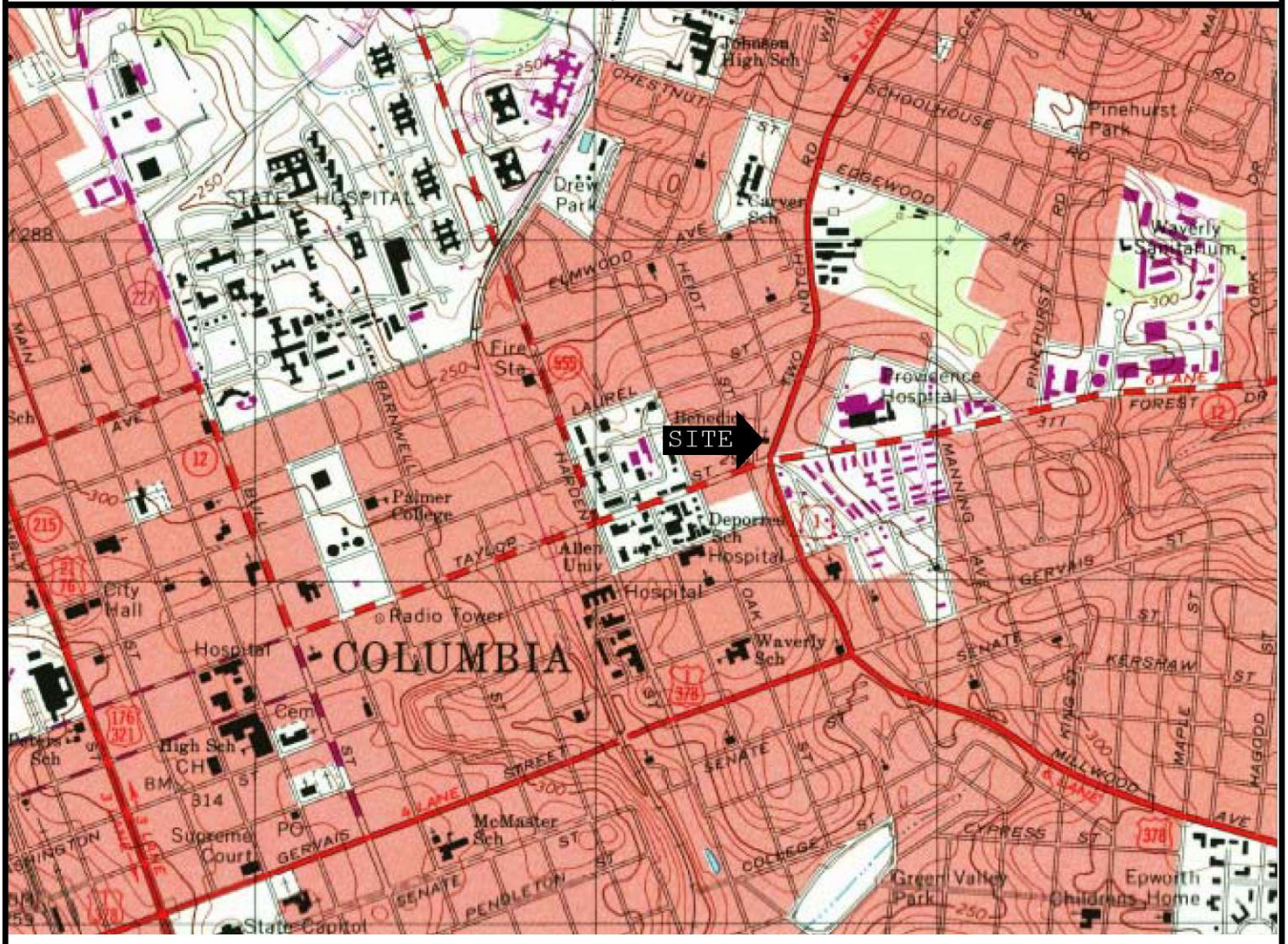
FIGURE 1

Site Location Map
Handy Pantry #65 / University Mart / Clouds Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina



CRAWFORD ENVIRONMENTAL SERVICES

15 Church Avenue, SW
Roanoke Virginia, 24011

540-343-6256 (office) 540-343-6259 (fax)

NORTH COLUMBIA, SOUTH CAROLINA

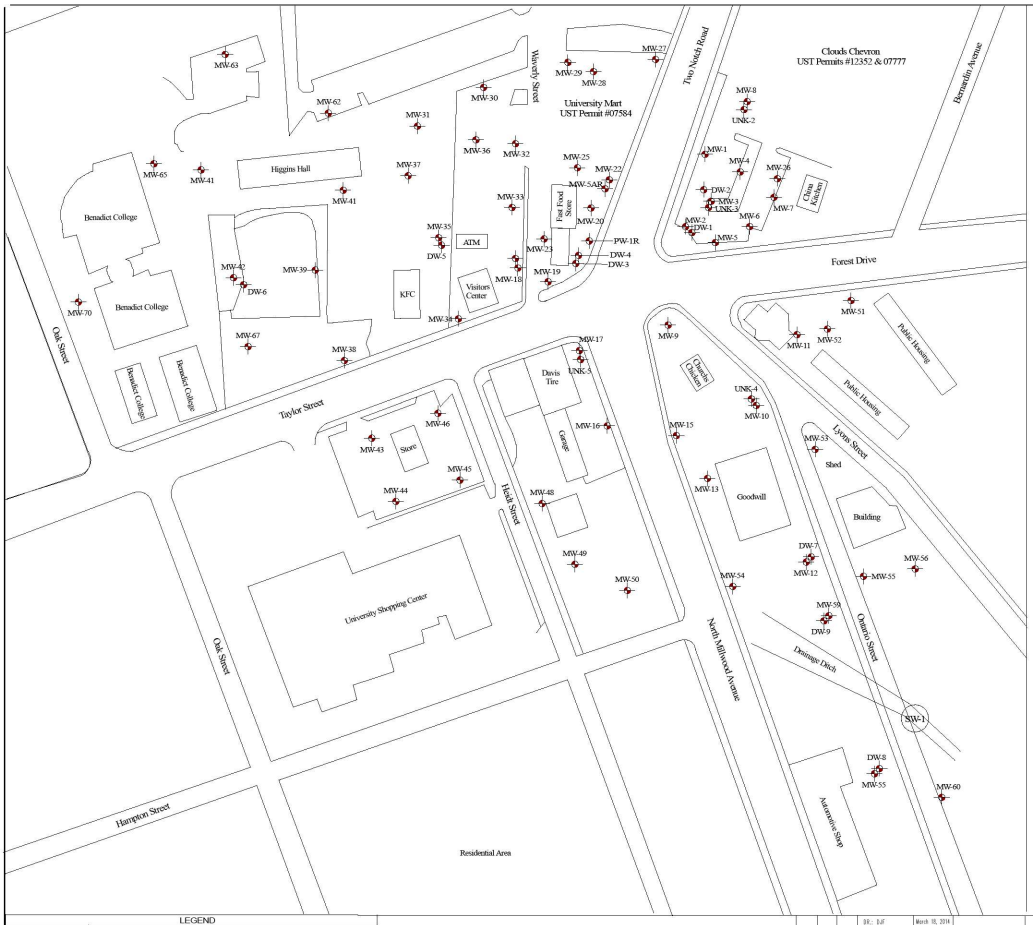
Source: U.S.G.S. Topographic Map of the Columbia North Quadrangle, Virginia, 7.5 Minute Series (1977, revised 1988)
Scale: 1:24,000 Contour Interval: 20 Feet
Vertical Datum: National Geodetic Vertical Datum 1929
Horizontal Datum: North American Datum1927

Project: Corrective Action Plan

Client: SCDHEC

CES Job #: 7.0547

Latitude:
034”00’42.72”N
Longitude:
081”01’00.13”W



Graphic Scale (Feet)

0 75 150 225 300

LEGEND

Gasoline Dispenser	Air Sparge Well	Mail Boxes	Propane Tank
Diesel Dispenser	Future Recovery Well	Sign	Overhead Utility
Utility Pole	Flag Pole	Pay Phone	Metal Fence
Water Meter	Water Spigot	Air Conditioning Unit	Wooden Fence
Monitoring Well	Light Pole	Compressed Air	Manway
Storm Drain	Grease Trap	Waste Receptacle	UST Access

REV.	BY	DATE
	DR.: DJF	March 10, 2014
	CK.:	
	APPD.:	
	SCALE: As Shown	
	CES PROJ. NO.: 7.0547	

Corrective Action Plan

CRAWFORD ENVIRONMENTAL SERVICES

15 Church Avenue, SW
Roanoke, Virginia 24011

540-343-6256
540-343-6259 (fax)

Figure Title
Site Plan
Handy Pantry/University Mart/Clouds Chevron
UST Permits # 07584 / 07777 / 12352
Intersection of Taylor and Two Notch Road
Columbia, South Carolina

DRAWING NUMBER: Figure 2 | REV: 0

			DR.: DJF	March 18, 2014
			CK.:	
			APP'D.: CTC	
			SCALE: NA	
			CES PROJ. NO.: 7.0547	
REV	BY	DATE		

Corrective Action Plan

CRAWFORD ENVIRONMENTAL SERVICES

15 Church Avenue, SW
Roanoke, Virginia 24011

540-343-6256
540-343-6259 (fax)

Figure Title
Tax Map
Handy Pantry/University Mart/Clouds Chevron
UST Permits # 07584 / 07777 / 12352
Intersection of Taylor and Two Notch Road
Columbia, South Carolina

DRAWING NUMBER	REV
Figure 3	0

2.0 EXISTING REMEDIAL SYSTEM

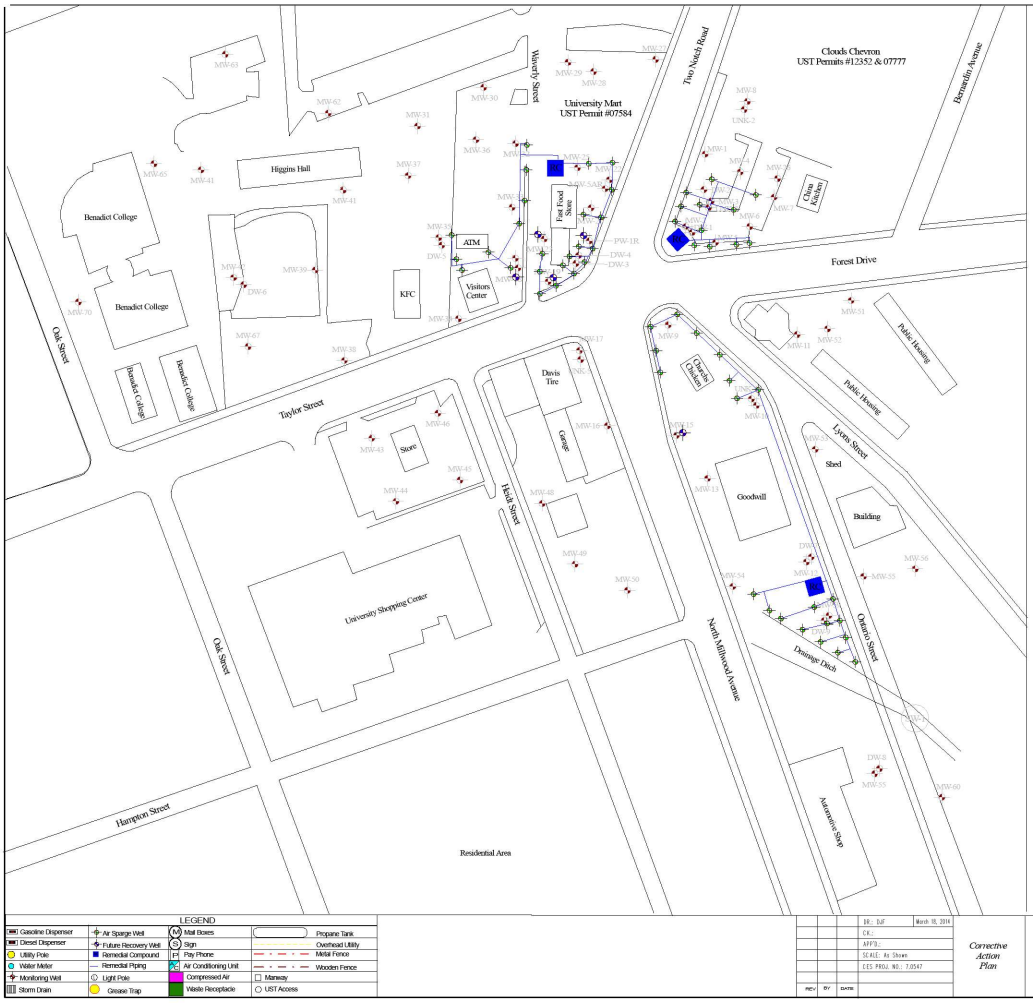
Based on a review of historical documents associated with the referenced UST permits as well as the initial site check performed by CES on March 10, 2014, the former remedial system components remain on-site from the previous contract with Palmetto Environmental Group (PEG). CES identified approximately 58 air-sparge points and four recovery wells. The air-sparge wells were constructed of four-inch schedule 40 polyvinyl chloride (PVC) piping to an approximate depth of 45.0 feet below ground surface (bgs) with screened intervals ranging between 25.0 feet and 45.0 feet bgs. The recovery wells were constructed of two-inch schedule 40 PVC piping to approximate depths of 35.0 feet bgs with screened intervals ranging between 25.0 feet and 35.0 feet bgs. Based on the Corrective Action Plan Implementation Report (CAP-IMP) dated December 27, 2006 completed by PEG, each air sparge well is connected via dedicated 0.5-inch PVC conduits to three independent remedial compounds located at 2367 Taylor Street, 2435 Forest Drive and 2436 Forest Drive. Each remedial system maintains an Atlas Cooper (or equivalent) 10.0-horsepower rotary screw air compressor, a five-horsepower Rotron Regenerative Blower and the ancillary electrical controls. CES performed a cursory visual inspection of the equipment and is assuming that the former remedial systems will resume full operation following minor maintenance and troubleshooting activities. CES has previously submitted applications to South Carolina Electric and Natural Gas (SCENG) to transfer the necessary electric accounts to CES. The existing remedial layout is provided as Figure 4.

3.0 REMEDIATION SYSTEM DESIGN

CES evaluated various corrective action techniques for application at the subject site. In accordance with observed site conditions, CES proposes to remediate the subject properties utilizing a "multi-step" process that will effectively address the free-, dissolved-, and adsorbed-phase petroleum compounds identified at the subject facilities. This tiered-approach will consist of re-activating the air sparge/SVE components, surfactant enhanced free-product recovery efforts, aggressive in-situ chemical-oxidation (ChemOx) and supplemental biological amendment injections. A summary of the remedial program to be implemented at the site is presented below.

3.1 Re-Activation of Existing Remedial Components

Initially, CES proposes to mobilize to the subject site to re-activate the three existing remedial systems. Re-activation will include the following activities: (1) securing the compounds by repairing fencing enclosures and repairing access doors; (2) clearing overgrown foliage and debris surrounding the remedial compounds; (3) performing routine maintenance on the compressors and blowers to include removal and replacement of lubricants, filters, belts, etc.; and (4) modification of the existing remedial manifold to facilitate use during future remedial injections. Following completion of the above referenced activities, the air sparge/SVE systems will be activated and monitored for approximately one quarter.


Clouds Chevron
UST Permits #12352 & 07777
University Mart
UST Permit #07584
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Benedict College
Benedict College
Benedict College
Oak Street
Taylor Street
ATM
Fast Food Store
Visitors Center
KFC
China Garden
Davis Tire
Garage
Store
Hatch Street
University Shopping Center
Oak Street
Hampton Street
Residential Area
Public Housing
Public Housing
Lyons Street
Shed
Building
Goodwill
North Millwood Avenue
Ontario Street
Drainage Ditch
Automotive Shop
Oriental Delights
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3.2 Surfactant Enhanced Recovery Events

Subsequent to completing approximately one quarter of sparging and vapor extraction, CES will inspect the monitoring points to confirm the presence or absence of free-product. Should site conditions indicate the presence of free-phase petroleum, CES will mobilize to the subject site and install a maximum of six free-product recovery wells. Eight-inch diameter soil borings will be installed utilizing hollow-stem auger techniques to facilitate the construction of six, four-inch recovery / injection wells. Each recovery / injection point will be installed to approximately 35.0 feet below ground surface (bgs). Recovery / injection wells will be equipped with screened intervals from approximately two feet above source area contaminants to the terminal depth of the boring. Each recovery / injection point will maintain an estimated eight-inch diameter waterproof manway installed within an estimated two foot by two foot concrete pad. Proposed recovery / injection point locations are presented on Figure 4.

Following installation of the injections wells, CES will mobilize to the site with remedial injection equipment and approximately 60-gallons of PetroSolv Surfactant (PetroSolv). CES will mix a 3.0% surfactant solution utilizing approximately 50-gallons of PetroSolv and approximately 600-gallons of potable water (acquired on-site). Over an estimated period of one to three days, CES will inject approximately 660-gallons of surfactant solution to injection points IW-1, IW-2, IW-3, IW-4, IW-5, and IW-6. During these injection events, CES will utilize a surge block to actively pressurize the surfactant solution into the formation creating direct contact with the free- and adsorbed-phase compounds. Following completion of the injection activities, CES will utilize a vacuum truck to extract approximately 150-gallons of petroleum impacted groundwater from each of the referenced injection wells.

3.3 Chemical Oxidation

Following achievement of the 60% concentrations of concern (COC) milestone, CES proposes to use a dilute Fenton's reagent process at the subject site to oxidize adsorbed- and dissolved-phase petroleum constituents in the subsurface The Fenton's reagent process utilizes a metal catalyst (ferrous sulfate) and hydrogen peroxide to produce hydroxyl radicals. These hydroxyl radicals rapidly oxidize petroleum hydrocarbons upon contact, ultimately producing by-products of carbon dioxide, water, and dissolved oxygen. Residual petroleum hydrocarbon mass and simple organic acids usually remain after the chemical oxidation process but can be treated with biological amendments. Fenton's reagent process is shown in the following steps:

$$(1)\ Fe^{2+} + H_2O_2 \rightarrow Fe^{3+} + OH\cdot + OH^-$$
$$(2)\ Fe^{3+} + H_2O_2 \rightarrow Fe^{2+} + OOH\cdot + H^+$$

The hydrogen peroxide will be injected into the estimated 58 existing air-sparge wells utilizing the existing piping as subsurface conveyance conduits. The six recovery / injection wells referenced in Section 3.2 also will be utilized for the injection of hydrogen peroxide on an as needed basis. The injection events will be performed episodically until an approximate COC reduction of 75-80% is achieved. CES estimates that each ChemOx injection event can be completed in approximately one to two weeks, however, the duration of these events will be controlled by the site's ability to sustain the desired rates of injection. CES estimates that

approximately 3,000-gallons of 5.0% hydrogen peroxide solution will be utilized at the subject site.

3.4 Biological Injections

Directly following the final ChemOx injection, the holding tank will be cleansed prior to the introduction of bacteria and nutrient-amended water. CES will utilize the PetroBac™ product bundle which contains a TPH Bacterial Consortium and Enzyme Accelerator. The NutriMax™ nutrient mix also will be utilized to increase biological degradation of the hydrocarbon mass at the site. Over the course of an estimated three to five days, CES will inject approximately 1,000 lbs. of CBN nutrients and approximately 20 gallons of A2 bacteria mixed with an estimated 3,500-gallons of potable water. The biological amendments will be gravity fed to the injection points in order to facilitate physical contact with the adsorbed-phase compounds. The amendments will react with the residual TPH mass to produce carbon dioxide and water as by-products.

3.5 Injection Schedule

CES will re-activate the existing remedial compounds immediately upon CAP approval from SCDHEC. Approximately three months following activation of the remedial system, CES will collect groundwater samples from the SSTL wells to evaluate the effectiveness of the existing remedial system. Based on the qualitative and quantitative data collected, CES will evaluate installation of the free-product recovery wells and perform additional injections either on a quarterly or semi-annual basis.

4.0 REMEDIAL SUMMARY

Based on observed site conditions, attainment of cleanup endpoints will be achieved only through remediation of source area or adsorbed-phase contaminants. As described in Section 3.0 of this CAP, surfactant enhanced free-product recovery, in-situ chemical oxidation and supplemental biological degradation will be an aggressive remedial approach to address the multiple-phase contaminants identified at the subject properties. The referenced remedial techniques have been demonstrated by industry as efficient remedial technologies that reduce adsorbed- and dissolved-phase contaminant plumes concurrently, at effective costs and within reasonable time frames. Although preliminary, CES estimates that remedial endpoints can be achieved within approximately 60 months. Contaminant mass removal estimates will be calculated and timelines for the attainment of cleanup endpoints will be modified accordingly after empirical data is collected and evaluated over time.

5.0 MONITORING SCHEDULES

5.1 Remedial Monitoring Schedule

The remedial operation and monitoring (O & M) schedule presented below has been developed to assess the overall effectiveness and operating efficiency of the implemented remedial techniques. Table 2 is a summary of the O & M schedule for the corrective action efforts to be implemented at the subject sites in Columbia, South Carolina.

Table 2.

Summary of Remedial Operation & Monitoring Schedule

Location	Frequency	Parameters	Methods	Media
SVE and system components	Weekly inspections for first month; bi-monthly thereafter	N/A	Routine system O&M	N/A
SVE vapor effluents	Weekly inspections for first month; bi-monthly thereafter	TPH	PID	Vapor
On- and Off-site Monitoring Wells	Semi-Annually from the Date of the CAP-IMP Report	BTEX, Naphthalene, MTBE, TAA, TAME, TBA.	8260B, 8260-OXY	Groundwater

5.2 Post-Operational Schedule

Following achievement of the third interim Chemical of Concern (CoC) concentration goal for 30 consecutive days, CES will complete two quarters of post corrective action monitoring to ensure that dissolved-phase endpoints have been maintained. Upon verification of endpoint maintenance for two consecutive quarters, CES will mobilize to the subject site to remove/abandon all assessment and corrective action equipment. This process will include removal of the injection equipment and abandonment of all on- and off-site monitoring/injection wells.

5.3 Implementation Schedule

Upon receiving the Notice to Proceed from DHEC personnel, CES will mobilize to the subject properties to initiate construction activities. The remedial equipment to be utilized at the subject property is owned by CES which will facilitate the expeditious commencement of the corrective action implementation phase. CES estimates that the existing remedial systems can be operational within one week of receiving the Notice to Proceed.

5.4 Reporting Schedule

The Initial CAP Implementation Report will be submitted to DHEC within 60 days of receipt of the Notice to Proceed. This initial report will comprise details pertaining to overall system design, well installations and as-built drawings for the remedial system utilized. Corrective Action System Evaluation Reports (CASE) will be submitted to DHEC semi-annually from the date of initial "system" startup. The CASE reports will include groundwater analytical results, contaminant mass removal estimates, and an evaluation of the effectiveness of corrective action efforts performed to date.

6.0 DISPOSAL/TREATMENT

The following sections address disposal/treatment options for petroleum-impacted material generated by the proposed corrective action.

6.1 Petroleum-Impacted Soil

CES anticipates that minor amounts of soil will be generated during soil boring installation. Should visual, olfactory and/or headspace evidence indicate that the generated material is petroleum-impacted, CES will collect soil samples for waste characterization analyses. The excavated material will be temporarily stockpiled on-site on six-millimeter polyethylene sheeting pending off-site disposal. Non-hazardous waste manifests for the transport and disposal of any petroleum-impacted soil generated during system installation will be submitted to DHEC under separate cover upon receipt.

6.2 Non-Impacted Soils

Excess non-impacted soils generated during the soil boring process will be stockpiled prior to disposal at a construction debris landfill.

7.0 PERMITTING REQUIREMENTS

7.1 Construction Permit

Local construction standards do not require a construction permit for the required remedial activities.

7.2 Injection Permit

CES has prepared the underground injection permit application and has submitted this document to the SCDHEC Bureau of Water for approval. A copy of the submitted application is included as Appendix A.

8.0 COST EFFECTIVENESS OF PROPOSED SYSTEM

Based on observed site conditions, attainment of cleanup endpoints will be achieved only through remediation of adsorbed- and dissolved-phase contaminant plumes. As described in Section 3.0 of this CAP, in-situ remedial techniques will serve as an aggressive cleanup approach to address the multiple contaminant phases identified at the subject properties.

9.0 ESTIMATED TIME FRAME TO ACHIEVE ENDPOINTS

Accurate estimation of cleanup time is based on sufficient monitoring of corrective action performance during early stages of implementation, quality of effluent data, and appropriate data interpretation (Buscheck and Peargin, 1991). CES has designed the CAP performance monitoring schedule to allow for adequate data collection, particularly as it relates to removal of contaminant mass, during the initial 12 months of corrective action. The absence of quantitative pilot test data is not

conducive to estimating, with any degree of certainty, the contaminant mass remaining in the subsurface. As such, cleanup time and endpoint attainment will be continually evaluated and confirmed throughout the remedial process. Data collection and interpretation in the early stages of corrective action will serve as the baseline for quantifying the remaining contaminant mass. Post-operational monitoring will verify that cleanup endpoints have been achieved.

