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Mr. Derrick Williams
Program Manager
Response & Remediation Program
Georgia Environmental Protection Division, Land Protection Branch
2 Martin Luther King Jr. Drive, SE, Suite 1462
Atlanta, Georgia 30334

Subject:
Revised Voluntary Remediation Plan Application
Former Lafarge Road Marking, Inc. facility, East Point, GA
2675 North Martin Street, East Point, GA 30344

Environmental

Date:
August 15, 2013

Contact:
David Wilderman

Phone:
404.952.1635

Email:
david.wilderman@arcadis-us.com

Our ref:
GA063865

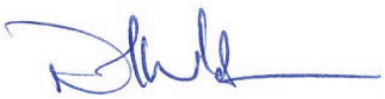
Dear Mr. Williams:

On behalf of Lafarge Road Marking, Inc. (LRM), ARCADIS U.S., Inc. (ARCADIS) is pleased to submit the attached Revised Voluntary Remediation Plan (VRP) prepared for the above-referenced site. This VRP has been prepared in accordance with EPD guidelines and it includes updated information that EPD staff requested in the June 6, 2013 meeting held at EPD's Atlanta office. An application check for $5,000 is already on file with the EPD from the original May 24, 2010 VRP submittal. A completed Voluntary Remediation Plan Application Form and Checklist, one hard copy of the VRP document, and two electronic copies of the VRP document on CD ROM are submitted under this cover letter.

Please review this revised application and contact me by telephone or by e-mail with any questions. I look forward to receiving your approval of this VRP application and thank you in advance for your review of the document.

Sincerely,

ARCADIS U.S., Inc.



David M. Wilderman, P.G.
Principal Hydrogeologist

Copies:
Mr. Joe McCarthy, Lafarge Road Marking, Inc.
Ms. Adam Sowatzka, King and Spalding LLP
Mr. Russell J. Dirienzo, ARCADIS

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Imagine the result

Lafarge Road Marking, Inc.

Revised Voluntary Remediation Plan

Former Lafarge Road Marking, Inc.
2675 North Martin Street, East Point, Georgia

August 15, 2013

Voluntary Remediation Plan Application Form and Checklist

VRP APPLICANT INFORMATION					
COMPANY NAME	Lafarge Road Marking, Inc				
CONTACT PERSON/TITLE	J.C. McCarthy, President				
ADDRESS	c/o Lafarge N.A., 12950 Worldgate Drive, Herndon, VA 20170				
PHONE	(973) 625-3916	**FAX**	(973) 586-3674	**E-MAIL**	jmccarthy@lafargeroadmarking.com

GEORGIA CERTIFIED PROFESSIONAL GEOLOGIST OR PROFESSIONAL ENGINEER OVERSEEING CLEANUP					
NAME	David M. Wilderman, PG			**GA PE/PG NUMBER**	978
COMPANY	ARCADIS U.S., Inc.				
ADDRESS	1000 Cobb Place Boulevard, Building 500-A, Kennesaw, Georgia 30144				
PHONE	(404) 952-1635	**FAX**	(770) 428-4004	**E-MAIL**	david.wilderman@arcadis-us.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	LAFARGE ROADMARKING, INC J. McCarthy		
APPLICANT'S NAME/TITLE (PRINT)	J.C. McCarthy President	**DATE**	8/15/13

QUALIFYING PROPERTY INFORMATION			
TAX PARCEL ID	14 0156 LL0293	PROPERTY SIZE (ACRES)	5.37
PROPERTY ADDRESS	2675 North Martin Street		
CITY	East Point	COUNTY	Fulton
LATITUDE	33.40' 56" N	LONGITUDE	84.26' 20" W
PROPERTY OWNER(S)	SOUTH CENTRAL STATION LLC	PHONE #	
MAILING ADDRESS	2675 Martin Street		
CITY	East Point	STATE/ZIP	GA, 30344

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.	**On record already with EPD**	
2.	**WARRANTY DEED(S)** FOR QUALIFYING PROPERTY.	**Appendix A**	
3.	**TAX PLAT** OR OTHER FIGURE INCLUDING QUALIFYING PROPERTY BOUNDARIES, ABUTTING PROPERTIES, AND TAX PARCEL IDENTIFICATION NUMBER(S).	**Appendix B**	
4.	**ONE (1) PAPER COPY AND TWO (2) COMPACT DISC (CD) COPIES** OF THE VOLUNTARY REMEDIATION PLAN IN A SEARCHABLE PORTABLE DOCUMENT FORMAT (PDF).	**Inside binder cover**	
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 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:	**Inside binder cover. Project Milestone Schedule is Figure 14.**	

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;	**Pending**	
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;	**Pending**	
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	**Pending**	
5.d.	Within 60 months after enrollment, the participant must submit the compliance status report required under the VRP, including the requisite certifications.	**Pending**	
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." DAVID WILDERMAN No. 978 — 9.15.13 Printed Name and GA PE/PG Number — Date Signature and Stamp DAVID M. WILDERMAN ★ GEORGIA REGISTERED PROFESSIONAL GEOLOGIST ★ 9/15/13 No. 978		

ARCADIS

Cecilia Reagan
Engineering Specialist 2

David M. Wilderman, PG
Project Manager

Revised Voluntary Remediation Plan

Former Lafarge Road Marking, Inc.
2675 North Martin Street
East Point, Georgia

Prepared for:
Lafarge Road Marking, Inc.

Prepared by:
ARCADIS U.S., Inc.
2410 Paces Ferry Road
#400
Atlanta
Georgia 30339
Tel 770 431 8666
Fax 770 435 2666

Our Ref.:
HT212510/Rpt2730

Date:
August 15, 2013

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1. Introduction

This revised Voluntary Remediation Plan (VRP), which has been prepared to meet requirements outlined in the Georgia Voluntary Remediation Program Act (VRPA), is being submitted to the Georgia Environmental Protection Division (EPD) by ARCADIS on behalf of Lafarge Road Marking Inc. (LRM) for its former road painting manufacturing facility located at 2675 North Martin Street, East Point, Georgia (Facility). The property is now owned by South Central Station, LLC, but, LRM has retained responsibility for addressing the environmental impacts on the property.

ARCADIS originally submitted a Voluntary Remediation Plan application to EPD on May 24, 2010. The May 2010 VRP application contained the following items:

1. Voluntary Remediation Plan Application Form and Checklist;

2. $5,000 check made out to the Georgia Department of Natural Resources;

3. Copies of the warranty deed for the qualifying property;

4. Tax plat of qualifying property and adjoining properties including tax parcel ID numbers; and

5. Initial VRP and Conceptual Site Model (CSM).

The EPD letter to LRM dated June 18, 2013 requested that LRM submit a revised VRP and application to the EPD within 60 days; or August 19, 2013. As part of this submittal, items 1 and 5 listed above have been updated. Item 2 is currently contained in EPD files. Items 3 and 4 are included in this application, but, are largely unchanged from the May 2010 submittal.

The requirements outlined in the *Application Form* and *Checklist* include the submittal of an initial VRP and CSM as part of the VRP application. This revised application includes a summary of the updated investigation/remediation plan and an updated CSM that incorporates data collected since the original VRP application was submitted. The CSM is based more on recent data and documents (i.e., data from the last five year period) and includes a three-dimensional graphic that illustrates the site's surface and subsurface setting, known or suspected contaminant sources, potential human and/or ecologic receptors, and potential routes for contaminant migration.

Figure 1 provides the location of the former LRM facility superimposed on a topographic map of the area. The Warranty Deed for the site is provided in Appendix A and an illustration of the Tax Plat that shows the site, abutting properties, and tax parcel identification numbers is provided in Appendix B. Portions of the purchase and sales agreement between LRM and South Central Station, LLC (current property owner) that confirm LRM's right to enter the site to conduct environmental investigations and remediation activities are also provided in Appendix B.

2. Background History and Data Summary

LRM, formerly Linear Dynamics, Inc. (LDI), formerly Prismo Safety Corporation (Prismo), voluntarily agreed to provide corrective action for soil and groundwater at the LRM facility in compliance with a Consent Order, EPDHW-562 (Consent Order).

Past industrial activities at the site involved research and production of paint for road marking. Historical facility structures included paint blending facilities, supply storage areas, office buildings, a laboratory, an underground storage tank (UST) farm, additional above-ground storage tanks (ASTs), and loading docks. Site history provided in this report is derived from previous reports, primarily the Report of Preliminary Contamination Assessment (Law, 1986).

The former drum storage areas and former UST farm, located in the western portion of the site, have been identified as contaminant release areas and were the focus of prior investigations. Figure 2 illustrates historical operation areas and the locations of groundwater monitoring and extraction wells at the site. Buildings and support structures that are shaded on the figure have been demolished; thus, the northwest and central west areas of the site are now open and covered by grass, gravel, asphalt, or concrete. Since 1983, investigations have identified the presence of three major groups of paint components or paint wastes at the site: volatile aromatic compounds (VACs), such as benzene; volatile halogenated organic compounds (VHOCs), such as TCE, and semi-volatile organic compounds (SVOCs), such as methyl ethyl ketone (MEK). The VACs, VHOCs, and SVOCs are sometimes lumped together and referred to as volatile organic compounds (VOCs) in historical reports. There were also historical releases of regulated substances, including trichloroethene (TCE) and tetrachloroethene (PCE), to soil at this site have resulted in soil and groundwater contamination.

Historical site cleanup actions have been conducted for soil and groundwater as described in the bullet list below. Cleanup activities have consisted of localized soil

excavation with off-site disposal, UST removal/disposal, and installation and operation of a groundwater extraction and treatment system. The EPD has been involved with, and has approved, cleanup activities performed at the site, including the following:

- Former Drum Storage Area – In the mid-1980s an undetermined volume of soil was removed for off-site disposal after receipt of a Notice of Violation in June 1983.
- Waste Solvent Tanks – In 1986, 70 tons of soil were removed for off-site disposal.
- Caustic Tanks – In 1986, 100 tons of soil were removed for off-site disposal.
- Underground Storage Tank Farm – Thirteen tanks were removed for off-site disposal in 1987.
- Groundwater Clean Up – The groundwater cleanup system was installed in 2000 and consists of equalization tank, groundwater extraction wells, an air stripper, and air phase carbon to control discharge from the air stripper. The extraction system operates continuously at an average flow rate of 16 gallons per minute and water is treated onsite using a tray air stripping unit. Groundwater is conveyed to the treatment plant via an underground pipeline. Treated water is discharged to the local sewer which is piped to the publicly-owned treatment works (POTW). Further information regarding the operation of the system can be found in Section 4.1 of this VRP.

Additional soil cleanup operations (i.e., excavations) were initiated in April 2013 concurrent with the installation of an interim soil and groundwater treatment remedy that will use air sparging (AS), soil vapor extraction (SVE), and multi-phase extraction (MPE) remedial technologies to remediate subsurface impacts. These excavations have taken place in proximity to former solvent and fuel storage areas mentioned above. Excavation activities are ongoing and periodic updates will be provided to EPD in the first semiannual report.

2.1 Groundwater Remediation System

The present groundwater remediation system and monitoring components include five active recovery wells (RW-2, RW-3, RW-4, RW-6, and RW-7), a groundwater treatment plant, a sewer conveyance discharge point to the City of East Point, Georgia sanitary sewer, 28 groundwater quality monitoring wells (MW-2 through MW-29), and five piezometers (P-2, P-4, P-6, P-7, and P-8). Recovery wells RW-1 and RW-5 were

taken out of service in March 2004 and February 2003, respectively. The well locations and other site features are shown on Figure 2. Table 1 contains well construction details.

The treatment plant operates continuously except for brief shut-down periods to allow for plant component cleaning and equipment sensor maintenance. The analytical results from the plant effluent samples that are required by the City of Atlanta demonstrate a high level of treatment efficiency, as no VOCs in the plant effluent have been detected above the maximum allowable concentration as specified in the City of Atlanta *Groundwater Discharge Permit* since issued on December 15, 2012. The treatment plant removed a total of 188.57 pounds of total VOCs during the 2012 reporting year. The addition of the new recovery well (RW-6), which was installed in February 2004 between RW-2 and RW-3, improved the hydraulic containment along the northern boundary. The containment system is being expanded, with the addition of another recovery well that will be installed in close proximity to MW-7 and RW-2, to enhance the mass recovery in this potential source area. This well will be added to the extraction well network in the summer of 2013 and subsequent monitoring events will evaluate the effectiveness of this new recovery well on hydraulic containment.

Groundwater samples are collected semiannually from site wells to assess changes in concentration of contaminants in groundwater. In 2012, groundwater sampling and analysis events were performed in May and November. Samples were collected from the 28 groundwater monitoring wells in May and 27 wells in November. The five active recovery wells were sampled during both monitoring events. Table 2 provides a listing of EPA guidance that contains initial delineation standards that will be used in future groundwater assessment activities. These standards will be reevaluated as part of the semiannual CSM updates required by the VRPA once additional data is collected on human and ecological receptors and pathways analyses.

Groundwater quality data from the November 2012 and May 2013 groundwater sampling are illustrated on Figure 3. Constituents detected above the Groundwater Protection Standard (GWPS) outlined in the site's Consent Order are highlighted in bold font on the figure. TCE is the most frequently detected constituent of concern (COC) in groundwater at the site. Details of groundwater monitoring well construction are provided in Table 1.

3. Preliminary Conceptual Site Model

Geologic investigations have been performed at this site as early as 1986. The data contained in this section are derived largely from the following reports:

- November 19, 2010 Soil Assessment Report (ARCADIS 2010a);
- January 2007 Conceptual Remedial Action Plan prepared by LFR, Inc. (LFR 2007); and
- February 2006 Supplemental Investigation Phase I Results report prepared by GeoTrans, Inc. (GeoTrans, 2006).

The GeoTrans report references previous geologic investigations performed by Law Engineering and Environmental, Inc. in 1986 and 1987. Data from ARCADIS and historical investigations were used in developing the current CSM illustrated in Figure 4. Additional data collection activities proposed in the initial phase of this VRP will be used to further refine the CSM and guide field data collection exercises.

3.1 Topography

The ground surface at the site ranges from 1080 feet above mean sea level (msl) along the southwest perimeter to 1020 feet msl in the northeast corner of the former LRM property. Surface water is controlled by storm drainage systems that generally flow from southwest to northeast.

3.2 Geology

The site is located in the Southern Piedmont Physiographic Province and Brevard fault zone (McConnell, 1984). The site geology and hydrology described in this report is based on previous reports, primarily the *Report of Preliminary Contamination Assessment* (Law, 1986) and the *Report of Additional Assessment Activities* (Law, 1987).

The Southern Piedmont Province and Brevard fault zone is a northeast southwest trending set of ridgelines and low rolling hills. Bedrock in the Piedmont Province generally consists of complex metamorphic, igneous, and metasedimentary rocks that have been exposed to intense pressure and heat associated with mountain building, folding, and faulting. As a result, these rocks are crystalline and, having little primary

porosity, groundwater occurs predominantly in heterogeneous fracture networks and overlying weathered regolith. Soils develop as a regolith by in situ weathering of the bedrock and are commonly referred to as saprolite.

The bedrock geology that underlies the saprolite at the site consists of interlayered mica schist, gneiss, and amphibolite. Boring logs and cross-sections prepared by Law (1987 and 1989) generally describe geologic horizons beneath the site as follows:

- 20 to 40 feet of residual soil (saprolite, micaceous sandy silt and silty sand);
- Underlain by 5 to 25 feet of partially weathered rock over; and
- Underlain by over 150 feet of variably-fractured competent granitic gneiss and amphibolite.

Boring data indicate that the bedrock surface dips across the site to the east-northeast such that the residual soil and partially weathered rock increase in thickness from approximately 40 feet in the west to nearly 70 feet in the east. A transect map showing location of geologic cross sections are shown on Figure 5. Geologic cross section maps are provided as Figure 6 through Figure 8. Groundwater analytical data for constituents detected above the GWPS during the November 2012 and May 2013 groundwater sampling event are shown. Soil analytical data were submitted in the Soil Assessment Report (ARCADIS 2010a), and are not shown on the cross section figures.

3.3 Hydrogeology

Groundwater movement is controlled by topography, geologic contacts, the distribution and orientation of fractures, and recharge and discharge (including pumping at the site). A regional groundwater divide is present west of the site along US Highway 29 (Main Street on Figure 1), which is located along the ridge line that separates the Chattahoochee River drainage (to the northwest) from the South River drainage (to the southeast). Groundwater movement southeast of the divide flows regionally to the southeast. Natural discharge of groundwater occurs locally to the drainage ditch/stream system on the northeast side of Norman Berry Drive (Figure 2). Most on-site groundwater recharge from precipitation infiltration is captured by five active recovery wells (RW-2, RW-3, RW-4, RW-6, and RW-7) that are completed in the residual soil and bedrock and operate as part of a hydraulic containment and groundwater treatment system at the site.

A comprehensive discussion of the site hydrogeology can be found in document submitted to the EPD in November 2009 titled *Geologic Study Work Plan* (ARCADIS, 2009). Potentiometric surface contour maps were prepared for the upper and lower aquifer from water level data collected in November 2009 and were included as Figure 8 and Figure 9, respectively, in that report.

Potentiometric surface elevation plots of the water table under non pumping conditions indicate that groundwater flows generally toward the east and northeast. Figure 9 of this VRP illustrates groundwater flow in the upper aquifer zone during the November 12, 2013 gauging event.

Vertically-nested wells that are completed in residual soil, the partially weathered rock, and the underlying fractured rock are present at five locations on-site. The wells pairs are listed in Table 1. Both upward and downward vertical hydraulic gradients were observed between nested wells based on hydraulic head measurements provided in the 2012 Annual Report. The gradients observed are predominantly upward, with the exception of the MW-13/MW-14 well pair during the February and May 2012 gauging events and the MW-15/MW-16 pair during the November 2012 gauging event. The downward gradient observed at the MW13/MW-14 well pair is likely associated with pumping effects from RW-4. The gradients observed at the site are generally consistent with those reported historically by GeoTrans.

Hydraulic testing performed on soil/rock cores from 22 wells (MW-1 through MW-22) resulted in hydraulic conductivity values ranging from 0.13 to 144 feet per day (ft/d), with an average of 2.7 ft/d. Average hydraulic conductivity values by geologic unit were 2.8 ft/d for tests performed on overburden core, 3.8 ft/d for tests performed on weathered rock core, and 1.3 ft/d for tests performed on deeper rock core (GeoTrans, 2006). Additional slug tests will be conducted on selected wells in the shallow and deeper portions of the upper aquifer during the first semiannual sampling event following the installation of the new recovery well to verify previously reported site hydraulic conductivity values. A total of 10 wells will be selected for slug testing to allow evaluation of variability between wells screened in similar saturated zones. Results will be included in the subsequent semiannual status update.

A 55-hour aquifer test was conducted at RW-1 in 1988 using wells MW-2, MW-10, P-1, and P-2 as observation monitoring wells. RW-1 was pumped at 8 gallons per minute (gpm). Transmissivity values determined by analysis of individual well time-drawdown data included 2,005 ft^2/d (MW-2), 160 ft^2/d (MW-10), 908 ft^2/d (P-1), and 882 ft^2/d (P-2).

3.4 Constituents of Concern

Based on the latest groundwater data obtained in May 2013, TCE and toluene collectively represent approximately 60 percent of the COCs present in the groundwater at the site. Although benzene, vinyl chloride and PCE collectively represent only about 27 percent of the listed COCs, they deserve consideration because of their relatively low GWPS, 5 µg/L and 2 µg/L, respectively. Based on available data, these four COCs, due to their prevalence in groundwater and/or low GWPS, likely represent the COCs that will control the clean-up efforts and the timing of closure. Groundwater quality data for constituents detected above a GWPS during the November 2012 and May 2013 groundwater sampling events are shown in Figure 3.

3.5 Formerly-Identified Potential Source Areas

Five impacted areas are identified and discussed in historical reports for this site. These five areas were identified as the potential source areas based on past solvent and fuel storage operations performed on-site in support of roadway painting operations. A detailed report describing each of the area was previously submitted to EPD by LFR (*Conceptual Remedial Action Plan*, 2007) and a summary of each are is provided below. Figure 2 outlines the locations of the five areas relative to other site features.

Area #1 is located on the northern property boundary along East Forest Street known as the Former Drum Storage Area. Prior to 1983, incidental spills were reported to have occurred at this area during the normal course of facility operations, releasing VOCs to the ground surface.

Area #2 is a small former AST location where reclaimed thinner was stored and is located just north of the former UST area. Reports state that the ASTs were taken out of service in 1984 and in 1986; the contents were, according to Geotrans, tested and found positive for lead.

Area #3 is a caustic tank area where, according to the Supplemental Investigation Report Phase 1 Results (Geotrans 2006), caustic solution was used to clean the varnish tanks. Geotrans further reported that the contents failed an EP TOX test for lead and chromium and that mixture was allowed to drain to the land surface. The ASTs were reportedly removed in 1986 and a 1989 investigation of soil revealed that solvents and fuel hydrocarbons were present in the soil.

Area #4 is a former UST area where according to the Geotrans report, 13 USTs were removed in 1987. The USTs were reported to have held xylene, methylene chloride, methyl isobutyl ketone, methyl alcohol, mineral spirits, and TCE. Soil contamination was reported during tank removal activities in 1987.

The Former Gasoline UST area is located adjacent to and east of Area #4. MIP groundwater sampling conducted by Geotrans directly down gradient of the former gasoline UST location (MIP #22) detected BTEX (benzene, toluene, ethylbenzene, and xylenes) compounds at concentrations of 13,200 µg/l (toluene), 2,880 µg/l (benzene), and 3,010 µg/l (xylene) at 22.1 feet bgs.

As noted in Section 2, EPD approved various historical remediation efforts performed at these potential source areas.

3.6 Migration Pathway Assessment and Potential Receptors

A comprehensive laboratory analytical database has been created from numerous historical investigations for use in evaluating potential human health exposure pathways at the site. The historical data are summarized in the following previously-submitted reports;

- *Human Health Risk Assessment, Law Environmental, 1996;*
- *Revised Risk Assessment, Law Environmental, 1998;*
- *Supplementary Investigation Phase I Results, GeoTrans, 2006;*
- *Human Exposures Prevention Plan (letter), ARCADIS, 2009;*
- *Soil Assessment Report, ARCADIS, 2010a;*
- *Pilot Study Plan, ARCADIS, 2010b;*
- *IAVI Report for the Building North of East Forrest Avenue and the Two On-site Buildings in the Central and the most Western Portion of the Property, January, 2011; and*
- *Surficial Soil Excavation Work Plan Summary, 2013.*

A study of migration pathways and potential receptors was performed for the site based on the data and information available in the above documents supported by more recent soil sample analytical results. As discussed in previous sections, historical releases to soil at this site have resulted in soil and groundwater contamination. The constituents in soil may leach to the groundwater at the site and VOC constituents in soil or groundwater may volatilize and move upward through the soil column with potential vapor intrusion into buildings on or near the site. Exposure pathways via soil, groundwater, and air were evaluated and are summarized in Figure 10.

The historical soil data indicate that concentrations of constituents in soil have only been observed at depths greater than five feet below ground surface (ft bgs). However, soil samples collected and analyzed in March 2010 from a direct push technology source area investigation indicate that impacts in certain areas of the site; both paved and unpaved, occur as shallow as 0 to 1 foot bgs. Although much of the site surface is covered with pavement (asphalt or concrete) or buildings, direct exposure to constituents in the soil by on-site workers may occur. Additionally, if intrusive activities were to occur at the site such as construction or utility work, the associated workers may be exposed to the soil via incidental ingestion, dermal contact, and inhalation of volatiles or particulates from the soil. Initial remedial actions have begun that include excavation of shallow impacted soil to limit or eliminate the potential for human exposure. Details of the initial work are provided in Section 4.4 of this VRP. A portion of the site is used as paved parking for a neighboring office building and tenants that utilize this parking lot are not anticipated to be at any increased level of exposure to contaminants in soil.

Groundwater is located approximately 15 to 20 feet below ground surface (bgs) and direct exposure, even during intrusive activities, is unlikely. Historical potable well surveys performed in proximity to this site concluded that there were no operational private or public potable supply wells within a three mile radius. These surveys also concluded that local residents, businesses, and schools in proximity to the site are served by city water which is drawn from the Sweetwater Creek intake located approximately 12 miles from the former LRM facility. Because of the depth to groundwater and lack of private or public potable wells, the pathway for groundwater exposure via ingestion and dermal contact is incomplete both on-site and off-site.

The VOC constituents in the soil and groundwater at the site may migrate from the subsurface via vapor intrusion into buildings either on or near the site. Potential exposures to VOCs via inhalation of indoor air were evaluated in the three buildings that are located within close proximity to impacted soil and groundwater. The indoor air

sample results, summarized in the January 2011 IAVI Report, indicated that no increased risks or hazards to occupational workers were present within the buildings.

The site is industrialized, largely paved, and presents very minimal terrestrial or aquatic habitat for ecological receptors. The only surface water body observed near the site is a concrete-lined drainage way that connects to the storm water system. The drainage way is believed to be intermittent and, therefore, not a significant habitat for surface water ecological receptors. Due to the lack of habitat, the depth to constituents in soil, and the lack of groundwater discharge at the site, exposure of terrestrial and aquatic receptors at the site is not applicable.

4. Initial Remediation Plan

The groundwater recovery and treatment system currently installed at the site will continue to be operated and maintained, at least during the initial phase of the VRP. After horizontal and vertical delineation of soil and groundwater is complete (as outlined in the VRP application) LRM will make a determination of the effectiveness and efficiency of the current system. Additional or alternative remedial strategies may be selected, or the current treatment system may be modified based on the additional findings. Operational and performance details of the present-day extraction system are provided in the following section. LRM has designed and is in the process of constructing an AS/SVE/MPE system in proximity to former suspected source areas where soil and groundwater is impacted with COCs. Details of both the existing and the expanded remedial systems are provided in this Section.

4.1 Groundwater Extraction and Treatment System

The groundwater recovery and treatment system operating at the site consists of seven recovery wells. The five active recovery wells (RW-2, RW-3, RW-4, RW-6, and RW-7) pump groundwater at a combined average rate of 12 gallons per minute (gpm) to a 10,000-gallon equalization tank for subsequent treatment at the on-site groundwater treatment plant. Figure 11 provides a piping and instrumentation diagram (P&ID) drawing of the extraction system. The treatment plant is fully automated and operates 24 hours per day. Flow from each recovery well is continuously metered and recorded periodically. Groundwater recovery well water levels are measured quarterly and are sampled for groundwater quality semi-annually.

Contaminated groundwater is pumped from the equalization tank to an air stripper where VOCs are removed from the groundwater. Treated groundwater is pumped from

the air stripper sump to the 10,000-gallon effluent tank. From the effluent tank, groundwater gravity flows to the City of Atlanta POTW through a one-inch parshall flume.

Air emissions from the air stripper are further treated by two, 2,000-pound vapor phase carbon canisters connected in series prior to discharge to the atmosphere. An auto-dialer connected to selected portions of the system's program logic controls, contacts the operator if the system shuts down.

Influent groundwater is sampled from the piping prior to the equalization tank while treatment plant effluent is sampled at the effluent storage tank overflow to the parshall flume. Influent and effluent samples are collected twice monthly, in accordance with City of Atlanta Discharge Monitoring Permit requirements. The discharge monitoring report for May 2013 is included as Appendix C.

Monthly air samples for VOC concentrations at the air stripper discharge stream are collected between the two carbon units in series. A new carbon unit is added as the second unit in the series when breakthrough has been indicated in two consecutive months. The first carbon unit is then recharged with fresh carbon off-site.

4.2 Potential DNAPL Recovery and Dissolved Plume Containment

The remedial approach for potential dense non-aqueous phase liquid (DNAPL) recovery and dissolved plume containment includes installing an additional groundwater recovery well in addition to the proposed AS/SVE/MPE system discussed in Section 4.5 of this application. This bedrock extraction well, RW-8, was installed in June 2013 with the intended purpose of providing additional hydraulic containment of the groundwater plume in close proximity to a suspected DNAPL source area. Extracted groundwater will be treated in the existing treatment system and the treated groundwater will be discharged to the sewer under the existing discharge permit. The newly-installed recovery well will be plumbed to the existing treatment system building and will be brought on line in September 2013.

4.3 Remediation Excavation

In April 2013, LRM began the excavation of impacted soils that contain concentrations of lead and VOC above residential or industrial risk-based criteria. The locations of proposed excavation areas were provided to the Georgia EPD in the 2010 Pilot Study Plan and again in the 2013 Surficial Soil Excavation Work Plan Summary. This

excavation work is being performed to accelerate of remediation of VOCs in surface soils which may be beyond of the influence of the proposed SVE system and decrease the potential for direct contact with impacted materials in the shallow subsurface. A summary of the completed excavation program will be provided to EPD in the first semiannual report. Soil is being managed on site until it has been properly characterized for disposal. Soils are then loaded, transported, and disposed by licensed waste haulers at permitted facilities in accordance with local, state, and federal regulations.

4.4 Air Sparging Soil Vapor Extraction, and Multi-Phase Extraction System

LRM began designing an AS/SVE system in April 2010 following the successful completion of field testing of the concept, which was performed in March 2010. Two AS/SVE pilot tests were performed in suspected source areas on March 24 and 25, 2010. Prior to starting and during the AS/SVE pilot test, depth-to-water, vacuum, and dissolved-oxygen measurements were collected from selected observation wells. The extracted soil vapor was treated with a 200-pound vapor-phase GAC vessel and air samples were collected during the pilot test.

