattanooga, TN 37405
Phone: (423) 499-4919 Fax: (423) 892-5122
Email: info@marionenv.com
Web: www.marionenv.com

GEOLOGIST:	PROJECT MGR:	DRAWN:	SIZE:	REV:	PROJECT:
H.S.W.	P.A.L.	P.V.A. T.L.M.	ANSI E	N/A	15513
APPROVED:	DATE:	DATE:	SCALE:	FILE NAME:	FACILITY:
P.A.L.	09/25/2015	09/25/2015	N/A		N/A

GRAPHIC 3-D CONCEPTUAL SITE MODEL

FOUNTAIN OAKS SHOPPING CENTER
4920 ROSWELL ROAD
SANDY SPRINGS, GEORGIA

Appendix I

Compliance Status Report &
Voluntary Remediation Program Application
- Electronic Copy (Compact Disc)