10.0 SUMMARY AND RECOMMENDATIONS

In accordance with measured site conditions and data reviewed to date, CES recommends a "tiered" remedial approach as follows: (1) reactivation of the existing air sparge and vapor extraction remedial components. (2) Subsequent to the completion of approximately one quarter of AS/SVE operation, supplemental vacuum-enhanced free-product recovery events will be performed, as needed. The final remedial "tiers" will comprise in-situ technologies including chemical oxidation injections and supplemental biological amendments. Following the initial 12 months of active remediation at the subject site, CES will evaluate the effectiveness of the proposed remedial efforts to determine if additional corrective action measures are warranted. CES is prepared to begin implementation of the CAP immediately upon receipt of the Notice to Proceed from SCDHEC. This CAP is being submitted to Ms. Susan Fulmer of the South Carolina Department of Health and Environmental Control UST Management Division.

REFERENCES

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Bryson, P. D. *Hydrocarbons. In Comprehensive Review In Toxicology.* 2nd ed., Chapter 47, Aspen Publications: Rockville, Maryland, 1989.

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Sax, N. I., and Lewis, R. J. *Hazardous Chemicals Desk Reference*. Van Norstrand Reinhold: New York, New York, 1987.

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U.S. Environmental Protection Agency. *Cleanup of Releases from Petroleum USTs: Selected Technologies.* Office of Underground Storage Tanks, April 1988

U.S. Environmental Protection Agency. *Assessing UST Corrective Action Technologies: Site Assessment and Selection of Unsaturated Zone Treatment Technologies*. Risk Reduction Engineering Laboratory, March 1990.

U.S. Geological Survey, *7.5 Minute Series Topographic Map of the North Columbia Quadrangle, South Carolina*,1979

APPENDIX A

Injection Permit

CRAWFORD
ENVIRONMENTAL
SERVICES

March 20, 2014

Mr. Christopher A. Wargo
State of South Carolina
Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RE: Underground Injection Control Permit Application
Handy Pantry #65/University Mart & Cloud's Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina
UST Permit # 07584 / 07777 / 12352

Dear Mr. Wargo:

Enclosed please find one copy of the Underground Injection Control Permit Application. A copy of the application also was included with the Corrective Action Plan submitted to Ms. Susan Fulmer on March 21, 2014. If you have any comments or questions, or if additional information is required, please feel free to contact me at 540.798.5068.

Best Regards,

Daniel J. Fisher
Division Manager

Form I UIC	D H E C	I. EPA ID NUMBER		
	Underground Injection Control Permit Application Ground-Water Protection Division (Collected under the Authority of Title 48 Chapter I of the 1976 South Carolina Code of Laws)		T/A	C
		U		

Read attached instructions before starting.
For OfficialUse Only

Application Approved month day year	Date Received month day year	Permit Well Number

Comments

II. Facility Name and Address	III. Owner/Operator and Address
Facility Name: Handy Pantry #65 / University Mart /Clouds Chevron	Owner/OperatorName: Crawford Environmental Services, Inc.
Street Address: Intersection of Taylor Street and Two Notch Road	Street Address: 15 Church Avenue, SW
City: Columbia State: South Carolina Zip Code: 29204	City: Roanoke State: Virginia Zip Code: 24011

IV. Ownership Status (Select One)

☐ A. Federal ☐ B. State ☒ C. Private ☐ D. Public ☐ E. Other (Explain)

V. SIC Codes

VI. Well Status (Select A, B or C)

☐ A. Operating | Date Started *(MM/DD/YYYY)* | ☐ B. Modification/Conversion ☒ C. Proposed

VII. Type of Permit Requested - Class and Type of Well (see reverse)

A. Class(es) enter code(s)	B. Type(s) enter code(s)	C. If class is "other" or type is code 'Y', explain	D. Number of Wells per type
V.A	I		64

VIII. Location of Wells or Approximate Center of field or Project

C	A. Latitude				B. Longitude			
I		Deg 34	Min 00	Sec 76.29		Deg 81	Min 00	Sec 57.53

IX. Attachments

Complete the following questions on a separate sheet(s) and number accordingly; see instructions for Classes 11, 111, and V, complete and submit on a separate sheet(s) attachments A-U as appropriate. Attach maps where required. List attachments by letter which are applicable and include with your application.

X. Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment.

A. Name (Type or Print)	Title	B. Phone No.
Charles F. Crawford	President	540-343-6256
C. Signature		D. Date Signed (MM/DD/YYYY) 03/20/2014

Well Class and Type Codes

Class I			Industrial, municipal, and other injection wells for the subsurface disposal of fluids. (Prohibited)
Class II			Oil and gas production and storage related injection wells.
	Type	"D"	Produced fluid disposal well
		"R"	Enhanced recovery well
		"R"	Hydrocarbon storage well (excluding natural gas)
		"X"	Other Class II wells
Class III			Special process injection wells.
	Type	"G"	Solution mining well
		"S"	Sulfur mining well by frasch process
		"U"	Uranium mining well (excluding solution mining of conventional mines)
		"X"	Other Class III wells
Class IV			Hazardous or radioactive waste disposal injection wells. (Prohibited)
Class V.A			Injection wells not included in Class I, II, III, IV or V.B
	Type	"A"	Storm runoff drainage wells
		"B"	Aquifer recharge wells
		"C"	Salt-water intrusion barrier wells
		"D"	Subsidence control wells
		"E"	Backfill wells associated with subsurface mining
		"F"	Geothermal energy recovery wells
		"G"	Experimental technology well
		"H"	Natural gas storage wells
		"I"	Corrective action wells
Class V.B			Non-contact return flow system wells
	Type	"A"	Heat pump return flow wells
	Type	"B"	Cooling water return flow wells

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The following ATTACH□ ENTS should be submitted with an underground injection control (UIC) permit application for Class V.A. corrective action wells associated with aquifer remediation that are to be used to inject fluid whose chemical constituents are below all drinking water standards, as established under R. □□-□□ □

Attachment A □Activity for Review

Submit a brief description of the activities to be conducted that require a UIC permit.

Attachment B □□ ell Construction Details

Submit schematic or other appropriate drawings of the surface and subsurface construction details of the recovery and injection wells.

Attachment C □Operating Data

Submit the following proposed operating data for each injection well□

□) Average and maximum daily rate and volume of fluid to be injected. In addition, indicate the average and maximum daily rate and volume of fluid to be withdrawn from each recovery well. Verification of the aquifer□s hydraulic ability to produce and accept the quantities proposed should be presented.

□) Average and maximum injection pressure.

□) Pumping schedule (i.e. continuous, alternating cycles, etc.).

□) Proposed ranges in the concentration of all contaminant constituents within the injection fluid. Include comprehensive ground-water quality data from a "worst case" well sample.

□) □ength of time the project is expected to require injection to complete remediation (to ensure the effective dates of the permit will allow sufficient time to complete the project).

Attachment D □□ onitoring Program

Discuss the planned monitoring program in detail□

□) Include a discussion of monitoring devices, sampling frequency (sufficient to verify treatment system efficiency), sampling protocol, sampling location, parameters to be analyzed, and proposed method(s) of analysis.

□) This plan should indicate how, through monitoring, the proposed contaminant levels in the injectate will be verified.

□) This plan should also clearly illustrate exactly how hydraulic control of the contaminant plume (and injectate, where relevant) will be verified through monitoring (i.e., piezometers, quality analyses, etc.).

Attachment E □Existing or Pending State □Federal Permits

□ist the program and permit number of any existing State or Federal permits for the facility (i.e., NPDES, RCRA, UST, etc.).

Attachment F □Description of Business

Give a brief description of the nature of the business of the facility and any immediately adjacent facilities.

Attachment G □Area of Review

□) The area of review should be a fixed radius of □□□mile from the injection well, the outermost injection wells (if a wellfield).

- If a fixed radius is not selected, the methods and the calculations used to determine the size of the area of review should be submitted.

Attachment H: Maps of Wells and Area of Review

- Submit a topographic map of the area, extending one mile beyond the project property boundaries. This map should show all hazardous waste treatment, storage, or disposal facilities, and all intake and discharge structures associated with the project facility. Any known areas of soil and/or ground-water contamination within a one mile radius should be indicated. Also indicate all surface bodies of water, springs, mines (surface and subsurface), quarries, and other pertinent surface features such as residences, roads, and geologic faults (known or suspected).

- A scaled map(s) should be included which shows the name and/or number and the location of All production, injection, monitoring, abandoned and dry wells within the area of review. This should be accomplished by file and field surveys. Information regarding the construction (i.e., total depth, diameter, casing/screened intervals, grouting, etc.) and the current status (i.e., actively used, temporarily abandoned, permanently abandoned) of All wells within the area of review should be submitted. If any wells have been abandoned, details on the method the wells were abandoned (i.e., cemented/grouted, filled with sand, etc.) should be included.

- A potentiometric map of the project site should be submitted which accurately locates all monitoring wells and proposed recovery and injection wells and outlines the horizontal extent of both the free-phase contaminant (where applicable) and dissolved contaminant plumes. Include all water level and product thickness data. The date and time that water levels and product thicknesses were measured should be indicated.

Attachment I: Cross Sections/Diagrams

- Geologic cross sections indicating the lithology and stratigraphy of the site and the horizontal and vertical extent of the contaminant plume, should be submitted. At least two stratigraphic cross sections, one parallel and one perpendicular to the horizontal ground-water flow direction, should be submitted. In areas where the site stratigraphy is complex, additional cross sections should be submitted to clearly illustrate the local conditions.

- A schematic diagram, in the form of a cross section, showing the proposed remediation system with the components of flow (above and below ground) and all associated appurtenances (i.e., stripping tower, piping, wells, etc.).

Attachment J: Name and Depth of Underground Sources of Drinking Water (USDWs)

Identify and describe all aquifers which may be affected by the injection.

Attachment K: Hydraulic Control

- Sufficient supporting data (i.e. time/drawdown data, Theis curves and methods, calculations, etc.), used to determine aquifer characteristics to verify complete hydraulic control over the contaminant plume (and injectate, if proposed injectate quality does not conform to classified ground-water standards) during injection should be submitted. At a minimum, values should be given for transmissivity, hydraulic conductivity, effective porosity and specific yield.

- Demonstrate the presence and magnitude of, or the absence of, any vertical hydraulic gradient at the site. If a vertical hydraulic gradient exists, show how its direction and magnitude are incorporated in the calculations demonstrating hydraulic control.

- Ground-water flow computer models (especially 2-D map view with potentiometric and flow lines) may be utilized and submitted. All calculations should be in English units. All model-derived data and maps should be properly labeled and keyed so as to be clearly understood.

Subsequent Action

After receipt of a complete Underground Injection Control Permit Application, the Department will make a determination to deny or issue a Permit to Construct the injection well(s). After the well(s) is/are constructed, the Department should be notified in writing of the well(s) completion and sent a copy of the completed well record form(s) signed by a South Carolina certified well driller which illustrates the "as built" well construction. If the system is in compliance with the approved application, the Department may then issue an Approval to Operate. This Approval to Operate is the final permission necessary prior to injection.

Attachment A: Activity for Review

On behalf of the South Carolina Department of Health and Environmental Control (SCDHEC), Crawford Environmental Services, Inc. (CES) has prepared a Corrective Action Plan (CAP) for the Handy Pantry # 65 / University Mart / Clouds Chevron (Subject Site) located at the intersection of Taylor Street and Two Notch Road in Columbia, South Carolina. Subsurface soils and groundwater quality have been impacted by a release of petroleum products at the site. In accordance with observed site conditions, CES proposes to remediate the subject properties utilizing a "multi-step" process that will effectively address the free-, dissolved-, and adsorbed-phase petroleum compounds identified at the subject facilities. This tiered-approach will consist of re-activating the air sparge/SVE components, surfactant enhanced free-product recovery efforts, aggressive in-situ chemical-oxidation (ChemOx) and supplemental biological amendment injections. A summary of the remedial program to be implemented at the site is presented below.

Attachment B: Well Construction Details

CES has identified approximately 58 air-sparge points and four recovery wells on-site from a previous remedial contract. The air-sparge wells were constructed of four-inch schedule 40 polyvinyl chloride (PVC) piping to an approximate depth of 45.0 feet below ground surface (bgs) with screened intervals ranging between 25.0 feet and 45.0 feet bgs. The recovery wells were constructed of two-inch schedule 40 PVC piping to approximate depths of 35.0 feet bgs with screened intervals ranging between 25.0 feet and 35.0 feet bgs. Based on the Corrective Action Plan Implementation Report (CAP-IMP) dated December 27, 2006 completed by PEG, each air sparge well is connected via dedicated 0.5-inch PVC conduits to three independent remedial compounds located at 2367 Taylor Street, 2435 Forest Drive and 2436 Forest Drive. CES proposes to utilize these wells for air sparging and supplemental injections (Chem-Ox, Surfactant, and Biological Amendments). Copies of the existing well completion records are include as Appendix A.

Subsequent to completing approximately one quarter of sparging and vapor extraction, CES will inspect the monitoring points to confirm the presence or absence of free-product. Should site conditions indicate the presence of free-phase petroleum, CES will mobilize to the subject site and install a maximum of six free-product recover wells. Eight-inch diameter soil borings will be installed utilizing hollow-stem auger techniques to facilitate the construction of six, four-inch recovery wells. Each recovery point will be installed to approximately 35.0 feet below ground surface (bgs). Injection points will be equipped with screened intervals from approximately two feet above source area contaminants to the terminal depth of the boring. Each injection point will maintain an estimated eight-inch diameter waterproof manway installed within an estimated two foot by two foot concrete pad. A diagram of proposed injection well construction is included as Appendix A.

Proposed and existing injection point locations are presented on Figure 1.

Attachment C: Operating Data

1. Average daily rate of fluid to be injected per well is 166 gallons per day (gpd) with a maximum of 210 gpd. Maximum flow rate for air sparging will be four cubic feet per minute (CFM) per injection point.

2. Average fluid injection pressure is planned to be 7-psi with a maximum of 15-psi. Maximum air sparge pressure will be 15-psi.

3. Should free-phase petroleum be identified following the first three months of air sparging, six additional injection wells will be installed for surfactant enhanced recovery points. Following installation of the injections wells, CES will mobilize to the site with remedial injection equipment and approximately 60-gallons of PetroSolv Surfactant (PetroSolv). CES will mix a 3.0% surfactant solution utilizing approximately 50-gallons of PetroSolv and approximately 600-gallons of potable water (acquired on-site). Over an estimated period of one to three days, CES will inject approximately 660-gallons of surfactant solution to injection points IW-1, IW-2, IW-3, IW-4, IW-5, and IW-6. During these injection events, CES will utilize a surge block to actively pressurize the surfactant solution into the formation creating direct contact with the free- and adsorbed-phase compounds. Following completion of the injection activities, CES will utilize a vacuum truck to extract approximately 150-gallons of petroleum impacted groundwater from each of the referenced injection wells.

4. Following achievement of the 60% concentrations of concern (COC) milestone, CES proposes to use a dilute Fenton's reagent process at the subject site to oxidize adsorbed- and dissolved-phase petroleum constituents in the subsurface The Fenton's reagent process utilizes a metal catalyst (ferrous sulfate) and hydrogen peroxide to produce hydroxyl radicals. These hydroxyl radicals rapidly oxidize petroleum hydrocarbons upon contact, ultimately producing by-products of carbon dioxide, water, and dissolved oxygen. Residual petroleum hydrocarbon mass and simple organic acids usually remain after the chemical oxidation process but can be treated with biological amendments. Fenton's reagent process is shown in the following steps:

(1) $Fe^{2+} + H_2O_2 \rightarrow Fe^{3+} + OH\cdot + OH^-$
(2) $Fe^{3+} + H_2O_2 \rightarrow Fe^{2+} + OOH\cdot + H^+$

The hydrogen peroxide will be injected into the estimated 58 existing air-sparge wells utilizing the existing piping as subsurface conveyance conduits. The six free-product recovery wells referenced in Section 3.2 also will be utilized for the injection of hydrogen peroxide on an as needed basis. The injection events will be performed episodically until an approximate COC reduction of 75-80% is achieved. CES estimates that each ChemOx injection event can be completed in approximately one to two weeks, however, the duration of these events will be controlled by the site's ability to sustain the desired rates of injection. CES estimates that approximately 3,000-gallons of 5.0% hydrogen peroxide solution will be utilized at the subject site.

5. Directly following the final ChemOx injection, the holding tank will be cleansed prior to the introduction of bacteria and nutrient-amended water. CES will utilize the PetroBac™ product

bundle which contains a TPH Bacterial Consortium and Enzyme Accelerator. The NutriMax™ nutrient mix also will be utilized to increase biological degradation of the hydrocarbon mass at the site. Over the course of an estimated three to five days, CES will inject approximately 1,000 lbs. of CBN nutrients and approximately 20 gallons of A2 bacteria mixed with an estimated 3,500-gallons of potable water. The biological amendments will be gravity fed to the injection points in order to facilitate physical contact with the adsorbed-phase compounds. The amendments will react with the residual TPH mass to produce carbon dioxide and water as by-products. Material Data Safety Sheets (MSDS) for the referenced amendments are included as Appendix C.

6. CES will conduct air sparging / SVE activities continuously until the 60% concentrations of concern (COC) milestone is achieved. Following conclusion of air sparging activities, CES will conduct injections on a quarterly basis. The estimated length of time to complete remediation is 48 months to 60 months.

Attachment D: Monitoring Program

Corrective Action System Evaluation Reports (CASE) will be submitted to DHEC semi-annually from the date of system startup (re-activation). The CASE reports will include groundwater analytical results, system flow rates and efficiency calculations, and contaminant mass removal rate estimates, and an evaluation of the systems effectiveness during the referenced period. Groundwater samples collected quarterly from site monitoring wells will be analyzed for benzene, toluene, ethylbenzene, xylenes, MTBE, naphthalene, by EPA Method 8260 and tert-amyl alcohol (TAA), tert-amyl methyl ether, TAME, and tert-butanol (TBA) via 8260-OXY. Laboratory analyses will be conducted by a third-party S.C. certified laboratory. Site monitoring well locations are depicted on Figure 2.

Attachment E: Existing Federal and State Permits

The sites currently maintain the following SCDHEC UST permits; 07584 (Handy Pantry #65/University Mart) and 07777 / 12352 (Cloud's Chevron). In addition, an Underground Injection Control permit has been issued to Palmetto Environmental Group, Inc. (PEG), however, the status of the permit is unknown.

Attachment F: Description of Business

The site associated with UST permit numbers 07777 / 12352 was formerly operating as a retail petroleum station. The site is currently utilized as a parking / access area. The site associated with UST permit number 07584 is currently operating as a retail petroleum station.

Attachment G: Area of Review

See Figure 3 for the area included in a quarter mile radius of the site.

Attachment H: Maps of Wells and Area of Review

1. Topographic map of surrounding area – See Figure 3.

2. Scaled map of well locations within the Area of Review – See Figure 2.

3. Potentiometric map of site – See Figure 4.

Attachment I: Cross-Sections/Diagrams

1. Geologic cross-sections of site area – See Figures 5 and 6.

Attachment J: Name and Depth of Underground Sources of Drinking Water (USDW's)

Richland County is located in the upper region of the Upper Coastal Plain Physiographic Province near the interface of the lower Piedmont Physiographic Province. The upper region of the Upper Coastal Plain is typically composed of a sandy or loamy surface layer that is under lain by loamy or clayey subsoil of the Coastal Plain Physiographic Province. Subsurface topography is dominated by a series of nearly level terraces formed by ancient shorelines of the Atlantic Ocean. Those deposits are underlain at relatively shallow depths by residual soils of the Piedmont Physiographic Province.

Based upon previous site investigations conducted by others, the surficial saprolite aquifer is composed of red silty sand grading into a reddish-brown sandy, clayey silt to an investigated depth of 80 feet bsg. Competent rock has not been encountered at the site in previous investigations. Shallow groundwater occurs in the saprolite aquifer at the site at depths ranging from 15-30 feet bgs. Supply wells were not detected within a ¼ mile of the subject site.

Attachment K: Hydraulic Control

The proposed rate and location of injection points should not affect shallow groundwater except in the localized areas of the injection points. Static groundwater conditions should return to the affected areas of the site within a short time frame. Undesirable plume migration will be identified by semi-annual monitoring activities. Site specific aquifer analysis values are included as Appendix D determined during previous phases of investigation.

Appendix A

Existing Well Completion Records /
Proposed Injection Well Construction

Water Well Record
Bureau of Water

2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

RECEIVED JAN 18 2007

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-1
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877
UNDERGROUND STORAGE TANK PROGRAM

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Authorized Representative Date: 12/27/2006

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

RECEIVED JAN 18 2007

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-2
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877 UNDERGROUND STORAGE TANK PROGRAM

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

RECEIVED
JAN 18 2007

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-3
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877 UNDERGROUND STORAGE TANK PROGRAM

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-4
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-5
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-6
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-7
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-8
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-9
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-10
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-11
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-12
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-13
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-14
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Authorized Representative Date: 12/27/2006

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-15
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-16
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-17
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-18
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-19
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-20
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-21
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-22
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-23
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

D H E C — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-24
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-25
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Authorized Representative Date: 12/27/2006

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-26
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-27
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Authorized Representative Date: 12/27/2006

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-28
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

D H E C — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-29
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-30
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-31
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-32
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-33
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Authorized Representative Date: 12/27/2006

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-34
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-35
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Authorized Representative Date: 12/27/2006

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-36
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-37
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-38
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-39
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-40
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-41
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-42
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-43
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-44
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Authorized Representative Date: 12/27/2006

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

D H E C — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-45
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-46
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-47
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

D H E C — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-48
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-49
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-50
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

D H E C — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-51
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-52
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-53
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) 45 ft. Date Started: 9/28/2006 Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-54
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-55
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-56
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-57
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-58
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: RW-1
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34° 00.77 Longitude: 81° 00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	35	35
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
35 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 2"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 25 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 2"
Slot/Gauge: .020 Length: 10'
Set Between: 25 ft. and 35 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 24 ft. to 35 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 0 ft. to 24 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: RW-2
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34° 00.77 Longitude: 81° 00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	35	35
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
35 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 2"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 25 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 2"
Slot/Gauge: .020 Length: 10'
Set Between: 25 ft. and 35 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 24 ft. to 35 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 0 ft. to 24 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

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Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: RW-3
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	35	35
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
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☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 2"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
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in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 2"
Slot/Gauge: .020 Length: 10'
Set Between: 25 ft. and 35 ft.
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Sieve Analysis ☐ Yes (please enclose) ☑ No

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ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

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Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 24 ft. to 35 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
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17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
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18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
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Telephone: Work: Home:

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City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

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Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	35	35
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

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6. PERMIT NUMBER: 877

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35 ft. Date Completed: 12/15/2006

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Diam.: 2"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
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in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 2"
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ft. below land surgace after 24 hours

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ft. after hrs. Pumping G.P.M.
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Installed from 24 ft. to 35 ft.
Effective size Uniformity Coefficient

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Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
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Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

REV	BY	DATE	

DR.:DJF
CK.:CJP
APP'D.:
SCALE: NA
CES PROJ. NO.:

UIC Application

CRAWFORD ENVIRONMENTAL SERVICES
15 Church Avenue, SW
Roanoke, Virginia 24011
540-343-6256
540-343-6259 (fax)

DRAWING TITLE

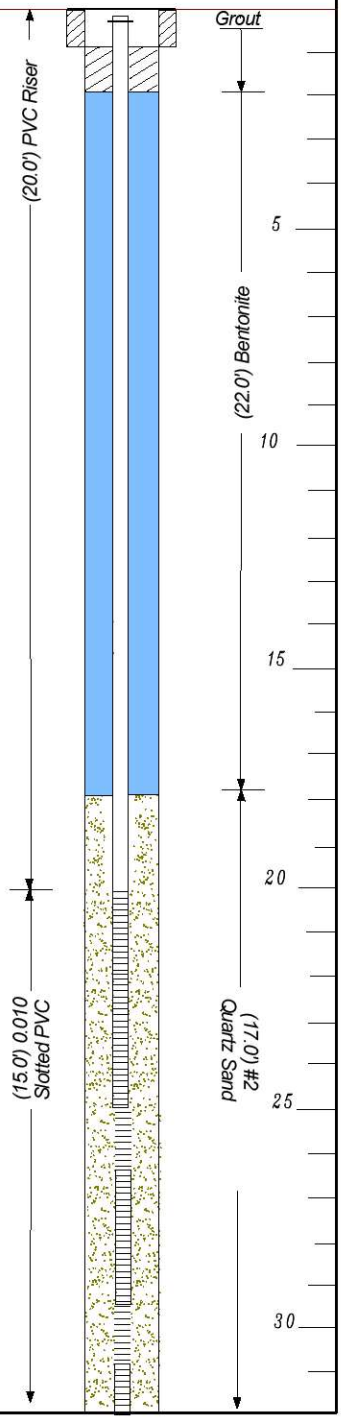
Proposed Well Construction Diagram
Handy Pantry # 65 / Clouds Chevron
Intersection of Taylor ST. & Two Notch Rd
Columbia, South Carolina

DRAWING NUMBER | REV

0

Depth (feet)	Sample ID	Blows	Rec/Adv (in)	PID (ppm)	Water Table	Lithology	Geologic Description
							Asphalt surface cover.