Based on the initial pilot-study observations and analyses, AS/SVE appears to be a feasible technology for addressing the dissolved phase constituents at this site. However, LRM has determined that a larger-scale, AS/SVE/MPE pilot-study is necessary to obtain data for a full-scale soil and groundwater remediation system. In April 2013, LRM began the construction of a larger-scale AS/SVE/MPE pilot-study, which is sufficiently large to cover most of the impacted area. The data collected during the first three months of pilot system operation will be used to determine if any system expansion is needed to meet mass recovery and remediation goals. The pilot-study system will include 63 AS wells to treat the VOCs dissolved in groundwater, 80 SVE wells to remove VOCs in soil above the groundwater surface and to collect AS vapors at the site, and 6 MPE wells to treat areas where LNAPL is suspected. The proposed locations of the remediation wells are shown on Figure 12. Figure 13 shows a process flow diagram for the AS/SVE/MPE system. Approximately 90 percent of the total planned number of pilot system wells have been installed as of mid-July 2013 and construction of the system is on schedule to be completed by September 2013.

The existing monitoring and observation well network will be used to evaluate operational conditions of the AS/SVE/MPE system. Additional observation wells will be installed as needed to collect data necessary to document system performance.

4.5 Remediation Performance Monitoring for Groundwater

The established program of semiannual sampling of select groundwater monitoring wells will continue to assess the concentrations of COCs in groundwater and evaluate remedial progress under the influence of the treatment system. Groundwater analytical data from future sampling events will be used to update the CSM with regard to distribution of COCs in the saturated zone. The results of the groundwater sampling will aid in refining the extent of impacts both on and off-site and will allow risk evaluations to be performed if sensitive receptors are identified. Additionally, groundwater analytical results will assist in the development of the final remediation plan.

Four additional groundwater monitoring wells were installed in the July 2013; two shallow wells and two bedrock wells. One well pair was installed between MW-2 and MW-12 to fill a data gap in groundwater monitoring data toward the east. Another well pair was installed between MW-23 and MW-6 to fill in a data gap for groundwater plume delineation on the western portion of the site. These four wells will be added to the semiannual monitoring program.

4.6 Risk Assessment

LRM will perform an evaluation of potential human health risks to update the understanding of potentially exposed populations in proximity of the site. Existing data and past risk assessment activities indicate that further evaluation of risk to potential ecological receptors is not necessary. Potential migration pathways for human exposures will be evaluated and site risks and hazards will be quantified for any completed pathway identified. A summary of anticipated elements included in the pathway analysis effort is provided in this section.

Local municipalities, water authorities, and USGS will be contacted to locate potential potable wells within 3 miles of the subject site. A search of the USGS database will be performed to confirm previous findings that there are no registered potable wells within the 3-mile radius of the subject site. A field reconnaissance of potential potable wells will be performed if data suggest that wells may exist but cannot be confirmed with historical records. Local health department and public utility files will also be reviewed for information regarding the use of groundwater for potable purposes in proximity to the site.

Topographic maps of the surrounding area will also be reviewed to identify surface drainage features and surface water resources within a 3-mile radius of the facility. Public utility records and health departments will be contacted to determine if any public water withdrawal points exist within a 3-mile radius of the facility. An analysis of potential ecological receptors will also be performed if sensitive habitat or protected species are located in proximity to the site.

Samples of soil, groundwater, and soil vapor will be collected for laboratory analysis as needed to support risk evaluation of completed pathways. These data will be used to update the human health risk assessment following guidelines provided in Georgia EPD Guidance for Selecting Media Remediation Levels at Resource Conservation and Recovery Act Solid Waste Management Units (Georgia EPD 1996) and applicable USEPA guidance for risk assessments (USEPA 1989; 1991; 1992; 1997a, b, c; 1998; 1999; 2000a, b; 2004; 2009c) if warranted by the outcome of the pathways analysis.

The risk assessment update will evaluate potential exposures and risks to site-related constituents (e.g., organic compounds and metals) detected in the soil or groundwater at the site. The assessment will consist of several elements: selection of COPCs, exposure assessment, toxicity assessment, risk characterization, development of risk-based remediation levels (if necessary), and uncertainty analysis. COPCs will be selected by comparison to USEPA regional screening levels (USEPA 2009a) and background levels for soil. Toxicity values will be obtained following the USEPA hierarchy (USEPA 2003).

Upon completion of the planned final site characterization activities, site data will be evaluated and a risk assessment (RA) dataset will be developed. Only data that are representative of current site conditions will be used in the RA. Site concentrations will be based on exposure point concentration (EPCs). The EPC is the representative concentration of a constituent in an environmental medium that is potentially contacted by the receptor (USEPA 1989). The EPC is defined as “the arithmetic average of the concentration that is contacted over the exposure period” (USEPA 1989). Consistent with USEPA methodology, the lower of the maximum concentration and the upper confidence limit on the mean (UCL) will be identified as the EPC (USEPA 1989, 2002). The UCL is a statistical number calculated to represent the mean concentration with a high percentage of confidence that the true arithmetic mean concentration for a site will be less than the UCL. The high level of confidence (e.g., 95 percent) is used to compensate for the uncertainty involved in representing site conditions with a finite number of samples. The most current version of USEPA’s ProUCL software - version

4.1 (USEPA 2011a) will be used to calculate UCLs when sufficient data are available (a minimum of five detections and eight samples).

Site-specific, Alternative Concentration Limits (ACLs) will be calculated for media where completed pathways are identified. These ACLs will represent risk-based concentrations in media where exposure would not result in unacceptable levels of risk to receptors. The calculated ACLs will be utilized as endpoints in delineation activities and will replace initial delineation standards presented in Table 2.

4.7 Delineation of Impacts

The extensive soil boring program summarized in the 2010 Soil Assessment Report successfully identified potential source areas in soil that later became the focus areas for targeted soil excavation and subsequent treatment with the AS/SVE/MPE system. Additional soil samples may be collected to evaluate the effectiveness of the SVE system surrounding these source areas and at locations where complete delineation of soil impact is uncertain. The existing groundwater monitoring well network will be used to evaluate the effectiveness of the AS/SVE/MPE system and COC concentration trends will be evaluated over time to determine if the extent of subsurface impacts are sufficiently delineated. Additional groundwater monitoring wells may be installed, if needed, to enable LRM to certify compliance with EPD-accepted RRSs.

4.8 Groundwater Modeling

Groundwater modeling may be performed using EPD-accepted methods to estimate the time needed to remediate the groundwater contaminant plume. Model data output will be compared to analytical results and physical measurements collected from on and off-site wells to calibrate the model and improve certainty of projected contaminant fate and transport simulations. This will allow the model output to be used to evaluate potential future impacts to receptors and to evaluate remedial options for completed exposure pathways. Once remediation is complete, the model will be updated (if needed) to illustrate that the requirements of the VRP have been met and risks associated with completed exposure pathways have been mitigated.

4.9 Soil Remediation

LRM recognizes that engineering and/or administrative controls as well as additional source area treatment may be needed to retard and ultimately eliminate off-site migration of COCs and/or to eliminate exposure pathways. However, the extent and/or

the necessity of additional action will be determined based on the review of data collected during the AS/SVE/MPE system operational period. The final remediation plan will be submitted to EPD within 30 months of enrollment into the VRP as outlined in section 5.c. of the VRP Application Checklist.

5. Cost Estimate

An initial cost estimate for elements of the work proposed under this VRP is provided in Table 3. The cost estimate includes: 1) investigation costs for on and off-site delineation work and five years of semiannual sampling; 2) remedial actions including the installation and operation of the AS/SVE/MPE and groundwater extraction and treatment systems over a five year period; and 3) reporting associated with preparing this revised VRP application, semiannual reporting, and preparing a CSR.

6. Schedule

A project schedule for work elements outlined in this VRP is provided in Figure 14. The actual schedule date for the start of work outlined in this schedule will depend on the receipt date of EPD's approval of the VRP application and plan.

7. Reporting

Semi-annual status reports will be submitted to the Director updating the progress and implementation of the VRP throughout the program. The semi-annual status reports may include an updated CSM if warranted by site data. Additionally, the projected milestone schedule will also be updated to show progress on VRP objectives.

Within 12 months of enrollment into the VRP, an updated CSM will be submitted with the semi-annual status report illustrating the completion of horizontal COC delineation. Within 24 months, an update will be submitted including horizontal delineation of off-site properties unless found to be technical impracticable as defined in the VRPA. Within 30 months, an updated CSM illustrating that vertical delineation of COCs has been completed will be prepared and submitted to the Director.

A Compliance Status Report (CSR) will be prepared for submittal to the EPD following the conclusion of data collection and interpretation activities as outlined in this VRP. The CSR will confirm the completion of the corrective action specified in the VRP and certify compliance of the site with the applicable cleanup standards.

The CSR will be supported with updated site figures that illustrate boring and well locations, potentiometric surface data, and soil and groundwater sampling results. Tables with borehole and well construction data, soil and groundwater analytical results, and study-related geologic, hydrogeologic, and geophysical data will also be provided.

The report will also contain a section that will summarize the findings of the study with respect to the adequacy of contaminant groundwater plume delineation, potential impacts of geological features on site risk, and recommendations on any suggested improvements or alterations to groundwater pump and treat system.

8. References

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Tables

Table 1. Well Construction Summary
Lafarge Road Marking, East Point, Georgia

Well Number	Top of Casing (ft amsl)	Total Depth (ft bgs)*	Screen Length (ft)	Screened Interval			
				Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Top of Screen (ft amsl)**	Bottom of Screen (ft amsl)
MW-1 (Soil)				Out of Commission			
MW-2 (Soil)	1026.53	25.5	9.5	15.5	25.0	1010.5	1001.0
MW-3 (Soil)	1028.09	32.8	9.3	23.0	32.3	1004.6	995.3
MW-4 (Soil)	1028.72	40.0	19.5	19.5	39.0	1008.2	988.7
MW-5 (Rock)	1028.24	61.3	15.0	45.5	60.5	981.9	966.9
MW-6 (Soil)	1041.48	40.0	14.5	25.0	39.5	1016.0	1001.5
MW-7 (Rock)	1027.13	62.5	14.0	47.5	61.5	978.6	964.6
MW-8 (Soil)	1027.83	39.3	9.3	29.0	38.3	997.8	988.5
MW-9 (Rock)	1020.63	81.1	13.9	66.2	80.1	953.4	939.5
MW-10 (Soil)	1020.34	57.0	19.1	36.9	56.0	982.4	963.3
MW-11 (Rock)	1023.46	106.3	14.7	91.0	105.7	931.9	917.2
MW-12 (Soil)	1022.66	79.2	19.0	59.0	78.0	962.5	943.5
MW-13 (Rock)	1020.67	97.0	13.5	81.5	95.0	937.2	923.7
MW-14 (Soil)	1020.84	73.7	19.2	53.8	73.0	966.3	947.1
MW-15 (Soil)	1029.09	37.0	18.5	18.0	36.5	1010.6	992.1
MW-16 (Rock)	1029.02	56.0	9.5	45.5	55.0	982.5	973.0
MW-17 (Soil)	1033.99	36.3	19.0	16.0	35.0	1016.7	997.7
MW-18 (Soil)	1043.04	38.0	14.0	23.0	37.0	1019.0	1005.0
MW-19 (Soil)	1023.68	29.5	19.5	9.5	29.0	1013.7	994.2
MW-20 (Soil)	1020.98	27.5	19.0	7.5	26.5	1012.5	993.5
MW-21 (Soil)	1028.56	24.5	14.0	9.8	23.8	1018.1	1004.1
MW-22 (Soil)	1023.45	28.0	19.0	8.0	27.0	1014.4	995.4
MW-23 (Rock)	1037.23	69.5	8.8	60.0	68.8	976.5	967.7
MW-24 (Soil)	1037.19	60.0	34.5	24.0	58.5	1011.7	977.2
MW-25 (Deep	1027.99	200.0	10.0	190.0	200.0	838.0	828.0
MW-26 (Soil)	1020.75	23.5	10.0	13.5	23.5	1007.3	997.3
MW-27 (Soil)	1021.13	48.2	2.0	46.2	48.2	974.9	972.9
MW-28 (Soil)	1008.03	23.5	10.0	13.5	23.5	994.5	984.5
MW-29 Soil)	1007.95	45.5	2.0	43.5	45.5	964.4	962.4
RW-1 (Soil/Rock)	1029.68	34.5	Out of Service				
RW-2 (Soil/Rock)	1028.05	70.2	50.0	20.0	70.0	1007.9	957.9
RW-3 (Soil/Rock)	1019.89	79.6	60.7	18.7	79.4	1001.0	940.3
RW-4 (Soil/Rock)	1023.06	130.3	101.5	28.7	130.2	994.3	892.8
RW-5 (Soil/Rock)	1031.08	70.2	Out of Service				
RW-6 (Soil/Rock)	1023.08	60.0	40.0	20.0	60.0	1003.1	963.1
RW-7 (Soil/Rock)	1028.05	70.0	50.0	20.0	70.0	1008.1	958.1

* bgs = below ground surface ** amsl = above mean sea level

Table 2. Preliminary Delineation Standards

Medium	Standard or Guidance Document
Soil, Tap water, and Protection of Groundwater	US EPA Region 3, Regional Screening Level Table, May 2013. http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm
Tap Water	Georgia Rule, Chapter 391-3-5, Safe Drinking Water, Rules for Safe Drinking Water
Surface Water and Groundwater	Georgia Rule, Chapter 391-3-6, Water Quality Control, Water Use Classifications and Water Use Standards

Table 3. Preliminary Cost Estimate

Task	Total
Investigation Actions:	
Semiannual Sampling (5-years)	$125,000
Onsite Soil and Groundwater Delineation	$20,000
Offsite Soil and Groundwater Delineation	$34,000
Remedial Actions:	
Remediation - Excavation	$671,000
Monitoring Well/Recovery Well Installation	$103,000
Construction - AS/SVE/MPE System	$1,600,000
Remedial System Operation (5 years)	$1,896,300
Reporting:	
Prepare and submit revised application	$13,100
Semiannual Reporting (5-years)	$60,000
Annual CAER (5-Years)	$40,000
Prepare Compliance Status Report	$37,000
Total:	$4,599,400

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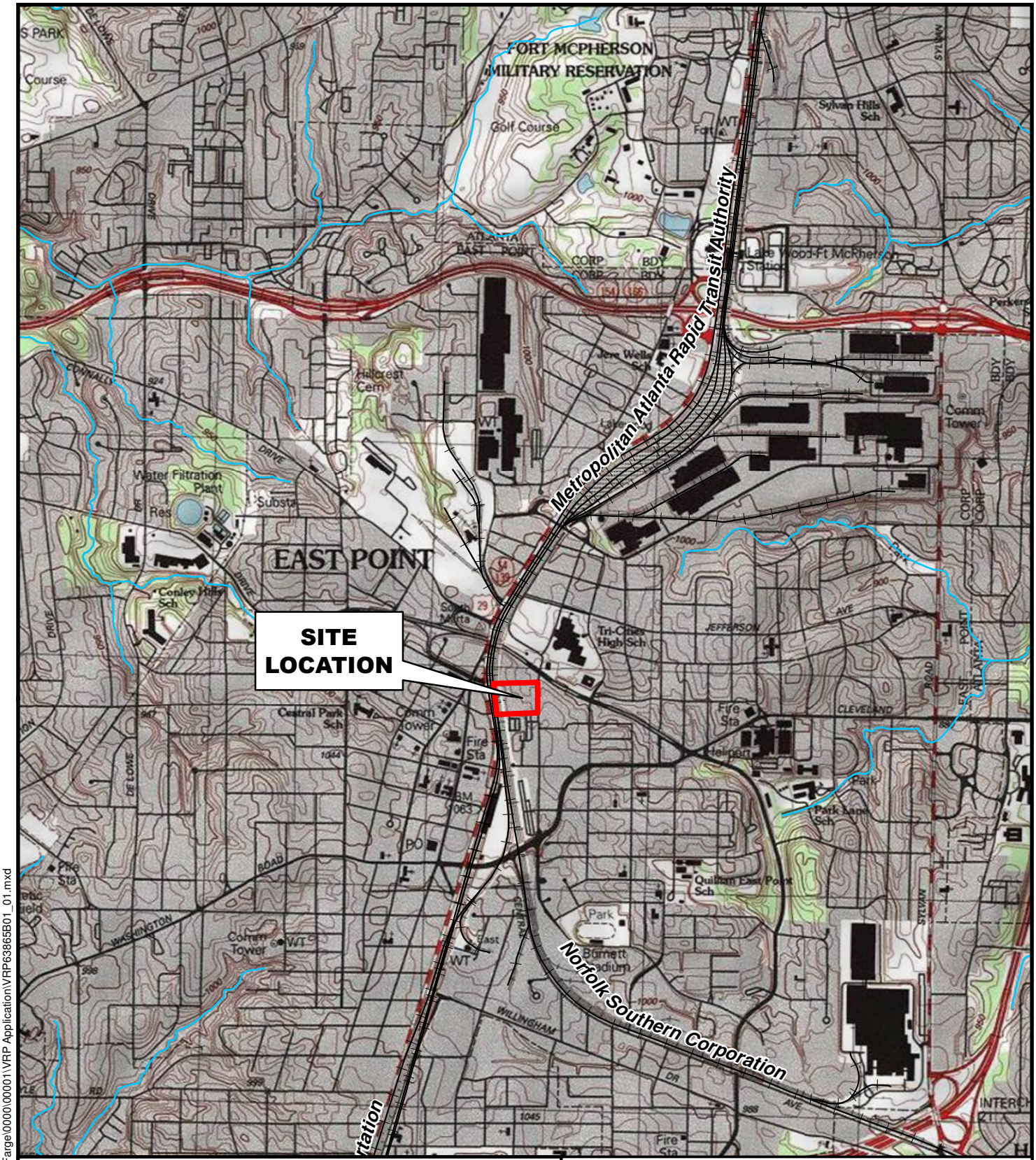
Figures



Source: USGS SW Atlanta, GA 7.5 Minute Quadrangle fromArcGIS Online Services Hosted by ESRI

N

0 500 1,000 2,000

Scale in Feet

LAFARGE ROAD MARKING, INC.
2675 NORTH MARTIN STREET
EAST POINT, GEORGIA

VOLUNTARY REMEDIATION PLAN

SITE LOCATION

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FIGURE

1

CITY: Augusta, GA DIV/GROUP: ENV DB: A. Saul LD: A. Saul PIC: PM: D. Wilderman TM: C. Miller TR: Thursday, May 13, 2010 4:48:52 PM
G:\ENVCAD\Augusta-GA\ACTIVE\212510_LaFarge\0000\00001\VRP Application\VRP63865B01_01.mxd

CITY: Augusta, GA DIV/GROUP: ENV DB: A. Saul LD: PIC: PM: R. Dilienzo TM: C. Miller TR:
Monday, May 24, 2010 1:41:54 PM
G:\ENVCAD\Augusta-GA\ACT\HT212510_LaFarge\0000\00001\VRP Application\VRP63865B02_02.mxd

LAFARGE ROAD MARKING
2675 NORTH MARTIN STREET
EAST POINT, GEORGIA

VOLUNTARY REMEDIATION PLAN

SITE LAYOUT

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FIGURE
2

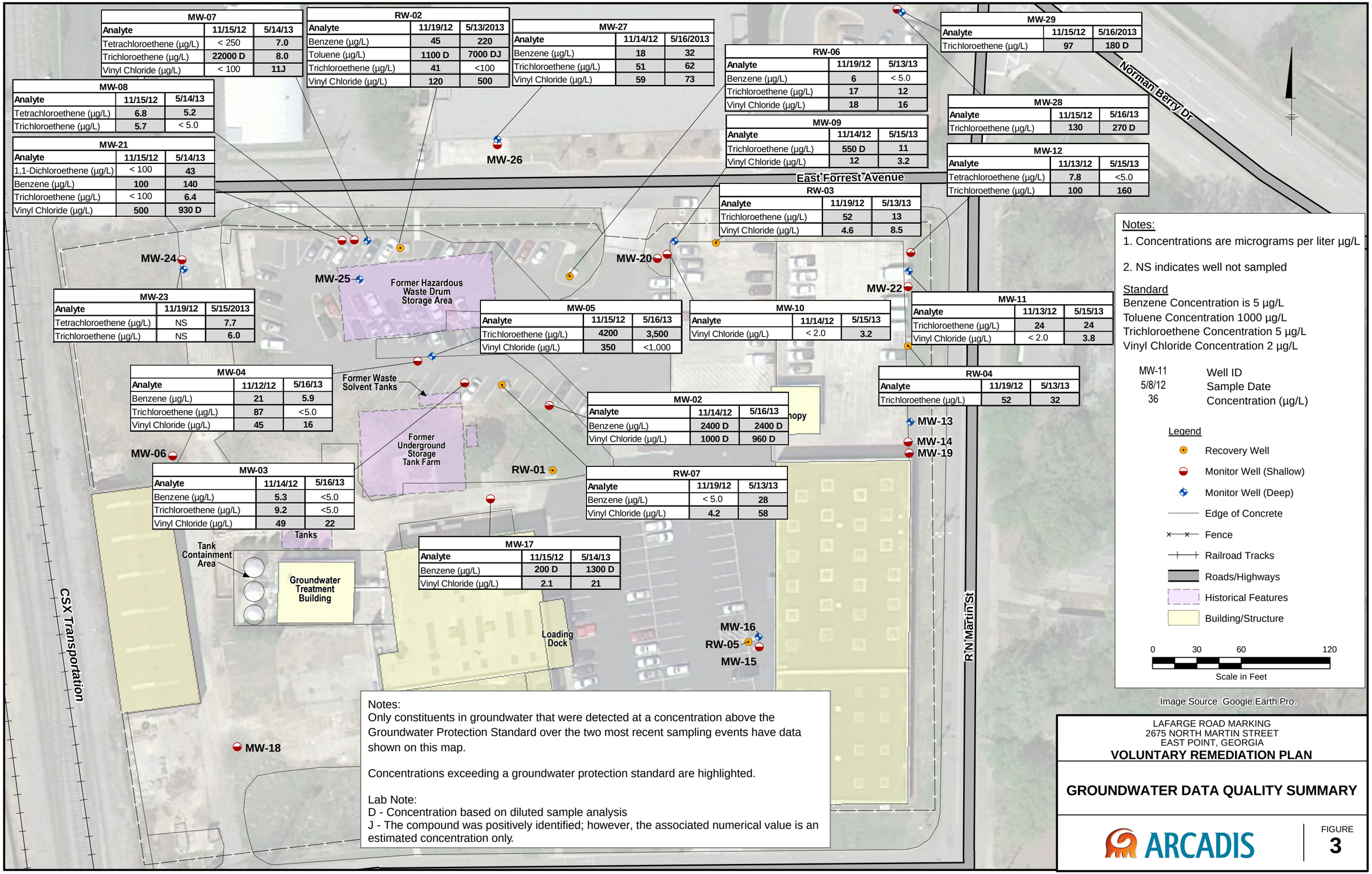

Image Source: Google Earth Pro.

LAFARGE ROAD MARKING
2675 NORTH MARTIN STREET
EAST POINT, GEORGIA

VOLUNTARY REMEDIATION PLAN

GROUNDWATER DATA QUALITY SUMMARY

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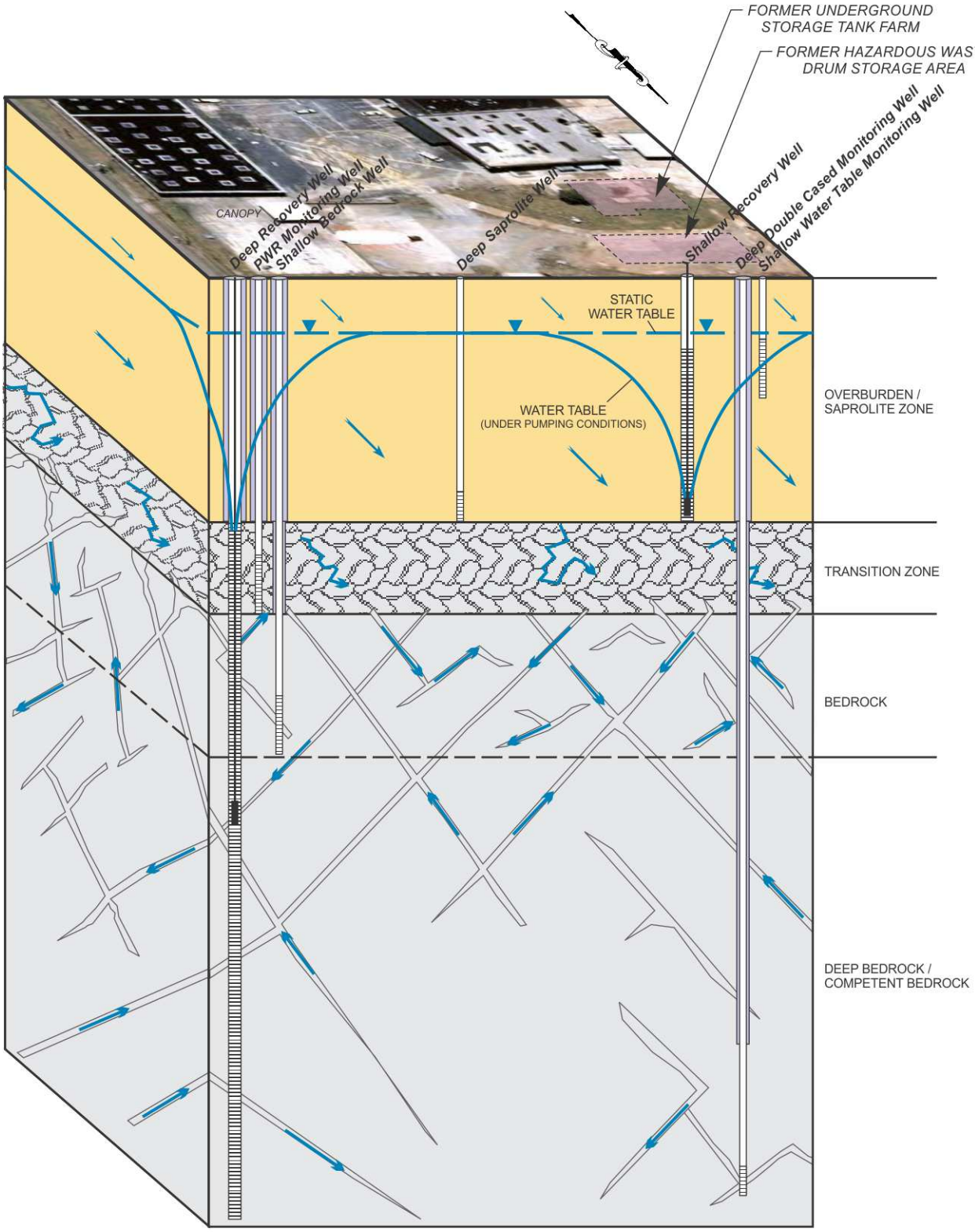
FIGURE
3

CITY: AUGUSTA DIV/GROUP: ENV DB: B.Altoml LD: A. Saul PIC: PM: TM: TR:
Project Number: Path: G:\ENVCADLansing-MIRETURN-TO\Augusta-GA\HT212446\00121000021HT212446_G



WELL CONSTRUCTION
SURFACE CASING
WELL CASING
SCREENED INTERVAL

GROUNDWATER FLOW DIRECTION

NOTE: Generalized well construction details are projected onto the northern block boundary for illustration purposes only.

LAFARGE ROAD MARKING, INC.
2675 NORTH MARTIN STREET
EAST POINT, GEORGIA

VOLUNTARY REMEDIATION PLAN

CONCEPTUAL SITE MODEL

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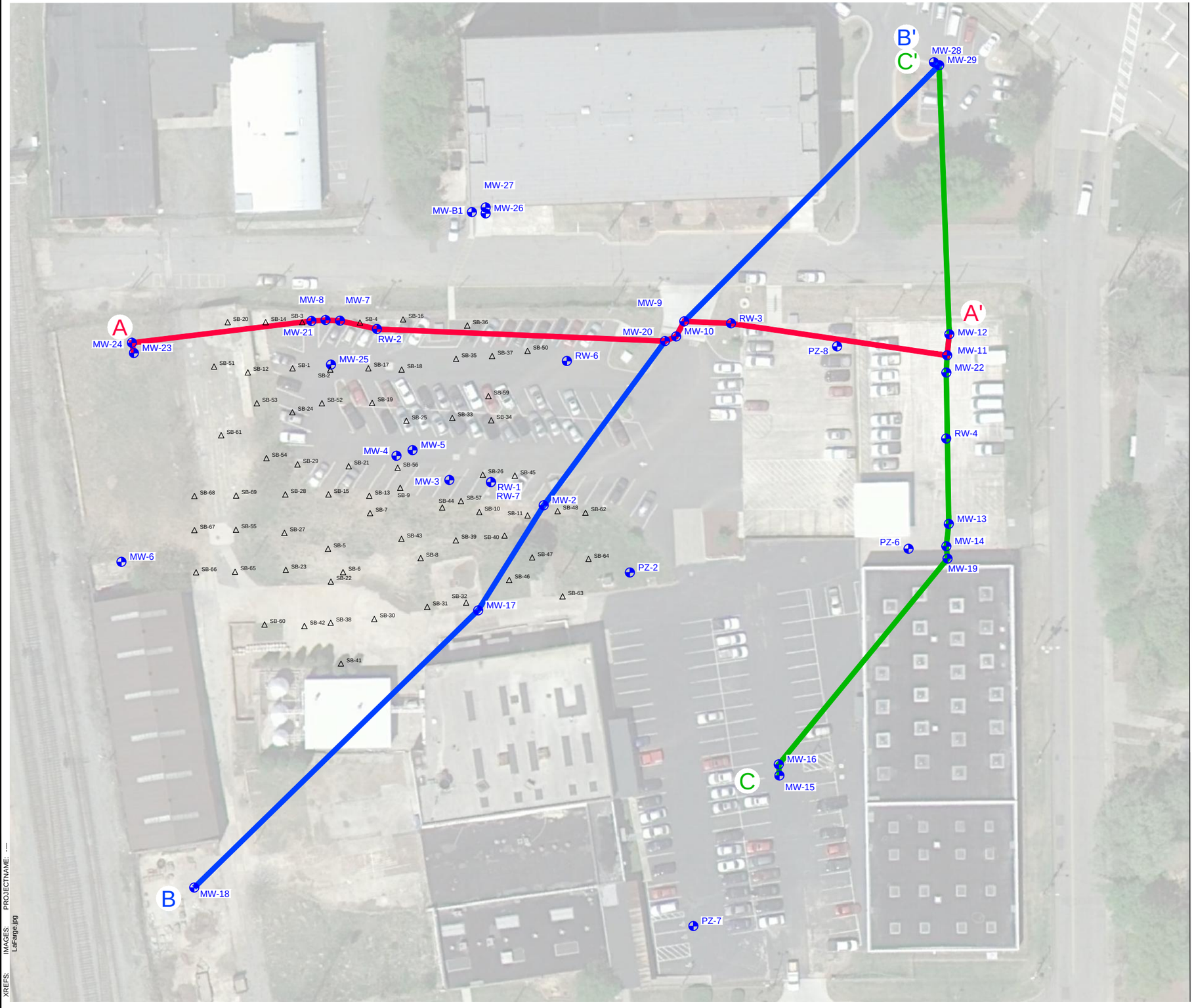
FIGURE
4

CITY:(KNOXVILLE) DIV/GROUP:(ENVCAD) DB:(B.ALTOM) LD:(A.SAUL) PIC:(_) PM:(D.WILDERMAN) TM:(C.REAGEN)
PROJECT: HT212510.0000 PATH: G:\ENVCAD\KnoxvilleACT\HT212510\ HT212510-VRP rev.cdr SAVED: 17JUL2013



LEGEND:

- MONITORING WELL
- SOIL BORING
- A — A' CROSS-SECTION A-A' TRANSECT
- B — B' CROSS-SECTION B-B'TRANSECT
- C — C' CROSS-SECTION C-C' TRANSECT

NOTE:

AERIAL PHOTOGRAPHY: GOOGLE EARTH PRO, 2010.