Well Diagram



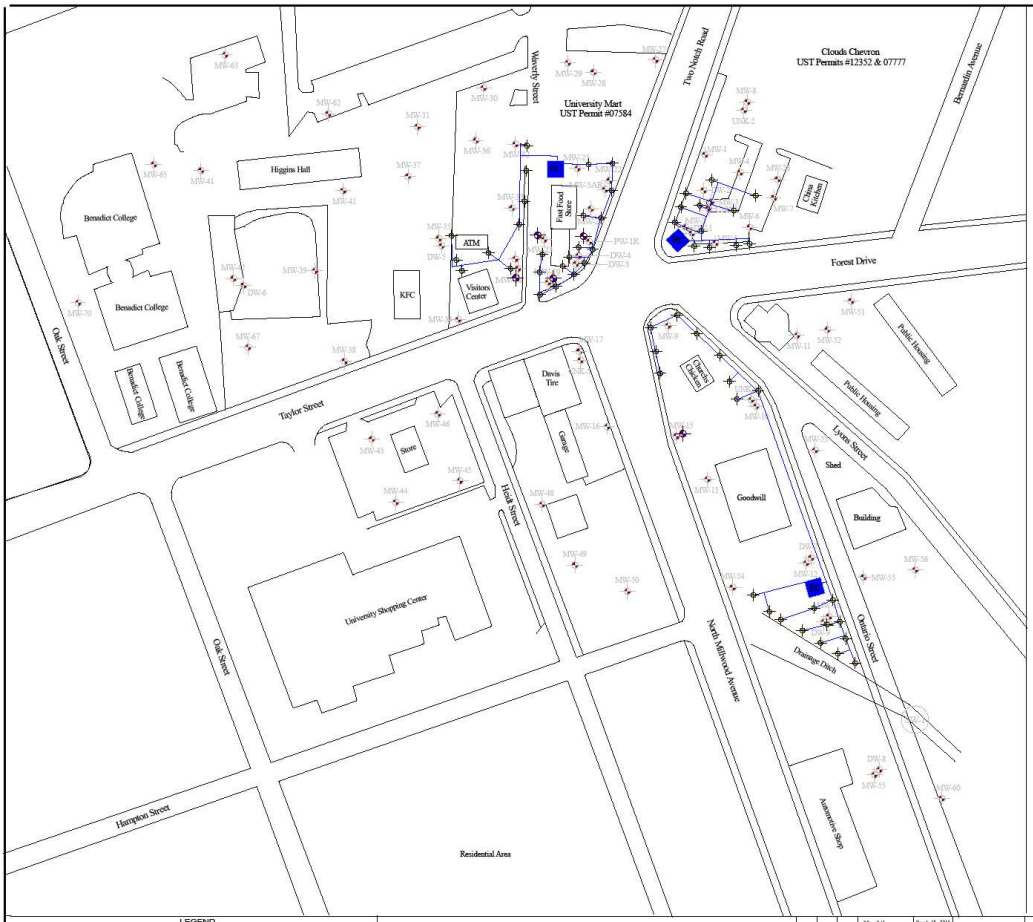
Geologist: _____

Appendix B

Figures

Figures 1

Existing / Proposed Injection Points



Graphic Scale (Feet)

0 75 150 225 300

Air Sparge Well Locations are Estimated.

LEGEND

Gasoline Dispenser	Air Sparge Well	Mail Boxes	Propane Tank
Diesel Dispenser	Future Recovery Well	Sign	Overhead Utility
Utility Pole	Remedial Compound	Pay Phone	Metal Fence
Water Meter	Remedial Piping	Air Conditioning Unit	Wooden Fence
Monitoring Well	Light Pole	Compressed Air	Manway
Storm Drain	Grease Trap	Waste Receptacle	UST Access

REV	BY	DATE

DR.: BJF March 18, 2014
CK.:
APP'D.:
SCALE: As Shown
CES PROJ. NO.: 7.0547

Underground Injection Control Permit Application

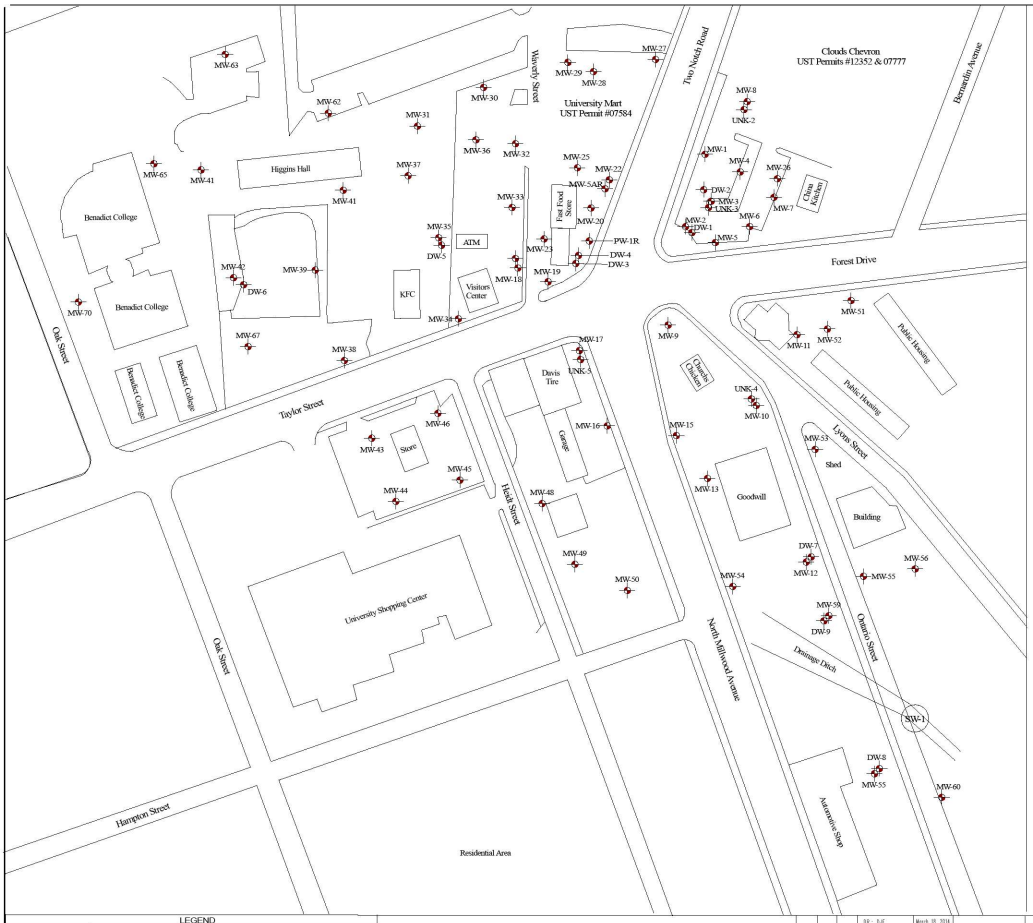
CRAWFORD ENVIRONMENTAL SERVICES
15 Church Avenue, SW
Roanoke, Virginia 24011
540-343-6256
540-343-6259 (fax)

Figure Title
Air Sparge / Remedial Well Layout
Handy Pantry/University Mart/Clouds Chevron
UST Permits # 07584 / 07777 / 12352
Intersection of Taylor and Two Notch Road
Columbia, South Carolina

DRAWING NUMBER: Figure 1 REV: 0

Figures 2

Monitoring Well Location Map



Graphic Scale (Feet)

0 75 150 225 300

LEGEND

Gasoline Dispenser	Air Sparge Well	Mail Boxes	Propane Tank
Diesel Dispenser	Future Recovery Well	Sign	Overhead Utility
Utility Pole	Flag Pole	Pay Phone	Metal Fence
Water Meter	Water Spigot	Air Conditioning Unit	Wooden Fence
Monitoring Well	Light Pole	Compressed Air	Manway
Storm Drain	Grease Trap	Waste Receptacle	UST Access

REV.	BY	DATE

DR.: DJF March 18, 2014
CK.:
APP'D.:
SCALE: As Shown
CES PROJ. NO.: 7.0547

Underground Injection Control Permit Application

CRAWFORD ENVIRONMENTAL SERVICES

15 Church Avenue, SW
Roanoke, Virginia 24011
540-343-6256
540-343-6259 (fax)

FIGURE TITLE
Monitoring Well Location Map
Handy Pantry/University Mart/Clouds Chevron
UST Permits # 07584 / 07777 / 12352
Intersection of Taylor and Two Notch Road
Columbia, South Carolina

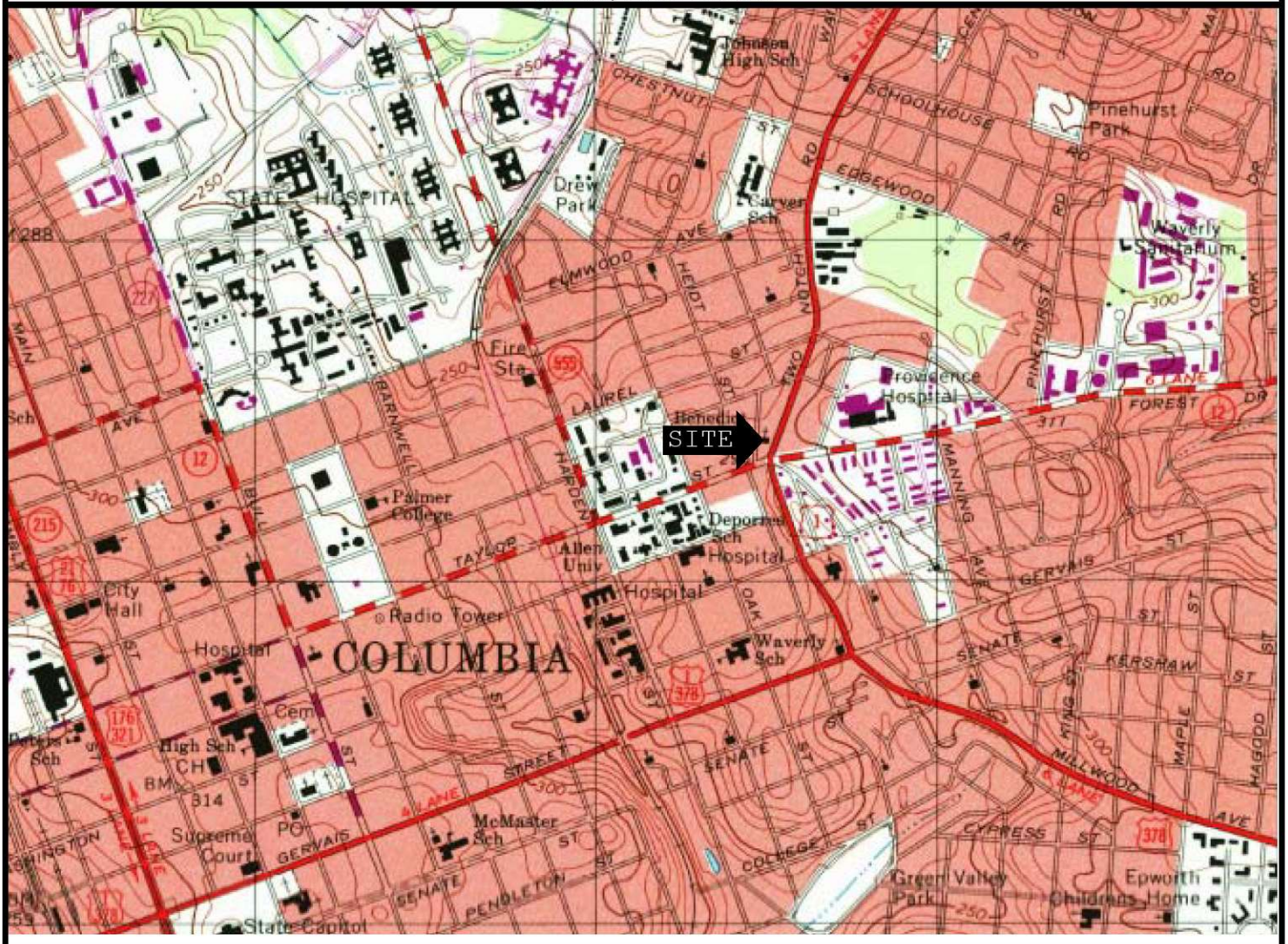
DRAWING NUMBER: Figure 2 REV: 0

Figures 3

¼ Mile Search Radius / Topographic Map

FIGURE 3

¼ Mile Search Radius / Topographic Map
Handy Pantry #65 / University Mart / Clouds Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina



CRAWFORD ENVIRONMENTAL SERVICES

15 Church Avenue, SW
Roanoke Virginia, 24011

540-343-6256 (office) 540-343-6259 (fax)

NORTH COLUMBIA, SOUTH CAROLINA

Source: U.S.G.S. Topographic Map of the Columbia North Quadrangle, Virginia, 7.5 Minute Series (1977, revised 1988)
Scale: 1:24,000 Contour Interval: 20 Feet
Vertical Datum: National Geodetic Vertical Datum 1929
Horizontal Datum: North American Datum1927

Project: Underground Injection Control Permit Application

Client: SCDHEC

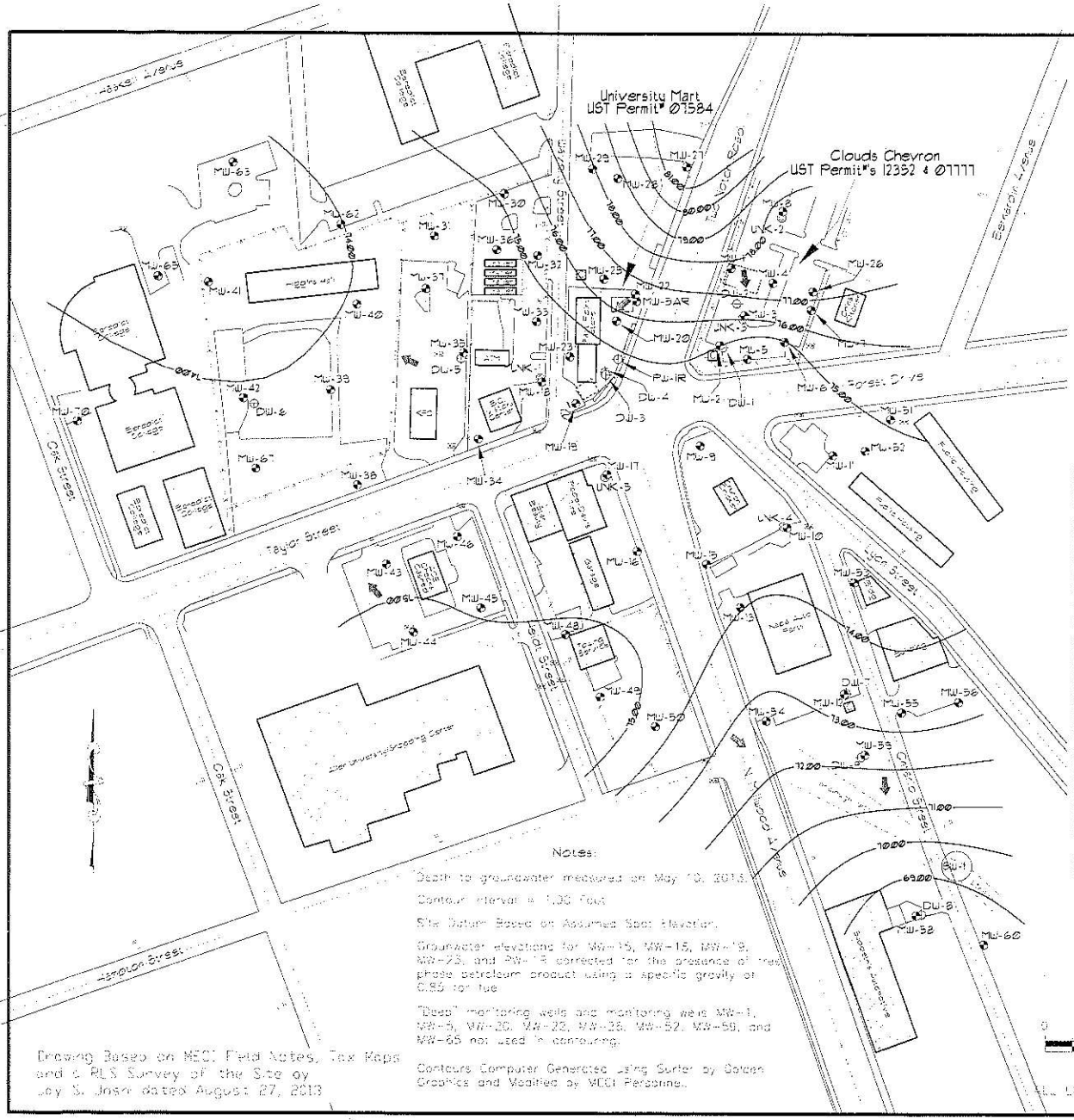
CES Job #: 7.0547

Latitude:
034”00’42.72”N
Longitude:
081”01’00.13”W

Figures 4

Potentiometric Surface Map

Figure 4 - Potentiometric Surface Map



Potentiometric Data

Well #	Screened Interval (ft)	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Well Head Elevation	Groundwater Elevation
MW-1	17-27	----	Dry	----	99.75	Dry
MW-2	25-30	----	25.50	----	100.47	74.97
MW-3	19-29	----	23.86	----	100.32	76.54
MW-4	18-28	----	31.00	----	103.75	72.75
MW-5	15-25	----	Dry	----	100.68	Dry
MW-6	20-30	----	25.80	----	100.94	74.94
MW-7	20-30	----	24.78	----	101.75	77.01
MW-8	18.5-28.5	----	21.18	----	102.67	77.49
MW-9	20-30	----	25.00	----	97.40	74.40
MW-10	19-29	----	9.14	----	99.29	74.15
MW-11	10-30.00	----	20.58	----	94.79	74.23
MW-12	10-24.85	----	5.50	----	79.13	73.63
MW-13	10-30.10	----	13.13	----	87.17	74.04
MW-15	15-25	18.40	18.53	0.13	92.45	74.02
MW-16	15-25	----	19.90	----	94.45	74.46
MW-17	20-30	----	24.35	----	98.80	74.44
MW-18	22-30	26.71	26.75	0.04	100.95	74.27
MW-19	20-30	25.80	25.92	0.12	100.20	74.36
MW-20	15-25	----	Dry	----	100.36	Dry
MW-22	20-30	----	25.90	----	100.00	74.10
MW-23	20-30	25.26	25.1'	0.06	100.20	74.14
MW-25	10-25.80	----	22.25	----	96.73	74.48
MW-26	10-30.00	----	NS	----	101.72	NS
MW-27	10-30	----	18.20	----	98.74	82.04
MW-28	15-30	----	18.80	----	97.79	78.99
MW-29	15-30	----	15.00	----	96.66	77.66
MW-30	15-30	----	23.44	----	99.50	76.06
MW-31	25-35	----	27.40	----	101.61	74.21
MW-32	15-30	----	23.90	----	98.15	74.25
MW-33	25-35	----	25.70	----	103.11	74.41
MW-34	25-35	----	26.58	----	101.20	74.62
MW-35	25-35	----	25.73	----	100.29	74.56
MW-36	25-35	----	25.50	----	100.18	74.68
MW-37	20-30	----	25.85	----	100.09	74.24
MW-38	20-30	----	27.24	----	101.76	74.52
MW-39	25-35	----	29.15	----	102.44	74.79
MW-40	20-30	----	27.89	----	101.97	74.08
MW-41	20-30	----	27.69	----	101.58	73.89
MW-42	25-35	----	28.50	----	102.87	74.37
MW-43	25-40	----	26.72	----	101.34	74.62
MW-44	19-31	----	23.11	----	100.78	75.67
MW-45	15-30	----	23.97	----	98.70	74.80
MW-46	25-35	----	28.10	----	103.65	74.55
MW-49	15-30	----	21.00	----	96.11	75.11
MW-49	15-30	----	18.50	----	94.47	75.97
MW-50	15-30	----	15.62	----	92.37	74.55
MW-51	20-30	----	25.15	----	100.26	75.11
MW-52	15-30	----	Obstructed	----	96.49	Obstructed
MW-53	5-20	----	11.73	----	86.91	74.18
MW-54	5-20	----	11.84	----	84.18	72.34
MW-55	4-14	----	4.03	----	77.53	73.50
MW-56	5-20	----	9.20	----	82.65	73.45
MW-58	4-19	----	7.10	----	74.99	67.89
MW-59	4-17	----	5.27	----	79.61	74.34
MW-60	4-14	----	5.70	----	74.16	68.46
MW-62	20-35	----	29.45	----	99.44	73.99
MW-63	20-35	----	25.72	----	99.24	73.52
MW-65	20-32	----	Dry	----	100.02	Dry
MW-67	20-35	----	29.07	----	102.85	74.58
MW-70	25-35	----	25.80	----	101.60	74.80
MW-SCH	19-29	----	23.45	----	99.94	76.49
SW-16	45-56	25.17	25.20	0.03	100.00	74.83
SW-1	55-70	----	45.70	----	100.57	54.87
DW-2	70-75	----	39.04	----	99.50	73.96
DW-3	47-62	----	29.24	----	100.06	74.82
DW-4	105-110	----	Dry	----	100.13	100.03
DW-5	69-79	----	45.79	----	102.12	56.36
DW-6	65-70	----	47.35	----	99.98	52.62
DW-7	55-95	----	25.13	----	79.11	53.92
DW-8	90-95	----	27.64	----	74.30	52.77
DW-9	90-95	----	25.80	----	75.99	52.75
UNK-1	Unknown	----	NM	----	100.56	NM
UNK-2	Unknown	----	Abandoned	----	Abandoned	Abandoned
UNK-3	Unknown	----	NM	----	100.50	NM
UNK-4	Unknown	----	Abandoned	----	Abandoned	Abandoned
UNK-5	Unknown	----	NM	----	98.93	NM

Notes:

Depth to groundwater measured on May 10, 2013.

Contour interval = 1.00 foot

Site Datum Based on Assumed Spot Elevation.

Groundwater elevations for MW-15, MW-16, MW-19, MW-23, and PW-1R corrected for the presence of free phase petroleum product using a specific gravity of 0.85 for fuel

"Deep" monitoring wells and monitoring wells MW-1, MW-5, MW-20, MW-22, MW-25, MW-52, MW-59, and MW-65 not used in contouring.

Contours Computer Generated using Surfer by Golden Graphics and Modified by MEC Personnel.

Drawing Based on MEC Field Notes, Tax Maps and a PLS Survey of the Site by Jay S. Jose dated August 27, 2013

GRAPHIC SCALE

0 75 150 225 300 ft

ALL LOCATIONS ARE APPROXIMATE

Explanation:

- Location of Waterlase Bracketing Monitoring Well
- Location of Double Cased "Deep" Monitoring Well
- Location of Former ECA Product Recovery Well
- SW-2 Location of Surface Water Sample Collection
- Estimated Groundwater Flow Direction
- Estimated Location of Removed Underground Storage Tanks
- Estimated Location of Existing Underground Storage Tanks
- Groundwater Elevation Contour (Feet)

Potentiometric Data Site Map
(Groundwater Contour/"Shallow" Zone)

University Mart & Clouds Chevron
Taylor Street & Two Notch Road
Columbia, South Carolina
SCDHEC Site ID#'s 07584, 07777, & 12352

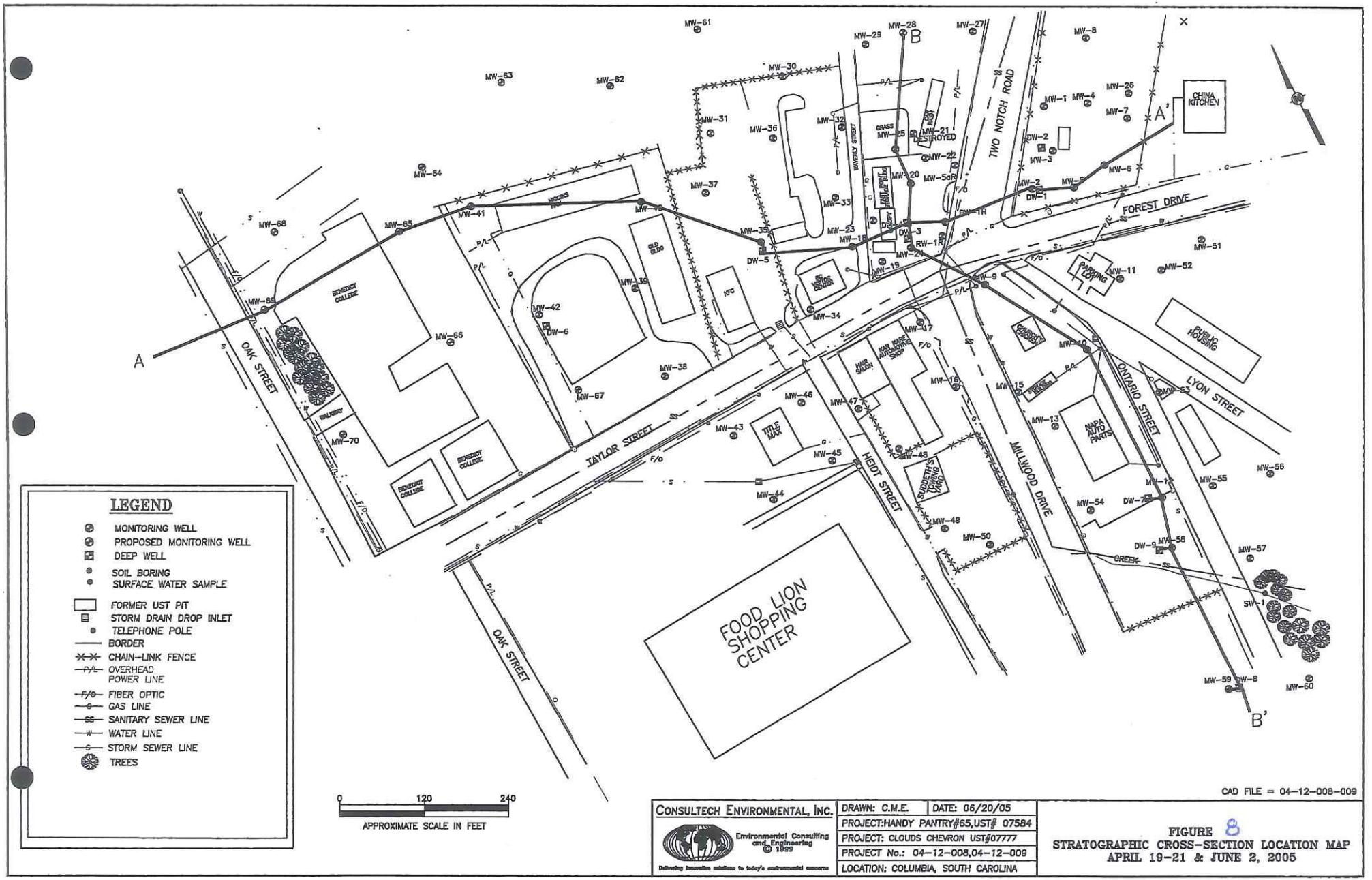
Midlands Environmental Consultants, Inc.

JOB NO. 13-4585
DATE September 5, 2013
FIGURE 2

Figures 5 / 6

Geologic Cross Sections

Figure 5 -Geologic Cross Section



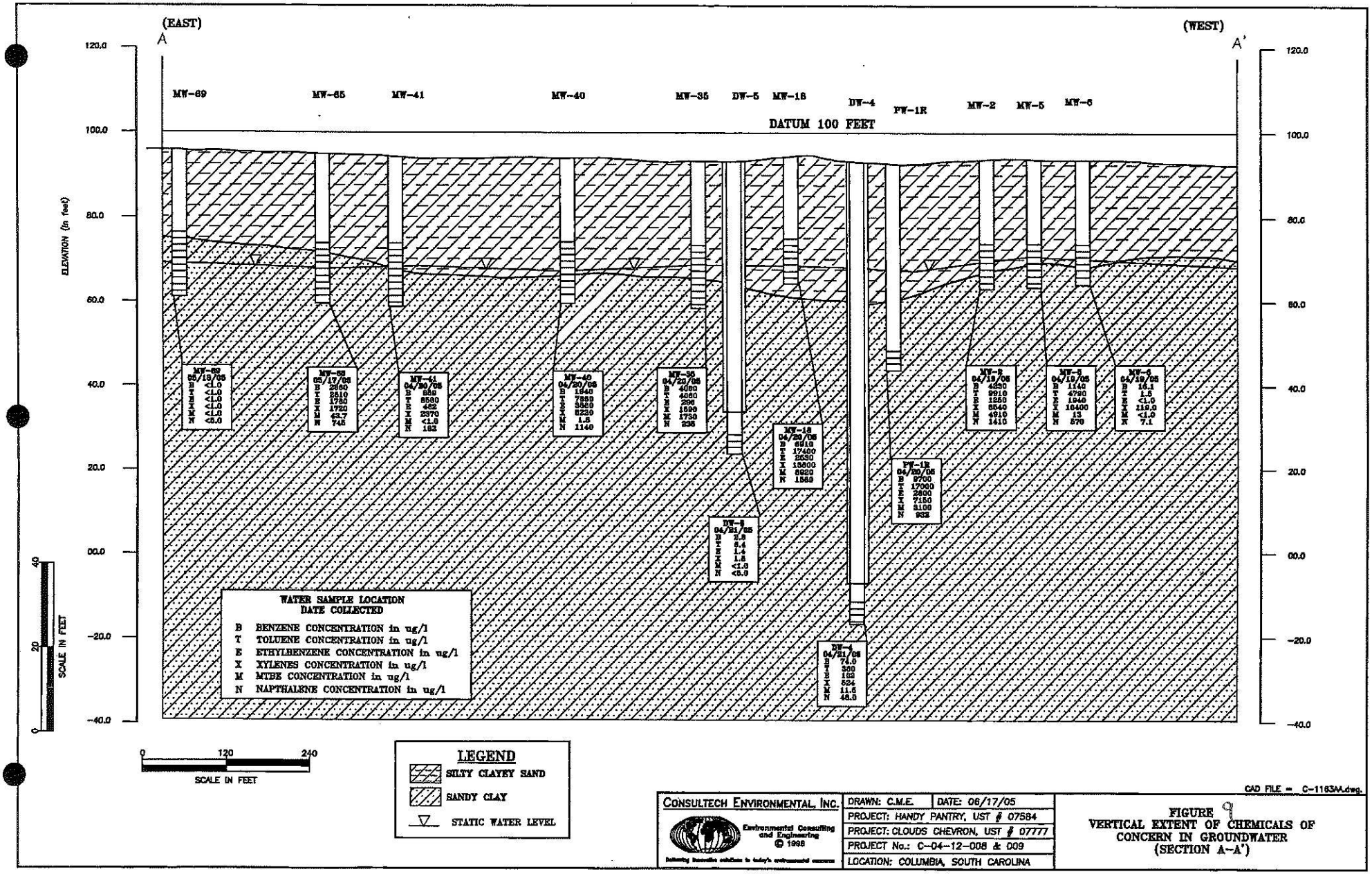
CONSULTECH ENVIRONMENTAL, INC.
Environmental Consulting and Engineering © 1999
Delivering Innovative solutions to today's environmental concerns

DRAWN: C.M.E.	DATE: 06/20/05
PROJECT:HANDY PANTRY#65,UST# 07584	
PROJECT: CLOUDS CHEVRON UST#07777	
PROJECT No.: 04-12-008,04-12-009	
LOCATION: COLUMBIA, SOUTH CAROLINA	

CAD FILE = 04-12-008-009

FIGURE 8
STRATOGRAPHIC CROSS-SECTION LOCATION MAP
APRIL 19-21 & JUNE 2, 2005

Figure 6 -Geologic Cross Section



CAD FILE = C-1163AA.dwg.

CONSULTECH ENVIRONMENTAL, INC. Environmental Consulting and Engineering © 1998	DRAWN: C.M.E.	DATE: 08/17/05
	PROJECT: HANDY PANTRY, UST # 07584	
	PROJECT: CLOUDS CHEVRON, UST # 07777	
	PROJECT No.: C-04-12-008 & 009	
	LOCATION: COLUMBIA, SOUTH CAROLINA	

FIGURE 9
VERTICAL EXTENT OF CHEMICALS OF CONCERN IN GROUNDWATER
(SECTION A-A')

Appendix C

Material Data Safety Sheets

6635 NE 59th Place
Portland, Oregon 97218
(971) 222-3903 Fax
www.etecllc.com

Material Safety Data Sheet

Revision Date: 09/30/2010

Section 1: Product and Company Identification

Product Name: PetroSolv/EZT-EA™
MSDS Number: 016
Chemical Name: Mixture
Chemical Family: Ethoxylated surfactant mixture

Recommended Use: Enzyme accelerator
Restrictions on Use: No Data

Company:
ETEC, LLC
6635 NE 59th Place
Portland, OR 97218
USA

Telephone: (971) 222-3616

Emergency Telephone: (800) 535-5053
Medical Emergencies: (800) 301-7976
U.S. Coast Guard National Response Center: (800) 424-8802

Section 2: Hazards Identification

Emergency Overview:
May be harmful if swallowed or inhaled. Causes skin irritation and eye irritation.

NFPA Rating:

Health Hazard:	1
Fire:	0
Reactivity Hazard:	0

Section 3: Composition/Information on Ingredients

Ingredients as defined by 29 CFR 1910.1200:

Chemical Ingredients:	CAS Number:	Percent Range:
Isotridecanol, ethoxylated	9043-30-5	20-50%
Fatty Acid Methyl Ester Ethoxylate	67762-39-4	20-50%
Rhamnolipid	147858-26-2	20-50%

Section 4: First Aid Measures

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if victim feels unwell.

Skin Contact: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion: Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

Section 5: Fire Fighting Measures

Suitable Extinguishing Media: Material is not expected to be combustible. Use extinguishing medium suitable for surrounding material.

Specific Hazards in Case of Fire: None known.

Special Protective Equipment for Fire-Fighters: Use protective clothing and breathing equipment appropriate for the surrounding fire.

Section 6: Accidental Release Measures

Personal Precautions: Eliminate all ignition sources and heat sources if safe to do so. Take off contaminated clothing and wash before reuse. Use protective clothing and breathing equipment.

Environmental Precautions: Do not flush into surface water or sanitary sewer system.

Methods for Containment/Cleaning Up: Contain spillage and collect with non-combustible absorbent material. Disposal should be in accordance with all applicable local, state and federal regulations.

Section 7: Handling and Storage

Handling: Avoid breathing vapor or mist. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Keep out of reach of children.

Storage: Keep container tightly closed. Store locked up. Store at temperatures not exceeding 130°F (54°C).

Section 8: Exposure Controls/Personal Protection

Exposure Limits:

Chemical Ingredients:	CAS Number:	OSHA PEL	NIOSH REL	ACGIH TLV
Isotridecanol, ethoxylated	9043-30-5	None Established	None Established	None Established
Fatty Acid Methyl Ester Ethoxylate	67762-39-4	None Established	None Established	None Established
Rhamnolipid	147858-26-2	None Established	None Established	None Established

Engineering Controls: Use only outdoors or in a well-ventilated area.

Personal Protective Equipment:

Eye Protection: Wear eye protection/face protection.

Hand Protection: Wear protective gloves.

Skin and Body Protection: Use protective clothing.

Respiratory Protection: Avoid breathing vapor or mist. Use only outdoors or in a well-ventilated area.

Hygiene Measures: Use only outdoors or in a well-ventilated area. Wash thoroughly after handling.

Section 9: Physical and Chemical Properties

Physical State:	Liquid
Color:	Clear to slightly hazy tan color
Odor:	Slight to none
Odor Threshold:	Not Available
pH:	6.5
Melting/Freezing Point:	Not Available
Initial Boiling Point:	Not Available
Flash Point:	Not Available
Evaporation Rate:	1.20
Flammability (solid, gas):	Not Available
Lower Explosive Limit:	Not Available
Upper Explosive Limit:	Not Available
Vapor Pressure:	Not Available
Vapor Density:	Not Available
Relative Density:	1.00
Solubility:	Complete solubility in water
Partition Coefficient:	Not Available
Autoignition Temperature:	Not Available
Decomposition Temperature:	Not Available

Section 10: Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.

Conditions to Avoid: Heat.

Incompatible Materials: Strong oxidizers, inorganic acids, and halogens.

Hazardous Decomposition Products: Irritating vapors.

Hazardous Polymerization: Will Not Occur

Section 11: Toxicological Information

Inhalation: May cause respiratory headache, dizziness.

Ingestion: May be harmful if swallowed and enters airways.

Skin Contact: Causes skin irritation.

Eye Contact: Causes eye irritation.

Chronic Exposure: No known effects.

Aggravation of Pre-existing Conditions: No information found.

Numerical Measures of Toxicity: None Available

Carcinogenicity: Not known to be as defined by OSHA, IARC or NTP.

Section 12: Ecological Information

This product is safe for the environment at the concentrations predicted under normal use conditions.

Section 13: Disposal Considerations

Dispose of contents/container in accordance with all applicable local, state and federal regulations.

Section 14: Transport Information

For Transportation Emergencies Involving This Material, Call:
ChemTrec 1-800-424-9300
Company Code: E249

DOT (LAND):

Proper Shipping Name:	Not Applicable
Hazard Class:	Not Applicable
UN Number:	Not Applicable

Packing Group:	Not Applicable
Labels:	Not Applicable
Emergency Response Guidebook Number:	Not Applicable
DOT Hazardous Substance RQ:	None/no reportable quantities
DOT Marine Pollutants:	None/no reportable quantities

Section 15: Regulatory Information

OSHA Hazards: Skin irritant, eye irritant

SARA 302: None/no reportable quantities

SARA 311/312 Hazard Categories: Acute Health Hazard

SARA 313: None/no reportable quantities

TSCA: All substances in this product are listed on the TSCA inventory.

Section 16: Other Information

The information contained in this MSDS is presented in good faith and believed to be accurate based on the information provided. The MSDS does not purport to be all inclusive, and shall be used only as a guide. While ETEC, LLC believes that the data contained herein comply with 29 CFR 1910.1200, they are not to be taken as a warranty or representation for which ETEC, LLC assumes legal responsibility. ETEC, LLC shall not be held liable or accountable for any loss or damage associated with the use of this material and information. The recommended industrial hygiene and safe use, handling, storage, and disposal procedures are believed to be generally applicable. However, since the use, handling, storage, and disposal are beyond ETEC, LLC control, it is the responsibility of the user both to determine safe conditions for use of this product and to assume liability of loss, damage, or expense arising out of the material's improper use.

Legend:

ACGIH: American Conference of Governmental & Industrial Hygienists
CAS: Chemical Abstract Service
CFR: Code of Federal Regulations
DOT: Department of Transportation
DSL/NDSL: Domestic Substances List/Non-Domestic Substances List
IARC: International Agency for the Research of Cancer
IATA: International Air Traffic Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods
IMO: International Maritime Organizations
Health, Flammability & Reactivity; Hazard Scale 0 =minimal/none 4= significant
NTP: National Toxicology Program
NFPA: National Fire Protection Association
OSHA: Occupational Safety & Health Administration
PEL: Permissible Exposure Limits
RCRA: Resource Conservation & Recovery Act
RQ: Reportable Quantity
RTK: Right-To-Know
SARA: Superfund Amendments & Reauthorization Act

STEL: Short Term Exposure Limit
TLV: Threshold Limit Value
TSCA: Toxic Substances Control Act
TWA: Time Weighted Average
TCLP: Toxicity Characteristic Leaching Procedure
VOC: Volatile Organic Compounds

1 PRODUCT AND COMPANY IDENTIFICATION

Industrial Chemicals
Arkema Inc.
2000 Market Street
Philadelphia, PA 19103

EMERGENCY PHONE NUMBERS:
Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887
Medical: Rocky Mountain Poison Control Center
(866) 767-5089 (24Hrs)

Information Telephone Numbers	Phone Number	Available Hrs
Product Information	215-419-7704	8:30 a.m. - 5:00 p.m. (Eastern)

Product Name	Hydrogen Peroxide, 50% (All Grades)
Product Synonym(s)	
Chemical Family	Peroxide
Chemical Formula	H2O2
Chemical Name	Hydrogen Peroxide Solution, 50%
EPA Reg Num	
Product Use	

IN CANADA, IN CASE OF EMERGENCY CALL:
CANUTEC 613-996-6666

2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical %	OSHA
Hydrogen peroxide	7722-84-1	50%	Y
Water	7732-18-5	50%	N

The substance(s) marked with a "Y" in the OSHA column, are identified as hazardous chemicals according to the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200)

This material is classified as hazardous under Federal OSHA regulation.

The components of this product are all on the TSCA Inventory list.

3 HAZARDS IDENTIFICATION

Emergency Overview
Water white liquid with slightly sharp odor.
DANGER!
CAUSES EYE BURNS. MAY CAUSE BLINDNESS.
CAUSES SKIN BURNS.
CAUSES RESPIRATORY TRACT BURNS.
HARMFUL IF SWALLOWED.
STRONG OXIDIZER.
CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE OR EXPLOSIVE DECOMPOSITION.

Potential Health Effects

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. Based on single exposure animal tests, it is considered to be moderately toxic if swallowed, practically non-toxic if absorbed

through skin, slightly toxic if inhaled, and corrosive to eyes and skin. Inhalation of high concentrations of vapor or mist may cause severe irritation of the eyes, nose and upper respiratory tract with cough, chest discomfort and, in severe cases, pulmonary edema (accumulation of fluid in the lungs). Skin contact with concentrated liquid for a short period of time may cause a temporary whitening or bleaching of the skin. Prolonged or repeated contact with skin may cause severe irritation or burns characterized by a tingling sensation, redness, swelling and possible destruction of the dermis with ulceration. If swallowed, this material may cause irritation, burns or perforation of the gastrointestinal tract including the stomach and intestines. Symptoms of injury may include nausea, vomiting, diarrhea, abdominal pain, bleeding or tissue ulceration.

4 FIRST AID MEASURES

IF IN EYES, immediately flush with plenty of water for at least 15 minutes. Get medical attention.

IF ON SKIN, immediately flush with plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Destroy contaminated shoes.

IF SWALLOWED, do NOT induce vomiting. Give water to drink. Get medical attention immediately. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

IF INHALED, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

5 FIRE FIGHTING MEASURES

Fire and Explosive Properties

Auto-Ignition Temperature	NA	
Flash Point	None	Flash Point Method
Flammable Limits- Upper	NA	
Lower	NA	

Extinguishing Media

Use water spray, water fog.

Fire Fighting Instructions

Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use.

Fire and Explosion Hazards

Solutions above 65% are especially hazardous as they do not contain enough water to remove the heat of decomposition by evaporation. Avoid breathing fumes from fire exposed material.

6 ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Stop the leak, if possible. Ventilate the space involved. Flush with plenty of water. Combustible materials exposed to hydrogen peroxide should be rinsed immediately with large amounts of water to ensure that all the hydrogen peroxide is removed. Residual hydrogen peroxide which is allowed to dry on organic materials such as paper, fabrics, cotton, leather, wood, or other combustibles can cause the material to ignite and result in a fire. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

7 HANDLING AND STORAGE

Handling

Do not get in eyes, on skin or on clothing. Do not breathe mist. Do not taste or swallow. Wash thoroughly after handling. Use only with adequate ventilation. Avoid contamination. Keep container closed.

Storage

Store separate from acids, alkalies, reducing agents, combustibles.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Investigate engineering techniques to reduce exposures below airborne exposure limits. Provide ventilation if necessary to control exposure levels below airborne exposure limits (see below). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

Eye / Face Protection

Where there is potential for eye contact, wear a face shield, chemical goggles, and have eye flushing equipment immediately available.

Skin Protection

Neoprene, Polyvinyl chloride, Butyl rubber Gloves should be worn when handling this material. Wear chemical goggles, a face shield, and chemical resistant clothing such as a rubber apron when splashing may occur. Rinse immediately if skin is contaminated. Remove contaminated clothing promptly and wash before reuse. Clean protective equipment before reuse. Provide a safety shower at any location where skin contact can occur. Wash skin thoroughly after handling.

Respiratory Protection

Avoid breathing vapor or mist. When airborne exposure limits are exceeded (see below), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Other Protective Equipment

Rubber boots with neoprene or pvc soles. Do NOT wear leather boots. Note: As the water content of hydrogen peroxide evaporates, cotton, rayon, and wool fibers are particularly subject to spontaneous combustion. Where there is significant risk of sudden splash or spray, it is advised that an apron or rubber suit be worn. Any contaminated clothing, including gloves, shoes, aprons, coveralls, etc., should be removed immediately and thoroughly flushed with water to eliminate any traces of hydrogen peroxide before cleaning and reuse.

Airborne Exposure Guidelines for Ingredients

Exposure Limit		Value
Hydrogen peroxide		
ACGIH TWA	-	1 ppm 1.4 mg/m3
OSHA TWA PEL	-	1 ppm 1.4 mg/m3

-Only those components with exposure limits are printed in this section.
-Skin contact limits designated with a "Y" above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required.
-ACGIH Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic reactions.
-WEEL-AIHA Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic skin reactions.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor	Water white liquid with slightly sharp odor.
pH	NE
Specific Gravity	1.196 @ 20 C
Vapor Pressure	18.3 @ 20 C
Vapor Density	1.0
Melting Point	NE
Freezing Point	-52 C (-62 F)
Boiling Point	114 C (237 F)
Solubility In Water	Complete
Percent Volatile	100%
Molecular Weight	34.01

10 STABILITY AND REACTIVITY

Stability

This material is chemically stable under normal and anticipated storage and handling conditions.

Incompatibility

Material decomposes with the potential to produce a rupture of unvented closed containers. Contact with metals, metal ions, organics, wood, dust, shavings, dry vegetables may cause decomposition.

Hazardous Decomposition Products

This material decomposes if contaminated, causing fire and possible explosions. Oxygen can be liberated at temperatures above ambient.

11 TOXICOLOGICAL INFORMATION

Toxicological Information

Data on this material and/or its components are summarized below. Hydrogen Peroxide
Single exposure (acute) studies indicate that this material is moderately toxic if swallowed (rat LD50 805 mg/kg; 70% solution), practically non-toxic if absorbed through skin (rabbit LD50 >6,500 mg/kg; 70% solution), slightly toxic if inhaled (no mortality in rats at 170 mg/m3 for 4 hours), and corrosive to rabbit eyes and skin. No skin allergy was observed in guinea pigs following repeated exposure. Solutions are commonly used for disinfecting wounds, bleaching hair or as a mouth wash and generally do not show adverse skin reactions. Accidental ingestion by children has resulted in death from lung edema, stomach erosions and gas distention and burns to the throat and esophagus. Eye and throat irritation and bleaching of hair have been reported by workers exposed to this material in the atmosphere.

Several studies have been conducted by administering material in the drinking water of mice and rats. The primary findings were irritation of the gastric mucous. Repeated inhalation exposure of rats and mice caused nasal irritation without notable adverse effects on the lining of the upper respiratory system. Repeated inhalation exposure of dogs resulted in upper respiratory tract irritation and emphysematous changes in the lungs. Generally, long-term oral dosing caused no adverse effects other than erosion of the stomach lining from direct application of the test material. Several studies have shown an increase in gastrointestinal tract tumors in mice and rats following long-term exposure in the drinking water. Concentrations less than 1% do not promote gastrointestinal tumors. The U.S. Federal Drug Administration has concluded that there is insufficient evidence of carcinogenicity and the International Agency for Research on Cancer (IARC) has concluded that this chemical is not classifiable as to its carcinogenicity to humans (Group 3). Genetic changes were observed in tests using bacteria and animal cells, but not in animals.

12 ECOLOGICAL INFORMATION

Ecotoxicological Information

Data on this material and/or its components are summarized below.
Hydrogen Peroxide
This material is highly toxic to marine algae (LC50 0.85 mg/l), moderately toxic to Daphnia magna (EC50 7.7 mg/l) and Daphnia pulex (LC50 2.4 mg/l). It is slightly toxic to coho salmon (LC50 10 mg/l), channel catfish (LC50 37.4 mg/l), golden orfe (LC50 35 mg/l), fathead minnow (LC50 16.4 mg/l), snail (LC50 17.7 mg/l) and bacteria (EC50 30 mg/l).

Chemical Fate Information

No data are available.

13 DISPOSAL CONSIDERATIONS

Waste Disposal

Consult with environmental engineer or professional to determine if neutralization is appropriate and for handling procedures for residual materials. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

14 TRANSPORT INFORMATION

DOT Name	Hydrogen Peroxide, Aqueous Solution,
DOT Technical Name	
DOT Hazard Class	5.1
UN Number	UN 2014
DOT Packing Group	PG II
RQ	
DOT Special Information	Subsidiary (8) Non-Bulk packages must have Class 5.1 and Class 8 labels. Bulk packages require Class 5.1 Oxidizer placards.

15 REGULATORY INFORMATION

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370)

Immediate (Acute) Health	Y	Fire	Y
Delayed (Chronic) Health	N	Reactive	Y
		Sudden Release of Pressure	N

The components of this product are all on the TSCA Inventory list.

Ingredient Related Regulatory Information:

SARA Reportable Quantities	CERCLA RQ	SARA TPQ
Hydrogen peroxide	NE	1000 LBS
Water	NE	

SARA Title III, Section 302

This product does contain chemical(s), as indicated below, currently on the Extremly Hazardous Substance List, Section 302, SARA Title III. See Section 2 for further details regarding concentrations and registry numbers.

Hydrogen peroxide

Massachusetts Right to Know

This product does contain the following chemicals(s), as indicated below, currently on the Massachusetts Right to Know Substance List.

Hydrogen peroxide

New Jersey Right to Know

This product does contain the following chemical(s), as indicated below, currently on the New Jersey Right-to-Know Substances List.