0 60' 120'

GRAPHIC SCALE

LAFARGE ROAD MARKING
2675 NORTH MARTIN STREET
EAST POINT, GEORGIA
VOLUNTARY REMEDIATION PLAN

CROSS-SECTION LOCATION MAP

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FIGURE
5

A WEST — **A'** EAST

ELEVATION (FEET AMSL)

HORIZONTAL DISTANCE (FEET)

MW-23		
Analyte	11/19/12	5/15/2013
Tetrachloroethene (µg/L)	NS	7.7
Trichloroethene (µg/L)	NS	6

MW-21		
Analyte	11/15/12	5/14/13
1,1-Dichloroethene (µg/L)	< 100	43
Benzene (µg/L)	100	140
Trichloroethene (µg/L)	< 100	6.4
Vinyl Chloride (µg/L)	500	930 D

MW-08		
Analyte	11/15/12	5/14/13
Tetrachloroethene (µg/L)	6.8	5.2
Trichloroethene (µg/L)	5.7	< 5.0

MW-07		
Analyte	11/15/12	5/14/13
Tetrachloroethene (µg/L)	< 250	7
Trichloroethene (µg/L)	22000 D	8
Vinyl Chloride (µg/L)	< 100	11 J

RW-02		
Analyte	11/19/12	5/13/2013
Benzene (µg/L)	45	220
Toluene (µg/L)	1100 D	7000 DJ
Trichloroethene (µg/L)	41	<100
Vinyl Chloride (µg/L)	120	500

MW-10		
Analyte	11/14/12	5/15/13
Vinyl Chloride (µg/L)	< 2.0	3.2

MW-09		
Analyte	11/14/12	5/15/13
Trichloroethene (µg/L)	550 D	11
Vinyl Chloride (µg/L)	12	3.2

RW-03		
Analyte	11/19/12	5/13/13
Trichloroethene (µg/L)	52	13
Vinyl Chloride (µg/L)	4.6	8.5

MW-11		
Analyte	11/13/12	5/15/13
Trichloroethene (µg/L)	24	24
Vinyl Chloride (µg/L)	< 2.0	3.8

MW-12		
Analyte	11/13/12	5/15/13
Tetrachloroethene (µg/L)	7.8	<5.0
Trichloroethene (µg/L)	100	160

LEGEND:

- WELL/BORING ID (SB-16)
- EXISTING GRADE (PER 2010 SURVEY DATA)
- LITHOLOGIC CONTACT (DASHED WHERE INFERRED)
- DOUBLE CASING (SHADED SECTION)
- GROUNDWATER LEVEL MAY 2013
- WELL SCREEN
- WELL/BORING BOTTOM
- Saprolite, Red/Orange/Brown/Tan/White, Clayey, Silty Sand
- Saprolite, Red/Brown/Tan/Black/Grey, Sandy, Silt
- Saprolite, Grey/Red/Brown, Sandy Clay
- Partially Weathered Rock
- Bedrock
- MW-10 GROUNDWATER RESULTS

D — CONCENTRATION BASED ON DILUTED SAMPLE ANALYSIS

J — THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER, THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY

VERTICAL SCALE (FEET): 20, 0

HORIZONTAL SCALE (FEET): 0, 50

NOTES:

1. ONLY CONSTITUENTS IN GROUNDWATER THAT WERE DETECTED AT A CONCENTRATION ABOVE THE GROUNDWATER PROTECTION STANDARD OVER THE TWO MOST RECENT SAMPLING EVENTS HAVE DATA SHOWN ON THIS MAP.
2. CONCENTRATIONS EXCEEDING GROUNDWATER PROTECTIONS STANDARDS ARE SHOWN IN BOLD.

LAFARGE ROAD MARKING
2675 NORTH MARTIN STREET
EAST POINT, GEORGIA
VOLUNTARY REMEDIATION PLAN

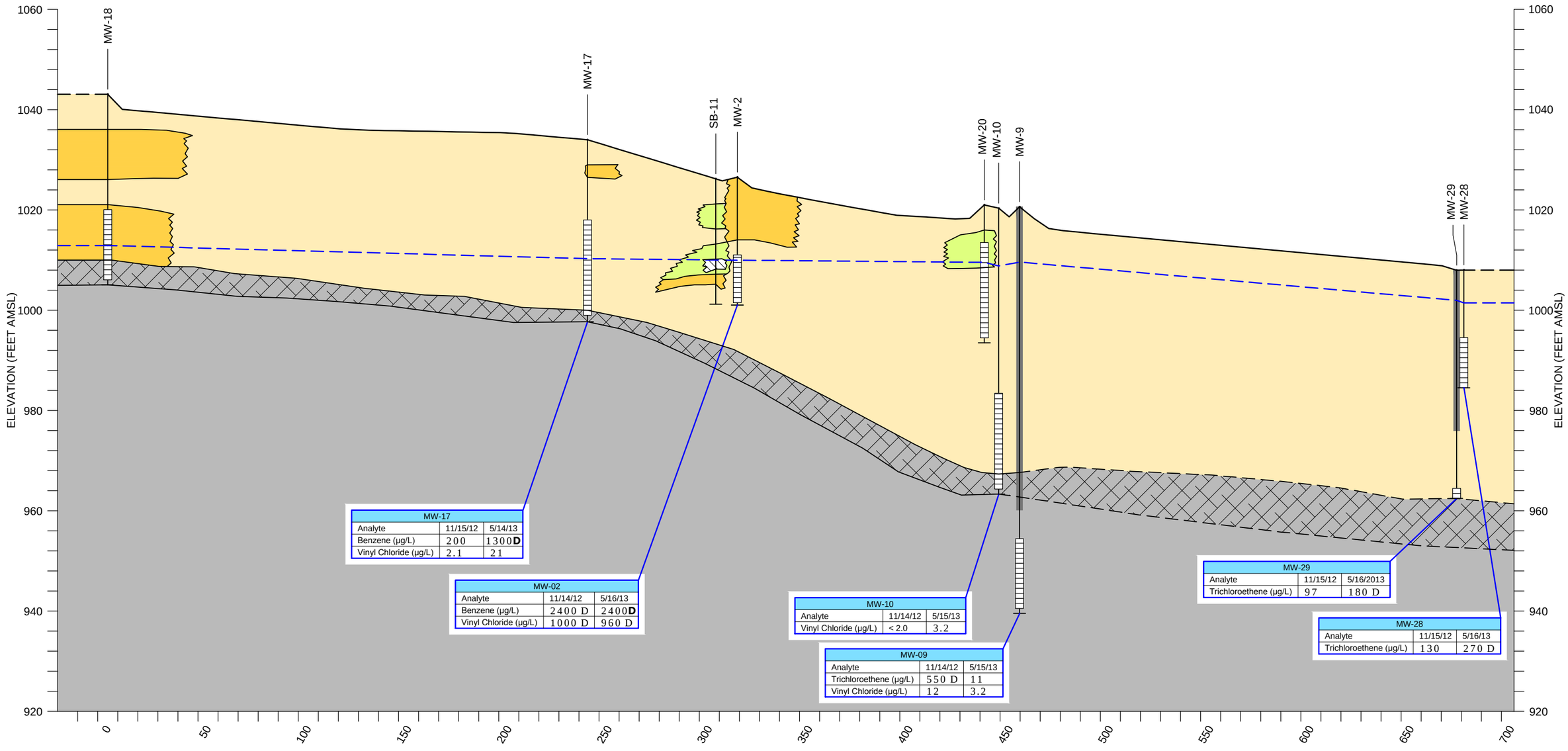
CROSS-SECTION A-A'

ARCADIS

FIGURE 6

B
SOUTHWEST

B'
NORTHEAST



MW-17		
Analyte	11/15/12	5/14/13
Benzene (µg/L)	200	1300**D**
Vinyl Chloride (µg/L)	2.1	21

MW-02		
Analyte	11/14/12	5/16/13
Benzene (µg/L)	2400 D	2400**D**
Vinyl Chloride (µg/L)	1000 D	960 D

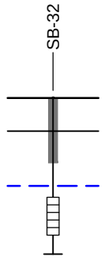
MW-10		
Analyte	11/14/12	5/15/13
Vinyl Chloride (µg/L)	< 2.0	3.2

MW-09		
Analyte	11/14/12	5/15/13
Trichloroethene (µg/L)	550 D	11
Vinyl Chloride (µg/L)	12	3.2

MW-29		
Analyte	11/15/12	5/16/2013
Trichloroethene (µg/L)	97	180 D

MW-28		
Analyte	11/15/12	5/16/13
Trichloroethene (µg/L)	130	270 D

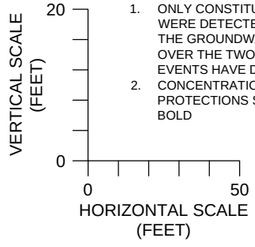
LEGEND:



- WELL/BORING ID
- EXISTING GRADE (PER 2010 SURVEY DATA)
- LITHOLOGIC CONTACT (DASHED WHERE INFERRED)
- DOUBLE CASING (SHADED SECTION)
- GROUNDWATER LEVEL MAY 2013
- WELL SCREEN
- WELL/BORING BOTTOM

- Saprolite, Red/Orange/Brown/ Tan/White, Clayey, Silty Sand
- Saprolite, Red/Brown/Tan/ Black/Grey, Sandy, Silt
- Saprolite, Grey/Red/Brown, Sandy Clay
- Partially Weathered Rock
- Bedrock
- Void, Open Space or Very Soft Material, No Recovery
- MW-28 GROUNDWATER RESULTS
- D CONCENTRATION BASED ON DILUTED SAMPLE ANALYSIS

HORIZONTAL DISTANCE (FEET)



NOTES:

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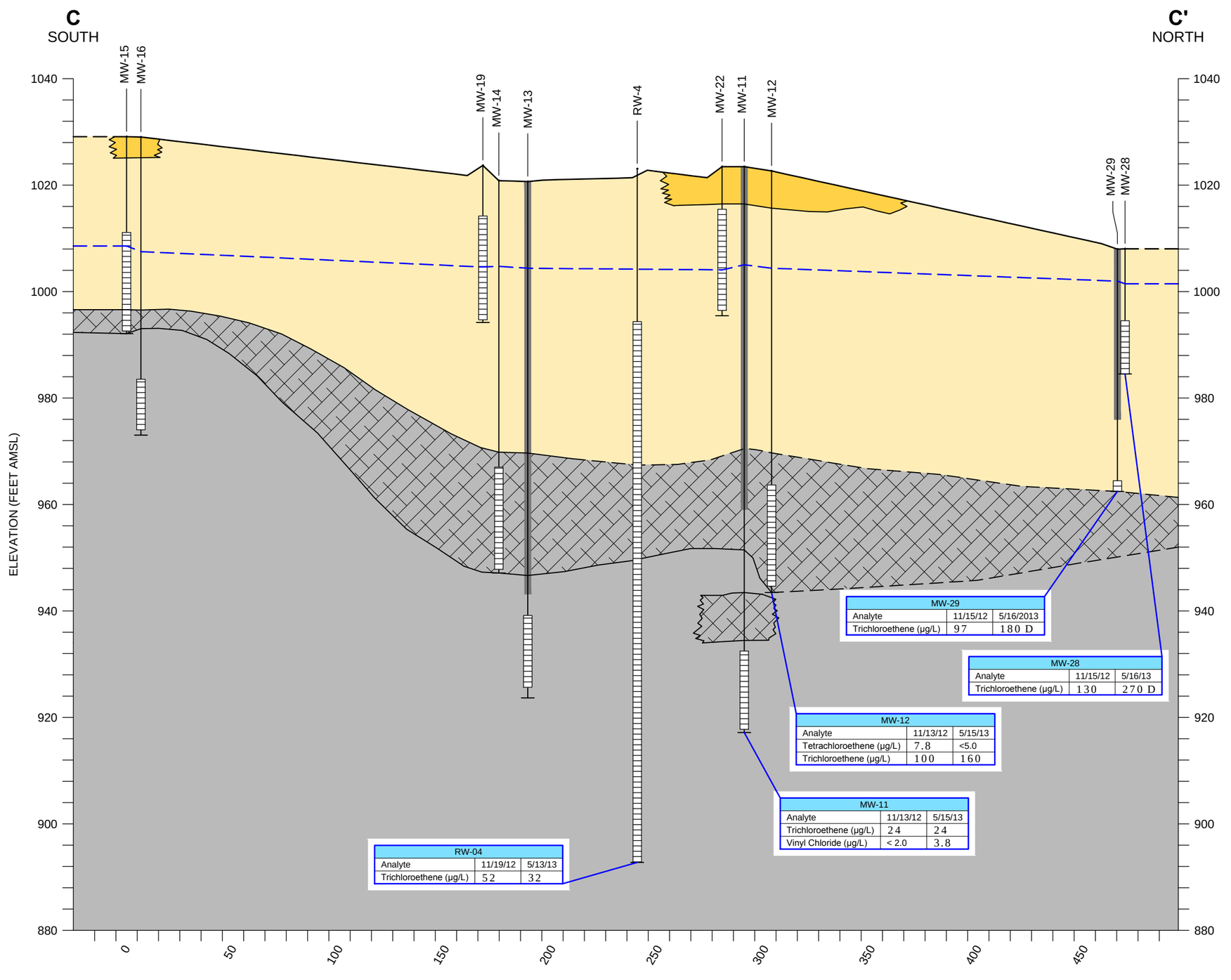
2. CONCENTRATIONS EXCEEDING GROUNDWATER PROTECTIONS STANDARDS ARE SHOWN IN BOLD

LAFARGE ROAD MARKING
2675 NORTH MARTIN STREET
EAST POINT, GEORGIA
VOLUNTARY REMEDIATION PLAN

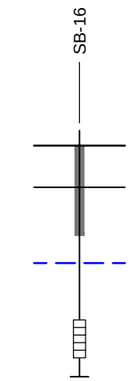
CROSS-SECTION B-B'

ARCADIS

FIGURE
7



LEGEND:



Saprolite, Red/Orange/Brown/Tan/White, Clayey, Silty Sand

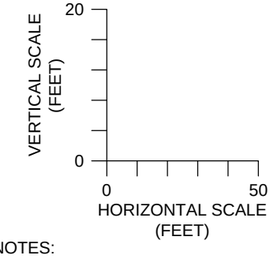
Saprolite, Red/Brown/Tan/Black/Grey, Sandy, Silt

Partially Weathered Rock

Bedrock

MW-28 GROUNDWATER RESULTS

D CONCENTRATION BASED ON DILUTED SAMPLE ANALYSIS



NOTES:

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2. CONCENTRATIONS EXCEEDING GROUNDWATER PROTECTIONS STANDARDS ARE SHOWN IN BOLD.

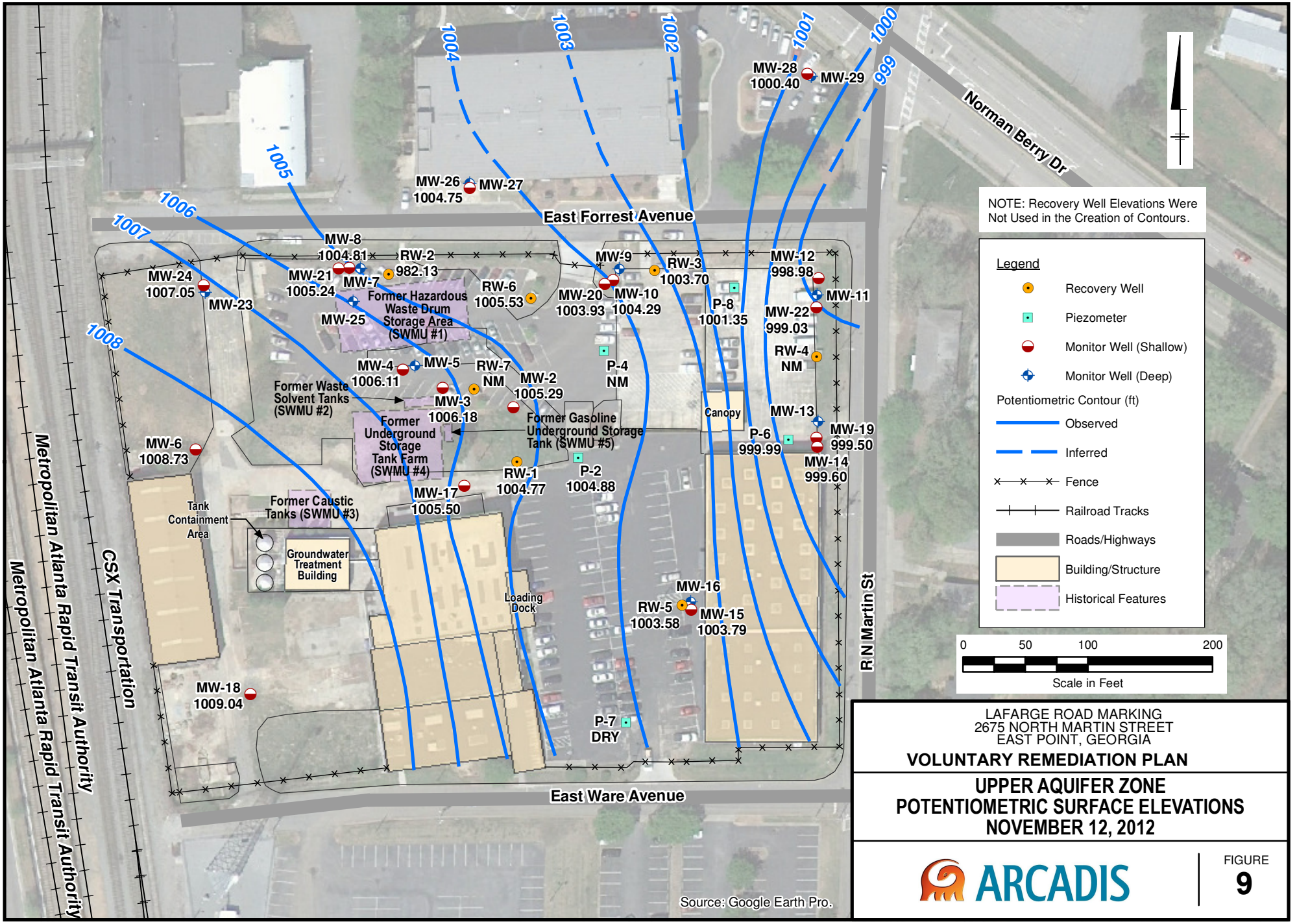
LAFARGE ROAD MARKING
2675 NORTH MARTIN STREET
EAST POINT, GEORGIA
VOLUNTARY REMEDIATION PLAN

CROSS-SECTION C-C'

ARCADIS

FIGURE
8

CITY: AUGUSTA DIV/GROUP: ENV DB: A. Saul LD: A. Saul PIC: PM: TM: TR:
Project Number: Path: G:\ENVCAD\Augusta-GA\ACT\HT212446\0013\00002\GW Mon Report\06_HT212446W01_PSE-UA_11-2012.mxd Date Saved: 3/22/2013 11:08:40 AM



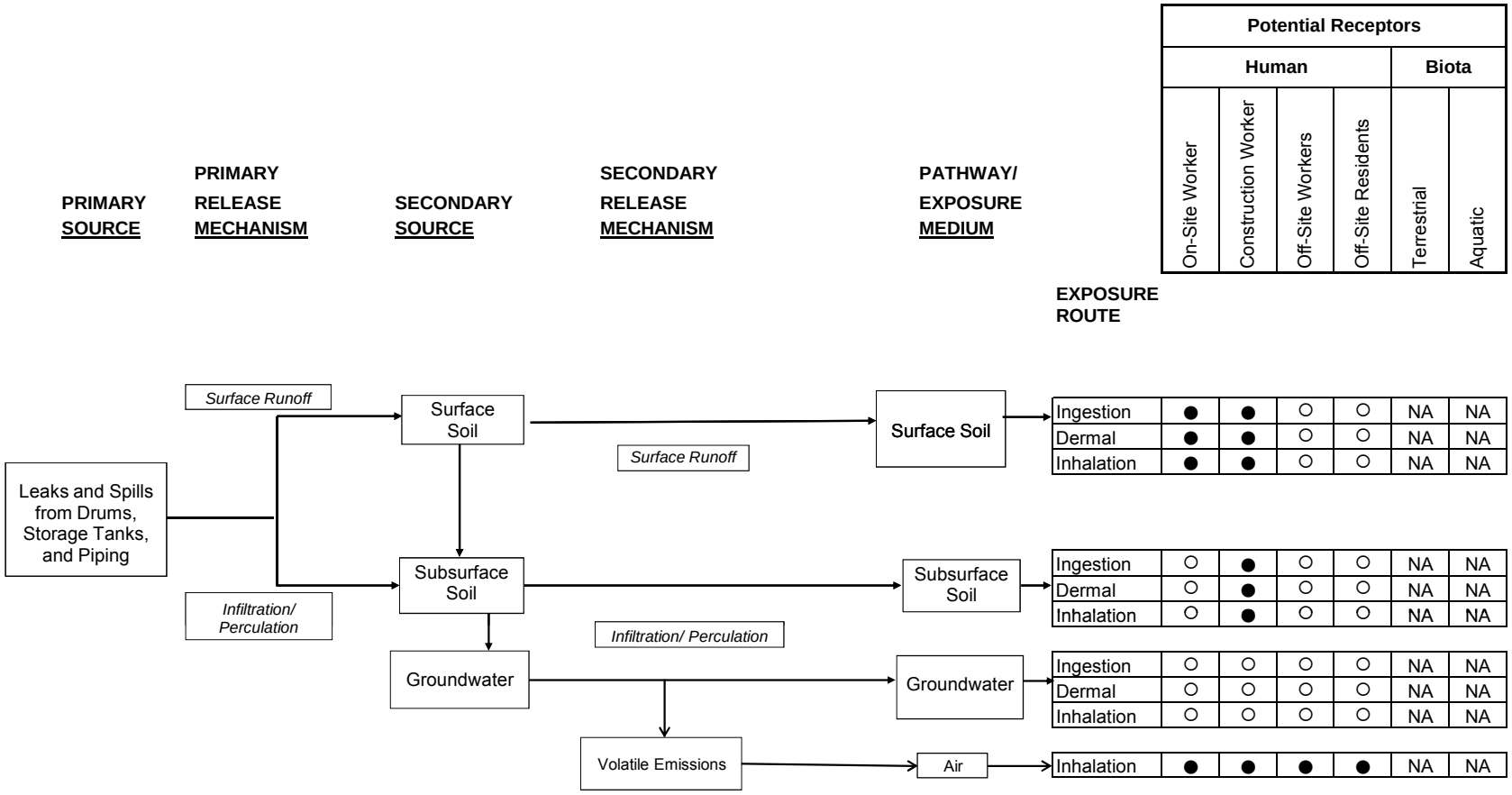
LAFARGE ROAD MARKING
2675 NORTH MARTIN STREET
EAST POINT, GEORGIA

VOLUNTARY REMEDIATION PLAN

UPPER AQUIFER ZONE POTENTIOMETRIC SURFACE ELEVATIONS NOVEMBER 12, 2012

ARCADIS

FIGURE
9



NA Pathway not applicable.
○ Potential pathway - incomplete.
● Potential pathway - complete.

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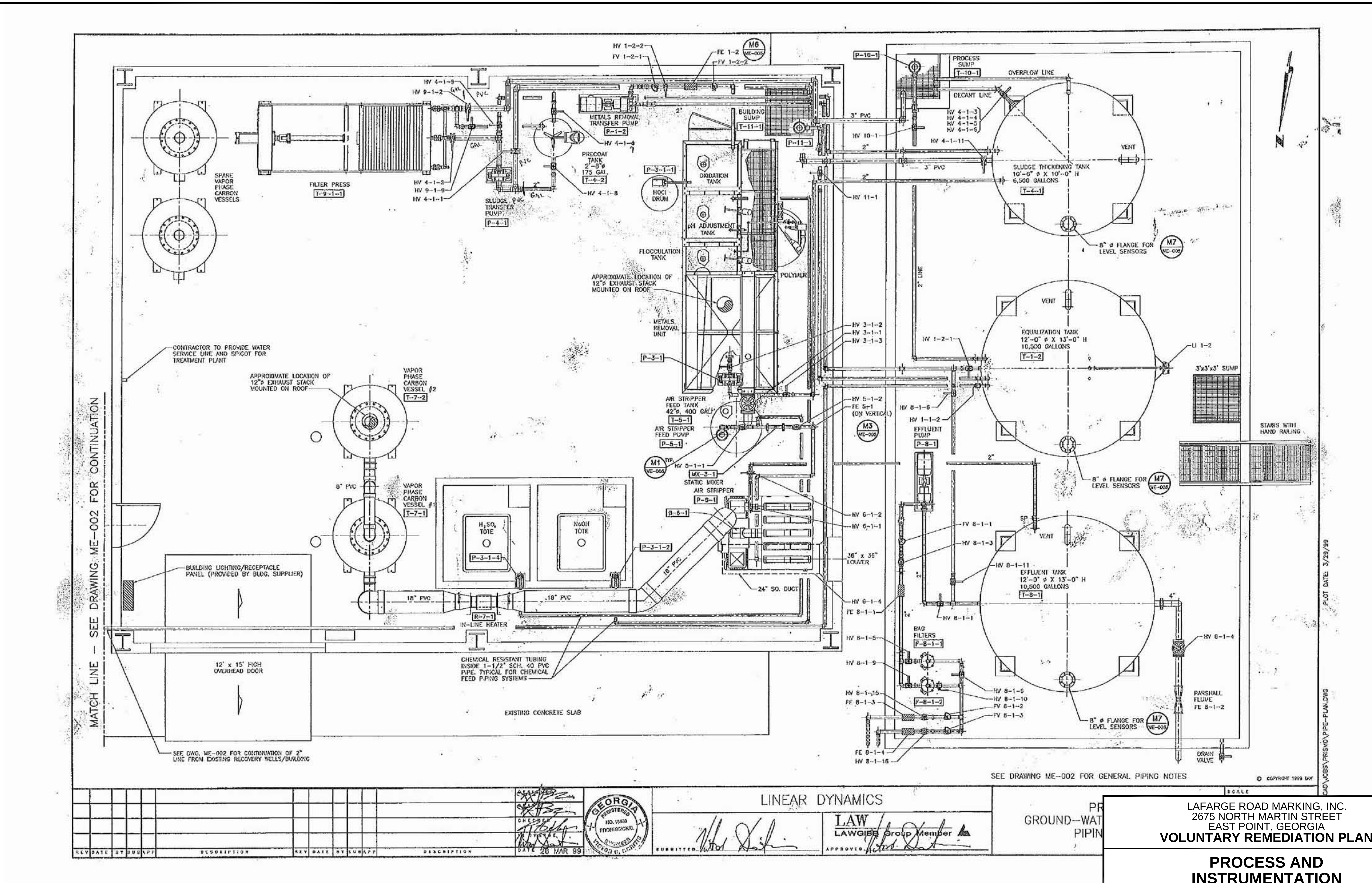
Potential Receptors and Exposure Pathways
Lafarge Road Marking Facility
East Point, GA

FIGURE 10



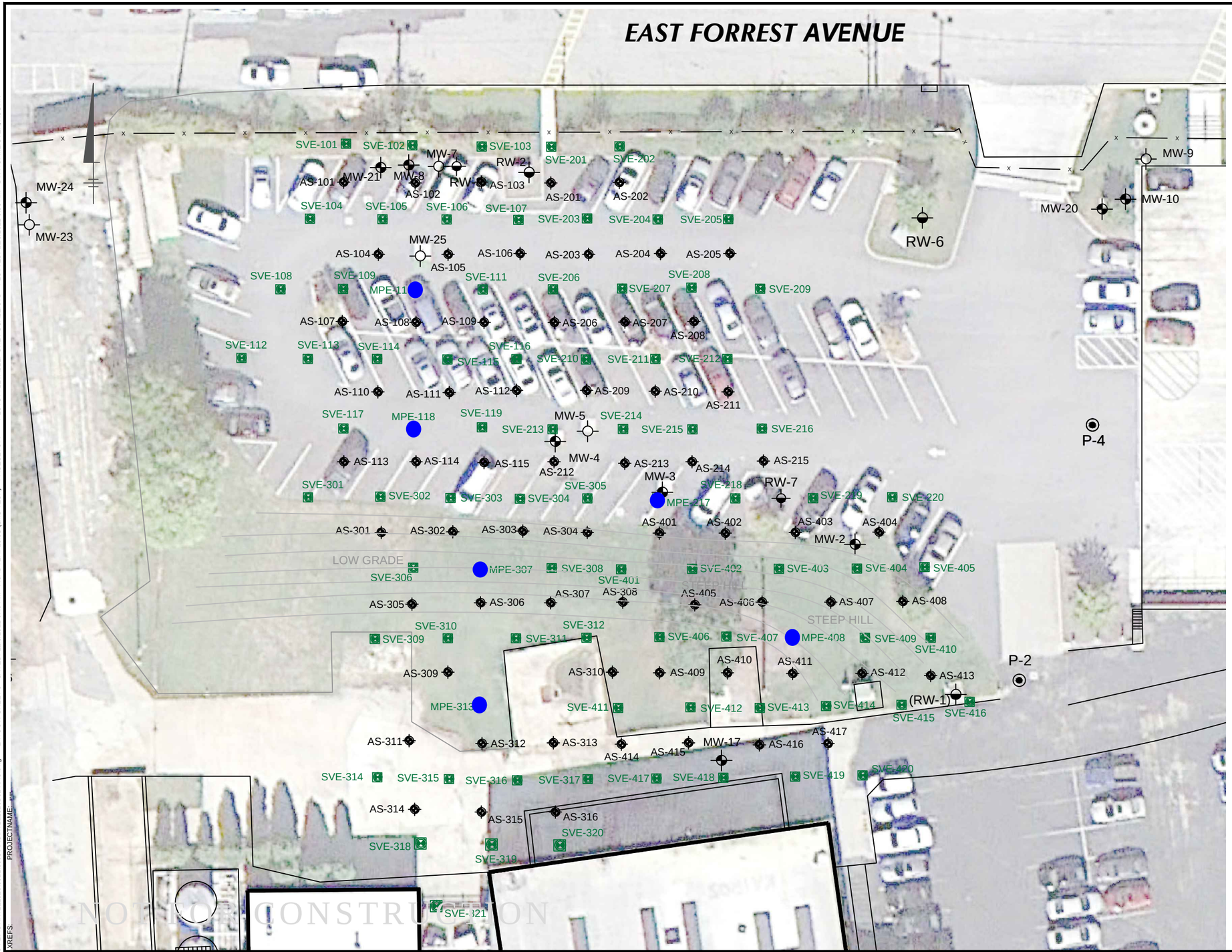
LAFARGE ROAD MARKING, INC.
2675 NORTH MARTIN STREET
EAST POINT, GEORGIA
VOLUNTARY REMEDIATION PLAN

PROCESS AND INSTRUMENTATION DESIGN DRAWING

ARCADIS

FIGURE
11

Source: Law Engineering, Inc.



LEGEND:

- PIEZOMETER
- MONITORING WELL IN UPPER AQUIFER ZONE (RESIDUAL SOIL)
- MONITORING WELL IN LOWER AQUIFER ZONE (FRACTURED ROCK)
- RECOVERY WELL
- (RW-1) RECOVERY WELL NOT IN SERVICE
- PROPOSED AIR SPARGE WELL
- PROPOSED SOIL VAPOR EXTRATION WELL
- PROPOSED MULTI-PHASE EXTRACTION WELL

NOTES:

1. THE FOLLOWING MAPS ARE REFERECED:
   A. FIGURE 16 - MIP, SOIL MATRIX, AND GRAB GROUNDWATER LOCATIONS, PREPARED BY GEOTRANS, INC.
   B. PROPOSED OFF SITE BORING LOCATIONS, FIGURE 20, PREPARED BY LAND WASTE SOLUTIONS, ACWORTH, GEORGIA.
2. THIS MAP IS A COMPILATION OF ABOVE REFERENCED MAPS. SCALE IS APPROXIMATE.

Professional Engineer's
KEVIN M WARNER, P.E.

P.E.'s Number	State	Date Signed
22508	GA	

0 15' 30' 60'
SCALE IN FEET

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING: USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Ckd

Project Mgr.	(RD)
Designed by	(PXC)
Drawn by	(ALH)
Checked by	(KMW)

ARCADIS U.S., INC.

LAFARGE ROAD MARKING EAST POINT GEORGIA
LAFARGE ROAD MARKING CONSTRUCTION DRAWINGS

Proposed SVE, MPE & Sparge Well Locations

ARCADIS Project No.	HT212516.0B01
Date	NOVEMBER 2012

ARCADIS
3522 Thomasville Rd
Tallahassee, FL 32309

12

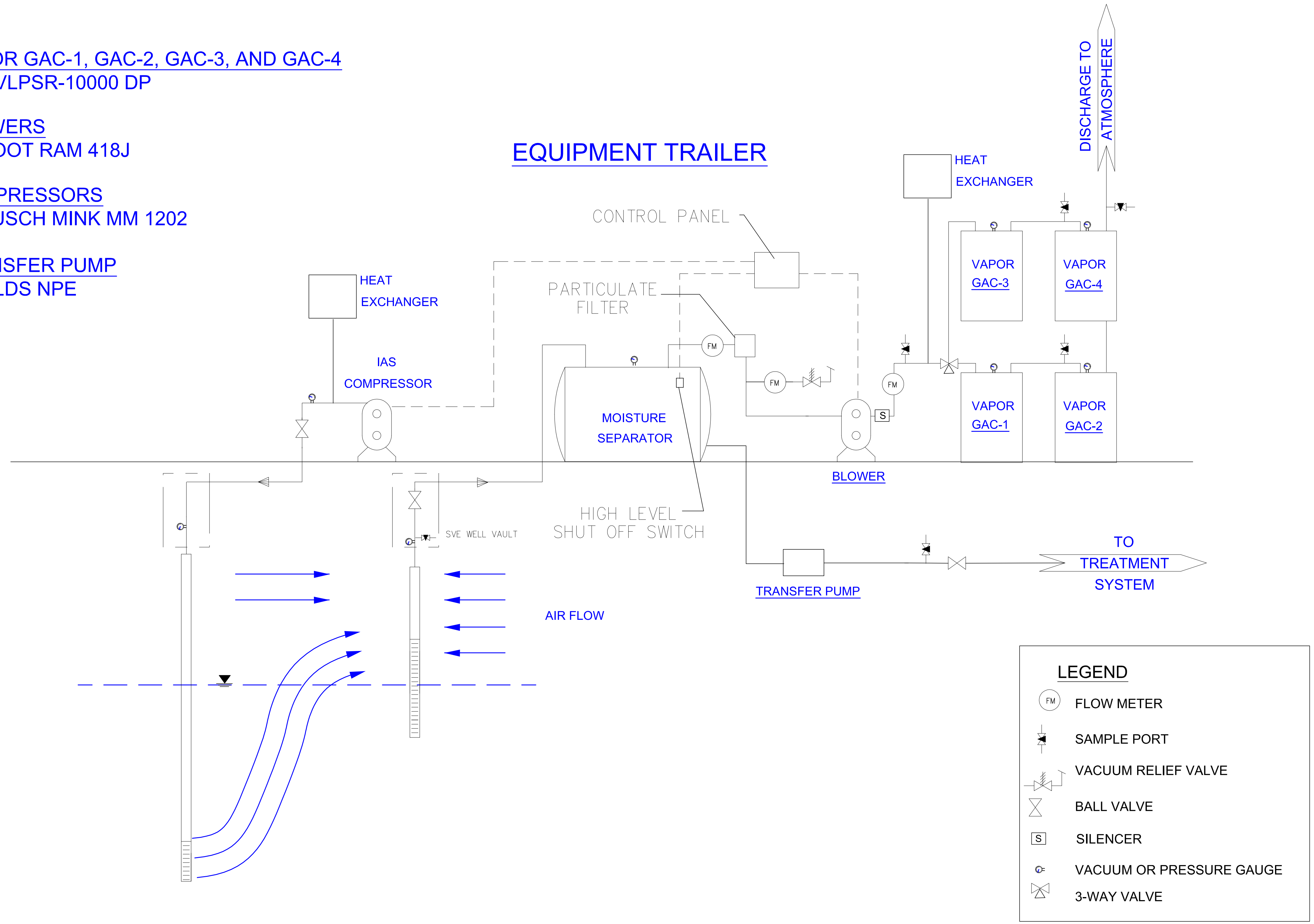
CITY: DIV/GROUP: DB: LD: PIC: PM: TM: LYR:ON=*;OFF=*REF*
G:\ENVCAD\Tallahassee-FL\ACTIVE\HT212516\0012\0003\RAC\HT212516B01 RAC.dwg
PROJECTNAME:
XREFS:
LAYOUT: SHEET 5 SAVED: 11/6/2012 6:49 AM ACADVER: 18.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: GREY SCALE.CTB PLOTTED: 11/6/2012 6:53 AM BY: HOFMEISTER, AUSTIN

VAPOR GAC-1, GAC-2, GAC-3, AND GAC-4
ESD VLPSR-10000 DP

BLOWERS
(2) ROOT RAM 418J

COMPRESSORS
(2) BUSCH MINK MM 1202

TRANSFER PUMP
GOULDS NPE



Lafarge Road Marking
2675 North Main Street
East Point, Georgia

SYSTEM PROCESS FLOW DIAGRAM

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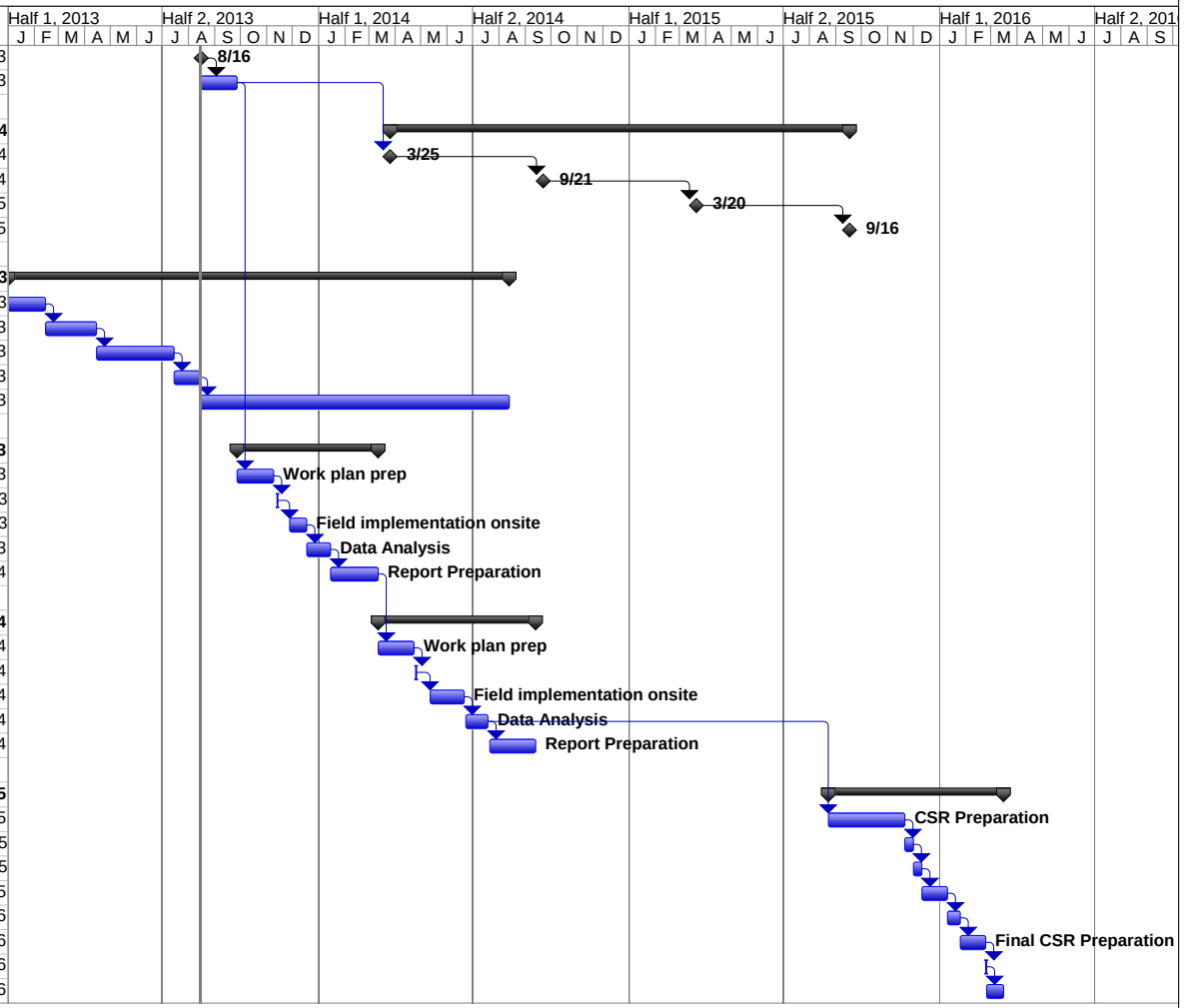
FIGURE
13

FINAL

Figure 14. VRP Project Milestone Schedule
Former Lafarge Road Marking Facility
East Point, Georgia

ID	Task Name	Duration	Start
1	Revised VRP Application Submittal	0 days	Fri 8/16/13
2	EPD Approval of Revised VRP Application	30 days	Fri 8/16/13
3			
4	**Semiannual Report**	**386 days**	**Tue 3/25/14**
5	First Semiannual Report	0 days	Tue 3/25/14
6	Second Semiannual Report	0 days	Sun 9/21/14
7	Third Semiannual Report	0 days	Fri 3/20/15
8	Fourth Semiannual Report	0 days	Wed 9/16/15
9			
10	**Design and Construct Pilot-Study System**	**421 days**	**Tue 1/1/13**
11	Finalize Design	44 edays	Tue 1/1/13
12	Permitting and Preparation	60 edays	Thu 2/14/13
13	Field Implementation	91 edays	Mon 4/15/13
14	Initial System Testing and Start-up	30 edays	Mon 7/15/13
15	Pilot System Operation and Data Collection	364 edays	Wed 8/14/13
16			
17	**Onsite Soil and Groundwater Delineation**	**118 days**	**Fri 9/27/13**
18	Prepare Work Plan	31 days	Fri 9/27/13
19	Work Plan Review Meeting	1 day	Wed 11/13/13
20	Field Implementation	20 edays	Wed 11/27/13
21	Data Analysis	4 wks	Wed 12/18/13
22	Report Preparation	8 wks	Wed 1/15/14
23			
24	**Offsite Soil and Groundwater Delineation**	**133 days**	**Wed 3/12/14**
25	Prepare Work Plan	30 days	Wed 3/12/14
26	Work Plan Review Meeting	1 day	Fri 4/25/14
27	Field Implementation	30 days	Mon 5/12/14
28	Data Analysis	4 wks	Mon 6/23/14
29	Report Preparation	8 wks	Mon 7/21/14
30			
31	**Prepare Compliance Status Report**	**147 days**	**Sat 8/22/15**
32	Prepare draft	90 edays	Sat 8/22/15
33	Internal review	10 edays	Fri 11/20/15
34	Revise and submit to EPD	10 edays	Mon 11/30/15
35	EPD review	30 edays	Thu 12/10/15
36	Respond to comments	15 edays	Sat 1/9/16
37	Prepare Final CSR	30 edays	Sun 1/24/16
38	Submit CSR	1 day	Wed 2/24/16
39	EPD approval of CSR	20 edays	Wed 2/24/16



Project: fig 6 schedule
Date: Thu 8/15/13

Task	External Tasks	Manual Task	Finish-only		
Split	External Milestone	Duration-only	Progress		
Milestone	Inactive Task	Manual Summary Rollup	Deadline		
Summary	Inactive Milestone	Manual Summary			
Project Summary	Inactive Summary	Start-only			

ARCADIS

Appendix A

Warranty Deed and Related Documents

Deed Book 43847 Pg 37
Filed and Recorded Nov-08-2006 08:30am
2006-0373069
Real Estate Transfer Tax $695.00
Juanita Hicks
Clerk of Superior Court
Fulton County, Georgia

RECORD AND RETURN TO:
Neil S. Morrisroe, Esq.
McLain & Merritt, P.C.
3445 Peachtree Road, N.E., Suite 500
Atlanta, Georgia 30326-1276
06CM-038/JB

STATE OF GEORGIA
COUNTY OF FULTON

LIMITED WARRANTY DEED

THIS INDENTURE made this 6th day of November, 2006, by and between **LAFARGE ROAD MARKING, INC.**, as party of the first part, hereinafter referred to as "Grantor," and **SOUTH CENTRAL STATION, LLC**, as party of the second part, hereinafter referred to as "Grantee";

WITNESSETH:

That Grantor for and in consideration of the sum of TEN DOLLARS, in hand paid, at or before the sealing and delivery of these presents, the receipt of which is hereby acknowledged, has granted, bargained, and conveyed, and by these presents does hereby grant, bargain, and convey unto Grantee, their heirs, successors and assigns, the following described property, to wit:

All that tract or parcel of land lying and being in Land Lot ~~133~~ 150 of the 14th District, Fulton County, Georgia, and being more particularly described in Exhibit "A" attached hereto and made a part hereof by reference, TOGETHER WITH all rights, members, structures, easements, alleys, ways, appurtenances, improvements, chattels, timber, shrubbery, trees, plants, fixtures, privileges, tenements or hereditaments.

SUBJECT ONLY to those matters set forth and described on Exhibit "B" attached hereto and incorporated herein by reference (hereinafter referred to as the "Permitted Exceptions"), incident or appurtenant thereto (hereinafter referred to collectively as the "Property").

TO HAVE AND TO HOLD the Property, with all and singular the rights, members and appurtenances thereof, to the same being, belonging or in anywise appertaining to the only proper use, benefit and behoof of Grantee, their heirs, successors and assigns forever, in Fee Simple.

AND THE GRANTOR will warrant and forever defend the right and title to the above-described property unto the Grantee, their heirs, successors and assigns, against the claims of all persons claiming by, through or under Grantor, subject only to the Permitted Exceptions.

IN WITNESS WHEREOF, the Grantor has signed and sealed this deed the day and year first above written.

Signed, sealed and delivered in the presence of:

Unofficial Witness

Notary Public
My Commission expires: 7-17-2008

[Notary Seal]

OFFICIAL SEAL
MADELEINE R. VASQUEZ
NOTARY PUBLIC - NEW JERSEY
My Comm. Expires 7-17-2008

LAFARGE ROAD MARKING, INC., a Delaware corporation, successor by merger to Prismo Safety Corporation, a Delaware corporation

By: _____
Joseph McCarthy, Secretary

[Corporate Seal]

LAFARGE ROAD MARKING, INC. CORPORATE SEAL DELAWARE

EXHIBIT "A"
(Legal Description)

ALL THAT TRACT OR PARCEL OF LAND lying and being in Land Lot 156 of the 14th District of Fulton County, Georgia, and being more particularly described as follows:

BEGINNING at the intersection of the northerly right-of-way of East Ware Avenue (a 50-foot right-of-way) with the westerly right-of-way of North Martin Street (a 50-foot right-of-way) and running thence South 87°34'30" West along the northerly right-of-way of East Ware Avenue a distance of 331.76 feet to an iron pin; continuing thence along the northerly right-of-way of East Ware Avenue South 82°12'30" West a distance of 198.66 feet to the easterly right-of-way of Central of Georgia Railroad Company; running thence North 11°17'30" West along the easterly right-of-way of the Central of Georgia Railroad Company 431.42 feet to an iron pin on the southerly right-of-way line of East Forrest Avenue (a 60-foot right-of-way); running thence North 87°47'30" East a distance of 596.27 feet to an iron pin on the westerly right-of-way of North Martin Street; running thence South 02°23'30" East a distance of 405.43 feet to an iron pin and the POINT OF BEGINNING; all as shown on plat of survey for Prismo Safety Corporation, prepared by Watts and Browning, Engineers, dated January 28, 1986.

ARCADIS

Appendix B

Tax Plat Summary and Related Site Access Documents

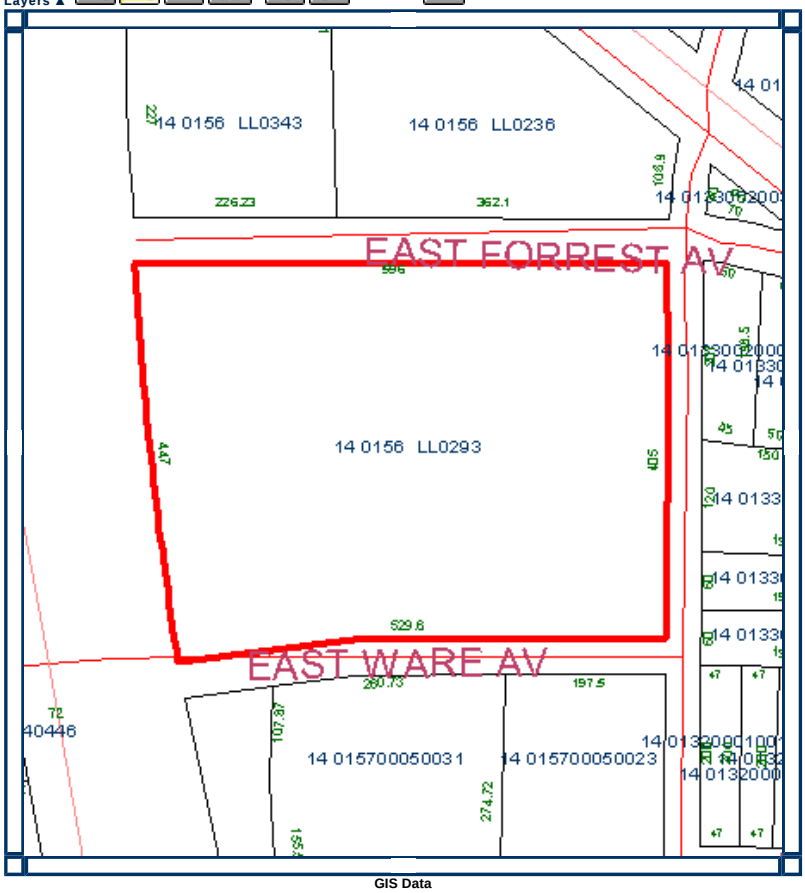
- Profile
- Residential
- Commercial
- Values
- Sales
- Out Buildings
- Sketch
- Map
- Photo

PARID: 14 0156 LL0293
SOUTH CENTRAL STATION LLC **2675 MARTIN ST**

CURRENT RECORD
1 of 1
Return to Search Results

REPORTS
Generic Composite Report
GO

Aerials
Layers ▲



GIS Data
Last GIS Data Update: 19-Jul-2009

AGREEMENT FOR PURCHASE AND SALE

THIS AGREEMENT is made and entered into by and among LAFARGE ROAD MARKING, INC., a Delaware corporation (hereinafter referred to as "Seller"), SOUTH CENTRAL STATION, LLC, a Georgia limited liability company (hereinafter referred to as "Buyer"), and CHICAGO TITLE INSURANCE COMPANY, (hereinafter referred to as "Escrow Agent"),

WITNESSETH: THAT

In consideration of the mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, intending to be legally bound, do hereby agree as follows:

Paragraph 1. Purchase and Sale Agreement.

Subject to and in accordance with the terms and provisions hereof, Seller agrees to sell and Buyer agrees to purchase all that tract or parcel of land described in Exhibit A attached hereto and incorporated herein by this reference (the "Land"), together with any and all improvements located thereon (hereinafter referred to as the "Improvements"). The Land, together with the Improvements, plants, trees, and shrubbery located thereon, and all fixtures within the Improvements or attached thereto or to the Land or located on the Land that are now or hereafter owned by Seller, together with all rights, title and interest of Seller, as landlord, in and to the lease described in item 1 of Exhibit B attached hereto and incorporated herein by this reference (the "Lease"), together with all rights, privileges, members, licenses, and easements appurtenant to the Land or any other of the foregoing items of property now or hereafter owned by Seller being hereinafter collectively referred to as the "Property."

Paragraph 2. Earnest Money

Upon the execution of this Agreement, Buyer will deposit with Escrow Agent the sum of Fifteen Thousand and No/100 Dollars ($15,000 00) The amount or amounts thus deposited with Escrow Agent, together with all interest earned thereon, shall constitute the "Earnest Money" hereunder and shall be held and disbursed pursuant to the terms hereof.

Paragraph 3. Purchase Price.

3 1. Amount. The purchase price for the Property shall be Six Hundred Ninety-Five Thousand and No/100 Dollars ($695,000 00) (hereinafter referred to as the "Purchase Price"). The Purchase Price, as reduced by the amount of the Earnest Money, which shall be paid to Seller at the closing and consummation of the purchase and sale of the Property pursuant hereto (herein referred to as the "Closing"), and as adjusted by the prorations provided in Paragraph 3.2 below, shall be paid by Buyer to Seller at Closing in cash, by wire transfer of immediately available funds.

14.13. Severability. If any term, covenant or condition of this Agreement or the application thereof to any person or circumstance shall to any extent be invalid or unenforceable, the remainder of this Agreement, or the application of such term, covenant or condition to persons or circumstances other than those to which it is held invalid or unenforceable, shall not be affected thereby and such term, covenant or condition shall be valid and enforceable to the fullest extent permitted by law.

14.14. Inspection Reports; Environmental Study. (a) Buyer agrees that, prior to Closing, it shall treat all information and written materials obtained or generated in connection with the conduct of all tests and inspections and those materials delivered to Buyer by Seller as confidential materials and shall not disclose any portion thereof except: (i) to extent required by law; (ii) as my be reasonably requested by Buyer's mortgage lender(s), if any, involved in the transaction contemplated by this Agreement; or (iii) with the express written consent of Seller.

(b) Seller agrees to deliver to Buyer a copy of the Annual Corrective Action Effectiveness Report for 2004 prepared by Land Waste Solutions LLC ("Corrective Action Report"). Buyer shall be permitted to undertake, at its sole cost and expense, to have a Phase I environmental report prepared during the Inspection Period using Seller's environmental engineers Land Waste Solutions LLC ("Phase I"). Buyer shall deliver a copy of such Phase I to Seller within 5 days of completion thereof. If such Phase I report indicates possible material contamination or material non-compliance with environmental laws, other than as has already been identified and is currently being remediated by Seller pursuant to the remediation plan ("Remediation Plan") referenced in Corrective Action Report, Buyer shall have the option of either (i) obtaining a Phase II environmental report to be prepared by Land Waste Solutions LLC at Buyer's sole cost and expense (and a copy of which shall be delivered to Seller) or (ii) terminating this Agreement and refunding the Earnest Money deposit.

14.15. Sellers Obligations After Closing. Seller agrees that Seller shall remain liable after Closing for compliance with soil and groundwater remediation obligations as required by Georgia EPD or U.S. Environmental Protection Agency ("EPA") with the use of the Property considered as industrial or commercial, including but not limited to Georgia EPD Consent Order EPD-HW-562 (the "environmental cleanup work") to the extent relating to soil and groundwater contamination existing at, on, under, or migrating from the Property as of the date of Closing. Such obligations shall include, but not be limited to, operating the groundwater filtration facility (the "Facility") currently located on the Property in compliance with all applicable State and Federal laws, and paying all expenses associated with the operation and maintenance of the said Facility. Such expenses shall include, without limitation, all salaries of personnel required to operate the Facility, all utilities (which shall be separately metered in Seller's name), all cost of monitoring and maintaining the Facility, and all cost associated with the filing of required reports with either the Georgia EPD and/or EPA. Seller agrees to operate the Facility as required pursuant to the Remediation Plan submitted to Georgia EPD in compliance with Consent Order EPD-HW-562. Upon issuance of a final written notice (the "Final Notice") from the Georgia EPD confirming that the soil and groundwater contamination at, on and under the Property has been adequately remediated in accordance with all Georgia EPD and EPA requirements and Georgia EPD Consent Order EPD-HW-562 for industrial properties, Seller agrees, if requested by Buyer, to remove at its

sole cost and expense, all equipment in the Facility and all associated wells and testing equipment on the Property within a reasonable time; provided, however, in no event shall Seller be required to remove or demolish any buildings from the Property. Seller acknowledges that Buyer shall have no obligation and assume no liability whatsoever with respect to, and Seller agrees to indemnify and hold Buyer, Buyer's agents, and lenders harmless from and against any and all loss, damage, expenses, fees, claims, cost and liabilities, including, but not limited to attorneys' fees and cost of litigation, arising out of or in any manner connected to, (i) the soil or groundwater contamination at, on, under, or migrating from the Property as of the date of Closing; and (ii) the soil or groundwater cleanup and removal of hazardous material at, on, under, or migrating from the Property which exist as of the date of Closing (collectively the "Environmental Condition"), except to the extent such Environmental Condition results in obligation or liability as result of the non-industrial or non-commercial use of the Property. Buyer hereby acknowledges and agrees that Seller is selling this Property to Buyer to be used for industrial or commercial use and Buyer hereby covenants and agrees to not convert the Property to a use which is neither non-commercial or non-industrial.

Buyer shall grant Seller access rights as may be reasonably required in order to operate the Facility (as described above) and to comply with its other obligations hereunder, and Seller's indemnification obligations hereunder shall be conditioned upon Buyer (including any of Buyer's successors -in -interest) granting such access rights. Seller's access shall terminate when the Final Notice is received by the Buyer. However, the termination of Seller's access due to the receipt of the Final Notice shall not affect any of Seller's obligations or indemnities under the Agreement, which shall expressly survive (i) the purchase of the property, (ii) the delivery of the deed, and (iii) the termination of Seller's access to the Property. Furthermore, Seller's access and activities thereon shall not unreasonably interfere with Buyer's use and enjoyment of the Property.