Hydrogen peroxide

Pennsylvania Environmental Hazard

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Environmental Hazard List.

Hydrogen peroxide

Pennsylvania Right to Know

This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Hazardous Substance List.

Hydrogen peroxide

16 OTHER INFORMATION

Revision Information

Revision Date	09 AUG 2006	Revision Number 21
Supercedes Revision Dated	12-OCT-2004	

Revision Summary

Added Peroxal BIO grade name

Key

NE= Not Established NA= Not Applicable (R) = Registered Trademark

Miscellaneous

This MSDS covers the following grades of H2O2:
Albone; Alb; Alb A; Alb CG; MS; Alb MT; Alb LCL; Alb LC; AL-1; AL-2; AL-3; AL-4; A; Per; Perone; FG; ASG; AG; CG; Pure; M; DS; EG; KASTONE 50; Valsterane; Peroxal;
CLG; SEG

Peroxal 50% BIO (EPA Registration # 335-235)

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Arkema Inc. believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with any other materials or in any process. Further, since the conditions and methods of use are beyond the control of Arkema Inc., Arkema Inc. expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

6635 NE 59th Place
Portland, Oregon 97218
(971) 222-3903 Fax
www.etecllc.com

Material Safety Data Sheet

Revision Date: 09/30/2010

Section 1: Product and Company Identification

Product Name: **EZT-A2**
MSDS Number: 010
Chemical Name: Not Applicable – Biological Material
Chemical Family: Not Applicable – Biological Material

Recommended Use: Petroleum Hydrocarbon Degradation
Restrictions on Use: No Data

Company:
ETEC, LLC
6635 NE 59th Place
Portland, OR 97218
USA

Telephone: (971) 222-3616

Emergency Telephone: (800) 535-5053
Medical Emergencies: (800) 301-7976
U.S. Coast Guard National Response Center: (800) 424-8802

Section 2: Hazards Identification

Emergency Overview:
Causes skin and eye irritation. May be harmful if swallowed.

NFPA Rating:

Health Hazard:	1
Fire:	0
Reactivity Hazard:	0

Section 3: Composition/Information on Ingredients

Ingredients as defined by 29 CFR 1910.1200:

Chemical Ingredients:	CAS Number:	Percent Range:
Bacterial Consortium	Not Applicable	100%

Section 4: First Aid Measures

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Skin Contact: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion: Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

Section 5: Fire Fighting Measures

Suitable Extinguishing Media: Material is not expected to be combustible. Use extinguishing medium suitable for surrounding material.

Specific Hazards in Case of Fire: None known.

Special Protective Equipment for Fire-Fighters: Use protective clothing and breathing equipment appropriate for the surrounding fire.

Section 6: Accidental Release Measures

Personal Precautions: Use goggles and impervious gloves if contact with product is possible.

Environmental Precautions: Prevent spill material from entering waterways and groundwater, if possible.

Methods for Containment/Cleaning Up: Collect spillage. Re-use if possible. Disposal should be in accordance with all applicable local, state and federal regulations.

Section 7: Handling and Storage

Handling: Avoid breathing vapor or mist. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Keep out of reach of children.

Storage: Keep container tightly closed. Store at temperatures not exceeding 70°F (20°C).

Section 8: Exposure Controls/Personal Protection

Exposure Limits:

Chemical Ingredients:	CAS Number:	OSHA PEL	NIOSH REL	ACGIH TLV
Bacterial Consortium	Not Applicable	None Established	None Established	None Established

Engineering Controls: Use only outdoors or in a well-ventilated area.

Personal Protective Equipment:

Eye Protection: Wear eye protection/face protection.

Hand Protection: Wear protective gloves.

Skin and Body Protection: Use protective clothing.

Respiratory Protection: Use only outdoors or in a well-ventilated area.

Hygiene Measures: Wash thoroughly after handling.

Section 9: Physical and Chemical Properties

Physical State:	Liquid
Color:	Brown/Tan
Odor:	Slightly Sour Odor
Odor Threshold:	Not Available
pH:	Not Available
Melting/Freezing Point:	Not Available
Initial Boiling Point:	212°F (100°C)
Flash Point:	Not Available
Evaporation Rate:	1.00
Flammability (solid, gas):	Not Applicable
Lower Explosive Limit:	Not Available
Upper Explosive Limit:	Not Available
Vapor Pressure:	18 mm Hg at 75°F (24°C)
Vapor Density:	Not Available
Relative Density:	1.00
Solubility:	Completely soluble in water
Partition Coefficient:	Not Available
Autoignition Temperature:	Not Available
Decomposition Temperature:	Not Available

Section 10: Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.

Conditions to Avoid: None identified.

Incompatible Materials: None identified.

Hazardous Decomposition Products: None identified.

Hazardous Polymerization: Will Not Occur

Section 11: Toxicological Information

Inhalation: No known effects.

Ingestion: Causes gastrointestinal irritation.

Skin Contact: Causes skin irritation.

Eye Contact: Causes eye irritation.

Chronic Exposure: No known effects.

Aggravation of Pre-existing Conditions: No information found.

Numerical Measures of Toxicity: None Available

Carcinogenicity: Not known to be as defined by OSHA, IARC or NTP.

Section 12: Ecological Information

This product is safe for the environment at the concentrations predicted under normal use conditions.

Section 13: Disposal Considerations

Dispose of contents/container in accordance with all applicable local, state and federal regulations.

Section 14: Transport Information

For Transportation Emergencies Involving This Material, Call:
ChemTrec 1-800-424-9300
Company Code: E249

DOT (LAND):

Proper Shipping Name:	Not Applicable
Hazard Class:	Not Applicable
UN Number:	Not Applicable
Packing Group:	Not Applicable
Labels:	Not Applicable
Emergency Response Guidebook Number:	Not Applicable
DOT Hazardous Substance RQ:	None/no reportable quantities
DOT Marine Pollutants:	None/no reportable quantities

Section 15: Regulatory Information

OSHA Hazards: Skin irritant, eye irritant, gastrointestinal irritant

SARA 302: None/no reportable quantities

SARA 311/312 Hazard Categories: No data

SARA 313: None/no reportable quantities

TSCA: Not Applicable

Section 16: Other Information

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Legend:

ACGIH: American Conference of Governmental & Industrial Hygienists
CAS: Chemical Abstract Service
CFR: Code of Federal Regulations
DOT: Department of Transportation
DSL/NDSL: Domestic Substances List/Non-Domestic Substances List
IARC: International Agency for the Research of Cancer
IATA: International Air Traffic Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods
IMO: International Maritime Organizations
NFPA: National Fire Protection Association
Health, Flammability & Reactivity; Hazard Scale 0 =minimal/none 4= significant
NTP: National Toxicology Program
OSHA: Occupational Safety & Health Administration
PEL: Permissible Exposure Limits
RCRA: Resource Conservation & Recovery Act
RQ: Reportable Quantity
RTK: Right-To-Know
SARA: Superfund Amendments & Reauthorization Act
STEL: Short Term Exposure Limit
TLV: Threshold Limit Value
TSCA: Toxic Substances Control Act
TWA: Time Weighted Average
TCLP: Toxicity Characteristic Leaching Procedure
VOC: Volatile Organic Compounds

6635 NE 59th Place
Portland, Oregon 97218
(971) 222-3903 Fax
www.etecllc.com

Material Safety Data Sheet

Revision Date: 09/30/2010

Section 1: Product and Company Identification

Product Name: CBN™ Custom-Blend Nutrients
MSDS Number: 014
Chemical Name: Inorganic Nutrient Mixture
Chemical Family: Mixed Nutrient

Recommended Use: Microbial Nutrient
Restrictions on Use: No Data

Company: ETEC, LLC
6635 NE 59th Place
Portland, OR 97218
USA

Telephone: (971) 222-3616

Emergency Telephone: (800) 535-5053
Medical Emergencies: (800) 301-7976
U.S. Coast Guard National Response Center: (800) 424-8802

Section 2: Hazards Identification

Emergency Overview:

May cause fire or explosion; strong oxidizer. May be harmful if swallowed or inhaled. Causes skin irritation and eye irritation. May cause respiratory irritation.

NFPA Rating:

Health Hazard:	0
Fire:	0
Reactivity Hazard:	3
Other:	Oxidizer

Section 3: Composition/Information on Ingredients

Ingredients as defined by 29 CFR 1910.1200:

Chemical Ingredients:	CAS Number:	Percent Range:
Ammonium Nitrate	6484-52-2	60 – 80%
Phosphate Salt		20 – 30%
Non-hazardous Component		5%

Section 4: First Aid Measures

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.

Skin Contact: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion: Do NOT induce vomiting. Give large quantities of water to drink. Immediately call a poison center or doctor/physician.

Section 5: Fire Fighting Measures

Suitable Extinguishing Media: Use flooding amounts of water in early stages of fire involving ammonium nitrate for extinction. Use any means suitable for extinguishing surrounding fire.

Specific Hazards in Case of Fire: May cause fire or explosion; strong oxidizer. May support combustion in an existing fire. Contact with oxidizable substances may cause extremely violent combustion. Sealed containers may rupture when heated. Sensitive to mechanical impact. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Special Protective Equipment for Fire-Fighters: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Section 6: Accidental Release Measures

Personal Precautions: Eliminate all ignition sources and heat sources if safe to do so.

Environmental Precautions: Prevent spill material from entering waterways and groundwater, if possible.

Methods for Containment/Cleaning Up: Collect spillage. Collected waste may be transferred to a closed, preferably metal container and sent to a RCRA approved waste disposal facility. Alternatively, sweep spill into noncombustible container and dissolve in large amount of water. Add soda ash. Mix and neutralize with 6M-HCl. Neutralized sludge may be sent to an approved waste disposal facility.

Section 7: Handling and Storage

Handling: Keep away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store away from clothing and other combustible materials. Store at temperatures not exceeding 130°F (54°C), preferably not exceeding 86°F (30°C).

Section 8: Exposure Controls/Personal Protection

Exposure Limits:

Chemical Ingredients:	CAS Number:	OSHA PEL	NIOSH REL	ACGIH TLV
Ammonium Nitrate	6484-52-2	None Established	None Established	None Established
Phosphate Salt		None Established	None Established	None Established
Non-hazardous Component		None Established	None Established	None Established

Engineering Controls: Use only outdoors or in a well-ventilated area.

Personal Protective Equipment:

Eye Protection: Wear eye protection/face protection.

Hand Protection: Wear protective gloves.

Skin and Body Protection: Wear impervious clothing, boots, gloves as appropriate to prevent skin contact.

Respiratory Protection: Avoid breathing dust. Use only outdoors or in a well-ventilated area. If exposure to dust is possible, use a NIOSH approved respirator.

Hygiene Measures: Keep away from clothing and other combustible materials. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling.

Section 9: Physical and Chemical Properties

Physical State:	Crystals, granules
Color:	White
Odor:	Odorless
Odor Threshold:	Not Available
pH:	7.0
Melting/Freezing Point:	338°F (170°C)
Initial Boiling Point:	410°F (210°C) Decomposes
Flash Point:	Not Available
Evaporation Rate:	Not Available
Flammability (solid, gas):	Not Available
Lower Explosive Limit:	Not Available

Upper Explosive Limit:	Not Available
Vapor Pressure:	Not Available
Vapor Density:	Not Available
Relative Density:	1.73 @ 77°F (23°C)
Solubility:	118 g/100 g water @ 32°F (0°C)
Partition Coefficient:	Not Available
Autoignition Temperature:	Not Available
Decomposition Temperature:	Not Available

Section 10: Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage. Hygroscopic.

Conditions to Avoid: Heat, flame, ignition sources, dusting and incompatibles. Moisture and combustible materials. Shock sensitive.

Incompatible Materials: Aluminum, antimony, chromium, copper, iron, lead, magnesium, manganese, nickel, zinc, brass, oil, charcoal, organic material, acetic acid, ammonium chloride, bismuth, cadmium, chlorides, cobalt, phosphorus, potassium and ammonium sulfate, sodium, sodium hypochlorite, sodium perchlorate, sodium-potassium alloy, and sulfides.

Hazardous Decomposition Products: Emits nitrous oxides when heated to decomposition. Liberates ammonia in reaction with strong alkalis.

Hazardous Polymerization: Will not occur.

Section 11: Toxicological Information

Inhalation: May cause respiratory irritation. At high temperatures, exposure to toxic nitrogen oxides decomposition products can quickly cause acute respiratory problems. Inhalation of large amounts causes systemic acidosis and abnormal hemoglobin.

Ingestion: Harmful if swallowed. Large oral doses of nitrates may cause dizziness, abdominal pain, vomiting, bloody diarrhea, weakness, convulsions, and collapse. May cause methemoglobinemia resulting in cyanosis.

Skin Contact: Causes skin irritation.

Eye Contact: Causes eye irritation.

Chronic Exposure: Small repeated oral doses of nitrates may cause weakness, depression, headache, and mental impairment.

Aggravation of Pre-existing Conditions: No information found.

Numerical Measures of Toxicity: Oral rat LD50: 2217 mg/kg (for ammonium nitrate)

Carcinogenicity: Not known to be as defined by OSHA, IARC or NTP (for ammonium nitrate).

Section 12: Ecological Information

Mobility in Soil: When released into soil, this material is expected to leach into groundwater. When released into the soil, this material is not expected to evaporate significantly.

Persistence: When released into water, this material is expected to readily biodegrade.

Section 13: Disposal Considerations

Dispose of contents/container in accordance with all applicable local, state and federal regulations.

Section 14: Transport Information

For Transportation Emergencies Involving This Material, Call: ChemTrec 1-800-424-9300 Company Code: E249

DOT (LAND):

Proper Shipping Name:	AMMONIUM NITRATE
Hazard Class:	5.1
UN Number:	UN1942
Packing Group:	III
Placards:	Oxidizer
DOT Hazardous Substance RQ:	None/no reportable quantities
DOT Marine Pollutants:	None/no reportable quantities

Section 15: Regulatory Information

OSHA Hazards: Strong oxidizer, skin irritant, eye irritant, respiratory irritant

SARA 302: None/no reportable quantities.

SARA 311/312 Hazard Categories: Acute Health Hazard, Reactive Hazard

SARA 313: Nitrate compounds are subject to the reporting requirements of SARA 313. Additionally, water dissociable ammonia salts are subject to the reporting requirements of SARA 313 when placed in water.

TSCA: All substances in this product are listed on the TSCA inventory.

Section 16: Other Information

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IMO: International Maritime Organizations
NFPA: National Fire Protection Association
Health, Flammability & Reactivity; Hazard Scale 0 =minimal/none 4= significant
NTP: National Toxicology Program
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PEL: Permissible Exposure Limits
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RQ: Reportable Quantity
RTK: Right-To-Know
SARA: Superfund Amendments & Reauthorization Act
STEL: Short Term Exposure Limit
TLV: Threshold Limit Value
TSCA: Toxic Substances Control Act
TWA: Time Weighted Average
TCLP: Toxicity Characteristic Leaching Procedure
VOC: Volatile Organic Compounds

Appendix D

Aquifer Analysis

D H E C
PROMOTE PROTECT PROSPER

Summary of Slug Test
Division of Underground Storage Tank Management

Site Data

UST Permit #: _____ County: Richland

Facility Name: Eastpoint #24

Slug Data

See Appendix D Table _____ Figure _____ for a list of all data measurements. [water level logs, etc. (complete as appropriate)].

Water Level Recovery Data was measured by Water Level Meter
[Hermit Data Logger, Manually with Water Level Indicator, etc. (list method)].

Complete the following table for each well tested.

COMPLETE A SECOND SHEET IF MORE THAN FOUR WELLS ARE TESTED

Slug Test Conducted in Well(s) Number	MW-2a	MW-5a		
Initial Rise/Drawdown in Well (feet)	18.12	22.01		
Radius of Well Casing (feet)	.08	.08		
Effective Radius of Well (feet)	.33	.33		
Static Saturated Aquifer Thickness (feet)	28	28		
Length of Well Screen (feet)	10	10		
Static Height of Water Column in Well (ft)	10	6		

Calculations

See Appendix D Table _____ Figure _____ for calculations (complete as appropriate).

The method for aquifer calculations was Bouwer-Rice (i.e. Bouwer-Rice, Cooper, etc.).

Calculated values by well were as follows:

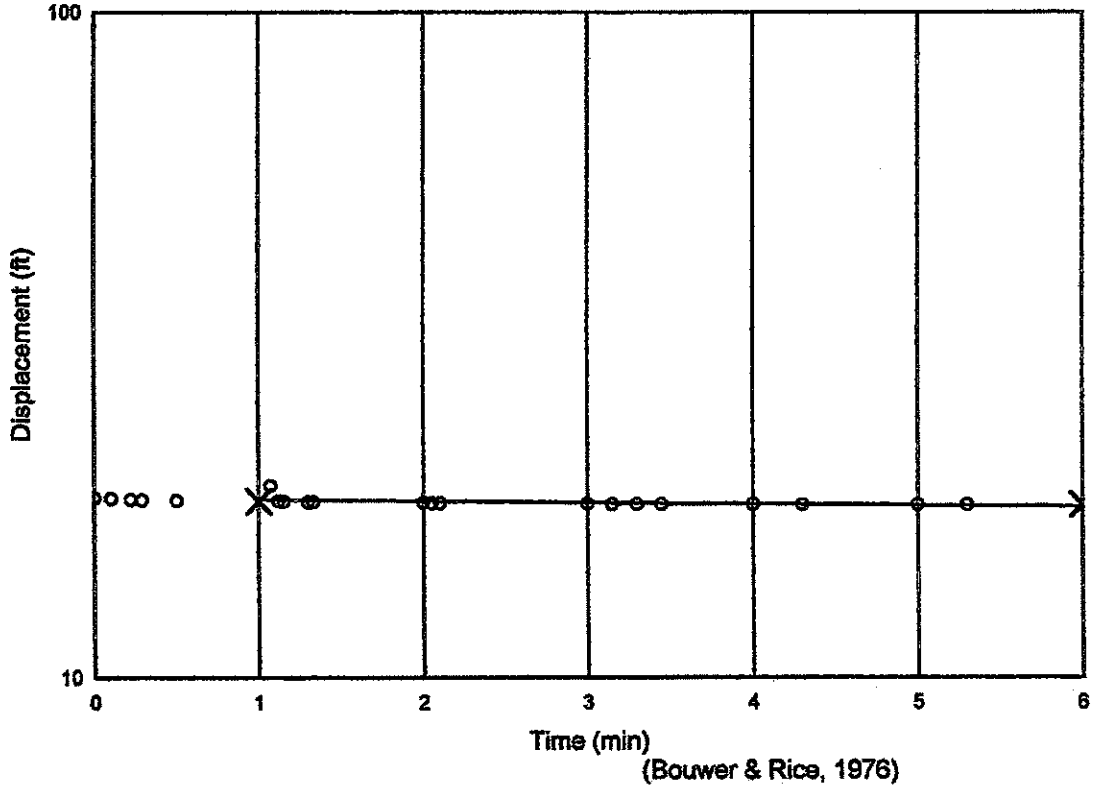
Slug Test Conducted in Well(s) Number	MW-2a	MW-5a	
Hydraulic Conductivity	1.91x10-6	5.60x10-7 cm/sec	

Thickness of the aquifer used to calculate hydraulic conductivity was 28.0 feet.

The aquifer is _____ confined _____ semi-confined X water table (check as appropriate).

The estimated seepage velocity is 0.012 to 0.040 feet per year based on a hydraulic conductivity of 1.91x10-6 to 5.60x10-7, a hydraulic gradient of .007 ft/ft, and a porosity of 35 percent for clayey sand soil (list type i.e., silty sand ,clay, etc).

Rising Head Slug Test
Fastpoint #24 MW-2a



(Bouwer & Rice, 1976)

Rising head test

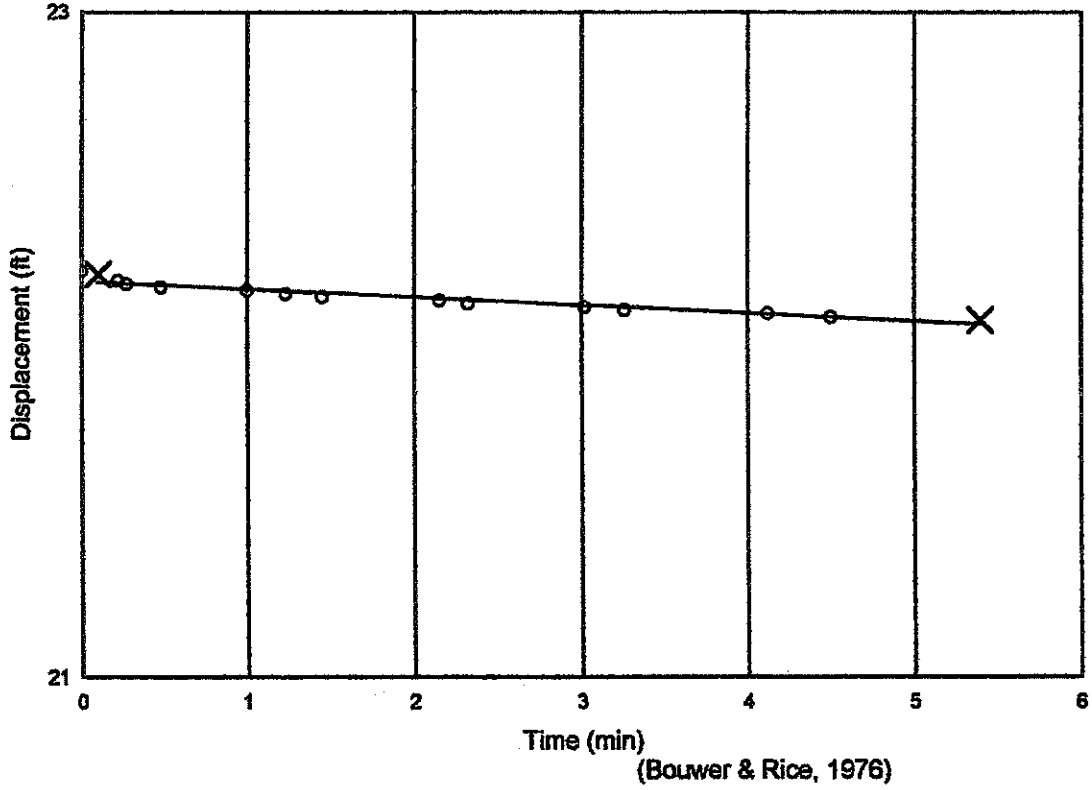
INPUT PARAMETERS
Raw data time unit is min
Raw data length unit is ft
b = 28.00 ft
H = 10.00 ft
L = 10.00 ft
rw = 0.33 ft
rc = 0.08 ft

CALCULATED PARAMETERS
Corr. coeff. = -5.30E-001
Yt = 18.37 ft
t = 2.10E+000 min

OUTPUT PARAMETERS
K = 1.91E-006 cm/sec

Fastpoint #24, Columbia, SC							
Rising Head Slug Test							
MW-2a							
Date: 5-18-99							
				Selected	Selected	Rescaled	
				Time	Draw	(t-t0)	Draw
Time (min.)				(min)	(ft)	(min)	(ft)
0.05	19.1			0.05	19.1	0	19.1
0.2	18.95			0.2	18.95	0.15	18.95
0.31	18.8			0.31	18.8	0.26	18.8
0.36	18.75			0.36	18.75	0.31	18.75
0.48	18.72			0.48	18.72	0.43	18.72
0.5	18.63			0.5	18.63	0.45	18.63
1	18.58			1	18.58	0.95	18.58
1.1	18.55			1.1	18.55	1.05	18.55
1.22	18.5			1.22	18.5	1.17	18.5
1.29	18.45			1.29	18.45	1.24	18.45
1.5	18.43			1.5	18.43	1.45	18.43
2	18.4			2	18.4	1.95	18.4
2.07	19.39			2.07	19.39	2.02	19.39
2.12	18.38			2.12	18.38	2.07	18.38
2.15	18.35			2.15	18.35	2.1	18.35
2.3	18.33			2.3	18.33	2.25	18.33
2.33	18.32			2.33	18.32	2.28	18.32
3	18.29			3	18.29	2.95	18.29
3.05	18.27			3.05	18.27	3	18.27
3.1	18.26			3.1	18.26	3.05	18.26
4	18.22			4	18.22	3.95	18.22
4.15	18.2			4.15	18.2	4.1	18.2
4.3	18.19			4.3	18.19	4.25	18.19
4.45	18.18			4.45	18.18	4.4	18.18
5	18.18			5	18.18	4.95	18.18
5.3	18.16			5.3	18.16	5.25	18.16
6	18.15			6	18.15	5.95	18.15
6.3	18.15			6.3	18.15	6.25	18.15
7	18.15			7	18.15	6.95	18.15

Rising Head Slug Test
Fastpoint #24 MW-5a



(Bouwer & Rice, 1976)

Rising head test

INPUT PARAMETERS
Raw data time unit is min
Raw data length unit is ft
b = 28.00 ft
H = 6.00 ft
L = 6.00 ft
rw = 0.33 ft
rc = 0.08 ft

CALCULATED PARAMETERS
Corr. coeff. = -9.71E-001
Yt = 22.13 ft
t = 1.45E+000 min

OUTPUT PARAMETERS
K = 5.60E-007 cm/sec

Fastpoint #24, Columbia, SC							
Rising Head Slug Test							
MW-5a							
Date: 5-18-99				Selected	Selected	Rescaled	
				Time	Draw	(t-t0)	Draw
Time	Draw			(min)	(ft)	(min)	(ft)
0.37	22.25			0.37	22.25	0	22.2
0.49	22.24			0.49	22.24	0.1	22.19
0.55	22.21			0.55	22.21	0.22	22.17
1	22.2			1	22.2	0.27	22.16
1.1	22.19			1.1	22.19	0.48	22.15
1.22	22.17			1.22	22.17	1	22.14
1.27	22.16			1.27	22.16	1.23	22.13
1.48	22.15			1.48	22.15	1.45	22.12
2	22.14			2	22.14	2.15	22.11
2.23	22.13			2.23	22.13	2.32	22.1
2.45	22.12			2.45	22.12	3.02	22.09
3.15	22.11			3.15	22.11	3.26	22.08
3.32	22.1			3.32	22.1	4.12	22.07
4.02	22.09			4.02	22.09	4.5	22.06
4.26	22.08			4.26	22.08	5.4	22.05
5.12	22.07			5.12	22.07		
5.5	22.06			5.5	22.06		
6.4	22.05			6.4	22.05		

Well Number	Type of Material Exposed to Screened Interval	Hydraulic Conductivity (K) (cm/sec)
MW-1A	UNKNOWN	2.87×10^{-4}
MW-2A	UNKNOWN	5.48×10^{-4}
MW-3	Sandy CLAY	6.96×10^{-5}
MW-5	Sandy CLAY	3.33×10^{-5}
MW-5A	UNKNOWN	8.09×10^{-4}
MW-11	Sandy CLAY	1.73×10^{-4}
MW-12	Silty Sand & Silty CLAY	8.50×10^{-5}
MW-14	SAND	8.24×10^{-6}
MW-16	Sandy CLAY	9.50×10^{-7}
MW-17D	Silty CLAY	7.73×10^{-7}

Notes:

Field tests were reduced and the hydraulic conductivities computed using techniques described in NAVFAC Soil Mechanics Design Manual 7.1, May, 1982, Condition A and Condition C (Condition C used on MW-17D).

Soil descriptions from SCDHEC files.
Calculations are included in Appendix B.

6.4 GROUNDWATER MOVEMENT

Groundwater movement is often related to topography, lithology, elevation of recharge and discharge areas and man-made influences. Referenced groundwater elevations were determined by measuring the top of the monitoring well casing relative to a nearby datum elevation (see Figure 2) measuring the water level in the monitoring well, and computing the reference elevation of the groundwater at the time of measurement.

Directions of groundwater flow were interpolated between monitoring wells by comparing the groundwater elevations at those locations considering the factors listed above. Groundwater levels typically fluctuate with seasonal and rainfall variations.

SUMMARY of SLUG TEST (page 1 of 3)

SOUTH CAROLINA
Department of Health and Environmental Control (DHEC)

Site Data

SITE ID # 7777 COUNTY Richland

FACILITY NAME Cloud's Chevron

SLUG DATA

See Appendix _____ Table _____ Figure _____ for a list of all data measurements.
(water level logs, etc.)(Complete as appropriate).
Water Level Recovery Data was measured by ORS Interface Probe .
(Hermit Data Logger, Manually with Water Level Indicator, etc.)(List Method)
Complete the following table for each well tested.
COMPLETE A SECOND SHEET IF MORE THAN FOUR WELLS ARE TESTED

Slug Test Conducted in well(s) number	MW-1A	MW-2A	MW-3	MW-5
Initial Rise/Drawdown in well (feet)	0.09	1.86	1.77	0.65
Radius of well casing (feet)	0.083	0.083	0.083	0.083
Effective Radius of Well (feet)	0.33	0.33	0.35	0.35
Static Saturated Aquifer Thickness (feet)	7.31	3.59	3.46	5.97
Length of Well Screen (feet)	10	10	15	15
Static Height of Water Column in Well (ft)	20.69	25.41	22.04	22.53

Calculations

See Appendix _____ Table _____ Figure _____ for calculations
The method for aquifer calculations was NAVFAC
Calculated values by well were as follows:

Slug Test Conducted in Well(s) number	MW-1A	MW-2A	MW-3	MW-5	
Hydraulic Conductivity	2.87E-04	5.48E-04	6.96E-05	3.33E-05	cm/sec

Thickness of the aquifer used to calculate hydraulic conductivity was N/A feet.
The aquifer is _____ confined _____ semi-confined _____ water table (Check as Appropriate).
SEE SHEET 3
The estimated seepage velocity is _____ feet per year based on a hydraulic conductivity of _____ cm/sec, a hydraulic gradient of _____ ft/ft, and a porosity of _____ percent for _____ soil.

SUMMARY of SLUG TEST

SUMMARY of SLUG TEST (page 2 of 3)

SOUTH CAROLINA
Department of Health and Environmental Control (DHEC)

Site Data

SITE ID # 7777 COUNTY Richland

FACILITY NAME Cloud's Chevron

SLUG DATA

See Appendix _____ Table _____ Figure _____ for a list of all data measurements.
(water level logs, etc.)(Complete as appropriate).
Water Level Recovery Data was measured by ORS Interface Probe .
(Hermit Data Logger, Manually with Water Level Indicator, etc..)(List Method)
Complete the following table for each well tested.
COMPLETE A SECOND SHEET IF MORE THAN FOUR WELLS ARE TESTED

Slug Test Conducted in well(s) number	MW-5A	MW-11	MW-12	MW-14
Initial Rise/Drawdown in well (feet)	0.08	0.43	0.1	0.1
Radius of well casing (feet)	0.083	0.083	0.083	0.083
Effective Radius of Well (feet)	0.33	0.33	0.33	0.33
Static Saturated Aquifer Thickness (feet)	6.14	10.02	24.9	14.41
Length of Well Screen (feet)	5	15	15	15
Static Height of Water Column in Well (ft)	23.26	19.98	5.1	15.59

Calculations

See Appendix _____ Table _____ Figure _____ for calculations
The method for aquifer calculations was NAVFAC
Calculated values by well were as follows:

Slug Test Conducted in Well(s) number	MW-5A	MW-11	MW-12	MW-14	
Hydraulic Conductivity	8.09E-04	1.73E-04	8.50E-05	8.24E-06	cm/sec

Thickness of the aquifer used to calculate hydraulic conductivity was N/A feet.
The aquifer is _____ confined _____ semi-confined _____ water table (Check as Appropriate).
SEE SHEET 3
The estimated seepage velocity is _____ feet per year based on a hydraulic conductivity of _____ cm/sec, a hydraulic gradient of _____ ft/ft, and a porosity of _____ percent for _____ soil.

SUMMARY of SLUG TEST

SUMMARY of SLUG TEST (page 3 of 3)

SOUTH CAROLINA
Department of Health and Environmental Control (DHEC)

Site Data

SITE ID # 7777 COUNTY Richland

FACILITY NAME Cloud's Chevron

SLUG DATA

See Appendix _____ Table _____ Figure _____ for a list of all data measurements.
(water level logs, etc.)(Complete as appropriate).
Water Level Recovery Data was measured by ORS Interface Probe .
(Hermit Data Logger, Manually with Water Level Indicator, etc..)(List Method)
Complete the following table for each well tested.
COMPLETE A SECOND SHEET IF MORE THAN FOUR WELLS ARE TESTED

Slug Test Conducted in well(s) number	MW-16	MW-17D		
Initial Rise/Drawdown in well (feet)	2.09	4.62		
Radius of well casing (feet)	0.083	0.083		
Effective Radius of Well (feet)	0.33	0.33		
Static Saturated Aquifer Thickness (feet)	11.83	14.36		
Length of Well Screen (feet)	15	15		
Static Height of Water Column in Well (ft)	18.17	44.64		

Calculations

See Appendix _____ Table _____ Figure _____ for calculations
The method for aquifer calculations was NAVFAC
Calculated values by well were as follows:

Slug Test Conducted in Well(s) number	MW-16	MW-17D			
Hydraulic Conductivity	9.50E-07	7.73E-07			cm/sec

Thickness of the aquifer used to calculate hydraulic conductivity was N/A feet.
The aquifer is _____ confined _____ semi-confined X water table (Check as Appropriate).
* Enter Values in Shaded Areas Only
The estimated seepage velocity is 72.94 feet per year based on a hydraulic conductivity of 2.01E-04 cm/sec, a hydraulic gradient of 1.40E-02 ft/ft, and a porosity of 4 percent for Sandy CLAY soil.

SUMMARY of SLUG TEST

Groundwater Seepage Velocity Calculations

SOUTH CAROLINA
Department of Health and Environmental Control (DHEC)

Site Data

SITE ID # 7777 Richland

FACILITY NAME Cloud's Chevron

Hydraulic Conductivity (average)

Hydraulic Conductivity Average = 2.01E-04 cm/sec

5.71E-01 ft./day

3.96E-04 ft./min

Groundwater Seepage Velocity

V = (Ki)/(Ne)
(ft./day)

* Enter Values in Shaded Areas Only

where:

K = Hydraulic Conductivity (ft./day)
I = Hydraulic Gradient (ft./ft.)
Ne = Effective Permeability

K = 5.71E-01 ft./day
I = 1.00E-02 ft./ft.
Ne = 0.04

V = **1.43E-01** ft./day **52.10** ft./year

Groundwater Seepage Velocity Calculations

Inflow for Type II Well MW-1A

Inflow Permeability Calculation

Cloud's Chevron

Test Performed: 4/9/97

MW-1A

Type II (Uncased Well)

Static: 20.69 ft

*Enter Values in Shaded Areas Only

Time (min)	Depth	delta H	Ht/Ho
0.50	20.78	0.09	1.00
1.00	20.77	0.08	0.89
2.00	20.75	0.06	0.67
4.00	20.73	0.04	0.44
7.00	20.71	0.02	0.22
9.50	20.70	0.01	0.11

Information from data and plot of Ht/H0 vs time

Bore Hole Diameter:	8	in
Total Depth of Well:	28	ft
Stand Pipe Area:	50.27	in^2
	0.35	ft^2

Coordinates from Graph for Slope Calc:

H1/Ho:	1	
t1:	0.5	min
H2/Ho:	0.89	
t2:	1	min

H1:	0.09	H2:	0.08
t1:	0.50	t2:	1.00
Radius	R:	4.00	in
Radius	R:	0.33	ft
Depth	D:	7.31	ft
	R/D:	0.046	
	D/R:	21.93	

Shape Factor Determination Value: 0.99 *

*This value is used in conjunction with Figure 13 of Reference [1] to obtain the shape factor.

Shape Factor S: 0.1

Coeff. of Permeability (K):

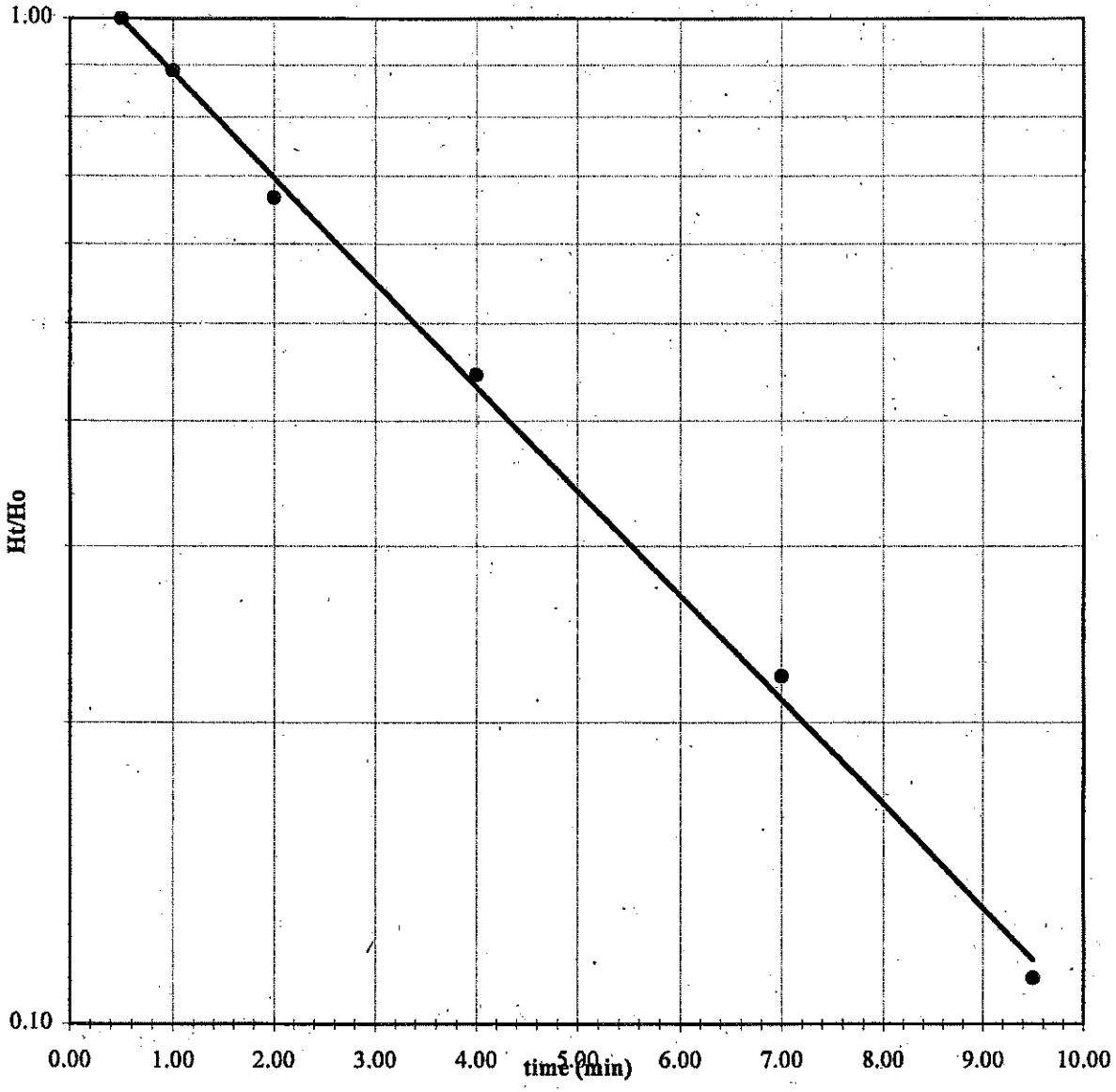
5.64E-04 ft/min

8.13E-01 ft/day

2.87E-04 cm/sec

Ref [1]: Naval Fac. Engr. Command, Design Manual 7.01, soil Mechanics

Inflow for Type II Well MW-1A



Midlands Environmental Consultants Inc.

Purchasing Office
SC DHEC
Attn: Procurement Services Division
2600 Bull Street
Columbia SC 29201-1708
Phone:(803) 898-3501
Fax: (803) 898-3505

Invoice To:
SC DHEC
Attn: Accounts Payable
2600 Bull Street
Columbia SC 29201-1708
Phone:(803) 898-3460
Fax: (803) 253-7637

UST
MAR 14 2014
PROGRAM

Purchase Order: 4600322226 **Date Issued:** 03/11/2014 **Validity - From:** 01/07/2014 **TO:** 01/06/2019 PO Number must appear on all Invoices and Delivery Slips.	**Payment Terms:** **within** 30 **Days** 0.000 **Percent Discount.**
Vendor: 7000130450 CRAWFORD ENVIRONMENTAL SERVICES 104 CORPORATE BLVD - SUITE 412 WEST COLUMBIA SC 29169 USA	**Deliver To:** The State of South Carolina DHEC - Columbia Mills Mailroom 301 Gervais St COLUMBIA SC 29201-3073 USA

INSTRUCTIONS TO VENDOR

Procurement Officer: E. Madison Winslow, (803) 898-3487 / Program Contact: Susan B. Fulmer, (803) 898-0614 / Contractor Contact: Charles P. Crawford, (540) 798-4205 / Price per IFB-5400007095-1/30/14-EMW, signed by Charles P. Crawford on 1/26/14. / UST corrective action at 07584-07777-12352. / Total Contract Cost: $540,000.00 / Contract period: January 7, 2014 through January 6, 2019 or until completion or work. / All terms and conditions of the solicitation do apply..

Item No	QTY	Order UOM	Description	Unit Price	Amount
001	540,000	EA	Environmental Consulting Release Order for contract: 4400007922 / 0000000001 Delivery Date:03/07/2015	1.0000	540,000.00
				Subtotal:	**540,000.00**
				Total Value:	**540,000.00 USD**

Created By: EDWARD WINSLOW
Authorized Signature
If received electronically, printed name represents authorized signature for this document

All Sales to the State of South Carolina (SC) are subject to the SC sales and use tax laws, unless such sales are otherwise exempt. The Contractor/Vendor will collect such tax as required.

UST
DOCKETING

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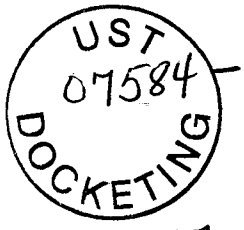
SERVICES

March 24, 2014



07584 - 242 tech
07777 - 176 tech
12352 - 111 tech

Ms. Susan Fulmer, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management
SCDHEC
2600 Bull Street
Columbia, SC 29201

RE: QAPP Contractor Addendum – CAP/CASE
Cloud's Chevron & University Mart
1600 Two Notch Road, Columbia, SC
UST Permits: #07584, 07777 and 12352
CES Number: Pending

Dear Ms. Fulmer

As we have discussed, attached please find the Quality Assurance Project Plan Addendum for the referenced facility prepared by Crawford Environmental Services, Inc. (CES). CES has completed the site check (March 10, 2014), the assessment plan and contractors addendum to the Master QAPP for the Corrective Action Plan (CAP) and Corrective Action System Evaluations (CASE) to be performed at the above noted facility.

Should you have any questions or comments regarding the attached, please feel free to contact me at 540-798-4205 or by email at ccrawford@crawfordenvironmental.com.

Best Regards,
CRAWFORD ENVIRONMENTAL SERVICES, INC.

Charles F. Crawford, III
President
SC Rehabilitation Contractor Number: 0388

Attachments:

Appendix A:	Quality Assurance Program Plan (Contractor's Addendum) 27 pages
Appendix B:	Chain of Custody Template 1 page
Appendix C:	Site Figures 2 pages
Appendix D:	Methodology – Ferrous Iron 14 pages

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APPENDIX A:

QAPP Contractor Addendum

CRAWFORD ENVIRONMENTAL SERVICES

Section A: Project Management

A1 Title and Approval Page

Quality Assurance Project Plan
Addendum (Corrective Action Plan) to the SC DHEC UST Programmatic QAPP
For
Handy Pantry #65 / University Mart & Cloud's Chevron
UST Permit #: 07584, 07777 and 12352

1600 Two Notch Road, Columbia, SC

Prepared by:

Charles F. Crawford, III
Crawford Environmental Services
15 Church Ave., SW
Roanoke, VA 24015
SCDHEC Site Rehabilitation Contractor Certification Number: UCC-0388

Approvals

Susan Fulmer SC DHEC Project Manager	Signature	Date	
Charles F. Crawford, III Site Rehabilitation Contractor	Signature	Date	03.21.14
Daniel J. Fisher Project Verifier	Signature	Date	03.21.14
Ashley Amick Laboratory Director Access Analytical Inc.	Signature	Date	03.21.14
Mehmet Yildrim Laboratory Director Analytical Environmental Services Inc.,	Signature	Date	03.21.14

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A3 Distribution List

Name	Title	Organization/Address	Telephone Number	Fax Number	Email Address
Susan Fulmer	SC DHEC Technical Project Manager	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-898-0614	803-896-6245	fulmersb@dhec.sc.gov
Charles F. Crawford	Site Rehabilitation Contractor	Crawford Environmental Services 104 Corporate Blvd. Suite 412 West Columbia, SC 29169	540-798-4205	540-343-6259	ccrawford@crawfordenvironmental.com
Daniel J. Fisher	Project QA/QC Manager and Project Verifier	Crawford Environmental Services 15 Church Ave., SW Roanoke, VA 24011	540-798-5068	540-343-6259	dfisher@crawfordenvironmental.com
Daniel J. Fisher	Project Manager	Crawford Environmental Services 104 Corporate Blvd. Suite 412 West Columbia, SC 29169	540-798-5068	540-343-6259	dfisher@crawfordenvironmental.com
William C. Ewing	Field Manager/ Certified Well Driller	Crawford Environmental Services 104 Corporate Blvd. Suite 412 West Columbia, SC 29169	803-708-0079	803-708-8137	bewing@crawfordenvironmental.com
Ashley Amick	Laboratory Director	Access Analytical, Inc. (AA) 7478 Carlisle Street Irmo, SC 29063	803-781-4243	803-781-4303	aamick@axs-inc.com
Mehmet Yildrim	Laboratory Director	Analytical Environmental (AES) Services Inc. 3785 Presidential Pkwy Atlanta, GA 30340	770-457-8177	770-457-8188	myildrim@aesatlanta.com

Table 1A Addendum Distribution List

A4 Project Organization

Role from the UST Master QAPP	Name of person in this Role for this Project	Organization/Address	Telephone Number	Fax Number	Email Address
Project Manager	Susan Fulmer	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-898-0614	803-896-6245	fulmersb@dhec.sc.gov
Site Rehabilitation Contractor	Charles F. Crawford	Crawford Environmental Services 104 Corporate Blvd. Suite 412 West Columbia, SC 29169	540-798-4205	540-343-6259	ccrawford@crawfordenvironmental.com
Project Manger	Daniel J. Fisher	Crawford Environmental Services 104 Corporate Blvd. Suite 412 West Columbia, SC 29169	540-798-5068	540-343-6259	dfisher@crawfordenvironmental.com
Analytical Laboratory Director	Ashley Amick	Access Analytical, Inc. (AA) 7478 Carlisle Street Irmo, SC 29063	803-781-4243	803-781-4303	aamick@axs-inc.com
Analytical Laboratory Director	Mehmet Yildrim	Analytical Environmental (AES) Services Inc. 3785 Presidential Pkwy Atlanta, GA 30340	770-457-8177	770-457-8188	myildrim@aesatlanta.com
Field Manager/ Certified Well Driller	William C. Ewing	Crawford Environmental Services 104 Corporate Blvd. Suite 412 West Columbia, SC 29169	803-708-0079	803-708-8137	bewing@crawfordenvironmental.com
Project QA/QC Manager and Project Verifier	Daniel J. Fisher	Crawford Environmental Services 15 Church Ave., SW Roanoke, VA 24011	540-798-5068	540-343-6259	dfisher@crawfordenvironmental.com
Disposal Subcontractor	Vanessa Tremblay	Waste Management 1850 Parkway Place – Suite 600 Marietta GA 30067	803-735-0808	877-446-1079	vtrembly@wm.com

Table 2A Addendum Role Identification and Contact Information

The responsibilities of the participants are as follows:

1. **UST Management Project Manager** – The UST Management Project Manager (UST Project Manager) is responsible for direct oversight of the contractor conducting this assessment. The UST Project Manager performs the review of the plan and the report associated with this assessment. These reviews include verification and analysis of data submitted to the UST Management Division by the Site Rehabilitation Contractor. The UST Project Manager is responsible for the review of and approval of the site specific QAPP to ensure compliance with the Master QAPP. The UST Project Manager also is responsible for validating data.

2. **Site Rehabilitation Contractor** – The Site Rehabilitation Contractor is an independent contractor responsible for managing and coordinating field and office activities needed for this assessment.

3. **Project Manager** – The Project Manager is a representative of the Site Rehabilitation Contractor responsible for the day to day oversight of activities needed to complete this assessment. The Project

Manager is responsible for the submission of plans, updates and reports associated with this assessment.

4. Laboratory Analytical Director – The Laboratory Analytical Director represents the Analytical Laboratory that will receive the soil and water samples from the Site Rehabilitation Contractor, performs the requested analyses and provides an analytical report.

5. Field Manager – The Field Manager is a representative of the Site Rehabilitation Contractor responsible for the oversight of the contractor technicians and field activities. The Field Manager is responsible for the review / QA of field activities to ensure compliance with the UST Master QAPP and contractor health and safety plans.

6. Project QA/QC Manager and Project Verifier – The Project QA/QC Manager and Project Verifier is a representative of the Site Rehabilitation Contractor responsible for the oversight of project activities to ensure quality control is in compliance with the UST Master QAPP.

7. Disposal Contractor – The Disposal Contractor is a subcontractor, chosen by the Site Rehabilitation Contractor, which will receive the industry derived waste created during the implementation of this assessment. The Disposal Contractor is responsible for the review of manifests to ensure the disposal is in compliance with the UST Master QAPP.