At Closing, Seller shall assign to Buyer, to the extent assignable, all of its rights, if any, under any agreements and indemnifications which Seller obtained for its benefit from the prior owner(s) of the property with respect to the environmental conditions of the Propery.

14.16. Remove of Materials. Seller agrees to arrange for the removal of all materials, drums, inventory and personalty from the Property prior to the Closing, except such equipment and other personalty required for the operation of the Facility and the performance of Seller's remediation obligations with respect to the Property.

14.17 Date of This Agreement. "Date of this Agreement" shall mean the date shown on the signature page of this Agreement as the date of the last Seller or Buyer (and not Escrow Agent) to execute this Agreement or otherwise to agree by initialing and dating any counteroffer.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, each of the parties hereto has duly signed and sealed this Agreement, effective as of the date on which this Agreement shall have been fully executed by both Buyer and Seller as indicated by the dates appearing below.

SELLER:

LAFARGE ROAD MARKING, INC.

Date: October 18, 2006

By: _____
Joseph McCarthy
Title: Authorized Representative

BUYER:

SOUTH CENTRAL STATION, LLC

Date: October 16, 2006

By: _____
Kevin J. Brangers, CCIM
Title: Director, Real Estate Services and Acquisitions

ESCROW AGENT:

CHICAGO TITLE INSURANCE COMPANY

Date: October____, 2006

By: _____

Title:

EXHIBIT A

Description of Property

EXHIBIT "A"
(Legal Description)

ALL THAT TRACT OR PARCEL OF LAND lying and being in Land Lot 156 of the 14th District of Fulton County, Georgia, and being more particularly described as follows:

BEGINNING at the intersection of the northerly right-of-way of East Ware Avenue (a 50-foot right-of-way) with the westerly right-of-way of North Martin Street (a 50-foot right-of-way) and running thence South 87°34'30" West along the northerly right-of-way of East Ware Avenue a distance of 331.76 feet to an iron pin; continuing thence along the northerly right-of-way of East Ware Avenue South 82°12'30" West a distance of 198.66 feet to the easterly right-of-way of Central of Georgia Railroad Company; running thence North 11°17'30" West along the easterly right-of-way of the Central of Georgia Railroad Company 431.42 feet to an iron pin on the southerly right-of-way line of East Forrest Avenue (a 60-foot right-of-way); running thence North 87°47'30" East a distance of 596.27 feet to an iron pin on the westerly right-of-way of North Martin Street; running thence South 02°23'30" East a distance of 405.43 feet to an iron pin and the POINT OF BEGINNING; all as shown on plat of survey for Prismo Safety Corporation, prepared by Watts and Browning, Engineers, dated January 28, 1986.

ARCADIS

Appendix C

May 2013 Self Monitoring Report

ARCADIS U.S., Inc.
1000 Cobb Place Boulevard
Building 500-A
Kennesaw, Georgia 30144
Tel 770.428.9009
Fax 770.428.4004
www.arcadis-us.com

Ms. Valencia Renee Williams
DWM-Bureau of Watershed Protection
Division of Inspection & Monitoring
72 Marietta Street (8th Floor)
Atlanta, GA 30303

ENVIRONMENT

Subject:
Monthly Self Monitoring Report – May 2013
Lafarge Road Marking
2675 North Main Street
East Point, GA
Permit No. SG 841

Date:
June 24, 2013

Contact:
David M. Wilderman

Phone:
404.952.1635

Email:
David.wilderman@arcadis-us.com

Our ref:
HT212446.0013

Dear Ms. Williams:

This report is being prepared on behalf of Lafarge Road Marking (LRM) in accordance with Groundwater Discharge Permit SG 841, dated December 15, 2012. The purpose of this report is: 1) to present the quality and quantity of treated groundwater discharged into the municipal pollution control facilities of the City of Atlanta and 2) to compare the discharge water concentrations to the effluent limitations set forth in the permit (Part V).

In accordance with the permit, monthly samples were collected on May 10, 2013 and May 24, 2013. The effluent quality discharge summary for May 2013 is summarized in Table 1 and the daily flow and pH measurements at the discharge point are summarized in the attached Self Monitoring Form. The laboratory reports and chain-of-custody records are also enclosed in this report.

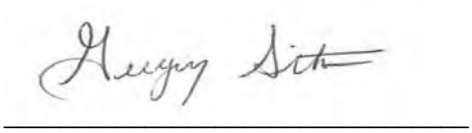
Based on the results of the effluent samples, the monitoring parameters were below the maximum allowable concentrations and pH was between 5 and 12. Other than the treated groundwater that was discharged, no liquid waste, sludge, oil or grease was discharged to the City sewers during the reporting period.

Mr. Sidney Heppern (GA WW3-06336), wastewater Class 3 operator oversees the treatment plant operations. This information is true and accurate to the best of our abilities. We are aware that there are significant penalties for submitting false information.

Please contact us at 770-428-9009 if you have any questions regarding this report and/or the treatment system operating at this location. Alternatively, you can send the assistant project manager an email at: david.wilderman@arcadis-us.com .

Sincerely,

ARCADIS



Gregory Sitomer
Project Engineer

David Wilderman, P.G.
Assistant Project Manager

Enclosure:
Self Monitoring Form
Table 1
Laboratory Reports and COCs

cc:
Mr. Russell J. Dirienzo, LFR
Mr. Joe McCarthy, President, LRM

INDUSTRY NAME: FORMER LAFARGE ROAD MARKINGS-GROUNDWATER SITE

PERMIT# SG841

Month: May **Year:** 2013

Date	Flow-gpd	pH-Low	ph-High	Average pH	Lead	Comments
1	124	6.30	6.72	6.52		
2	133	6.35	6.70	6.52		
3	1464	6.38	7.31	6.70		
4	122	6.87	8.03	7.25		
5	0	6.41	7.63	7.33		
6	0	6.41	8.28	7.42		System downtime due to problem with influent pump
7	3835	6.82	7.62	7.17		
8	32316	7.02	7.37	7.20		
9	16543	6.29	7.71	7.06		
10	16182	7.17	7.32	7.27	BRL	
11	16108	7.28	7.35	7.32		
12	14128	7.28	7.40	7.36		
13	13892	7.23	7.48	7.40		
14	13737	7.28	7.46	7.39		
15	15827	7.29	7.43	7.38		
16	23639	7.22	7.38	7.32		
17	24048	7.14	7.30	7.26		
18	24833	7.21	7.28	7.26		
19	24177	7.26	7.31	7.29		
20	23954	7.28	7.34	7.31		
21	18908	6.31	7.59	7.21		
22	153	6.89	6.94	6.91		
23	22384	6.84	6.94	6.90		
24	23401	6.84	6.95	6.90	BRL	
25	24915	6.84	6.97	6.92		
26	24809	6.84	6.96	6.91		
27	24563	6.84	6.94	6.91		
28	23879	6.82	6.93	6.89		
29	23348	6.80	6.92	6.88		
30	23313	6.81	6.90	6.87		
31	23595	6.80	6.89	6.86		

Note: BRL- Below Reporting Limit

TOTAL	**498,330 GAL**					
AVERAGE	**16,075**	**6.87**	**7.27**	**7.09**		
HIGHEST	**32,316**	**7.29**	**8.28**	**7.42**		
LOWEST	**0**	**6.29**	**6.70**	**6.52**		

SAMPLE POINT LOCATION: Effluent

SAMPLES COLLECTED BY: DDORMINY, IJENKINS

ANALYZED BY: Analytical Environmental Services

COMPANY OFFICIAL

"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 QUAILIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. THIS INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY ABILITIES. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

SIGNATURE:

NAME: David Wilderman, P.G.

TITLE: Assistant Project Manager

CITY USE:

DATE RECEIVED:

CHECKED BY:

ENTERED BY:

ENTERED BY:

Table 1
Summary of Effluent Water Quality
May 2013
Lafarge Road Marking, East Point, GA
Groundwater Discharge Permit No SG 841

Monitoring Parameters	Maximum Allowable Concentrations	Effluent Sampling Date	Effluent Sampling Date
		5/10/2013	5/24/2013
	mg/L	mg/L	mg/L
Acetone	3.000	BRL	BRL
Benzene	0.130	BRL	BRL
2-Butanone	0.020	less than detection limit[1]	less than detection limit[1]
Chlorobenzene	2.350	BRL	BRL
Chloroform	0.420	BRL	BRL
1,1-Dichloroethane	4.580	BRL	BRL
1,1-Dichloroethene	0.003	BRL	BRL
Trans-1,2-Dichloroethene	0.280	BRL	BRL
Ethylbenzene	1.590	BRL	BRL
Ethylene Dichloride	1.050	BRL	BRL
Methylene Chloride	4.150	BRL	BRL
Toluene	1.350	BRL	BRL
1,1,1-Trichloroethane	1.550	BRL	BRL
Trichloroethene	0.710	BRL	BRL
Vinyl chloride	0.003	BRL	BRL
Total Xylenes	1.000	BRL	BRL
Lead	0.653	BRL	BRL

BRL - Below Reporting Limit

[1] - Maximum allowable concentration is less than the detection limit

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

AES

May 22, 2013

Cecilia Reagan
Arcadis
1000 Cobb Place Blvd., Bldg. 500-A
Kennesaw GA 30144

TEL: (404) 952-1621
FAX: (770) 428-4004

RE: Lafarge East Point DMR

Dear Cecilia Reagan: Order No: 1305A05

Analytical Environmental Services, Inc. received 4 samples on 5/11/2013 12:10:00 PM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/12-06/30/13.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/13.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

CRKanhai

Chantelle Kanhai
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3785 Presidential Parkway, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1305A05

Date: 05/10/13 Page 1 of 1

COMPANY: ARCADIS

ADDRESS: 1000 Cobb Place Blvd. Bldg 500A

PHONE: 770.428.9009 FAX: 770.428.4004

SAMPLED BY: D. Downing SIGNATURE:

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	TCL VOCs	Aromatic VOCs in AIR	Total Metals by EPA Method 6020 & 8260	Temp	PRESERVATION (See codes) H	—	N	H	No # of Containers
1	Influent (051013)	051013	1755	✓		GW	2								2
2	Effluent (051013)	051013	1741	✓	✓	GW							1	2	3
3	Effluent GAC1 (051013)	051013	1745	✓		AIR		1							1
4	Trip Blank (051013)	Lab				W	2								2
5	Temp Blank (051013)	Lab								1					1
6															
7															
8															
9															
10															
11															
12															
13															
14															

ANALYSIS REQUESTED

REMARKS

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: D. Downing	05/10/13	1: Evan Jenkins	5/11/13 1948
2: Evan Jenkins	5/11/13 1210	2: Andrews	5.11.13 12:10
3:		3:	

SPECIAL INSTRUCTIONS/COMMENTS:

SHIPMENT METHOD
OUT / / VIA:
IN / / VIA:
CLIENT FedEx UPS MAIL COURIER
GREYHOUND OTHER_____

PROJECT INFORMATION
PROJECT NAME: Lafarge East Point DMR
PROJECT #: HT212446.0013
SITE ADDRESS: 2675 N. Martin St. East Point, GA
SEND REPORT TO: cecilia.reagan@arcadis-us.com
INVOICE TO: (IF DIFFERENT FROM ABOVE)
QUOTE #: PO#:

RECEIPT
Total # of Containers: 9

Turnaround Time Request
- (●) Standard 5 Business Days
- ( ) 2 Business Day Rush
- ( ) Next Business Day Rush
- ( ) Same Day Rush (auth req.)
- ( ) Other _____

STATE PROGRAM (if any): _____
E-mail? Y / N; Fax? Y / N
DATA PACKAGE: I II III IV

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.
SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water
PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc **Date:** 22-May-13

Client:	Arcadis	**Client Sample ID:**	INFLUENT (051013)
Project Name:	Lafarge East Point DMR	**Collection Date:**	5/10/2013 5:55:00 PM
Lab ID:	1305A05-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
1,1,2-Trichloroethane	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
1,1-Dichloroethane	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
1,1-Dichloroethene	5.3	5.0		ug/L	176198	1	05/16/2013 12:16	YT
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
1,2-Dibromoethane	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
1,2-Dichlorobenzene	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
1,2-Dichloroethane	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
1,2-Dichloropropane	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
1,3-Dichlorobenzene	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
1,4-Dichlorobenzene	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
2-Butanone	BRL	50		ug/L	176198	1	05/16/2013 12:16	YT
2-Hexanone	BRL	10		ug/L	176198	1	05/16/2013 12:16	YT
4-Methyl-2-pentanone	BRL	10		ug/L	176198	1	05/16/2013 12:16	YT
Acetone	BRL	50		ug/L	176198	1	05/16/2013 12:16	YT
Benzene	54	5.0		ug/L	176198	1	05/16/2013 12:16	YT
Bromodichloromethane	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
Bromoform	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
Bromomethane	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
Carbon disulfide	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
Carbon tetrachloride	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
Chlorobenzene	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
Chloroethane	BRL	10		ug/L	176198	1	05/16/2013 12:16	YT
Chloroform	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
Chloromethane	BRL	10		ug/L	176198	1	05/16/2013 12:16	YT
cis-1,2-Dichloroethene	2000	100		ug/L	176198	20	05/16/2013 20:56	YT
cis-1,3-Dichloropropene	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
Cyclohexane	27	5.0		ug/L	176198	1	05/16/2013 12:16	YT
Dibromochloromethane	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
Dichlorodifluoromethane	BRL	10		ug/L	176198	1	05/16/2013 12:16	YT
Ethylbenzene	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
Freon-113	BRL	10		ug/L	176198	1	05/16/2013 12:16	YT
Isopropylbenzene	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
m,p-Xylene	320	5.0		ug/L	176198	1	05/16/2013 12:16	YT
Methyl acetate	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
Methyl tert-butyl ether	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
Methylcyclohexane	19	5.0		ug/L	176198	1	05/16/2013 12:16	YT
Methylene chloride	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
o-Xylene	100	5.0		ug/L	176198	1	05/16/2013 12:16	YT

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 22-May-13

Client:	Arcadis	**Client Sample ID:**	INFLUENT (051013)
Project Name:	Lafarge East Point DMR	**Collection Date:**	5/10/2013 5:55:00 PM
Lab ID:	1305A05-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
Tetrachloroethene	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
Toluene	490	100		ug/L	176198	20	05/16/2013 20:56	YT
trans-1,2-Dichloroethene	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
trans-1,3-Dichloropropene	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
Trichloroethene	130	5.0		ug/L	176198	1	05/16/2013 12:16	YT
Trichlorofluoromethane	BRL	5.0		ug/L	176198	1	05/16/2013 12:16	YT
Vinyl chloride	260	40		ug/L	176198	20	05/16/2013 20:56	YT
Surr: 4-Bromofluorobenzene	99.6	64.6-123		%REC	176198	1	05/16/2013 12:16	YT
Surr: 4-Bromofluorobenzene	94.2	64.6-123		%REC	176198	20	05/16/2013 20:56	YT
Surr: Dibromofluoromethane	115	76.6-133		%REC	176198	20	05/16/2013 20:56	YT
Surr: Dibromofluoromethane	108	76.6-133		%REC	176198	1	05/16/2013 12:16	YT
Surr: Toluene-d8	112	77.8-120		%REC	176198	20	05/16/2013 20:56	YT
Surr: Toluene-d8	105	77.8-120		%REC	176198	1	05/16/2013 12:16	YT

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 22-May-13

Client:	Arcadis	**Client Sample ID:**	EFFLUENT (051013)
Project Name:	Lafarge East Point DMR	**Collection Date:**	5/10/2013 5:41:00 PM
Lab ID:	1305A05-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP E200.7				**(E200.7)**				
Lead	BRL	0.0100		mg/L	176153	1	05/16/2013 14:57	MR
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
2-Butanone	BRL	50		ug/L	176162	1	05/15/2013 18:18	AR
Acetone	BRL	50		ug/L	176162	1	05/15/2013 18:18	AR
cis-1,2-Dichloroethene	16	5.0		ug/L	176162	1	05/15/2013 18:18	AR
PRIORITY POLLUTANT-VOLATILES E624				**(E624)**				
1,1,1-Trichloroethane	BRL	2.0		ug/L	176162	1	05/15/2013 18:18	AR
1,1,2,2-Tetrachloroethane	BRL	2.0		ug/L	176162	1	05/15/2013 18:18	AR
1,1,2-Trichloroethane	BRL	2.0		ug/L	176162	1	05/15/2013 18:18	AR
1,1-Dichloroethane	BRL	2.0		ug/L	176162	1	05/15/2013 18:18	AR
1,1-Dichloroethene	BRL	2.0		ug/L	176162	1	05/15/2013 18:18	AR
1,2-Dichlorobenzene	BRL	5.0		ug/L	176162	1	05/15/2013 18:18	AR
1,2-Dichloroethane	BRL	2.0		ug/L	176162	1	05/15/2013 18:18	AR
1,2-Dichloropropane	BRL	2.0		ug/L	176162	1	05/15/2013 18:18	AR
1,3-Dichlorobenzene	BRL	5.0		ug/L	176162	1	05/15/2013 18:18	AR
1,4-Dichlorobenzene	BRL	5.0		ug/L	176162	1	05/15/2013 18:18	AR
2-Chloroethyl vinyl ether	BRL	10		ug/L	176162	1	05/15/2013 18:18	AR
Acrolein	BRL	50		ug/L	176162	1	05/15/2013 18:18	AR
Acrylonitrile	BRL	50		ug/L	176162	1	05/15/2013 18:18	AR
Benzene	BRL	2.0		ug/L	176162	1	05/15/2013 18:18	AR
Bromodichloromethane	BRL	10		ug/L	176162	1	05/15/2013 18:18	AR
Bromoform	BRL	10		ug/L	176162	1	05/15/2013 18:18	AR
Bromomethane	BRL	10		ug/L	176162	1	05/15/2013 18:18	AR
Carbon tetrachloride	BRL	2.0		ug/L	176162	1	05/15/2013 18:18	AR
Chlorobenzene	BRL	10		ug/L	176162	1	05/15/2013 18:18	AR
Chloroethane	BRL	5.0		ug/L	176162	1	05/15/2013 18:18	AR
Chloroform	BRL	2.0		ug/L	176162	1	05/15/2013 18:18	AR
Chloromethane	BRL	10		ug/L	176162	1	05/15/2013 18:18	AR
cis-1,3-Dichloropropene	BRL	2.0		ug/L	176162	1	05/15/2013 18:18	AR
Dibromochloromethane	BRL	10		ug/L	176162	1	05/15/2013 18:18	AR
Ethylbenzene	BRL	2.0		ug/L	176162	1	05/15/2013 18:18	AR
m,p-Xylene	BRL	5.0		ug/L	176162	1	05/15/2013 18:18	AR
Methylene chloride	BRL	10		ug/L	176162	1	05/15/2013 18:18	AR
o-Xylene	BRL	5.0		ug/L	176162	1	05/15/2013 18:18	AR
Tetrachloroethene	BRL	2.0		ug/L	176162	1	05/15/2013 18:18	AR
Toluene	BRL	2.0		ug/L	176162	1	05/15/2013 18:18	AR
trans-1,2-Dichloroethene	BRL	2.0		ug/L	176162	1	05/15/2013 18:18	AR
trans-1,3-Dichloropropene	BRL	2.0		ug/L	176162	1	05/15/2013 18:18	AR
Trichloroethene	BRL	2.0		ug/L	176162	1	05/15/2013 18:18	AR

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 22-May-13

Client:	Arcadis	**Client Sample ID:**	EFFLUENT (051013)
Project Name:	Lafarge East Point DMR	**Collection Date:**	5/10/2013 5:41:00 PM
Lab ID:	1305A05-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
PRIORITY POLLUTANT-VOLATILES E624				**(E624)**				
Trichlorofluoromethane	BRL	5.0		ug/L	176162	1	05/15/2013 18:18	AR
Vinyl chloride	BRL	2.0		ug/L	176162	1	05/15/2013 18:18	AR
Xylenes, Total	BRL	5.0		ug/L	176162	1	05/15/2013 18:18	AR
Surr: 4-Bromofluorobenzene	91.8	64.6-123		%REC	176162	1	05/15/2013 18:18	AR
Surr: Dibromofluoromethane	97.5	76.6-133		%REC	176162	1	05/15/2013 18:18	AR
Surr: Toluene-d8	97.6	77.8-120		%REC	176162	1	05/15/2013 18:18	AR

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 22-May-13

Client:	Arcadis	**Client Sample ID:**	TRIP BLANK
Project Name:	Lafarge East Point DMR	**Collection Date:**	5/11/2013
Lab ID:	1305A05-004	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
1,1,2-Trichloroethane	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
1,1-Dichloroethane	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
1,1-Dichloroethene	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
1,2-Dibromoethane	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
1,2-Dichlorobenzene	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
1,2-Dichloroethane	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
1,2-Dichloropropane	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
1,3-Dichlorobenzene	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
1,4-Dichlorobenzene	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
2-Butanone	BRL	50		ug/L	176198	1	05/16/2013 15:38	YT
2-Hexanone	BRL	10		ug/L	176198	1	05/16/2013 15:38	YT
4-Methyl-2-pentanone	BRL	10		ug/L	176198	1	05/16/2013 15:38	YT
Acetone	BRL	50		ug/L	176198	1	05/16/2013 15:38	YT
Benzene	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
Bromodichloromethane	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
Bromoform	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
Bromomethane	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
Carbon disulfide	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
Carbon tetrachloride	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
Chlorobenzene	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
Chloroethane	BRL	10		ug/L	176198	1	05/16/2013 15:38	YT
Chloroform	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
Chloromethane	BRL	10		ug/L	176198	1	05/16/2013 15:38	YT
cis-1,2-Dichloroethene	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
cis-1,3-Dichloropropene	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
Cyclohexane	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
Dibromochloromethane	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
Dichlorodifluoromethane	BRL	10		ug/L	176198	1	05/16/2013 15:38	YT
Ethylbenzene	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
Freon-113	BRL	10		ug/L	176198	1	05/16/2013 15:38	YT
Isopropylbenzene	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
m,p-Xylene	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
Methyl acetate	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
Methyl tert-butyl ether	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
Methylcyclohexane	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
Methylene chloride	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
o-Xylene	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 22-May-13

Client:	Arcadis	**Client Sample ID:**	TRIP BLANK
Project Name:	Lafarge East Point DMR	**Collection Date:**	5/11/2013
Lab ID:	1305A05-004	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
Tetrachloroethene	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
Toluene	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
trans-1,2-Dichloroethene	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
trans-1,3-Dichloropropene	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
Trichloroethene	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
Trichlorofluoromethane	BRL	5.0		ug/L	176198	1	05/16/2013 15:38	YT
Vinyl chloride	BRL	2.0		ug/L	176198	1	05/16/2013 15:38	YT
Surr: 4-Bromofluorobenzene	94.8	64.6-123		%REC	176198	1	05/16/2013 15:38	YT
Surr: Dibromofluoromethane	108	76.6-133		%REC	176198	1	05/16/2013 15:38	YT
Surr: Toluene-d8	109	77.8-120		%REC	176198	1	05/16/2013 15:38	YT

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Results
for
Arcadis

Date: 22-May-13

Workorder: 1305A05

Client Reference: Lafarge East Point DMR

Analyte	Concentration					Limit of Detection (ug)	Qual	Date Analyzed /Analyst		Test Method
	Total (ug)	Front (ug)	Back (ug)	(mg/m3)	(ppm)					
Client ID: EFFLUENT GAC (051013)	**Lab ID:** 003A	**Date Sampled:** 5/10/2013		**Media:** Tedlar Bag		**Air Vol.(L):** 1				
1,1,1-Trichloroethane	<10			<10	<1.8	10		5/13/2013	YT	EPA18
1,1-Dichloroethene	<10			<10	<2.5	10		5/13/2013	YT	EPA18
2-Butanone	<10			<10	<3.4	10		5/13/2013	YT	EPA18
4-Methyl-2-pentanone	<10			<10	<2.4	10		5/13/2013	YT	EPA18
Acetone	<10			<10	<4.2	10		5/13/2013	YT	EPA18
Benzene	<10			<10	<3.1	10		5/13/2013	YT	EPA18
Carbon tetrachloride	<10			<10	<1.6	10		5/13/2013	YT	EPA18
Chloroform	<10			<10	<2.0	10		5/13/2013	YT	EPA18
cis-1,2-Dichloroethene	<10			<10	<2.5	10		5/13/2013	YT	EPA18
Diethyl ether	<10			<10	<3.3	10		5/13/2013	YT	EPA18
Ethylbenzene	<10			<10	<2.3	10		5/13/2013	YT	EPA18
Freon 141B	<10			<10	<2.1	10		5/13/2013	YT	EPA18
m,p-Xylene	<20			<20	<4.6	20		5/13/2013	YT	EPA18
Methyl tert-butyl ether	<10			<10	<2.8	10		5/13/2013	YT	EPA18
Methylene chloride	<10			<10	<2.9	10		5/13/2013	YT	EPA18
n-Heptane	<10			<10	<2.4	10		5/13/2013	YT	EPA18
n-Hexane	<10			<10	<2.8	10		5/13/2013	YT	EPA18
Naphthalene	<10			<10	<1.9	10		5/13/2013	YT	EPA18
o-Xylene	<10			<10	<2.3	10		5/13/2013	YT	EPA18
Tetrachloroethene	<10			<10	<1.5	10		5/13/2013	YT	EPA18
Toluene	<10			<10	<2.7	10		5/13/2013	YT	EPA18
trans-1,2-Dichloroethene	<10			<10	<2.5	10		5/13/2013	YT	EPA18
Trichloroethene	<10			<10	<1.9	10		5/13/2013	YT	EPA18
TRPH (Based on Benzene)	<100			<100	<31	100		5/13/2013	YT	EPA18
Vinyl chloride	<10			<10	<3.9	10		5/13/2013	YT	EPA18

(a) Analysis indicates possible breakthrough; back section result is greater than 10 % of the front section result.

General Notes:
<: Less than the indicated limit of detection (LOD).
--: Information not available or not applicable.
Back sections were checked and showed no significant breakthrough.

Results are blank corrected where applicable.

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Arcadis Work Order Number 1305A05

Checklist completed by [signature] 5/11/13
Signature Date

Carrier name: FedEx __ UPS __ Courier __ Client ✓ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes __ No __ Not Present ✓

Custody seals intact on sample bottles? Yes __ No __ Not Present ✓

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ✓ No __

Cooler #1 3.2 Cooler #2 _____ Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ✓ No __

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted __ Yes ✓ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by _____

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

Client: Arcadis
Project: Lafarge East Point DMR
Lab Order: 1305A05

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1305A05-001A	INFLUENT (051013)	5/10/2013 5:55:00PM	Groundwater	TCL VOLATILE ORGANICS		05/15/2013	05/16/2013
1305A05-002A	EFFLUENT (051013)	5/10/2013 5:41:00PM	Groundwater	PP-VOLATILES		05/14/2013	05/15/2013
1305A05-002A	EFFLUENT (051013)	5/10/2013 5:41:00PM	Groundwater	TCL VOLATILE ORGANICS		05/14/2013	05/15/2013
1305A05-002B	EFFLUENT (051013)	5/10/2013 5:41:00PM	Groundwater	Total Metals by ICP		05/15/2013	05/16/2013
1305A05-003A	EFFLUENT GAC (051013)	5/10/2013 5:45:00PM	Air	Aromatic Volatiles in Air		05/11/2013	05/13/2013
1305A05-003A	EFFLUENT GAC (051013)	5/10/2013 5:45:00PM	Air	Chlorinated Volatiles in Air		05/11/2013	05/13/2013
1305A05-003A	EFFLUENT GAC (051013)	5/10/2013 5:45:00PM	Air	Volatile Hydrocarbons in Air		05/11/2013	05/13/2013
1305A05-004A	TRIP BLANK	5/11/2013 12:00:00AM	Aqueous	TCL VOLATILE ORGANICS		05/15/2013	05/16/2013

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305A05

ANALYTICAL QC SUMMARY REPORT

BatchID: 176153

Sample ID: **MB-176153**	Client ID:				Units: **mg/L**		Prep Date: **05/15/2013**		Run No: **244151**
SampleType: **MBLK**	TestCode: **Total Metals by ICP** **E200.7**				BatchID: **176153**		Analysis Date: **05/16/2013**		Seq No: **5111936**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	BRL	0.0100	0	0	0	0	0	0	0	0	

Sample ID: **LCS-176153**	Client ID:				Units: **mg/L**		Prep Date: **05/15/2013**		Run No: **244151**
SampleType: **LCS**	TestCode: **Total Metals by ICP** **E200.7**				BatchID: **176153**		Analysis Date: **05/16/2013**		Seq No: **5111935**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	1.068	0.0100	1.000	0	107	85	115	0	0	0	

Sample ID: **1305A19-003AMS**	Client ID:				Units: **mg/L**		Prep Date: **05/15/2013**		Run No: **244151**
SampleType: **MS**	TestCode: **Total Metals by ICP** **E200.7**				BatchID: **176153**		Analysis Date: **05/16/2013**		Seq No: **5111938**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	1.039	0.0100	1.000	0	104	70	130	0	0	0	

Sample ID: **1305A19-003AMSD**	Client ID:				Units: **mg/L**		Prep Date: **05/15/2013**		Run No: **244151**
SampleType: **MSD**	TestCode: **Total Metals by ICP** **E200.7**				BatchID: **176153**		Analysis Date: **05/16/2013**		Seq No: **5111940**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	1.030	0.0100	1.000	0	103	70	130	1.039	0.891	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305A05

ANALYTICAL QC SUMMARY REPORT

BatchID: 176162

Sample ID: **MB-176162** Client ID: Units: **ug/L** Prep Date: **05/14/2013** Run No: **244017**
SampleType: **MBLK** TestCode: **PRIORITY POLLUTANT-VOLATILES E624** BatchID: **176162** Analysis Date: **05/15/2013** Seq No: **5111482**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	2.0	0	0	0	0	0	0	0	0	
1,1,2,2-Tetrachloroethane	BRL	2.0	0	0	0	0	0	0	0	0	
1,1,2-Trichloroethane	BRL	2.0	0	0	0	0	0	0	0	0	
1,1-Dichloroethane	BRL	2.0	0	0	0	0	0	0	0	0	
1,1-Dichloroethene	BRL	2.0	0	0	0	0	0	0	0	0	
1,2-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dichloroethane	BRL	2.0	0	0	0	0	0	0	0	0	
1,2-Dichloropropane	BRL	2.0	0	0	0	0	0	0	0	0	
1,3-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
1,4-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
2-Chloroethyl vinyl ether	BRL	10	0	0	0	0	0	0	0	0	
Acrolein	BRL	50	0	0	0	0	0	0	0	0	
Acrylonitrile	BRL	50	0	0	0	0	0	0	0	0	
Benzene	BRL	2.0	0	0	0	0	0	0	0	0	
Bromodichloromethane	BRL	10	0	0	0	0	0	0	0	0	
Bromoform	BRL	10	0	0	0	0	0	0	0	0	
Bromomethane	BRL	10	0	0	0	0	0	0	0	0	
Carbon tetrachloride	BRL	2.0	0	0	0	0	0	0	0	0	
Chlorobenzene	BRL	10	0	0	0	0	0	0	0	0	
Chloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
Chloroform	BRL	2.0	0	0	0	0	0	0	0	0	
Chloromethane	BRL	10	0	0	0	0	0	0	0	0	
cis-1,3-Dichloropropene	BRL	2.0	0	0	0	0	0	0	0	0	
Dibromochloromethane	BRL	10	0	0	0	0	0	0	0	0	
Ethylbenzene	BRL	2.0	0	0	0	0	0	0	0	0	
m,p-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	
Methylene chloride	BRL	10	0	0	0	0	0	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305A05

ANALYTICAL QC SUMMARY REPORT

BatchID: 176162

Sample ID: **MB-176162** Client ID: Units: **ug/L** Prep Date: **05/14/2013** Run No: **244017**
SampleType: **MBLK** TestCode: **PRIORITY POLLUTANT-VOLATILES E624** BatchID: **176162** Analysis Date: **05/15/2013** Seq No: **5111482**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
o-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	
Tetrachloroethene	BRL	2.0	0	0	0	0	0	0	0	0	
Toluene	BRL	2.0	0	0	0	0	0	0	0	0	
trans-1,2-Dichloroethene	BRL	2.0	0	0	0	0	0	0	0	0	
trans-1,3-Dichloropropene	BRL	2.0	0	0	0	0	0	0	0	0	
Trichloroethene	BRL	2.0	0	0	0	0	0	0	0	0	
Trichlorofluoromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Vinyl chloride	BRL	10	0	0	0	0	0	0	0	0	
Xylenes, Total	BRL	5.0	0	0	0	0	0	0	0	0	
Surr: 4-Bromofluorobenzene	47.24	0	50.00	0	94.5	64.6	123	0	0	0	
Surr: Dibromofluoromethane	46.30	0	50.00	0	92.6	76.6	133	0	0	0	
Surr: Toluene-d8	47.45	0	50.00	0	94.9	77.8	120	0	0	0	

Sample ID: **MB-176162** Client ID: Units: **ug/L** Prep Date: **05/14/2013** Run No: **244017**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **176162** Analysis Date: **05/15/2013** Seq No: **5113788**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
2-Butanone	BRL	50	0	0	0	0	0	0	0	0	
Acetone	BRL	50	0	0	0	0	0	0	0	0	
cis-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	

Sample ID: **LCS-176162** Client ID: Units: **ug/L** Prep Date: **05/14/2013** Run No: **244017**
SampleType: **LCS** TestCode: **PRIORITY POLLUTANT-VOLATILES E624** BatchID: **176162** Analysis Date: **05/15/2013** Seq No: **5111477**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	19.91	2.0	20.00	0	99.6	75	125	0	0	0	
1,1,2,2-Tetrachloroethane	18.75	2.0	20.00	0	93.8	61	140	0	0	0	
1,1,2-Trichloroethane	20.03	2.0	20.00	0	100	71	129	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305A05

ANALYTICAL QC SUMMARY REPORT

BatchID: 176162

Sample ID: **LCS-176162** Client ID: Units: **ug/L** Prep Date: **05/14/2013** Run No: **244017**
SampleType: **LCS** TestCode: **PRIORITY POLLUTANT-VOLATILES E624** BatchID: **176162** Analysis Date: **05/15/2013** Seq No: **5111477**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethane	17.75	2.0	20.00	0	88.8	73	128	0	0	0	
1,1-Dichloroethene	19.00	2.0	20.00	0	95.0	51	150	0	0	0	
1,2-Dichlorobenzene	17.84	5.0	20.00	0	89.2	63	137	0	0	0	
1,2-Dichloroethane	19.02	2.0	20.00	0	95.1	68	132	0	0	0	
1,2-Dichloropropane	18.80	2.0	20.00	0	94.0	34	166	0	0	0	
1,3-Dichlorobenzene	18.50	5.0	20.00	0	92.5	73	127	0	0	0	
1,4-Dichlorobenzene	18.64	5.0	20.00	0	93.2	63	137	0	0	0	
2-Chloroethyl vinyl ether	37.60	10	40.00	0	94.0	1	224	0	0	0	
Acrolein	35.92	20	40.00	0	89.8	30	170	0	0	0	
Acrylonitrile	29.60	20	40.00	0	74.0	46	153	0	0	0	
Benzene	19.14	2.0	20.00	0	95.7	64	136	0	0	0	
Bromodichloromethane	18.66	10	20.00	0	93.3	66	135	0	0	0	
Bromoform	16.52	10	20.00	0	82.6	71	129	0	0	0	
Bromomethane	18.32	10	20.00	0	91.6	14	186	0	0	0	
Carbon tetrachloride	19.70	2.0	20.00	0	98.5	73	127	0	0	0	
Chlorobenzene	18.82	10	20.00	0	94.1	66	134	0	0	0	
Chloroethane	18.85	5.0	20.00	0	94.2	38	162	0	0	0	
Chloroform	18.15	2.0	20.00	0	90.8	68	133	0	0	0	
Chloromethane	16.86	10	20.00	0	84.3	1	204	0	0	0	
cis-1,3-Dichloropropene	19.44	2.0	20.00	0	97.2	24	176	0	0	0	
Dibromochloromethane	19.27	10	20.00	0	96.4	68	133	0	0	0	
Ethylbenzene	19.65	2.0	20.00	0	98.2	59	141	0	0	0	
m,p-Xylene	38.21	5.0	40.00	0	95.5	50	150	0	0	0	
Methylene chloride	19.93	10	20.00	0	99.6	61	140	0	0	0	
o-Xylene	18.99	5.0	20.00	0	95.0	50	150	0	0	0	
Tetrachloroethene	20.80	2.0	20.00	0	104	74	127	0	0	0	
Toluene	19.70	2.0	20.00	0	98.5	75	126	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305A05

ANALYTICAL QC SUMMARY REPORT

BatchID: 176162

Sample ID: **LCS-176162** Client ID: Units: **ug/L** Prep Date: **05/14/2013** Run No: **244017**
SampleType: **LCS** TestCode: **PRIORITY POLLUTANT-VOLATILES E624** BatchID: **176162** Analysis Date: **05/15/2013** Seq No: **5111477**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
trans-1,2-Dichloroethene	18.28	2.0	20.00	0	91.4	70	131	0	0	0	
trans-1,3-Dichloropropene	19.92	2.0	20.00	0	99.6	50	150	0	0	0	
Trichloroethene	20.07	2.0	20.00	0	100	67	134	0	0	0	
Trichlorofluoromethane	19.66	5.0	20.00	0	98.3	48	152	0	0	0	
Vinyl chloride	18.44	10	20.00	0	92.2	4	196	0	0	0	
Surr: 4-Bromofluorobenzene	49.34	0	50.00	0	98.7	64.6	123	0	0	0	
Surr: Dibromofluoromethane	45.74	0	50.00	0	91.5	76.6	133	0	0	0	
Surr: Toluene-d8	49.38	0	50.00	0	98.8	77.8	120	0	0	0	

Sample ID: **1305928-004AMS** Client ID: Units: **ug/L** Prep Date: **05/14/2013** Run No: **244017**
SampleType: **MS** TestCode: **PRIORITY POLLUTANT-VOLATILES E624** BatchID: **176162** Analysis Date: **05/15/2013** Seq No: **5111490**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	24.71	2.0	20.00	0	124	52	162	0	0	0	
1,1,2,2-Tetrachloroethane	19.03	2.0	20.00	0	95.2	46	157	0	0	0	
1,1,2-Trichloroethane	24.44	2.0	20.00	0	122	52	150	0	0	0	
1,1-Dichloroethane	22.56	2.0	20.00	0	113	59	155	0	0	0	
1,1-Dichloroethene	27.84	2.0	20.00	0	139	1	234	0	0	0	
1,2-Dichlorobenzene	20.52	5.0	20.00	0	103	18	190	0	0	0	
1,2-Dichloroethane	24.39	2.0	20.00	0	122	49	155	0	0	0	
1,2-Dichloropropane	25.36	2.0	20.00	0	127	1	210	0	0	0	
1,3-Dichlorobenzene	21.03	5.0	20.00	0	105	59	156	0	0	0	
1,4-Dichlorobenzene	20.52	5.0	20.00	0	103	18	190	0	0	0	
2-Chloroethyl vinyl ether	50.72	10	40.00	0	127	1	305	0	0	0	
Acrolein	23.45	20	40.00	0	58.6	30	170	0	0	0	
Acrylonitrile	36.72	20	40.00	0	91.8	30	170	0	0	0	
Benzene	24.99	2.0	20.00	0	125	37	151	0	0	0	
Bromodichloromethane	22.91	10	20.00	0	115	35	155	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305A05

ANALYTICAL QC SUMMARY REPORT

BatchID: 176162

Sample ID: **1305928-004AMS** Client ID: Units: **ug/L** Prep Date: **05/14/2013** Run No: **244017**
SampleType: **MS** TestCode: **PRIORITY POLLUTANT-VOLATILES E624** BatchID: **176162** Analysis Date: **05/15/2013** Seq No: **5111490**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Bromoform	11.27	10	20.00	0	56.4	45	169	0	0	0	
Bromomethane	24.42	10	20.00	0	122	1	242	0	0	0	
Carbon tetrachloride	25.29	2.0	20.00	0	126	70	140	0	0	0	
Chlorobenzene	22.62	10	20.00	0	113	34	160	0	0	0	
Chloroethane	27.33	5.0	20.00	0	137	14	230	0	0	0	
Chloroform	22.45	2.0	20.00	0	112	51	138	0	0	0	
Chloromethane	22.44	10	20.00	0	112	1	273	0	0	0	
cis-1,3-Dichloropropene	19.48	2.0	20.00	0	97.4	1	227	0	0	0	
Dibromochloromethane	18.10	10	20.00	0	90.5	53	149	0	0	0	
Ethylbenzene	23.94	2.0	20.00	0	120	37	162	0	0	0	
m,p-Xylene	48.12	5.0	40.00	0	120	60	140	0	0	0	
Methylene chloride	28.30	10	20.00	0	142	1	221	0	0	0	
o-Xylene	22.76	5.0	20.00	0	114	60	140	0	0	0	
Tetrachloroethene	25.32	2.0	20.00	0	127	64	148	0	0	0	
Toluene	26.49	2.0	20.00	0	132	47	150	0	0	0	
trans-1,2-Dichloroethene	23.96	2.0	20.00	0	120	54	156	0	0	0	
trans-1,3-Dichloropropene	19.74	2.0	20.00	0	98.7	17	183	0	0	0	
Trichloroethene	24.87	2.0	20.00	0	124	71	157	0	0	0	
Trichlorofluoromethane	24.68	5.0	20.00	0	123	17	181	0	0	0	
Vinyl chloride	25.76	10	20.00	0	129	1	251	0	0	0	
Surr: 4-Bromofluorobenzene	50.66	0	50.00	0	101	64.6	123	0	0	0	
Surr: Dibromofluoromethane	49.35	0	50.00	0	98.7	76.6	133	0	0	0	
Surr: Toluene-d8	53.35	0	50.00	0	107	77.8	120	0	0	0	

Sample ID: **1305928-004AMSD** Client ID: Units: **ug/L** Prep Date: **05/14/2013** Run No: **244017**
SampleType: **MSD** TestCode: **PRIORITY POLLUTANT-VOLATILES E624** BatchID: **176162** Analysis Date: **05/15/2013** Seq No: **5111493**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305A05

ANALYTICAL QC SUMMARY REPORT

BatchID: 176162

Sample ID: **1305928-004AMSD** Client ID:
SampleType: **MSD** TestCode: **PRIORITY POLLUTANT-VOLATILES E624**
Units: **ug/L** Prep Date: **05/14/2013** Run No: **244017**
BatchID: **176162** Analysis Date: **05/15/2013** Seq No: **5111493**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	22.42	2.0	20.00	0	112	52	162	24.71	9.72	23	
1,1,2,2-Tetrachloroethane	17.31	2.0	20.00	0	86.6	46	157	19.03	9.47	37	
1,1,2-Trichloroethane	21.89	2.0	20.00	0	109	52	150	24.44	11.0	27.5	
1,1-Dichloroethane	20.19	2.0	20.00	0	101	59	155	22.56	11.1	25.5	
1,1-Dichloroethene	24.93	2.0	20.00	0	125	1	234	27.84	11.0	45.5	
1,2-Dichlorobenzene	18.21	5.0	20.00	0	91.0	18	190	20.52	11.9	35.5	
1,2-Dichloroethane	20.70	2.0	20.00	0	104	49	155	24.39	16.4	30	
1,2-Dichloropropane	22.07	2.0	20.00	0	110	1	210	25.36	13.9	69	
1,3-Dichlorobenzene	18.62	5.0	20.00	0	93.1	59	156	21.03	12.2	27.5	
1,4-Dichlorobenzene	19.00	5.0	20.00	0	95.0	18	190	20.52	7.69	35.5	
2-Chloroethyl vinyl ether	44.15	10	40.00	0	110	1	305	50.72	13.9	130	
Acrolein	24.04	20	40.00	0	60.1	30	170	23.45	2.48	100	
Acrylonitrile	36.05	20	40.00	0	90.1	30	170	36.72	1.84	50	
Benzene	21.47	2.0	20.00	0	107	37	151	24.99	15.2	34.5	
Bromodichloromethane	20.54	10	20.00	0	103	35	155	22.91	10.9	32	
Bromoform	10.98	10	20.00	0	54.9	45	169	11.27	2.61	27	
Bromomethane	24.87	10	20.00	0	124	1	242	24.42	1.83	89.5	
Carbon tetrachloride	22.55	2.0	20.00	0	113	70	140	25.29	11.5	26	
Chlorobenzene	20.38	10	20.00	0	102	34	160	22.62	10.4	31.5	
Chloroethane	24.30	5.0	20.00	0	122	14	230	27.33	11.7	57	
Chloroform	20.18	2.0	20.00	0	101	51	138	22.45	10.6	30.5	
Chloromethane	21.27	10	20.00	0	106	1	273	22.44	5.35	99	
cis-1,3-Dichloropropene	18.28	2.0	20.00	0	91.4	1	227	19.48	6.36	79	
Dibromochloromethane	16.75	10	20.00	0	83.8	53	149	18.10	7.75	30.5	
Ethylbenzene	21.41	2.0	20.00	0	107	37	162	23.94	11.2	37.5	
m,p-Xylene	43.02	5.0	40.00	0	108	60	140	48.12	11.2	30	
Methylene chloride	23.98	10	20.00	0	120	1	221	28.30	16.5	37	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305A05

ANALYTICAL QC SUMMARY REPORT

BatchID: 176162

Sample ID: **1305928-004AMSD** Client ID: Units: **ug/L** Prep Date: **05/14/2013** Run No: **244017**
SampleType: **MSD** TestCode: **PRIORITY POLLUTANT-VOLATILES E624** BatchID: **176162** Analysis Date: **05/15/2013** Seq No: **5111493**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
o-Xylene	20.08	5.0	20.00	0	100	60	140	22.76	12.5	30	
Tetrachloroethene	22.79	2.0	20.00	0	114	64	148	25.32	10.5	25	
Toluene	22.86	2.0	20.00	0	114	47	150	26.49	14.7	24	
trans-1,2-Dichloroethene	21.65	2.0	20.00	0	108	54	156	23.96	10.1	28.5	
trans-1,3-Dichloropropene	18.61	2.0	20.00	0	93.0	17	183	19.74	5.89	52	
Trichloroethene	21.94	2.0	20.00	0	110	71	157	24.87	12.5	33	
Trichlorofluoromethane	23.97	5.0	20.00	0	120	17	181	24.68	2.92	50	
Vinyl chloride	24.52	10	20.00	0	123	1	251	25.76	4.93	100	
Surr: 4-Bromofluorobenzene	51.00	0	50.00	0	102	64.6	123	50.66	0	0	
Surr: Dibromofluoromethane	47.68	0	50.00	0	95.4	76.6	133	49.35	0	0	
Surr: Toluene-d8	53.10	0	50.00	0	106	77.8	120	53.35	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305A05

ANALYTICAL QC SUMMARY REPORT

BatchID: 176198

Sample ID: **MB-176198** Client ID: Units: **ug/L** Prep Date: **05/15/2013** Run No: **244072**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **176198** Analysis Date: **05/15/2013** Seq No: **5111469**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,1,2,2-Tetrachloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,1,2-Trichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,1-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,1-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
1,2,4-Trichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dibromo-3-chloropropane	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dibromoethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dichloroethane	BRL	5.0	0	0	0	0	0	0	0	0	
1,2-Dichloropropane	BRL	5.0	0	0	0	0	0	0	0	0	
1,3-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
1,4-Dichlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
2-Butanone	BRL	50	0	0	0	0	0	0	0	0	
2-Hexanone	BRL	10	0	0	0	0	0	0	0	0	
4-Methyl-2-pentanone	BRL	10	0	0	0	0	0	0	0	0	
Acetone	BRL	50	0	0	0	0	0	0	0	0	
Benzene	BRL	5.0	0	0	0	0	0	0	0	0	
Bromodichloromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Bromoform	BRL	5.0	0	0	0	0	0	0	0	0	
Bromomethane	BRL	5.0	0	0	0	0	0	0	0	0	
Carbon disulfide	BRL	5.0	0	0	0	0	0	0	0	0	
Carbon tetrachloride	BRL	5.0	0	0	0	0	0	0	0	0	
Chlorobenzene	BRL	5.0	0	0	0	0	0	0	0	0	
Chloroethane	BRL	10	0	0	0	0	0	0	0	0	
Chloroform	BRL	5.0	0	0	0	0	0	0	0	0	
Chloromethane	BRL	10	0	0	0	0	0	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305A05

ANALYTICAL QC SUMMARY REPORT

BatchID: 176198

Sample ID: **MB-176198** Client ID: Units: **ug/L** Prep Date: **05/15/2013** Run No: **244072**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **176198** Analysis Date: **05/15/2013** Seq No: **5111469**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
cis-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
cis-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	
Cyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	
Dibromochloromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Dichlorodifluoromethane	BRL	10	0	0	0	0	0	0	0	0	
Ethylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	
Freon-113	BRL	10	0	0	0	0	0	0	0	0	
Isopropylbenzene	BRL	5.0	0	0	0	0	0	0	0	0	
m,p-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	
Methyl acetate	BRL	5.0	0	0	0	0	0	0	0	0	
Methyl tert-butyl ether	BRL	5.0	0	0	0	0	0	0	0	0	
Methylcyclohexane	BRL	5.0	0	0	0	0	0	0	0	0	
Methylene chloride	BRL	5.0	0	0	0	0	0	0	0	0	
o-Xylene	BRL	5.0	0	0	0	0	0	0	0	0	
Styrene	BRL	5.0	0	0	0	0	0	0	0	0	
Tetrachloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
Toluene	BRL	5.0	0	0	0	0	0	0	0	0	
trans-1,2-Dichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
trans-1,3-Dichloropropene	BRL	5.0	0	0	0	0	0	0	0	0	
Trichloroethene	BRL	5.0	0	0	0	0	0	0	0	0	
Trichlorofluoromethane	BRL	5.0	0	0	0	0	0	0	0	0	
Vinyl chloride	BRL	2.0	0	0	0	0	0	0	0	0	
Surr: 4-Bromofluorobenzene	47.42	0	50.00	0	94.8	64.6	123	0	0	0	
Surr: Dibromofluoromethane	52.25	0	50.00	0	104	76.6	133	0	0	0	
Surr: Toluene-d8	52.87	0	50.00	0	106	77.8	120	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305A05

ANALYTICAL QC SUMMARY REPORT

BatchID: 176198

Sample ID: **LCS-176198** Client ID: Units: **ug/L** Prep Date: **05/15/2013** Run No: **244072**
SampleType: **LCS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **176198** Analysis Date: **05/15/2013** Seq No: **5111472**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	59.75	5.0	50.00	0	120	61.1	142	0	0	0	
Benzene	56.02	5.0	50.00	0	112	73.5	130	0	0	0	
Chlorobenzene	47.97	5.0	50.00	0	95.9	72.4	123	0	0	0	
Toluene	57.03	5.0	50.00	0	114	73.6	130	0	0	0	
Trichloroethene	51.66	5.0	50.00	0	103	70	135	0	0	0	
Surr: 4-Bromofluorobenzene	50.86	0	50.00	0	102	64.6	123	0	0	0	
Surr: Dibromofluoromethane	54.04	0	50.00	0	108	76.6	133	0	0	0	
Surr: Toluene-d8	53.83	0	50.00	0	108	77.8	120	0	0	0	

Sample ID: **1305C13-001AMS** Client ID: Units: **ug/L** Prep Date: **05/15/2013** Run No: **244072**
SampleType: **MS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **176198** Analysis Date: **05/15/2013** Seq No: **5111479**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	33810	2500	25000	0	135	60	168	0	0	0	
Benzene	28670	2500	25000	0	115	66.6	148	0	0	0	
Chlorobenzene	24620	2500	25000	0	98.5	71.9	135	0	0	0	
Toluene	28870	2500	25000	0	115	68	149	0	0	0	
Trichloroethene	26960	2500	25000	0	108	71.1	154	0	0	0	
Surr: 4-Bromofluorobenzene	26400	0	25000	0	106	64.6	123	0	0	0	
Surr: Dibromofluoromethane	27680	0	25000	0	111	76.6	133	0	0	0	
Surr: Toluene-d8	26430	0	25000	0	106	77.8	120	0	0	0	

Sample ID: **1305C13-001AMSD** Client ID: Units: **ug/L** Prep Date: **05/15/2013** Run No: **244072**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **176198** Analysis Date: **05/15/2013** Seq No: **5111483**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	32290	2500	25000	0	129	60	168	33810	4.60	18.6	
Benzene	27840	2500	25000	0	111	66.6	148	28670	2.92	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305A05

ANALYTICAL QC SUMMARY REPORT

BatchID: 176198

Sample ID: **1305C13-001AMSD** Client ID:
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B**
Units: **ug/L** Prep Date: **05/15/2013** Run No: **244072**
BatchID: **176198** Analysis Date: **05/15/2013** Seq No: **5111483**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chlorobenzene	23710	2500	25000	0	94.8	71.9	135	24620	3.77	20	
Toluene	28040	2500	25000	0	112	68	149	28870	2.93	20	
Trichloroethene	26420	2500	25000	0	106	71.1	154	26960	2.02	20	
Surr: 4-Bromofluorobenzene	25810	0	25000	0	103	64.6	123	26400	0	0	
Surr: Dibromofluoromethane	27050	0	25000	0	108	76.6	133	27680	0	0	
Surr: Toluene-d8	26620	0	25000	0	106	77.8	120	26430	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305A05

ANALYTICAL QC SUMMARY REPORT

BatchID: 175966

Sample ID: **MB-175966** Client ID: Units: **ug, Total** Prep Date: **05/10/2013** Run No: **243958**
SampleType: **MBLK** TestCode: **Chlorinated Volatiles in Air EPA18** BatchID: **175966** Analysis Date: **05/13/2013** Seq No: **5107651**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	10	0	0	0	0	0	0	0	0	
1,1-Dichloroethene	BRL	10	0	0	0	0	0	0	0	0	
Carbon tetrachloride	BRL	10	0	0	0	0	0	0	0	0	
Chloroform	BRL	10	0	0	0	0	0	0	0	0	
cis-1,2-Dichloroethene	BRL	10	0	0	0	0	0	0	0	0	
Freon 141B	BRL	10	0	0	0	0	0	0	0	0	
Methylene chloride	BRL	10	0	0	0	0	0	0	0	0	
Tetrachloroethene	BRL	10	0	0	0	0	0	0	0	0	
trans-1,2-Dichloroethene	BRL	10	0	0	0	0	0	0	0	0	
Trichloroethene	BRL	10	0	0	0	0	0	0	0	0	
Vinyl chloride	BRL	10	0	0	0	0	0	0	0	0	

Sample ID: **MB-175966** Client ID: Units: **ug, Total** Prep Date: **05/10/2013** Run No: **243959**
SampleType: **MBLK** TestCode: **Volatile Hydrocarbons in Air EPA18** BatchID: **175966** Analysis Date: **05/13/2013** Seq No: **5107699**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
2-Butanone	BRL	10	0	0	0	0	0	0	0	0	
4-Methyl-2-pentanone	BRL	10	0	0	0	0	0	0	0	0	
Acetone	BRL	10	0	0	0	0	0	0	0	0	
Diethyl ether	BRL	10	0	0	0	0	0	0	0	0	
n-Heptane	BRL	10	0	0	0	0	0	0	0	0	
n-Hexane	BRL	10	0	0	0	0	0	0	0	0	

Sample ID: **MB-175966** Client ID: Units: **ug, Total** Prep Date: **05/10/2013** Run No: **243960**
SampleType: **MBLK** TestCode: **Aromatic Volatiles in Air EPA18** BatchID: **175966** Analysis Date: **05/13/2013** Seq No: **5107711**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	BRL	10	0	0	0	0	0	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305A05

ANALYTICAL QC SUMMARY REPORT

BatchID: 175966

Sample ID: **MB-175966** Client ID: Units: **ug, Total** Prep Date: **05/10/2013** Run No: **243960**
SampleType: **MBLK** TestCode: **Aromatic Volatiles in Air EPA18** BatchID: **175966** Analysis Date: **05/13/2013** Seq No: **5107711**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Ethylbenzene	BRL	10	0	0	0	0	0	0	0	0	
m,p-Xylene	BRL	20	0	0	0	0	0	0	0	0	
Methyl tert-butyl ether	BRL	10	0	0	0	0	0	0	0	0	
Naphthalene	BRL	10	0	0	0	0	0	0	0	0	
o-Xylene	BRL	10	0	0	0	0	0	0	0	0	
Toluene	BRL	10	0	0	0	0	0	0	0	0	
TRPH (Based on Benzene)	BRL	100	0	0	0	0	0	0	0	0	

Sample ID: **LCS-175966** Client ID: Units: **ug, Total** Prep Date: **05/10/2013** Run No: **243958**
SampleType: **LCS** TestCode: **Chlorinated Volatiles in Air EPA18** BatchID: **175966** Analysis Date: **05/13/2013** Seq No: **5107654**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	106.2	10	100.0	0	106	84.6	121	0	0	0	
Carbon tetrachloride	107.4	10	100.0	0	107	84.6	124	0	0	0	
Chloroform	103.6	10	100.0	0	104	82.7	117	0	0	0	
Methylene chloride	107.0	10	100.0	0	107	80	116	0	0	0	
Tetrachloroethene	107.4	10	100.0	0	107	80	118	0	0	0	
Trichloroethene	107.8	10	100.0	0	108	80	118	0	0	0	

Sample ID: **LCS-175966** Client ID: Units: **ug, Total** Prep Date: **05/10/2013** Run No: **243959**
SampleType: **LCS** TestCode: **Volatile Hydrocarbons in Air EPA18** BatchID: **175966** Analysis Date: **05/13/2013** Seq No: **5107700**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
2-Butanone	91.45	10	100.0	0	91.5	78.6	120	0	0	0	
4-Methyl-2-pentanone	99.75	10	100.0	0	99.8	80	120	0	0	0	
Acetone	81.11	10	100.0	0	81.1	70	120	0	0	0	
Diethyl ether	99.62	10	100.0	0	99.6	80	120	0	0	0	
n-Heptane	106.8	10	100.0	0	107	80	122	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305A05

ANALYTICAL QC SUMMARY REPORT

BatchID: 175966

Sample ID: **LCS-175966**	Client ID:				Units: **ug, Total**		Prep Date: **05/10/2013**		Run No: **243959**	
SampleType: **LCS**	TestCode: **Volatile Hydrocarbons in Air EPA18**				BatchID: **175966**		Analysis Date: **05/13/2013**		Seq No: **5107700**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
n-Hexane	108.1	10	100.0	0	108	80	121	0	0	0	

Sample ID: **LCS-175966**	Client ID:				Units: **ug, Total**		Prep Date: **05/10/2013**		Run No: **243960**	
SampleType: **LCS**	TestCode: **Aromatic Volatiles in Air EPA18**				BatchID: **175966**		Analysis Date: **05/13/2013**		Seq No: **5107712**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	107.2	10	100.0	0	107	80	120	0	0	0	
Ethylbenzene	109.5	10	100.0	0	109	80	116	0	0	0	
m,p-Xylene	215.6	20	200.0	0	108	80	120	0	0	0	
Methyl tert-butyl ether	88.29	10	100.0	0	88.3	80	120	0	0	0	
Naphthalene	48.19	10	100.0	0	48.2	34.6	100	0	0	0	
o-Xylene	103.2	10	100.0	0	103	80	120	0	0	0	
Toluene	106.3	10	100.0	0	106	80	120	0	0	0	