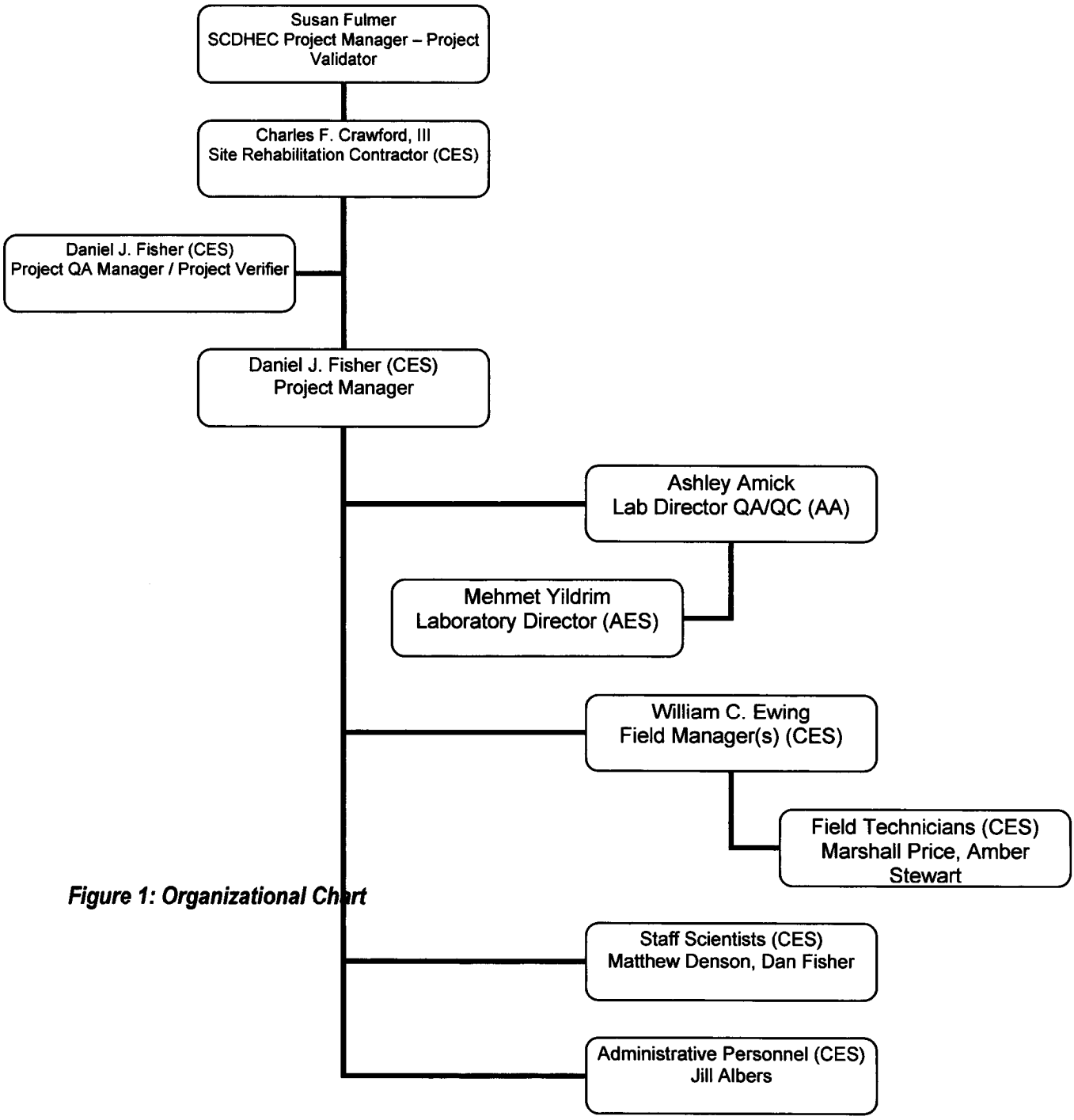

Figure 1: Organizational Chart

A5 Problem Definition/Background

Discuss the background (as much as is known) of the site and appropriate historical information, and why this site is being assessed. According to SCDHEC and contractor records an IGWA, Tier 1, Tier II, Corrective Action and several groundwater sampling events were previously completed at this facility. During the previous assessments, several groundwater monitoring wells yielded dissolved-phase concentrations of Chemicals of Concern (CoCs) in exceedance of the risk based screening limits and maximum contaminant limits (RBSLs/MCLs). Refer to Appendix C for site specifics and history.

Please answer the following: Does this project fall under UST or Brownfields area?
UST Area.

A6 Project/Task Description

1. **Summarize what is known about the work to be done. This can be a short sentence indicating what the Scope of this project is (see Master QAPP Section A6).**

   Complete Semi-Annual Groundwater/Water Supply Well Sampling Reports [Corrective Action System Evaluation – CASE]. Refer to the Figures provided as Appendix C for details and specifics regarding the locations of monitoring wells.

2. **The work will begin within:**
   a. Site mobilization / sample collection and laboratory analysis: 1-2 weeks
   b. De-mobilization and clean-up: 1 week
   c. Report preparation: 1 week; should additional samples be required to achieve 90% valid samples, the project may be extended. The SCDHEC Project Manger will be contacted via email or telephone if project requires an extension for any reason. (Repeating)

3. **Are there any time or resource constraints? Include those factors that may interfere with the tentative schedule.** Laboratory equipment failures may cause up to a two week delay. Property access issues due to their inherent unpredictability, may cause a delay that will exceed the initial timeframe given for this project. Inclement weather conditions also may cause project delays. No resource constraints are anticipated.

A7 Data Quality Objectives (DQOs) and Data Quality Indicators (DQIs)

Please refer to Appendix C of this QAPP for shallow and deep monitoring well locations. The assessment boundaries are limited to the area necessary to complete this initial groundwater assessment. SCDHEC will be notified during the assessment regarding any accessibility issues.

A8 Training and Certificates

Required training and licenses:

Title/Job	Name	Training Required	Date training received	Type of License	License Number
CRAWFORD ENVIRONMENTAL SERVICES, INC. (Last Updated March 2014)					
Site Rehabilitation Contractor	Charles F. Crawford	OSHA HASWOPER	-	Class A General Contractor	2705076157
Senior Project Geologist	B. Thomas Houghton	-	-	S.C.P.G.	2343
Project Manager	Daniel J. Fisher	OSHA HASWOPER	December 2013 (OSHA)	-	-
Staff Scientist	Matthew Denson	OSHA HASWOPER	March 2014 (OSHA)	-	-
Staff Scientist	Daniel J. Fisher	OSHA HASWOPER	December 2013 (OSHA)	N/A	N/A
Administrative	Jill A. Albers	-	-	-	-
Field Manager	William C. Ewing	OSHA HASWOPER	December 2013 (OSHA)	SCLLR Class B Drilling License	1505
Field Technician	Marshall Price	OSHA HASWOPER	December 2013 (OSHA)		
Subcontractors (Labs / Surveyors)					
Lab Director (AA)	Ashley Amick	N/A	N/A	SC Certified Lab	32575001
Lab Director (AES)	Mehmet Yildrim	N/A	N/A	SC Certified Lab	98016003

Table 3A Required Training and Licenses

Daniel J. Fisher of CES is responsible for ensuring that personnel participating in this project receive the proper training. All personnel training records will be stored at the Corporate office located at 15 Church Avenue, SW in Roanoke, VA 24011.

It is understood that training records will be produced if requested by SC DHEC.

The Following Laboratory(ies) will be used for this Project:

Commercial Lab(s)

Full Name of the Contractor performing Lab Analyses: Analytical Environmental Services Inc.
Name of Lab Director: Mehmet Yildrim (QA/QC Ashley Amick- Access Analytical inc.)
SCDHEC Certification Number: SC Cert #: 98016003

Parameters this Laboratory/Contractor will analyze for this project:
BTEX, naphthalene, MTBE via US EPA method 8260B and TBA, TAA and TAME via US EPA method 8260-Oxy

Verification Event(s) Only:
Dissolved Oxygen by method SM4500-O G
Ferrous Iron by Kerr Method
Nitrate by method 9056/9210
Sulfate by method 9038/9056
Methane by method RSK-175

Please note: SC DHEC may require that the contractor submit some or all of the Laboratory's SOPs as part of this QAPP.

CRAWFORD ENVIRONMENTAL SERVICES

A9 Documents and Records

Personnel will receive the most current version of the QAPP Addendum via: (Check all that apply)

__X__ US Mail ____ Courier __X__ Hand delivered

Personnel will receive the QAPP via US Mail, Email, or by downloading from the CES internal network. Notification of updates to the Master QAPP will be through email from the contractor. CES personnel can access the QAPP by downloading through the internal network system.

Record	Produced By	Hardcopy/ Electronic	Storage Location For how long?	Archival
Field Data Sheets/ Sampling logs	Environmental Contractor	Electronic	At Contractor Office Electronic for 5 Years	Included in Report
Laboratory Data	Laboratory Contractor	Electronic	At Laboratory Electronic for 25 Years	See Lab Archive plan
Weekly Update	Environmental Contractor	Electronic	At Contractors Office Electronic copy for 5 years	Included in Report
Monitoring Report	Environmental Contractor	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy
Correspondence	Environmental Contractor/ SCDHEC/ Subcontractors	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy
Invoices	Environmental Contractor	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy
Manifests	Environmental Contractor	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy
Figures	Environmental Contractor	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy
Surveys	Environmental Contractor/ Comprehensive Survey Subcontractor	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy
Disposal Manifests	Environmental Contractor/ Disposal Subcontractor	Electronic/ Hard Copy	At Contractors Office Electronic copy for 5 years	Electronic Copy

Table 4A Record Identification, Storage, and Disposal

Section B Measurement/Data Acquisition

B1 Sampling Process/Experimental Design

Event	Mobilization/ Sampling / Demobilization	Laboratory Analysis	Report Creation	# Samples	Type	Events
Groundwater and Surface Water Sampling Event	3-5 days	11 days	7 days	83 / 89*	Semi Annual	10 +2*
* 2 verification events						

Table 5A Sampling Activities
Up to a total of:

0 Soil Samples
1008 Water Samples

may be submitted for laboratory analysis.

Groundwater samples will be analyzed for the following parameters:
BTEX, naphthalene, MTBE via US EPA method 8260B and TBA, TAA and TAME via EPA method SW-846 8260-Oxy

Verification Event(s) Only:
Dissolved Oxygen by method SM4500-O G
Ferrous Iron by Kerr Method
Nitrate by method 9056/9210
Sulfate by method 9038/9056
Methane by method RSK-175

Field blanks and duplicates will be obtained for groundwater samples (1 per every 20 samples collected). Trip blanks will be obtained for every 20 samples and/or per every cooler used during the assessment.

The contractor will follow sampling protocols as outlined in the UST QAPP. These totals are anticipated to be maximums. The actual number of samples collected and submitted for laboratory analysis will be dependent upon the effort required to complete the scope of work.

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***Estimate* the number of samples of each matrix that are expected to be collected:**
Note: numbers provided are intended as a maximum probable under the current plan

Groundwater / Water Supply Well Sampling Event

Sample Type	Amount (apx)	
Soil	0	
Soil Duplicates	0	
Field Blank	0	
Trip Blank	0	
Total Soil Samples	0	
Groundwater from Monitoring Well Sampling (MWS)	70	
Groundwater from verification wells	6	
Water from water wells	0	0
Water from surface features	1	1
Field Blanks	4	4
Trip Blanks	4	4
Duplicates	4	4
Total	83	89
# of events (Standard / Verification)	10	2
TOTAL	1008	

Water Supply Well Sampling Event

Sample Type	Amount (apx)
Soil	0
Soil Duplicates	0
Field Blank	0
Trip Blank	0
Total Soil Samples	0
Groundwater from Monitoring Well Sampling (MWS)	0
Water from water wells	0
Water from surface features	0
Field Blanks	0
Trip Blanks	0
Duplicates	0
Total	0
# of events	0
TOTAL	0

TOTAL	1008

If any of the above are circled please indicate how will it be done and the equipment needed. Sample collection that results in groundwater chemical analysis will include depth to water, depth to product, and groundwater quality indicators. Sampling will include gauging the depth to water and/or depth to free product utilizing an electronic water level indicator or similar device capable of recording the water level or thickness of any free product to an accuracy of 0.01 feet. Measurements of groundwater quality indicators (pH, temperature, D.O. turbidity and specific conductivity) will be recorded during sampling to ensure that groundwater quality is representative of the formation prior to collection of samples. Groundwater samples will be collected from a monitoring well by manual bailing using disposable polyethylene bailers. One sample will be collected from each monitoring well beginning with the wells on the outside perimeter of the contamination plume and working from the wells exhibiting the lowest CoC's to the highest CoC's. Sample duplicates will be collected per every 20 samples. For sample collection the bailer will be slowly lowered into the well until the top of the bailer has penetrated the water table surface, and slowly removed once full. Purge waters will be containerized on site and disposed of properly. The sample containers will then be placed in a cooler and delivered to AA laboratories.

Will Sampling Equipment have to be cleaned and decontaminated or is everything disposable? Decontamination procedures will be the responsibility of the CES Field Technicians; ultimately reviewed and approved by the Field Manager. As outlined in Appendix A of the UST Guidance Document " QAPP Revision 1", all reusable sampling equipment will be stainless steel or constructed of a material that is compatible with the specified analysis and will be cleaned prior to and following the collection of each sample. Disposable bailers, string and gloves will be utilized for sample collection and will be disposed of after use.

If sampling equipment must be cleaned please give a detailed description of how this is done and the disposal of by-products from the cleaning and decontamination. pH, specific conductance, dissolved oxygen, and temperature meters [parameter devices] and water meter probes [sampling equipment] will be decontaminated between monitoring wells. In the field, parameter meter probes will be decontaminated utilizing deionized water. Each meter will be rinsed and then allowed to air dry. Decontamination waste from the cleaning processes will be contained and disposed of with the associated IDW for the site.

Sampling equipment and/or instruments will be decontaminated by washing with a laboratory-grade detergent such as Alconox, rinsed with tap water and then rinsed with analyte free water. If the equipment is not used immediately, it will be covered in plastic and stored in a clean, dry place. If required by UST Project Manager, verification of the effectiveness of the decontamination procedure will be acquired through equipment rinsate samples.

Identify any equipment and support facilities needed. This may include such things as Fed-ex to ship the samples, a Geoprobe, field analysis done by another contractor (who must be certified), and electricity to run sampling equipment.
Access Analytical will be the laboratory and is responsible for shipment of all samples (via Federal Express) to the subcontracted laboratory of AES.

Address the actions to be taken when problems occur in the field, and the person responsible for taking corrective action and how the corrective action will be documented.

Failure	Response	Documentation	Individual Responsible
Equipment Failure (Drilling) {Ie. Drill rig, concrete}	Contact CES project manager. Use alternative equipment if available. Initiate field repairs if possible	Identify failure. Log date, time and equipment.	Field Manager William C. Ewing 803-708-0079
Equipment Failure (sampling) {ie. Parameter meters, pump failure, calibration error}	Contact CES project manager. Use alternative equipment if available. Initiate field repairs if possible.	Identify failure. Log date, time and equipment.	Field Manager William C. Ewing 803-708-0079
Loss or delay of lab samples	Resample	Notice by Access of lost or delayed samples	Access Analytical Ashley Amick 803-781-4243
Drilling Refusal (Rock)	Contact CES project manager. Contact SCDHEC project manager	Log location, time and depth.	Field Manager William C. Ewing 803-708-0079
Drilling Issue (utility line impact etc.)	Contact CES project Manager, Contact Palmetto Utilities Protection Service.	Log location, time and depth.	Field Manager William C. Ewing 803-708-0079
Passive Diffusion Bag deployment / sampling failure	Redeploy. Use alternate method if applicable.	Log location, time and equipment.	Field Manager William C. Ewing 803-708-0079
Snap collector deployment failure.	Redeploy. Use alternate method if applicable.	Log location, time and equipment.	Field Manager William C. Ewing 803-708-0079
Lost samples in the lab	Resample	Email from lab to CES project manager and QA/ project verifier	Access Analytical Ashley Amick 803-781-4243
Sample failure (hold time limit exceeded/temperature limit exceeded	Contact CES project manager	Email from lab to CES project manager and QA/ project verifier	Access Analytical Ashley Amick 803-781-4243

Table 6A Field Corrective Action

B3 Sample Handling and Custody

1. ***How will the samples get from the Site to the Lab to ensure holding requirements are met?*** Samples will be delivered to Access Analytical by CES personnel within 24-72 hours of sample collection. Access Analytical will then ship the samples via Federal Express to AES. Temperature and condition of the samples will be verified upon arrival at both Access Analytical and AES.

2. ***How will the contactors cool the samples and keep the samples cool?*** Sample containers will be maintained in a refrigerator or cooler filled with ice until they are shipped. Appropriate shipping containers for samples include insulated polypropylene or aluminum-clad coolers. The coolers should contain ice in a sealed container or other cooling source to maintain a temperature of 6°C in the container and to prevent degradation of the samples

3. ***How will the lab determine the temperature of the samples upon receipt? Will they be using a temperature blank?*** Project laboratories will use a certified thermometer to determine at-receipt sample temperatures. The temperature will be recorded on the chain-of-custody, temperature blanks will be used.

4. ***Where will the samples be stored in the Lab once they are received?*** Samples to be shipped for analysis will be handled and packaged in a manner that maintains a complete chain-of-custody record and prevents damage during shipment. All samples will be transported to the laboratory directly or by a commercial carrier. When using a commercial carrier, a custody seal will be used to preserve the integrity of the sample from the time it is collected until the container is opened in the laboratory. Samples received at project laboratories will be kept in secure refrigerators.

5. ***Describe the chain of custody procedure and attach a copy of each chain of custody that will be used. If a Chain of Custody SOP exists from the Lab and the Contractor is willing to adhere to it, then this may be attached.*** A chain-of-custody record supplied by the contracted laboratory will be used to document and track possession of the samples. The chain-of-custody record will be sent with each sample shipment from the field to the laboratory and will serve as a record for the receipt of samples by the laboratory. Copies of the chain-of custodies are included as Appendix E.

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B4 Analytical Methods

1. *Identify the SOPs which will be used to analyze the samples, the method which the SOP references and the equipment or instrumentation that is needed:*

Parameter	SOP ID*	Method Referenced	Equipment	Comments
pH	Section 2.10	SM 4500 H+B	HACH SenseION 156 HANNA HI	Refer section 2.10 CES SOP
Specific Conductance	Section 2.10	SM2510B	HACH SenseION 156 HANNA HI	Refer section 2.10 CES SOP
Temperature	Section 2.10	SM2550B	HACH SenseION 156 HANNA HI	Refer section 2.10 CES SOP
Dissolved Oxygen	Section 2.10	SM4500-O-G	HACH SenseION 156 HANNA HI	Refer section 2.10 CES SOP
Turbidity	Section 2.10	Method 8237	HACH DR-820	Refer section 2.10 CES SOP
BTEX, naphthalene, and MTBE	OA 11010	EPA Method 8260B	AES QAP p.195	AES SOP OA 11010 APDX III CES SOP
TAA, TAME and TBA	OA 11010	EPA Method 8260-Oxy	AES QAP p.195	AES SOP OA 11010 APDX III CES SOP
Nitrate	OA 11007	9056/9210	AES QAP p.195	AES SOP OA 11007 APDX III CES SOP
Sulfate	OA 11007	9038/9056	AES QAP p.195	AES SOP OA 11007 APDX III CES SOP
Ferrous Iron	OA 11007	SM3500-Fe	AES QAP p.195	AES SOP OA 11007 APDX III CES SOP
Methane	OA 11007	Kerr Method	AES QAP p.195	AES SOP OA 11007 APDX III CES SOP

Table 7A Analytical SOPs and Referenced Methods

- **This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.**

Abbreviation	Lab Identification of this SOP	Full Name of the SOP
Section 2.10	CES SOP Section 2.10	State Lead Tier II Assessment Program: Standard Operating Procedure & Quality Assurance/Quality Control
OA 11010	AES SOP OA-11010	Analytical Environmental Services Standard Operating Procedure for Volatile Organic Compound by EPA SW-846 Method 8260B/5030/5035
OA 13002	AES SOP OA-13002	Analytical Environmental Services Standard Operating Procedure Determination of Metals in Water, Soils and Wastes by ICPBY EPA SW-846 Method 6010C and Prep Methods 3010A/3050B/SM3030C
OA 11007	AES SOP OA-11007	Analytical Environmental Services Standard Operating Procedure for 1,2-Dibromoethane (EDB) and 1,2-Bibromo-3-chloropropane (DBCP) by EPA SW-846 Method 8011
AES QAP Section 9.0	AES QAP Rev 15	Access Analytical, Inc. & Analytical Environmental Services (AES) Comprehensive Quality Assurance Plan (Revision 15): Section 9.0 Calibration Procedures and Frequency

Table 8A: SOP Abbreviation Key

2. Identify procedures to follow when failures occur, identify the individual responsible for corrective action and appropriate documentation:

Failure	Response	Documented Where?	Individual Responsible
Equipment Failure (drilling equipment) i.e. drill rig, concrete saw, etc.	Contact CES Project Manager	Record problem, use alternate method / equipment if available / applicable or reschedule field activities after equipment is repaired	CES Project Manager Daniel J. Fisher 540-798-5068
Equipment Failure (sampling equipment) i.e. passive diffusion bags, parameter meters	Contact CES Project Manager	Record problem, use alternate method if applicable/ available or reschedule field activities after equipment is repaired.	CES Project Manager Daniel J. Fisher 540-798-5068
QC Failure	Contact CES Project Manager	Notification/Documentation via email, noted in laboratory report	CES Project Manager Daniel J. Fisher 540-798-5068
Sample accident in transit	Contact CES Project Manager	Notification/Documentation via email, noted in laboratory report	Laboratory Director (AA) Ashley Amick 803-781-4243
Sample accident in lab	Contact CES Project Manager	Notification/Documentation via email, noted in laboratory report	Laboratory Director (AA) Ashley Amick 803-781-4243
Insufficient sample for analysis or repeat analysis	Contact CES Project Manager	Notification/Documentation via email, noted in laboratory report	Laboratory Director (AA) Ashley Amick 803-781-4243
Analytical Errors	Contact CES Project Manager	Notification/Documentation via email, noted in laboratory report.	CES Project Manager Daniel J. Fisher 540-798-5068
CoC or Sample Receiving Issues	Contact CES Project Manager	Notification/Documentation via email, noted in laboratory report.	CES Project Manager Daniel J. Fisher 540-798-5068
On-Time delivery	Contact CES Project Manager	Notification/Documentation via email, noted in laboratory report.	CES Project Manager Daniel J. Fisher 540-798-5068

Table 9A Corrective Action Procedures

3. **Identify sample disposal procedures.**

Analysis	Matrix	Schedule for disposal	Method for disposal	Comments
Turbidity	Groundwater	As Generated	If applicable, a portable granulated carbon filter will be used. 55 gallon drum on site	A&D Environmental Services
DO	Groundwater	As Generated	If applicable, a portable granulated carbon filter will be used. 55 gallon drum on site	A&D Environmental Services
Specific Conductance	Groundwater	As Generated	If applicable, a portable granulated carbon filter will be used. 55 gallon drum on site	A&D Environmental Services
pH	Groundwater	As Generated	If applicable, a portable granulated carbon filter will be used. 55 gallon drum on site	A&D Environmental Services
Lab	All	As Generated	See AES SOP WM 17001	Analytical Environmental Services Inc.

Table 10A Sample Disposal

4. **Provide SOPs for the Kerr Method or the Ferrous Iron Method if these are parameters for this study. This can be attached or written here. If attached please note that it is an attachment and where it is located (if applicable).** Refer to Appendix D.

B5 Quality Control Requirements:

All QC will follow the requirements laid out in Section B5 of the UST Programmatic QAPP.