Sample ID: **LCS-175966-2**	Client ID:				Units: **ug, Total**		Prep Date: **05/10/2013**		Run No: **243958**	
SampleType: **LCS**	TestCode: **Chlorinated Volatiles in Air EPA18**				BatchID: **175966**		Analysis Date: **05/13/2013**		Seq No: **5107661**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	106.8	10	100.0	0	107	85.1	120	0	0	0	
cis-1,2-Dichloroethene	108.5	10	100.0	0	108	80	119	0	0	0	
trans-1,2-Dichloroethene	108.7	10	100.0	0	109	85.7	117	0	0	0	

Sample ID: **LCS-175966-3**	Client ID:				Units: **ug, Total**		Prep Date: **05/10/2013**		Run No: **243958**	
SampleType: **LCS**	TestCode: **Chlorinated Volatiles in Air EPA18**				BatchID: **175966**		Analysis Date: **05/13/2013**		Seq No: **5107659**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Vinyl chloride	25.69	10	25.00	0	103	61.2	120	0	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305A05

ANALYTICAL QC SUMMARY REPORT

BatchID: 175966

Sample ID: **LCSD-175966** Client ID: Units: **ug, Total** Prep Date: **05/10/2013** Run No: **243958**
SampleType: **LCSD** TestCode: **Chlorinated Volatiles in Air EPA18** BatchID: **175966** Analysis Date: **05/13/2013** Seq No: **5107655**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	106.5	10	100.0	0	106	84.6	121	106.2	0.240	20	
Carbon tetrachloride	107.7	10	100.0	0	108	84.6	124	107.4	0.307	20	
Chloroform	103.9	10	100.0	0	104	82.7	117	103.6	0.284	20	
Methylene chloride	107.2	10	100.0	0	107	80	116	107.0	0.205	20	
Tetrachloroethene	107.3	10	100.0	0	107	80	118	107.4	0.042	20	
Trichloroethene	108.1	10	100.0	0	108	80	118	107.8	0.265	20	

Sample ID: **LCSD-175966** Client ID: Units: **ug, Total** Prep Date: **05/10/2013** Run No: **243959**
SampleType: **LCSD** TestCode: **Volatile Hydrocarbons in Air EPA18** BatchID: **175966** Analysis Date: **05/13/2013** Seq No: **5107701**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
2-Butanone	93.06	10	100.0	0	93.1	78.6	120	91.45	1.74	20	
4-Methyl-2-pentanone	100.9	10	100.0	0	101	80	120	99.75	1.17	20	
Acetone	83.22	10	100.0	0	83.2	70	120	81.11	2.56	20	
Diethyl ether	99.99	10	100.0	0	100.0	80	120	99.62	0.376	20	
n-Heptane	107.0	10	100.0	0	107	80	122	106.8	0.199	20	
n-Hexane	108.4	10	100.0	0	108	80	121	108.1	0.279	20	

Sample ID: **LCSD-175966** Client ID: Units: **ug, Total** Prep Date: **05/10/2013** Run No: **243960**
SampleType: **LCSD** TestCode: **Aromatic Volatiles in Air EPA18** BatchID: **175966** Analysis Date: **05/13/2013** Seq No: **5107714**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	107.5	10	100.0	0	107	80	120	107.2	0.283	20	
Ethylbenzene	109.6	10	100.0	0	110	80	116	109.5	0.117	20	
m,p-Xylene	215.9	20	200.0	0	108	80	120	215.6	0.142	20	
Methyl tert-butyl ether	88.51	10	100.0	0	88.5	80	120	88.29	0.249	20	
Naphthalene	47.22	10	100.0	0	47.2	34.6	100	48.19	2.03	20	
o-Xylene	103.1	10	100.0	0	103	80	120	103.2	0.044	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305A05

ANALYTICAL QC SUMMARY REPORT

BatchID: 175966

Sample ID: **LCSD-175966**	Client ID:				Units: **ug, Total**		Prep Date: **05/10/2013**		Run No: **243960**	
SampleType: **LCSD**	TestCode: **Aromatic Volatiles in Air EPA18**				BatchID: **175966**		Analysis Date: **05/13/2013**		Seq No: **5107714**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Toluene	106.6	10	100.0	0	107	80	120	106.3	0.272	20	

Sample ID: **LCSD-175966-2**	Client ID:				Units: **ug, Total**		Prep Date: **05/10/2013**		Run No: **243958**	
SampleType: **LCSD**	TestCode: **Chlorinated Volatiles in Air EPA18**				BatchID: **175966**		Analysis Date: **05/13/2013**		Seq No: **5107663**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	105.7	10	100.0	0	106	85.1	120	106.8	1.01	20	
cis-1,2-Dichloroethene	106.7	10	100.0	0	107	80	119	108.5	1.63	20	
trans-1,2-Dichloroethene	107.2	10	100.0	0	107	85.7	117	108.7	1.40	20	

Sample ID: **LCSD-175966-3**	Client ID:				Units: **ug, Total**		Prep Date: **05/10/2013**		Run No: **243958**	
SampleType: **LCSD**	TestCode: **Chlorinated Volatiles in Air EPA18**				BatchID: **175966**		Analysis Date: **05/13/2013**		Seq No: **5107657**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Vinyl chloride	24.57	10	25.00	0	98.3	61.2	120	25.69	4.42	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

AES

June 12, 2013

Cecilia Reagan
Arcadis
1000 Cobb Place Blvd., Bldg. 500-A
Kennesaw GA 30144

TEL: (404) 952-1621
FAX: (770) 428-4004

RE: Lafarge East Point DMR

Dear Cecilia Reagan: Order No: 1305L16

Analytical Environmental Services, Inc. received 4 samples on 5/24/2013 10:33:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.
AES' certifications are as follows:
-NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/12-06/30/13.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/13.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

CRKanhai

Chantelle Kanhai
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC
3785 Presidential Parkway, Atlanta GA 30340-3704
AES TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1305L16

Date: 5-24-13 Page 1 of 1

COMPANY: Arcadis
ADDRESS: Building 500A, 1000 Cobb Place Blvd, Kennesaw GA 30144
PHONE: 770 428 9009
FAX: 770 428 4004
SAMPLED BY: Evan Jenkins
SIGNATURE: Evan Jenkins

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	HCL	HNO3	HCL	—	4°	REMARKS	No # of Containers
1	Effluent GAC1 (052413)	5-24-13	0820	/		Air				1			1
2	Influent (052413)	5-24-13	0825	/		GW			2				2
3	Effluent (052413)	5-24-13	0824	/	/	GW	2	1				Metals are 24 hr composite	3
4	Trip Blank	5-24-13	LAB			LAB			2				2
5	Temp Blank	5-24-13	LAB			11				1			1
6													
7													
8													
9													
10													
11													
12													
13													
14													

ANALYSIS REQUESTED: EPA Method 624 GC/MS 8260; Total Metals by ICP; TCL VOCs; Aroma Hc VOCs in Air; Temp. 4°

Visit our website www.aesatlanta.com to check on the status of your results, place bottle orders, etc.

RELINQUISHED BY 1: Evan Jenkins DATE/TIME 5-24-13 1033
RECEIVED BY 1: [signature] ~~5/25/13~~ DATE/TIME 10:33AM

PROJECT INFORMATION
PROJECT NAME: Lafarge East Point DMR
PROJECT #: HT2E446.0013
SITE ADDRESS: 2675 N. Martin St. East Point, GA
SEND REPORT TO: Cecilia.reagan@arcadis-us.com
INVOICE TO: (IF DIFFERENT FROM ABOVE)
QUOTE #: PO#:

RECEIPT
Total # of Containers: 9

Turnaround Time Request
- (●) Standard 5 Business Days
- ( ) 2 Business Day Rush
- ( ) Next Business Day Rush
- ( ) Same Day Rush (auth req.)
- ( ) Other

STATE PROGRAM (if any):
E-mail? Y / N; Fax? Y / N
DATA PACKAGE: I II III IV

SPECIAL INSTRUCTIONS/COMMENTS:

SHIPMENT METHOD
OUT / / VIA:
IN 5/24/13 VIA: (CLIENT) FedEx UPS MAIL COURIER GREYHOUND OTHER

SAMPLES RECEIVED AFTER 3PM OR SATURDAY ARE CONSIDERED AS RECEIVED ON THE NEXT BUSINESS DAY; IF NO TAT IS MARKED ON COC AES WILL PROCEED AS STANDARD TAT.
SAMPLES ARE DISPOSED OF 30 DAYS AFTER COMPLETION OF REPORT UNLESS OTHER ARRANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water
PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Results for Arcadis

Date: 12-Jun-13

Workorder: 1305L16

Client Reference: Lafarge East Point DMR

Analyte	Concentration			Limit of Detection (ug)	Qual	Date Analyzed /Analyst		Test Method
	Total (ug)	(mg/m3)	(ppm)					
Client ID: EFFLUENT GAC1 (052413)	**Lab ID:** 1305L16-001A	**Date Sampled:** 5/24/2013		**Media:** Tedlar Bag		**Air Vol.(L):** 1		
1,1,1-Trichloroethane	<10	<10	<1.8	10		5/28/2013	AR	EPA18
1,1-Dichloroethene	<10	<10	<2.5	10		5/28/2013	AR	EPA18
2-Butanone	<10	<10	<3.4	10		5/28/2013	AR	EPA18
4-Methyl-2-pentanone	<10	<10	<2.4	10		5/28/2013	AR	EPA18
Acetone	<10	<10	<4.2	10		5/28/2013	AR	EPA18
Benzene	<10	<10	<3.1	10		5/28/2013	AR	EPA18
Carbon tetrachloride	<10	<10	<1.6	10		5/28/2013	AR	EPA18
Chloroform	<10	<10	<2.0	10		5/28/2013	AR	EPA18
cis-1,2-Dichloroethene	<10	<10	<2.5	10		5/28/2013	AR	EPA18
Diethyl ether	<10	<10	<3.3	10		5/28/2013	AR	EPA18
Ethylbenzene	<10	<10	<2.3	10		5/28/2013	AR	EPA18
Freon 141B	<10	<10	<2.1	10		5/28/2013	AR	EPA18
m,p-Xylene	<20	<20	<4.6	20		5/28/2013	AR	EPA18
Methyl tert-butyl ether	<10	<10	<2.8	10		5/28/2013	AR	EPA18
Methylene chloride	<10	<10	<2.9	10		5/28/2013	AR	EPA18
n-Heptane	<10	<10	<2.4	10		5/28/2013	AR	EPA18
n-Hexane	<10	<10	<2.8	10		5/28/2013	AR	EPA18
Naphthalene	<10	<10	<1.9	10		5/28/2013	AR	EPA18
o-Xylene	<10	<10	<2.3	10		5/28/2013	AR	EPA18
Tetrachloroethene	<10	<10	<1.5	10		5/28/2013	AR	EPA18
Toluene	<10	<10	<2.6	10		5/28/2013	AR	EPA18
trans-1,2-Dichloroethene	<10	<10	<2.5	10		5/28/2013	AR	EPA18
Trichloroethene	<10	<10	<1.9	10		5/28/2013	AR	EPA18
TRPH (Based on Benzene)	<100	<100	<31	100		5/28/2013	AR	EPA18
Vinyl chloride	<10	<10	<3.9	10		5/28/2013	AR	EPA18

Qualifiers:

< Less than the indicated limit of detection (LOD)

H Holding time for preparation or analysis

General Notes:

Results are blank corrected where applicable

Analytical Environmental Services, Inc **Date:** 12-Jun-13

Client:	Arcadis	**Client Sample ID:**	INFLUENT (052413)
Project Name:	Lafarge East Point DMR	**Collection Date:**	5/24/2013 8:25:00 AM
Lab ID:	1305L16-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
1,1,2-Trichloroethane	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
1,1-Dichloroethane	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
1,1-Dichloroethene	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
1,2-Dibromoethane	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
1,2-Dichlorobenzene	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
1,2-Dichloroethane	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
1,2-Dichloropropane	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
1,3-Dichlorobenzene	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
1,4-Dichlorobenzene	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
2-Butanone	BRL	50		ug/L	176672	1	05/24/2013 15:33	AR
2-Hexanone	BRL	10		ug/L	176672	1	05/24/2013 15:33	AR
4-Methyl-2-pentanone	BRL	10		ug/L	176672	1	05/24/2013 15:33	AR
Acetone	BRL	50		ug/L	176672	1	05/24/2013 15:33	AR
Benzene	130	5.0		ug/L	176672	1	05/24/2013 15:33	AR
Bromodichloromethane	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
Bromoform	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
Bromomethane	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
Carbon disulfide	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
Carbon tetrachloride	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
Chlorobenzene	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
Chloroethane	BRL	10		ug/L	176672	1	05/24/2013 15:33	AR
Chloroform	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
Chloromethane	BRL	10		ug/L	176672	1	05/24/2013 15:33	AR
cis-1,2-Dichloroethene	2500	250		ug/L	176672	50	05/24/2013 16:49	AR
cis-1,3-Dichloropropene	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
Cyclohexane	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
Dibromochloromethane	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
Dichlorodifluoromethane	BRL	10		ug/L	176672	1	05/24/2013 15:33	AR
Ethylbenzene	11	5.0		ug/L	176672	1	05/24/2013 15:33	AR
Freon-113	BRL	10		ug/L	176672	1	05/24/2013 15:33	AR
Isopropylbenzene	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
m,p-Xylene	550	250		ug/L	176672	50	05/24/2013 16:49	AR
Methyl acetate	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
Methyl tert-butyl ether	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
Methylcyclohexane	20	5.0		ug/L	176672	1	05/24/2013 15:33	AR
Methylene chloride	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
o-Xylene	130	5.0		ug/L	176672	1	05/24/2013 15:33	AR

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 12-Jun-13

Client:	Arcadis	**Client Sample ID:**	INFLUENT (052413)
Project Name:	Lafarge East Point DMR	**Collection Date:**	5/24/2013 8:25:00 AM
Lab ID:	1305L16-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
Tetrachloroethene	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
Toluene	630	50		ug/L	176672	10	05/24/2013 17:40	AR
trans-1,2-Dichloroethene	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
trans-1,3-Dichloropropene	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
Trichloroethene	78	5.0		ug/L	176672	1	05/24/2013 15:33	AR
Trichlorofluoromethane	BRL	5.0		ug/L	176672	1	05/24/2013 15:33	AR
Vinyl chloride	250	20		ug/L	176672	10	05/24/2013 17:40	AR
Surr: 4-Bromofluorobenzene	93.9	64.6-123		%REC	176672	50	05/24/2013 16:49	AR
Surr: 4-Bromofluorobenzene	97.6	64.6-123		%REC	176672	10	05/24/2013 17:40	AR
Surr: 4-Bromofluorobenzene	103	64.6-123		%REC	176672	1	05/24/2013 15:33	AR
Surr: Dibromofluoromethane	103	76.6-133		%REC	176672	50	05/24/2013 16:49	AR
Surr: Dibromofluoromethane	93	76.6-133		%REC	176672	1	05/24/2013 15:33	AR
Surr: Dibromofluoromethane	99.5	76.6-133		%REC	176672	10	05/24/2013 17:40	AR
Surr: Toluene-d8	85.3	77.8-120		%REC	176672	50	05/24/2013 16:49	AR
Surr: Toluene-d8	89.3	77.8-120		%REC	176672	1	05/24/2013 15:33	AR
Surr: Toluene-d8	88.2	77.8-120		%REC	176672	10	05/24/2013 17:40	AR

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 12-Jun-13

Client:	Arcadis	**Client Sample ID:**	EFFLUENT (052413)
Project Name:	Lafarge East Point DMR	**Collection Date:**	5/24/2013 8:24:00 AM
Lab ID:	1305L16-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP E200.7				**(E200.7)**				
Lead	BRL	0.0100		mg/L	176711	1	05/29/2013 16:23	MR
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
2-Butanone	BRL	50		ug/L	176672	1	05/24/2013 14:41	AR
Acetone	BRL	50		ug/L	176672	1	05/24/2013 14:41	AR
cis-1,2-Dichloroethene	27	5.0		ug/L	176672	1	05/24/2013 14:41	AR
PRIORITY POLLUTANT-VOLATILES E624				**(E624)**				
1,1,1-Trichloroethane	BRL	2.0		ug/L	176672	1	05/24/2013 14:41	AR
1,1,2,2-Tetrachloroethane	BRL	2.0		ug/L	176672	1	05/24/2013 14:41	AR
1,1,2-Trichloroethane	BRL	2.0		ug/L	176672	1	05/24/2013 14:41	AR
1,1-Dichloroethane	BRL	2.0		ug/L	176672	1	05/24/2013 14:41	AR
1,1-Dichloroethene	BRL	2.0		ug/L	176672	1	05/24/2013 14:41	AR
1,2-Dichlorobenzene	BRL	5.0		ug/L	176672	1	05/24/2013 14:41	AR
1,2-Dichloroethane	BRL	2.0		ug/L	176672	1	05/24/2013 14:41	AR
1,2-Dichloropropane	BRL	2.0		ug/L	176672	1	05/24/2013 14:41	AR
1,3-Dichlorobenzene	BRL	5.0		ug/L	176672	1	05/24/2013 14:41	AR
1,4-Dichlorobenzene	BRL	5.0		ug/L	176672	1	05/24/2013 14:41	AR
2-Chloroethyl vinyl ether	BRL	10		ug/L	176672	1	05/24/2013 14:41	AR
Acrolein	BRL	50		ug/L	176672	1	05/24/2013 14:41	AR
Acrylonitrile	BRL	50		ug/L	176672	1	05/24/2013 14:41	AR
Benzene	BRL	2.0		ug/L	176672	1	05/24/2013 14:41	AR
Bromodichloromethane	BRL	10		ug/L	176672	1	05/24/2013 14:41	AR
Bromoform	BRL	10		ug/L	176672	1	05/24/2013 14:41	AR
Bromomethane	BRL	10		ug/L	176672	1	05/24/2013 14:41	AR
Carbon tetrachloride	BRL	2.0		ug/L	176672	1	05/24/2013 14:41	AR
Chlorobenzene	BRL	10		ug/L	176672	1	05/24/2013 14:41	AR
Chloroethane	BRL	5.0		ug/L	176672	1	05/24/2013 14:41	AR
Chloroform	BRL	2.0		ug/L	176672	1	05/24/2013 14:41	AR
Chloromethane	BRL	10		ug/L	176672	1	05/24/2013 14:41	AR
cis-1,3-Dichloropropene	BRL	2.0		ug/L	176672	1	05/24/2013 14:41	AR
Dibromochloromethane	BRL	10		ug/L	176672	1	05/24/2013 14:41	AR
Ethylbenzene	BRL	2.0		ug/L	176672	1	05/24/2013 14:41	AR
m,p-Xylene	BRL	5.0		ug/L	176672	1	05/24/2013 14:41	AR
Methylene chloride	BRL	10		ug/L	176672	1	05/24/2013 14:41	AR
o-Xylene	BRL	5.0		ug/L	176672	1	05/24/2013 14:41	AR
Tetrachloroethene	BRL	2.0		ug/L	176672	1	05/24/2013 14:41	AR
Toluene	BRL	2.0		ug/L	176672	1	05/24/2013 14:41	AR
trans-1,2-Dichloroethene	BRL	2.0		ug/L	176672	1	05/24/2013 14:41	AR
trans-1,3-Dichloropropene	BRL	2.0		ug/L	176672	1	05/24/2013 14:41	AR
Trichloroethene	BRL	2.0		ug/L	176672	1	05/24/2013 14:41	AR

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
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- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 12-Jun-13

Client:	Arcadis	**Client Sample ID:**	EFFLUENT (052413)
Project Name:	Lafarge East Point DMR	**Collection Date:**	5/24/2013 8:24:00 AM
Lab ID:	1305L16-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
PRIORITY POLLUTANT-VOLATILES E624				**(E624)**				
Trichlorofluoromethane	BRL	5.0		ug/L	176672	1	05/24/2013 14:41	AR
Vinyl chloride	BRL	2.0		ug/L	176672	1	05/24/2013 14:41	AR
Xylenes, Total	BRL	5.0		ug/L	176672	1	05/24/2013 14:41	AR
Surr: 4-Bromofluorobenzene	88	64.6-123		%REC	176672	1	05/24/2013 14:41	AR
Surr: Dibromofluoromethane	102	76.6-133		%REC	176672	1	05/24/2013 14:41	AR
Surr: Toluene-d8	89.9	77.8-120		%REC	176672	1	05/24/2013 14:41	AR

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 12-Jun-13

Client:	Arcadis	**Client Sample ID:**	TRIP BLANK
Project Name:	Lafarge East Point DMR	**Collection Date:**	5/24/2013
Lab ID:	1305L16-004	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1-Trichloroethane	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
1,1,2,2-Tetrachloroethane	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
1,1,2-Trichloroethane	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
1,1-Dichloroethane	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
1,1-Dichloroethene	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
1,2,4-Trichlorobenzene	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
1,2-Dibromo-3-chloropropane	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
1,2-Dibromoethane	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
1,2-Dichlorobenzene	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
1,2-Dichloroethane	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
1,2-Dichloropropane	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
1,3-Dichlorobenzene	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
1,4-Dichlorobenzene	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
2-Butanone	BRL	50		ug/L	176672	1	05/24/2013 14:15	AR
2-Hexanone	BRL	10		ug/L	176672	1	05/24/2013 14:15	AR
4-Methyl-2-pentanone	BRL	10		ug/L	176672	1	05/24/2013 14:15	AR
Acetone	BRL	50		ug/L	176672	1	05/24/2013 14:15	AR
Benzene	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
Bromodichloromethane	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
Bromoform	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
Bromomethane	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
Carbon disulfide	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
Carbon tetrachloride	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
Chlorobenzene	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
Chloroethane	BRL	10		ug/L	176672	1	05/24/2013 14:15	AR
Chloroform	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
Chloromethane	BRL	10		ug/L	176672	1	05/24/2013 14:15	AR
cis-1,2-Dichloroethene	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
cis-1,3-Dichloropropene	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
Cyclohexane	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
Dibromochloromethane	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
Dichlorodifluoromethane	BRL	10		ug/L	176672	1	05/24/2013 14:15	AR
Ethylbenzene	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
Freon-113	BRL	10		ug/L	176672	1	05/24/2013 14:15	AR
Isopropylbenzene	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
m,p-Xylene	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
Methyl acetate	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
Methyl tert-butyl ether	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
Methylcyclohexane	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
Methylene chloride	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
o-Xylene	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 12-Jun-13

Client:	Arcadis	**Client Sample ID:**	TRIP BLANK
Project Name:	Lafarge East Point DMR	**Collection Date:**	5/24/2013
Lab ID:	1305L16-004	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
TCL VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Styrene	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
Tetrachloroethene	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
Toluene	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
trans-1,2-Dichloroethene	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
trans-1,3-Dichloropropene	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
Trichloroethene	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
Trichlorofluoromethane	BRL	5.0		ug/L	176672	1	05/24/2013 14:15	AR
Vinyl chloride	BRL	2.0		ug/L	176672	1	05/24/2013 14:15	AR
Surr: 4-Bromofluorobenzene	91.5	64.6-123		%REC	176672	1	05/24/2013 14:15	AR
Surr: Dibromofluoromethane	104	76.6-133		%REC	176672	1	05/24/2013 14:15	AR
Surr: Toluene-d8	88.8	77.8-120		%REC	176672	1	05/24/2013 14:15	AR

Qualifiers:

*	Value exceeds maximum contaminant level	E	Estimated (value above quantitation range)
BRL	Below reporting limit	S	Spike Recovery outside limits due to matrix
H	Holding times for preparation or analysis exceeded	Narr	See case narrative
N	Analyte not NELAC certified	NC	Not confirmed
B	Analyte detected in the associated method blank	<	Less than Result value
>	Greater than Result value	J	Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Arcadis Work Order Number 1305L16

Checklist completed by _____ 5/24/13
Signature Date

Carrier name: FedEx __ UPS __ Courier __ Client ✓ US Mail __ Other _____

Shipping container/cooler in good condition? Yes ✓ No __ Not Present __

Custody seals intact on shipping container/cooler? Yes __ No __ Not Present ✓

Custody seals intact on sample bottles? Yes __ No __ Not Present ✓

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ✓ No __

Cooler #1 3.4 Cooler #2 amb Cooler #3 _____ Cooler #4 _____ Cooler#5 _____ Cooler #6 _____

Chain of custody present? Yes ✓ No __

Chain of custody signed when relinquished and received? Yes ✓ No __

Chain of custody agrees with sample labels? Yes ✓ No __

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ✓ No __

Was TAT marked on the COC? Yes ✓ No __

Proceed with Standard TAT as per project history? Yes __ No __ Not Applicable ✓

Water - VOA vials have zero headspace? No VOA vials submitted __ Yes ✓ No __

Water - pH acceptable upon receipt? Yes ✓ No __ Not Applicable __

Adjusted? _____ Checked by PT

Sample Condition: Good ✓ Other(Explain) _____

(For diffusive samples or AIHA lead) Is a known blank included? Yes __ No ✓

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\L\Quality Assurance\Checklists Procedures Sign-Off Templates\Checklists\Sample Receipt Checklists\Sample_Cooler_Receipt_Checklist

Client: Arcadis
Project: Lafarge East Point DMR
Lab Order: 1305L16

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1305L16-001A	EFFLUENT GAC1 (052413)	5/24/2013 8:20:00AM	Air	Aromatic Volatiles in Air		05/24/2013	05/28/2013
1305L16-001A	EFFLUENT GAC1 (052413)	5/24/2013 8:20:00AM	Air	Chlorinated Volatiles in Air		05/24/2013	05/28/2013
1305L16-001A	EFFLUENT GAC1 (052413)	5/24/2013 8:20:00AM	Air	Volatile Hydrocarbons in Air		05/24/2013	05/28/2013
1305L16-002A	INFLUENT (052413)	5/24/2013 8:25:00AM	Groundwater	TCL VOLATILE ORGANICS		05/24/2013	05/24/2013
1305L16-003A	EFFLUENT (052413)	5/24/2013 8:24:00AM	Groundwater	PP-VOLATILES		05/24/2013	05/24/2013
1305L16-003A	EFFLUENT (052413)	5/24/2013 8:24:00AM	Groundwater	PP-VOLATILES		05/24/2013	05/24/2013
1305L16-003A	EFFLUENT (052413)	5/24/2013 8:24:00AM	Groundwater	TCL VOLATILE ORGANICS		05/24/2013	05/24/2013
1305L16-003B	EFFLUENT (052413)	5/24/2013 8:24:00AM	Groundwater	Total Metals by ICP		05/28/2013	05/29/2013
1305L16-004A	TRIP BLANK	5/24/2013 12:00:00AM	Aqueous	TCL VOLATILE ORGANICS		05/24/2013	05/24/2013

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305L16

ANALYTICAL QC SUMMARY REPORT

BatchID: 176624

Sample ID: **MB-176624** Client ID: Units: **ug, Total** Prep Date: **05/24/2013** Run No: **244873**
SampleType: **MBLK** TestCode: **Chlorinated Volatiles in Air EPA18** BatchID: **176624** Analysis Date: **05/28/2013** Seq No: **5128186**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	10									
1,1-Dichloroethene	BRL	10									
Carbon tetrachloride	BRL	10									
Chloroform	BRL	10									
cis-1,2-Dichloroethene	BRL	10									
Freon 141B	BRL	10									
Methylene chloride	BRL	10									
Tetrachloroethene	BRL	10									
trans-1,2-Dichloroethene	BRL	10									
Trichloroethene	BRL	10									
Vinyl chloride	BRL	10									

Sample ID: **MB-176624** Client ID: Units: **ug, Total** Prep Date: **05/24/2013** Run No: **244874**
SampleType: **MBLK** TestCode: **Volatile Hydrocarbons in Air EPA18** BatchID: **176624** Analysis Date: **05/28/2013** Seq No: **5128220**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
2-Butanone	BRL	10									
4-Methyl-2-pentanone	BRL	10									
Acetone	BRL	10									
Diethyl ether	BRL	10									
n-Heptane	BRL	10									
n-Hexane	BRL	10									

Sample ID: **MB-176624** Client ID: Units: **ug, Total** Prep Date: **05/24/2013** Run No: **244875**
SampleType: **MBLK** TestCode: **Aromatic Volatiles in Air EPA18** BatchID: **176624** Analysis Date: **05/28/2013** Seq No: **5128227**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	BRL	10									

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305L16

ANALYTICAL QC SUMMARY REPORT

BatchID: 176624

Sample ID: **MB-176624** Client ID: Units: **ug, Total** Prep Date: **05/24/2013** Run No: **244875**
SampleType: **MBLK** TestCode: **Aromatic Volatiles in Air EPA18** BatchID: **176624** Analysis Date: **05/28/2013** Seq No: **5128227**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Ethylbenzene	BRL	10									
m,p-Xylene	BRL	20									
Methyl tert-butyl ether	BRL	10									
Naphthalene	BRL	10									
o-Xylene	BRL	10									
Toluene	BRL	10									
TRPH (Based on Benzene)	BRL	100									

Sample ID: **LCS-176624** Client ID: Units: **ug, Total** Prep Date: **05/24/2013** Run No: **244873**
SampleType: **LCS** TestCode: **Chlorinated Volatiles in Air EPA18** BatchID: **176624** Analysis Date: **05/28/2013** Seq No: **5128187**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	103.5	10	100.0		104	84.6	121				
Carbon tetrachloride	104.1	10	100.0		104	84.6	124				
Chloroform	100.6	10	100.0		101	82.7	117				
Methylene chloride	103.6	10	100.0		104	80	116				
Tetrachloroethene	104.1	10	100.0		104	80	118				
Trichloroethene	104.6	10	100.0		105	80	118				

Sample ID: **LCS-176624** Client ID: Units: **ug, Total** Prep Date: **05/24/2013** Run No: **244874**
SampleType: **LCS** TestCode: **Volatile Hydrocarbons in Air EPA18** BatchID: **176624** Analysis Date: **05/28/2013** Seq No: **5128221**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
2-Butanone	88.83	10	100.0		88.8	78.6	120				
4-Methyl-2-pentanone	96.61	10	100.0		96.6	80	120				
Acetone	78.50	10	100.0		78.5	70	120				
Diethyl ether	96.12	10	100.0		96.1	80	120				
n-Heptane	103.3	10	100.0		103	80	122				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305L16

ANALYTICAL QC SUMMARY REPORT

BatchID: 176624

Sample ID: **LCS-176624** Client ID: Units: **ug, Total** Prep Date: **05/24/2013** Run No: **244874**
SampleType: **LCS** TestCode: **Volatile Hydrocarbons in Air EPA18** BatchID: **176624** Analysis Date: **05/28/2013** Seq No: **5128221**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
n-Hexane	104.2	10	100.0		104	80	121				

Sample ID: **LCS-176624** Client ID: Units: **ug, Total** Prep Date: **05/24/2013** Run No: **244875**
SampleType: **LCS** TestCode: **Aromatic Volatiles in Air EPA18** BatchID: **176624** Analysis Date: **05/28/2013** Seq No: **5128228**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	103.9	10	100.0		104	80	120				
Ethylbenzene	105.6	10	100.0		106	80	116				
m,p-Xylene	208.4	20	200.0		104	80	120				
Methyl tert-butyl ether	85.58	10	100.0		85.6	80	120				
Naphthalene	46.69	10	100.0		46.7	34.6	100				
o-Xylene	99.30	10	100.0		99.3	80	120				
Toluene	103.0	10	100.0		103	80	120				

Sample ID: **LCS-176624-2** Client ID: Units: **ug, Total** Prep Date: **05/24/2013** Run No: **244873**
SampleType: **LCS** TestCode: **Chlorinated Volatiles in Air EPA18** BatchID: **176624** Analysis Date: **05/28/2013** Seq No: **5128194**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	102.6	10	100.0		103	85.1	120				
cis-1,2-Dichloroethene	104.5	10	100.0		104	80	119				
trans-1,2-Dichloroethene	104.4	10	100.0		104	85.7	117				

Sample ID: **LCS-176624-3** Client ID: Units: **ug, Total** Prep Date: **05/24/2013** Run No: **244873**
SampleType: **LCS** TestCode: **Chlorinated Volatiles in Air EPA18** BatchID: **176624** Analysis Date: **05/28/2013** Seq No: **5128192**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Vinyl chloride	23.32	10	25.00		93.3	61.2	120				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305L16

ANALYTICAL QC SUMMARY REPORT

BatchID: 176624

Sample ID: **LCSD-176624** Client ID: Units: **ug, Total** Prep Date: **05/24/2013** Run No: **244873**
SampleType: **LCSD** TestCode: **Chlorinated Volatiles in Air EPA18** BatchID: **176624** Analysis Date: **05/28/2013** Seq No: **5128189**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	101.4	10	100.0		101	84.6	121	103.5	2.01	20	
Carbon tetrachloride	102.1	10	100.0		102	84.6	124	104.1	1.97	20	
Chloroform	98.66	10	100.0		98.7	82.7	117	100.6	1.90	20	
Methylene chloride	102.4	10	100.0		102	80	116	103.6	1.21	20	
Tetrachloroethene	102.0	10	100.0		102	80	118	104.1	2.02	20	
Trichloroethene	102.6	10	100.0		103	80	118	104.6	1.87	20	

Sample ID: **LCSD-176624** Client ID: Units: **ug, Total** Prep Date: **05/24/2013** Run No: **244874**
SampleType: **LCSD** TestCode: **Volatile Hydrocarbons in Air EPA18** BatchID: **176624** Analysis Date: **05/28/2013** Seq No: **5128222**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
2-Butanone	87.24	10	100.0		87.2	78.6	120	88.83	1.80	20	
4-Methyl-2-pentanone	94.92	10	100.0		94.9	80	120	96.61	1.76	20	
Acetone	76.45	10	100.0		76.5	70	120	78.50	2.64	20	
Diethyl ether	93.89	10	100.0		93.9	80	120	96.12	2.34	20	
n-Heptane	101.3	10	100.0		101	80	122	103.3	1.92	20	
n-Hexane	102.8	10	100.0		103	80	121	104.2	1.39	20	

Sample ID: **LCSD-176624** Client ID: Units: **ug, Total** Prep Date: **05/24/2013** Run No: **244875**
SampleType: **LCSD** TestCode: **Aromatic Volatiles in Air EPA18** BatchID: **176624** Analysis Date: **05/28/2013** Seq No: **5128229**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	102.0	10	100.0		102	80	120	103.9	1.87	20	
Ethylbenzene	103.6	10	100.0		104	80	116	105.6	1.99	20	
m,p-Xylene	204.4	20	200.0		102	80	120	208.4	1.91	20	
Methyl tert-butyl ether	83.98	10	100.0		84.0	80	120	85.58	1.89	20	
Naphthalene	45.54	10	100.0		45.5	34.6	100	46.69	2.48	20	
o-Xylene	97.31	10	100.0		97.3	80	120	99.30	2.03	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305L16

ANALYTICAL QC SUMMARY REPORT

BatchID: 176624

Sample ID: **LCSD-176624**	Client ID:			Units: **ug, Total**	Prep Date: **05/24/2013**	Run No: **244875**
SampleType: **LCSD**	TestCode: **Aromatic Volatiles in Air EPA18**			BatchID: **176624**	Analysis Date: **05/28/2013**	Seq No: **5128229**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Toluene	101.0	10	100.0		101	80	120	103.0	1.89	20	

Sample ID: **LCSD-176624-2**	Client ID:			Units: **ug, Total**	Prep Date: **05/24/2013**	Run No: **244873**
SampleType: **LCSD**	TestCode: **Chlorinated Volatiles in Air EPA18**			BatchID: **176624**	Analysis Date: **05/28/2013**	Seq No: **5128193**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	103.4	10	100.0		103	85.1	120	102.6	0.758	20	
cis-1,2-Dichloroethene	105.0	10	100.0		105	80	119	104.5	0.523	20	
trans-1,2-Dichloroethene	105.3	10	100.0		105	85.7	117	104.4	0.787	20	

Sample ID: **LCSD-176624-3**	Client ID:			Units: **ug, Total**	Prep Date: **05/24/2013**	Run No: **244873**
SampleType: **LCSD**	TestCode: **Chlorinated Volatiles in Air EPA18**			BatchID: **176624**	Analysis Date: **05/28/2013**	Seq No: **5128190**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Vinyl chloride	22.96	10	25.00		91.9	61.2	120	23.32	1.53	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305L16

ANALYTICAL QC SUMMARY REPORT

BatchID: 176672

Sample ID: **MB-176672** Client ID: Units: **ug/L** Prep Date: **05/24/2013** Run No: **244677**
SampleType: **MBLK** TestCode: **PRIORITY POLLUTANT-VOLATILES E624** BatchID: **176672** Analysis Date: **05/24/2013** Seq No: **5125821**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	2.0									
1,1,2,2-Tetrachloroethane	BRL	2.0									
1,1,2-Trichloroethane	BRL	2.0									
1,1-Dichloroethane	BRL	2.0									
1,1-Dichloroethene	BRL	2.0									
1,2-Dichlorobenzene	BRL	5.0									
1,2-Dichloroethane	BRL	2.0									
1,2-Dichloropropane	BRL	2.0									
1,3-Dichlorobenzene	BRL	5.0									
1,4-Dichlorobenzene	BRL	5.0									
2-Chloroethyl vinyl ether	BRL	10									
Acrolein	BRL	50									
Acrylonitrile	BRL	50									
Benzene	BRL	2.0									
Bromodichloromethane	BRL	10									
Bromoform	BRL	10									
Bromomethane	BRL	10									
Carbon tetrachloride	BRL	2.0									
Chlorobenzene	BRL	10									
Chloroethane	BRL	5.0									
Chloroform	BRL	2.0									
Chloromethane	BRL	10									
cis-1,3-Dichloropropene	BRL	2.0									
Dibromochloromethane	BRL	10									
Ethylbenzene	BRL	2.0									
m,p-Xylene	BRL	5.0									
Methylene chloride	BRL	10									

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305L16

ANALYTICAL QC SUMMARY REPORT

BatchID: 176672

Sample ID: **MB-176672** Client ID: Units: **ug/L** Prep Date: **05/24/2013** Run No: **244677**
SampleType: **MBLK** TestCode: **PRIORITY POLLUTANT-VOLATILES E624** BatchID: **176672** Analysis Date: **05/24/2013** Seq No: **5125821**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
o-Xylene	BRL	5.0									
Tetrachloroethene	BRL	2.0									
Toluene	BRL	2.0									
trans-1,2-Dichloroethene	BRL	2.0									
trans-1,3-Dichloropropene	BRL	2.0									
Trichloroethene	BRL	2.0									
Trichlorofluoromethane	BRL	5.0									
Vinyl chloride	BRL	10									
Xylenes, Total	BRL	5.0									
Surr: 4-Bromofluorobenzene	43.54	0	50.00		87.1	64.6	123				
Surr: Dibromofluoromethane	50.80	0	50.00		102	76.6	133				
Surr: Toluene-d8	45.07	0	50.00		90.1	77.8	120				

Sample ID: **MB-176672** Client ID: Units: **ug/L** Prep Date: **05/24/2013** Run No: **244677**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **176672** Analysis Date: **05/24/2013** Seq No: **5125867**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	BRL	5.0									
1,1,2,2-Tetrachloroethane	BRL	5.0									
1,1,2-Trichloroethane	BRL	5.0									
1,1-Dichloroethane	BRL	5.0									
1,1-Dichloroethene	BRL	5.0									
1,2,4-Trichlorobenzene	BRL	5.0									
1,2-Dibromo-3-chloropropane	BRL	5.0									
1,2-Dibromoethane	BRL	5.0									
1,2-Dichlorobenzene	BRL	5.0									
1,2-Dichloroethane	BRL	5.0									
1,2-Dichloropropane	BRL	5.0									

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305L16

ANALYTICAL QC SUMMARY REPORT

BatchID: 176672

Sample ID: **MB-176672** Client ID: Units: **ug/L** Prep Date: **05/24/2013** Run No: **244677**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **176672** Analysis Date: **05/24/2013** Seq No: **5125867**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,3-Dichlorobenzene	BRL	5.0									
1,4-Dichlorobenzene	BRL	5.0									
2-Butanone	BRL	50									
2-Hexanone	BRL	10									
4-Methyl-2-pentanone	BRL	10									
Acetone	BRL	50									
Benzene	BRL	5.0									
Bromodichloromethane	BRL	5.0									
Bromoform	BRL	5.0									
Bromomethane	BRL	5.0									
Carbon disulfide	BRL	5.0									
Carbon tetrachloride	BRL	5.0									
Chlorobenzene	BRL	5.0									
Chloroethane	BRL	10									
Chloroform	BRL	5.0									
Chloromethane	BRL	10									
cis-1,2-Dichloroethene	BRL	5.0									
cis-1,3-Dichloropropene	BRL	5.0									
Cyclohexane	BRL	5.0									
Dibromochloromethane	BRL	5.0									
Dichlorodifluoromethane	BRL	10									
Ethylbenzene	BRL	5.0									
Freon-113	BRL	10									
Isopropylbenzene	BRL	5.0									
m,p-Xylene	BRL	5.0									
Methyl acetate	BRL	5.0									
Methyl tert-butyl ether	BRL	5.0									

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305L16

ANALYTICAL QC SUMMARY REPORT

BatchID: 176672

Sample ID: **MB-176672** Client ID: Units: **ug/L** Prep Date: **05/24/2013** Run No: **244677**
SampleType: **MBLK** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **176672** Analysis Date: **05/24/2013** Seq No: **5125867**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Methylcyclohexane	BRL	5.0									
Methylene chloride	BRL	5.0									
o-Xylene	BRL	5.0									
Styrene	BRL	5.0									
Tetrachloroethene	BRL	5.0									
Toluene	BRL	5.0									
trans-1,2-Dichloroethene	BRL	5.0									
trans-1,3-Dichloropropene	BRL	5.0									
Trichloroethene	BRL	5.0									
Trichlorofluoromethane	BRL	5.0									
Vinyl chloride	BRL	2.0									
Surr: 4-Bromofluorobenzene	40.70	0	50.00		81.4	64.6	123				
Surr: Dibromofluoromethane	51.88	0	50.00		104	76.6	133				
Surr: Toluene-d8	44.97	0	50.00		89.9	77.8	120				

Sample ID: **LCS-176672** Client ID: Units: **ug/L** Prep Date: **05/24/2013** Run No: **244677**
SampleType: **LCS** TestCode: **PRIORITY POLLUTANT-VOLATILES E624** BatchID: **176672** Analysis Date: **05/24/2013** Seq No: **5125822**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	19.76	2.0	20.00		98.8	75	125				
1,1,2,2-Tetrachloroethane	20.65	2.0	20.00		103	61	140				
1,1,2-Trichloroethane	20.16	2.0	20.00		101	71	129				
1,1-Dichloroethane	19.69	2.0	20.00		98.4	73	128				
1,1-Dichloroethene	18.51	2.0	20.00		92.6	51	150				
1,2-Dichlorobenzene	19.56	5.0	20.00		97.8	63	137				
1,2-Dichloroethane	19.26	2.0	20.00		96.3	68	132				
1,2-Dichloropropane	20.48	2.0	20.00		102	34	166				
1,3-Dichlorobenzene	19.18	5.0	20.00		95.9	73	127				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305L16

ANALYTICAL QC SUMMARY REPORT

BatchID: 176672

Sample ID: **LCS-176672** Client ID: Units: **ug/L** Prep Date: **05/24/2013** Run No: **244677**
SampleType: **LCS** TestCode: **PRIORITY POLLUTANT-VOLATILES E624** BatchID: **176672** Analysis Date: **05/24/2013** Seq No: **5125822**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,4-Dichlorobenzene	18.82	5.0	20.00		94.1	63	137				
2-Chloroethyl vinyl ether	40.96	10	40.00		102	1	224				
Acrolein	BRL	50	40.00		76.5	30	170				
Acrylonitrile	BRL	50	40.00		66.4	46	153				
Benzene	19.14	2.0	20.00		95.7	64	136				
Bromodichloromethane	19.80	10	20.00		99.0	66	135				
Bromoform	19.04	10	20.00		95.2	71	129				
Bromomethane	20.18	10	20.00		101	14	186				
Carbon tetrachloride	18.21	2.0	20.00		91.0	73	127				
Chlorobenzene	18.69	10	20.00		93.4	66	134				
Chloroethane	21.46	5.0	20.00		107	38	162				
Chloroform	20.64	2.0	20.00		103	68	133				
Chloromethane	20.49	10	20.00		102	1	204				
cis-1,3-Dichloropropene	18.90	2.0	20.00		94.5	24	176				
Dibromochloromethane	19.13	10	20.00		95.6	68	133				
Ethylbenzene	17.57	2.0	20.00		87.8	59	141				
m,p-Xylene	35.30	5.0	40.00		88.2	50	150				
Methylene chloride	23.29	10	20.00		116	61	140				
o-Xylene	17.21	5.0	20.00		86.0	50	150				
Tetrachloroethene	19.17	2.0	20.00		95.8	74	127				
Toluene	19.13	2.0	20.00		95.6	75	126				
trans-1,2-Dichloroethene	18.82	2.0	20.00		94.1	70	131				
trans-1,3-Dichloropropene	18.80	2.0	20.00		94.0	50	150				
Trichloroethene	16.83	2.0	20.00		84.2	67	134				
Trichlorofluoromethane	20.67	5.0	20.00		103	48	152				
Vinyl chloride	19.13	10	20.00		95.6	4	196				
Surr: 4-Bromofluorobenzene	52.24	0	50.00		104	64.6	123				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305L16

ANALYTICAL QC SUMMARY REPORT

BatchID: 176672

Sample ID: **LCS-176672**	Client ID:		Units: **ug/L**	Prep Date: **05/24/2013**	Run No: **244677**
SampleType: **LCS**	TestCode: **PRIORITY POLLUTANT-VOLATILES E624**		BatchID: **176672**	Analysis Date: **05/24/2013**	Seq No: **5125822**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: Dibromofluoromethane	48.80	0	50.00		97.6	76.6	133				
Surr: Toluene-d8	50.59	0	50.00		101	77.8	120				

Sample ID: **LCS-176672**	Client ID:		Units: **ug/L**	Prep Date: **05/24/2013**	Run No: **244677**
SampleType: **LCS**	TestCode: **TCL VOLATILE ORGANICS SW8260B**		BatchID: **176672**	Analysis Date: **05/24/2013**	Seq No: **5125854**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	18.51	5.0	20.00		92.6	61.1	142				
Benzene	19.14	5.0	20.00		95.7	73.5	130				
Chlorobenzene	18.69	5.0	20.00		93.4	72.4	123				
Toluene	19.13	5.0	20.00		95.6	73.6	130				
Trichloroethene	16.83	5.0	20.00		84.2	70	135				
Surr: 4-Bromofluorobenzene	52.24	0	50.00		104	64.6	123				
Surr: Dibromofluoromethane	48.80	0	50.00		97.6	76.6	133				
Surr: Toluene-d8	50.59	0	50.00		101	77.8	120				

Sample ID: **1305L16-003AMS**	Client ID: **EFFLUENT (052413)**		Units: **ug/L**	Prep Date: **05/24/2013**	Run No: **244677**
SampleType: **MS**	TestCode: **PRIORITY POLLUTANT-VOLATILES E624**		BatchID: **176672**	Analysis Date: **05/24/2013**	Seq No: **5125819**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	21.66	2.0	20.00		108	52	162				
1,1,2,2-Tetrachloroethane	20.62	2.0	20.00		103	46	157				
1,1,2-Trichloroethane	19.92	2.0	20.00		99.6	52	150				
1,1-Dichloroethane	20.99	2.0	20.00		105	59	155				
1,1-Dichloroethene	21.52	2.0	20.00		108	1	234				
1,2-Dichlorobenzene	20.37	5.0	20.00		102	18	190				
1,2-Dichloroethane	21.12	2.0	20.00		106	49	155				
1,2-Dichloropropane	20.82	2.0	20.00		104	1	210				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305L16

ANALYTICAL QC SUMMARY REPORT

BatchID: 176672

Sample ID: **1305L16-003AMS** Client ID: **EFFLUENT (052413)** Units: **ug/L** Prep Date: **05/24/2013** Run No: **244677**
SampleType: **MS** TestCode: **PRIORITY POLLUTANT-VOLATILES E624** BatchID: **176672** Analysis Date: **05/24/2013** Seq No: **5125819**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,3-Dichlorobenzene	20.42	5.0	20.00		102	59	156				
1,4-Dichlorobenzene	19.56	5.0	20.00		97.8	18	190				
2-Chloroethyl vinyl ether	41.64	10	40.00		104	1	305				
Acrolein	BRL	50	40.00		87.2	30	170				
Acrylonitrile	BRL	50	40.00		90.8	30	170				
Benzene	21.03	2.0	20.00		105	37	151				
Bromodichloromethane	20.46	10	20.00		102	35	155				
Bromoform	18.05	10	20.00		90.2	45	169				
Bromomethane	24.00	10	20.00		120	1	242				
Carbon tetrachloride	21.34	2.0	20.00		107	70	140				
Chlorobenzene	20.55	10	20.00		103	34	160				
Chloroethane	27.09	5.0	20.00		135	14	230				
Chloroform	21.72	2.0	20.00		109	51	138				
Chloromethane	25.54	10	20.00		128	1	273				
cis-1,3-Dichloropropene	16.94	2.0	20.00		84.7	1	227				
Dibromochloromethane	19.19	10	20.00		96.0	53	149				
Ethylbenzene	19.73	2.0	20.00		98.6	37	162				
m,p-Xylene	39.83	5.0	40.00		99.6	60	140				
Methylene chloride	21.45	10	20.00		107	1	221				
o-Xylene	19.44	5.0	20.00		97.2	60	140				
Tetrachloroethene	22.40	2.0	20.00		112	64	148				
Toluene	20.38	2.0	20.00		102	47	150				
trans-1,2-Dichloroethene	20.10	2.0	20.00		100	54	156				
trans-1,3-Dichloropropene	18.08	2.0	20.00		90.4	17	183				
Trichloroethene	19.66	2.0	20.00		98.3	71	157				
Trichlorofluoromethane	24.60	5.0	20.00		123	17	181				
Vinyl chloride	24.67	10	20.00		123	1	251				

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305L16

ANALYTICAL QC SUMMARY REPORT

BatchID: 176672

Sample ID: **1305L16-003AMS** Client ID: **EFFLUENT (052413)** Units: **ug/L** Prep Date: **05/24/2013** Run No: **244677**
SampleType: **MS** TestCode: **PRIORITY POLLUTANT-VOLATILES E624** BatchID: **176672** Analysis Date: **05/24/2013** Seq No: **5125819**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: 4-Bromofluorobenzene	53.29	0	50.00		107	64.6	123				
Surr: Dibromofluoromethane	49.10	0	50.00		98.2	76.6	133				
Surr: Toluene-d8	47.95	0	50.00		95.9	77.8	120				

Sample ID: **1305L16-003AMS** Client ID: **EFFLUENT (052413)** Units: **ug/L** Prep Date: **05/24/2013** Run No: **244677**
SampleType: **MS** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **176672** Analysis Date: **05/24/2013** Seq No: **5125887**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	21.52	5.0	20.00		108	60	168				
Benzene	21.03	5.0	20.00		105	66.6	148				
Chlorobenzene	20.55	5.0	20.00		103	71.9	135				
Toluene	20.38	5.0	20.00		102	68	149				
Trichloroethene	19.66	5.0	20.00		98.3	71.1	154				
Surr: 4-Bromofluorobenzene	53.29	0	50.00		107	64.6	123				
Surr: Dibromofluoromethane	49.10	0	50.00		98.2	76.6	133				
Surr: Toluene-d8	47.95	0	50.00		95.9	77.8	120				

Sample ID: **1305L16-003AMSD** Client ID: **EFFLUENT (052413)** Units: **ug/L** Prep Date: **05/24/2013** Run No: **244677**
SampleType: **MSD** TestCode: **PRIORITY POLLUTANT-VOLATILES E624** BatchID: **176672** Analysis Date: **05/24/2013** Seq No: **5125820**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	22.83	2.0	20.00		114	52	162	21.66	5.26	23	
1,1,2,2-Tetrachloroethane	22.01	2.0	20.00		110	46	157	20.62	6.52	37	
1,1,2-Trichloroethane	21.38	2.0	20.00		107	52	150	19.92	7.07	27.5	
1,1-Dichloroethane	21.27	2.0	20.00		106	59	155	20.99	1.33	25.5	
1,1-Dichloroethene	21.69	2.0	20.00		108	1	234	21.52	0.787	45.5	
1,2-Dichlorobenzene	21.29	5.0	20.00		106	18	190	20.37	4.42	35.5	
1,2-Dichloroethane	22.41	2.0	20.00		112	49	155	21.12	5.93	30	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305L16

ANALYTICAL QC SUMMARY REPORT

BatchID: 176672

Sample ID: **1305L16-003AMSD** Client ID: **EFFLUENT (052413)** Units: **ug/L** Prep Date: **05/24/2013** Run No: **244677**
SampleType: **MSD** TestCode: **PRIORITY POLLUTANT-VOLATILES E624** BatchID: **176672** Analysis Date: **05/24/2013** Seq No: **5125820**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,2-Dichloropropane	22.45	2.0	20.00		112	1	210	20.82	7.53	69	
1,3-Dichlorobenzene	20.96	5.0	20.00		105	59	156	20.42	2.61	27.5	
1,4-Dichlorobenzene	20.41	5.0	20.00		102	18	190	19.56	4.25	35.5	
2-Chloroethyl vinyl ether	44.91	10	40.00		112	1	305	41.64	7.56	130	
Acrolein	BRL	50	40.00		84.8	30	170	34.88	0	100	
Acrylonitrile	BRL	50	40.00		96.7	30	170	36.30	0	50	
Benzene	21.88	2.0	20.00		109	37	151	21.03	3.96	34.5	
Bromodichloromethane	20.68	10	20.00		103	35	155	20.46	1.07	32	
Bromoform	18.44	10	20.00		92.2	45	169	18.05	2.14	27	
Bromomethane	24.31	10	20.00		122	1	242	24.00	1.28	89.5	
Carbon tetrachloride	21.53	2.0	20.00		108	70	140	21.34	0.886	26	
Chlorobenzene	21.84	10	20.00		109	34	160	20.55	6.09	31.5	
Chloroethane	26.35	5.0	20.00		132	14	230	27.09	2.77	57	
Chloroform	22.09	2.0	20.00		110	51	138	21.72	1.69	30.5	
Chloromethane	25.24	10	20.00		126	1	273	25.54	1.18	99	
cis-1,3-Dichloropropene	17.60	2.0	20.00		88.0	1	227	16.94	3.82	79	
Dibromochloromethane	20.35	10	20.00		102	53	149	19.19	5.87	30.5	
Ethylbenzene	20.44	2.0	20.00		102	37	162	19.73	3.53	37.5	
m,p-Xylene	40.17	5.0	40.00		100	60	140	39.83	0.850	30	
Methylene chloride	21.65	10	20.00		108	1	221	21.45	0.928	37	
o-Xylene	19.63	5.0	20.00		98.2	60	140	19.44	0.973	30	
Tetrachloroethene	22.70	2.0	20.00		114	64	148	22.40	1.33	25	
Toluene	21.26	2.0	20.00		106	47	150	20.38	4.23	24	
trans-1,2-Dichloroethene	20.90	2.0	20.00		104	54	156	20.10	3.90	28.5	
trans-1,3-Dichloropropene	19.02	2.0	20.00		95.1	17	183	18.08	5.07	52	
Trichloroethene	20.43	2.0	20.00		102	71	157	19.66	3.84	33	
Trichlorofluoromethane	25.55	5.0	20.00		128	17	181	24.60	3.79	50	

Qualifiers:

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J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
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Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305L16

ANALYTICAL QC SUMMARY REPORT

BatchID: 176672

Sample ID: **1305L16-003AMSD** Client ID: **EFFLUENT (052413)** Units: **ug/L** Prep Date: **05/24/2013** Run No: **244677**
SampleType: **MSD** TestCode: **PRIORITY POLLUTANT-VOLATILES E624** BatchID: **176672** Analysis Date: **05/24/2013** Seq No: **5125820**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Vinyl chloride	24.88	10	20.00		124	1	251	24.67	0.848	100	
Surr: 4-Bromofluorobenzene	51.30	0	50.00		103	64.6	123	53.29	0	0	
Surr: Dibromofluoromethane	50.29	0	50.00		101	76.6	133	49.10	0	0	
Surr: Toluene-d8	48.51	0	50.00		97.0	77.8	120	47.95	0	0	

Sample ID: **1305L16-003AMSD** Client ID: **EFFLUENT (052413)** Units: **ug/L** Prep Date: **05/24/2013** Run No: **244677**
SampleType: **MSD** TestCode: **TCL VOLATILE ORGANICS SW8260B** BatchID: **176672** Analysis Date: **05/24/2013** Seq No: **5125891**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
1,1-Dichloroethene	21.69	5.0	20.00		108	60	168	21.52	0.787	18.6	
Benzene	21.88	5.0	20.00		109	66.6	148	21.03	3.96	20	
Chlorobenzene	21.84	5.0	20.00		109	71.9	135	20.55	6.09	20	
Toluene	21.26	5.0	20.00		106	68	149	20.38	4.23	20	
Trichloroethene	20.43	5.0	20.00		102	71.1	154	19.66	3.84	20	
Surr: 4-Bromofluorobenzene	51.30	0	50.00		103	64.6	123	53.29	0	0	
Surr: Dibromofluoromethane	50.29	0	50.00		101	76.6	133	49.10	0	0	
Surr: Toluene-d8	48.51	0	50.00		97.0	77.8	120	47.95	0	0	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Arcadis
Project Name: Lafarge East Point DMR
Workorder: 1305L16

ANALYTICAL QC SUMMARY REPORT

BatchID: 176711

Sample ID: **MB-176711** Client ID: Units: **mg/L** Prep Date: **05/28/2013** Run No: **244883**
SampleType: **MBLK** TestCode: **Total Metals by ICP E200.7** BatchID: **176711** Analysis Date: **05/29/2013** Seq No: **5128287**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	BRL	0.0100									

Sample ID: **LCS-176711** Client ID: Units: **mg/L** Prep Date: **05/28/2013** Run No: **244883**
SampleType: **LCS** TestCode: **Total Metals by ICP E200.7** BatchID: **176711** Analysis Date: **05/29/2013** Seq No: **5128286**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	1.033	0.0100	1.000		103	85	115				

Sample ID: **1305L43-007AMS** Client ID: Units: **mg/L** Prep Date: **05/28/2013** Run No: **244883**
SampleType: **MS** TestCode: **Total Metals by ICP E200.7** BatchID: **176711** Analysis Date: **05/29/2013** Seq No: **5128289**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	1.040	0.0100	1.000		104	70	130				

Sample ID: **1305L43-007AMSD** Client ID: Units: **mg/L** Prep Date: **05/28/2013** Run No: **244883**
SampleType: **MSD** TestCode: **Total Metals by ICP E200.7** BatchID: **176711** Analysis Date: **05/29/2013** Seq No: **5128290**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Lead	1.037	0.0100	1.000		104	70	130	1.040	0.300	20	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		