B6 Field Instrument and Equipment Testing, Inspection and Maintenance

1. **Identify all field and laboratory equipment needing periodic maintenance, the schedule for this, and the person responsible. Not the availability and location of spare parts.**

Instrument	Serial Number	Type of Maintenance	Frequency	Parts needed/Location	Person responsible
HACH SenselON 156 Parameter Meter (ph, Con, temp, DO)	8228266	Check batteries, check buffer solutions, calibration, factory check, clean/change probe(s)	Monthly, change out daily as needed	Columbia Office, Supply Cabinet	CES Project Manager Daniel J. Fisher 540-798-5068
HACH Colorimeter (turbidity)	010420015672	Check batteries, check buffer solutions, calibration, factory check,	Monthly, change out daily as needed	Columbia Office, Supply Cabinet	CES Project Manager Daniel J. Fisher 540-798-5068
HANNA HI 991001 Parameter Meter (pH, Temp)	182298	Check batteries, check buffer solutions, calibration, factory check, clean/change probe(s)	Monthly, change out daily as needed	Columbia Office, Supply Cabinet	CES Project Manager Daniel J. Fisher 540-798-5068
HANNA Dissolved Oxygen Meter	9142	Check batteries, check buffer solutions, calibration, factory check, clean/change probe(s)	Monthly, change out daily as needed	Columbia Office, Supply Cabinet	CES Project Manager Daniel J. Fisher 540-798-5068
KECK Water Level Indicator	2185	Check batteries, clean probe	Weekly	Columbia Office, Supply Cabinet	CES Project Manager Daniel J. Fisher 540-798-5068
KECK Oil Interface Probe	2011	Check batteries, clean probe	Weekly	Columbia Office, Supply Cabinet	CES Project Manager Daniel J. Fisher 540-798-5068
Solonist Water Level Indicator	004602	Check batteries, clean probe	Weekly	Columbia Office, Supply Cabinet	CES Project Manager Daniel J. Fisher 540-798-5068
Laboratory Equipment	P. 195 AES QAP Apdx III Equipment List	p.122 AES QAP Section 10.0	AES QAP Section 10.0	AES QAP Section 10.0	Laboratory Personnel

Table 11A Instrument and Equipment Maintenance

2. Identify the testing criteria for each lab or field instrument that is used to ensure the equipment is performing properly. Indicate how deficiencies, if found, will be resolved, re-inspections performed, and effectiveness of corrective action determined and documented. Give the person responsible for this:

Instrument/Equipment & Serial Number	Type of Inspection	Requirement	Individual Responsible	Resolution of Deficiencies
HACH SenselON 156 Parameter Meter (ph, Con, temp, DO)	Calibration	See CES SOP Section 2.10	Daniel J. Fisher CES Project Manager 540-798-5068	Use another meter
HACH Colorimeter (turbidity)	Calibration	See CES SOP Section 2.10	Daniel J. Fisher CES Project Manager 540-798-5068	Use another meter
HANNA HI 991001 Parameter Meter (pH, Temp)	Calibration	See CES SOP Section 2.10	Daniel J. Fisher CES Project Manager 540-798-5068	Use another meter
HANNA Dissolved Oxygen Meter	Calibration	See CES SOP Section 2.10	Daniel J. Fisher CES Project Manager 540-798-5068	Use another meter
KECK Water Level Indicator	Preparatory Check	See CES SOP Section 2.10	Daniel J. Fisher CES Project Manager 540-798-5068	Use another meter
KECK Oil Interface Probe	Preparatory Check	See CES SOP Section 2.10	Daniel J. Fisher CES Project Manager 540-798-5068	Use another meter
Solonist Water Level Indicator	Preparatory Check	See CES SOP Section 2.10	Daniel J. Fisher CES Project Manager 540-798-5068	Use another meter
Laboratory Equipment	p.116 AES QAP Section 9.0	p.116 AES QAP Section 9.0	Laboratory Personnel	AES QAP Section 9.0

Table 12A Instrument and Equipment Inspection

CRAWFORD ENVIRONMENTAL SERVICES

B7 Instrument Calibration and Frequency

1. **Identify equipment, tools, and instruments for field or lab work that should be calibrated and the frequency.**
2. **Describe how the calibrations should be performed and documented, indicating test criteria and standards or certified equipment.**
3. **Identify how deficiencies should be resolved and documented. Identify the person responsible for corrective action.**

Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA	SOP Reference*
HACH SenselON 156 Parameter Meter (ph, Con, temp, DO)	See CES SOP Section 2.10	See CES SOP Section 2.10, pg 11, Daily Before Use	See CES SOP Section 2.10	See CES SOP Section 2.10	Daniel J. Fisher CES Project Manager 540-798-5068	See CES SOP Section 2.10
HACH Colorimeter (turbidity)	See CES SOP Section 2.10	See CES SOP Section 2.10, pg 11, Daily Before Use	See CES SOP Section 2.10	See CES SOP Section 2.10	Daniel J. Fisher CES Project Manager 540-798-5068	See CES SOP Section 2.10
HANNA HI 991001 Parameter Meter (pH, Temp)	See CES SOP Section 2.10	See CES SOP Section 2.10, pg 11, Daily Before Use	See CES SOP Section 2.10	See CES SOP Section 2.10	Daniel J. Fisher CES Project Manager 540-798-5068	See CES SOP Section 2.10
HANNA Dissolved Oxygen Meter	See CES SOP Section 2.10	See CES SOP Section 2.10, pg 11, Daily Before Use	See CES SOP Section 2.10	See CES SOP Section 2.10	Daniel J. Fisher CES Project Manager 540-798-5068	See CES SOP Section 2.10
KECK Water Level Indicator	See CES SOP Section 2.10	See CES SOP Section 2.10, pg 11, Daily Before Use	See CES SOP Section 2.10	See CES SOP Section 2.10	Daniel J. Fisher CES Project Manager 540-798-5068	See CES SOP Section 2.10
KECK Oil Interface Probe	See CES SOP Section 2.10	See CES SOP Section 2.10, pg 11, Daily Before Use	See CES SOP Section 2.10	See CES SOP Section 2.10	Daniel J. Fisher CES Project Manager 540-798-5068	See CES SOP Section 2.10
Solonist Water Level Indicator	See CES SOP Section 2.10	See CES SOP Section 2.10, pg 11, Daily Before Use	See CES SOP Section 2.10	See CES SOP Section 2.10	Daniel J. Fisher CES Project Manager 540-798-5068	See CES SOP Section 2.10
Laboratory Equipment	See-AES QAP Section 9.0	See-AES QAP Section 9.0	See-AES QAP Section 9.0	See-AES QAP Section 9.0	Laboratory Personnel	See-AES QAP Section 9.0

Table 13A Instrument Calibration Criteria and Corrective Action

*** This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.**

B8 Inspection/Acceptance Requirements for Supplies and Consumables

1. Identify critical supplies and consumables for field and laboratory, noting supply source, acceptance criteria, and procedures for tracking, storing and retrieving these materials.
2. Identify the individual(s) responsible for this.

Item	Vendor	Acceptance criteria	Handling/Storage Conditions	Person responsible for inspection and tracking.
pH Buffer Solution	Fisher	Within expiration date	Cool. Dry cabinet	Daniel J. Fisher CES Project Manager 540-798-5068
Specific Conductivity Standard	Fisher	Within expiration date	Cool, dry cabinet	Daniel J. Fisher CES Project Manager 540-798-5068
Nitrile Gloves	Clearwater	Sealed	Cool, dry room	Daniel J. Fisher CES Project Manager 540-798-5068
Batteries	Any	Sealed	Cool, dry cabinet	William C. Ewing Field Manager 803-708-0079
Bailers	Clearwater	Sealed (individually)	Cool, dry room	William C. Ewing Field Manager 803-708-0079
Bottles	Access Analytical	Sealed	Cool, dry room	William C. Ewing Field Manager 803-708-0079
Nylon String	Clearwater	Sealed	Cool,dry room	William C. Ewing Field Manager 803-708-0079
Coolers	Access Analytical	Sealed	Cool,dry room	William C. Ewing Field Manager 803-708-0079
Laboratory Equipment	AES	AES QAP Section 11.0	AES QAP Section 11.0	Laboratory Personnel (AES) & (AA)

Table 14A List of Consumables and Acceptance Criteria

B9 Data Acquisition Requirements (Non-Direct Measurements)

1. Identify data sources, for example, computer databases or literature files, or models that should be accessed or used.
2. Describe the intended use of this information and the rationale for their selection, i.e., its relevance to project.
3. Indicate the acceptance criteria for these data sources and/or models.

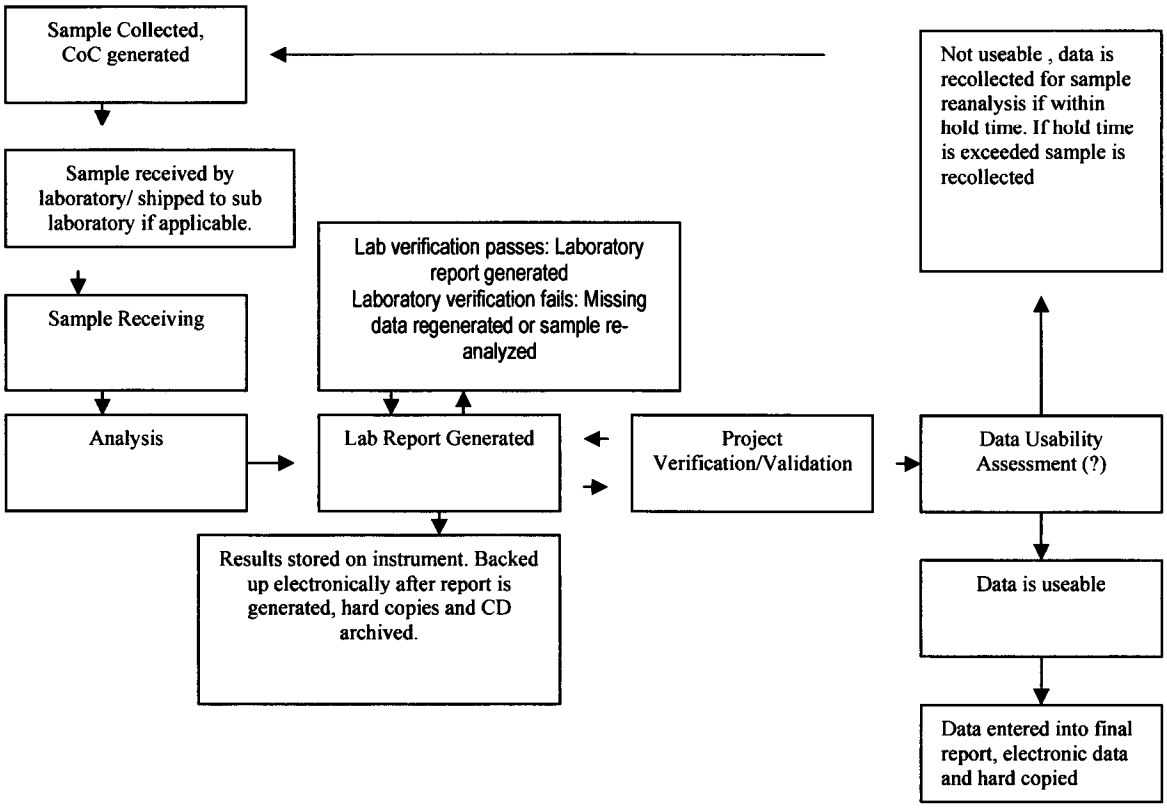
Data Source	Used for	Justification for use in this project	Comments
Previous Assessment and Corrective Action documentation	Remedial efforts performed to date; historic groundwater elevations, historic chemical concentrations, historic well construction logs, historic surveys, historic diagrams, historic topography, historic boring data.	Effectiveness of remedial strategy implemented at the site, evaluate corrective action data collected; determining well screen intervals, total depths, construction details, property access, and historic summary tables.	

Table 15A Non-Direct Measurements

4. Identify key resources/support facilities needed. Not applicable.

B10 Data Management

Describe the data management scheme from field to final use and storage.



1. **How does the lab and field staff ensure that no unauthorized changes are made to the chain of custody, sampling notebooks, laboratory notebooks and computer records?** Field data is kept in a dedicated notebook with no pages removed. All data (reports from the lab, field notes, drafts and final reports) are saved on the internal company server. Original field data hard copies are filed into relevant project folders and archived in filing cabinets. Report data, to include tables and figures, are verified from the original source by the CES Project Manager before the report is signed.

2. **How does the lab ensure that there are no errors in samples records including times when sample information is compiled, data calculated and/or transmitted.** Lab internal QA/QC checks and check sheets for all received coolers will determine if laboratory data is credible, or if the groundwater samples are suspect and new samples must be collected and reanalyzed. Laboratory supervisor will check all data before it leaves the laboratory. Laboratory data will be sent electronically to the environmental contractors of the USA for storage on their server.

3. **How will the data be archived once the report is produced? How can it be retrieved? (This applies to both electronic and hard copies).** Hard copies will be maintained at the West Columbia office for five years. The electronic copies will be maintained for 25 years at the West Columbia office.

Section C Assessment and Oversight

C1 Assessment and Response Actions

1. **Field Oversight:** The Field Manager is responsible for ensuring SOPs to include equipment decontamination and calibration are properly conducted by the field staff. The Field Manager will be present and monitor the field staff every day that field activities occur. The Field Manager also is responsible for ensuring that field personnel adhere to the QAPP. If problems occur, the Field Manager will immediately contact the CES Project Manager to determine the appropriate corrective action. If the situation cannot be resolved on site, another visit will be scheduled to resample the wells. The Field Manager can stop work at any time. The Project Manager can decide if the sampling party will return to the office without completing sampling of all the monitoring wells. The Field Manager's observations will be submitted to the Project Manager on a daily basis.

2. **Commercial Lab Offsite Technical Assessment:** The supervisors for each section will review the procedures for another section of the laboratory on a monthly basis to check quality procedures. The Project QA Manager will conduct specific assessments for the methods addressed by this QAPP. Anyone may suspend work if a situation arises, but only the supervisor can stop work. The Laboratory QA Manager will report all observations to the Laboratory Director. SCDHEC has the right to inspect work at any time. This will be documented and kept as part of the project records.

3. **Project Assessment:** Assessment of project activities will be performed by the CES Project Manager. Field assessments will ensure that proper field methods are followed. At the end of each day of field activities, the Subcontractor Project Manager will review the work completed during that day with the Subcontractor Field Manager. If methods were not adequately followed, affected items will be corrected. If corrective action is implemented, the Subcontractor Project Manager or Project QA/QC Manager will verify that the corrective action was adequate and was properly documented.

C2 Reports to Management

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).

Section D Data Validation and Usability

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).

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APPENDIX B:

Chain of Custody Template

Access Analytical - Chain of Custody Record

LAB USE ONLY

Sales Order # _____ **PO #** _____ **Access Quote #** _____ **Project Work Order #** _____ **Laboratory ID:** _____

Company Name: | Preservative: (*see codes)

Report To: | Container Type: (*see codes)

Address:

City: State: Zip:

Phone: Fax:

Email:

Project ID:

Sampled By:

↓ REQUESTED LAB ANALYSIS: ↓

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	# of containers collected per analysis	# of containers collected per analysis	# of containers collected per analysis	# of containers collected per analysis	# of containers collected per analysis	# of containers collected per analysis	# of containers collected per analysis	# of containers collected per analysis	# of containers collected per analysis	# of containers collected per analysis	# of containers collected per analysis	NOTES / COMMENTS (if sample is a composite please use space below to note start/finish times & dates)

ACCESS ANALYTICAL, INC.

7478 Carlisle Street
Irmo, SC 29063

Phone: (803) 781-4243
Fax: 781-4303

www.axs-inc.com

***Preservative Codes** *(place corresponding # in block above analysis field)*: **0** = None, **1** = HCL, **2** = HNO_3, **3** = H_2SO_4, **4** = NaOH, **5** = $Na_2S_2O_3$, **6** = Method 5035 set w/ $NaHSO_4$ & CH_3OH, **7** = NaOH/ZnO_2C, **8** = H_3PO_4

***Matrix Codes** *(place corresponding code in matrix column)*: **GW** = ground water, **WW** = waste water, **DW** = drinking water, **S** = soil, **SL** = sludge, **A** = air, **IW** = industrial waste, **WO** = waste oil, **OT** = other *(specify in comments section)*

***Program Area Codes:** **CWA** = Clean Water Act (for wastewaters), **SDWA** = Safe Drinking Water Act (for drinking waters), **SHW** = Solid and Hazardous Wastes (for soils, ground waters and waste samples)

***Container Type:** **G** = Glass, **P** = Plastic

Turnaround Time:

___ Standard
___ RUSH*
*Date Required:_____
(For rush work, results emailed/faxed by end of business day on date required)

Project Location:
___SC
___NC
___Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
				___Y ___N	_____(°C)	_____(N/A)
				___Y ___N	_____(°C)	_____(N/A)
				___Y ___N	_____(°C)	_____(N/A)
				___Y ___N	_____(°C)	_____(N/A)

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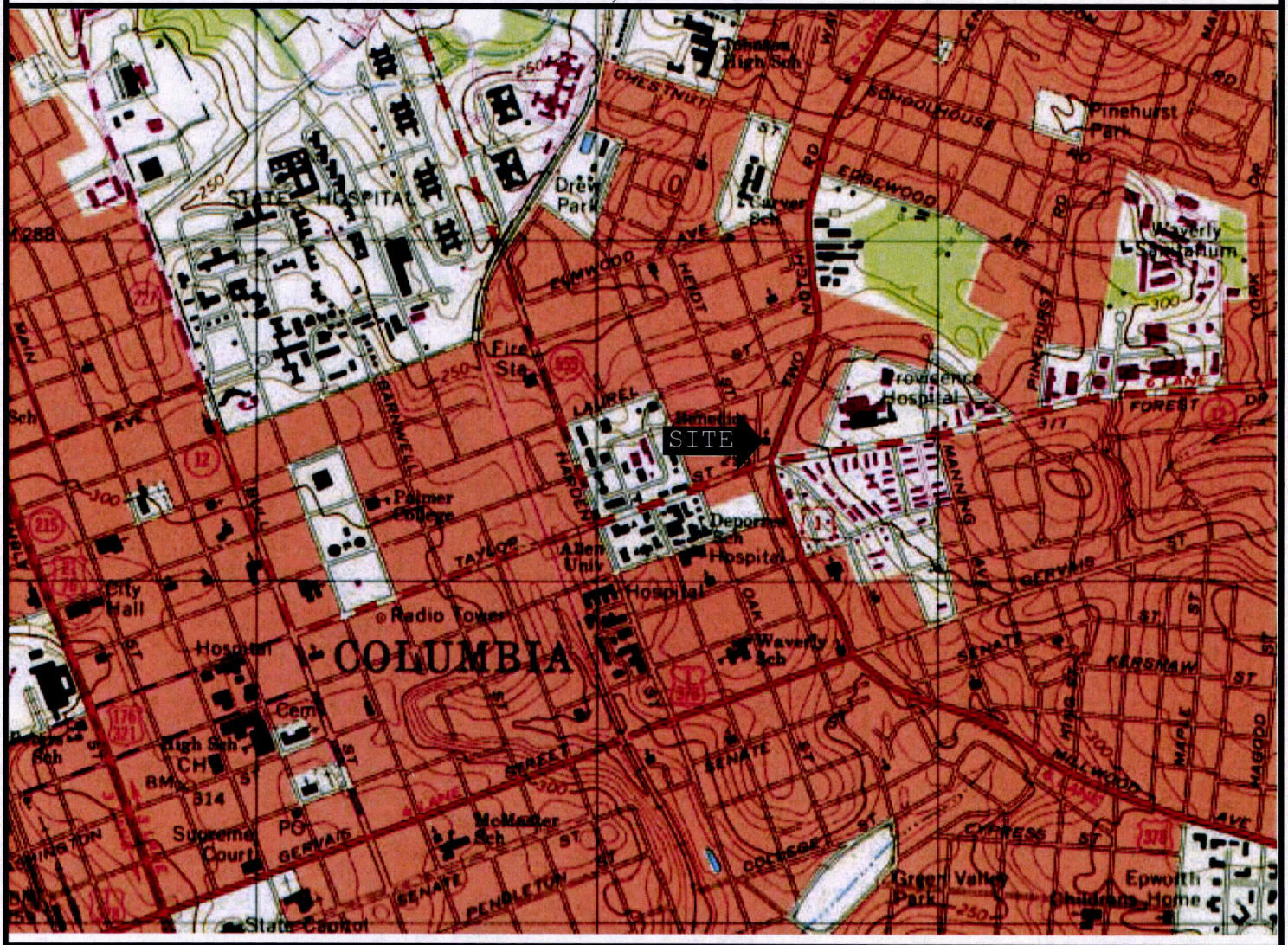
APPENDIX C:

Site Figures

FIGURE 1

Site Location Map
Handy Pantry #65 / University Mart / Clouds Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina



CRAWFORD ENVIRONMENTAL SERVICES

15 Church Avenue, SW
Roanoke Virginia, 24011

540-343-6256 (office) 540-343-6259 (fax)

NORTH COLUMBIA, SOUTH CAROLINA

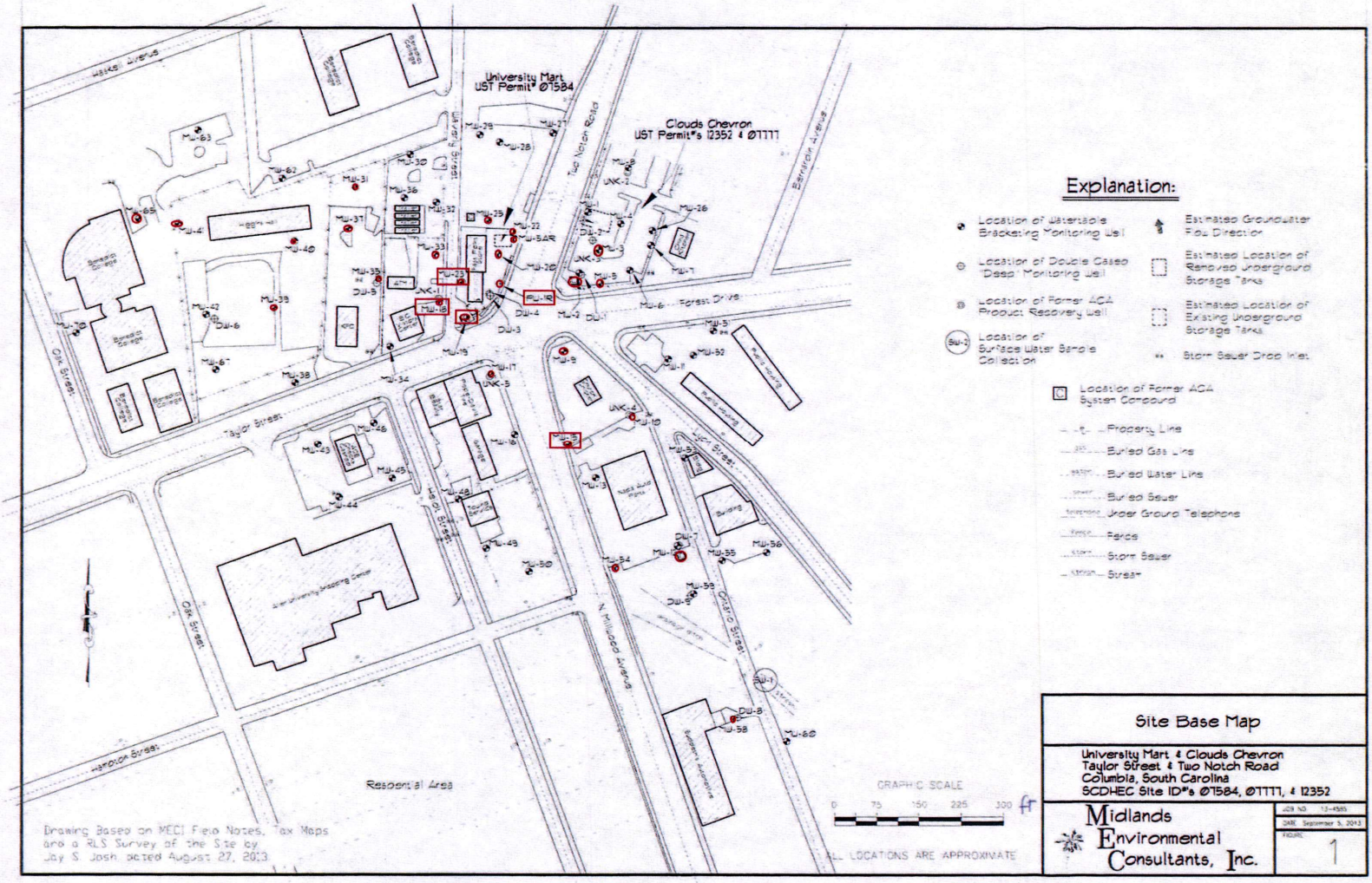
Source: U.S.G.S. Topographic Map of the Columbia North Quadrangle, Virginia, 7.5 Minute Series (1977, revised 1988)
Scale: 1:24,000 Contour Interval: 20 Feet
Vertical Datum: National Geodetic Vertical Datum 1929
Horizontal Datum: North American Datum1927

Project: Corrective Action Plan

Client: SCDHEC

CES Job #: 7.0547

Latitude:
034"00'42.72"N
Longitude:
081"01'00.13"W



Site Base Map

University Mart & Clouds Chevron
Taylor Street & Two Notch Road
Columbia, South Carolina
SCDHEC Site ID#'s Ø1584, Ø7777, & 12352

Midlands Environmental Consultants, Inc.

JOB NO. 13-4585
DATE September 5, 2013
FIGURE 1

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APPENDIX D:

Methodology – Ferrous Iron 14 pages

AES, Inc.
3785 Presidential Pkwy
Atlanta, GA 30340

APPROVAL OF ATTACHED DOCUMENT FOR IMPLEMENTATION

NOTE: THIS IS A CONTROLLED ELECTRONIC DOCUMENT

PRINTED COPIES OF THIS DOCUMENT ARE UNCONTROLLED

ORIGINAL SIGNED DOCUMENT RESIDES IN AES QA OFFICE

DOCUMENT TITLE: STANDARD OPERATING PROCEDURES FOR DETERMINING FERROUS IRON (Fe^{+2}) BY STANDARD METHODS 3500Fe B (20th Edition)

DOCUMENT CONTROL NUMBER: Rev. *6*

DOCUMENT DISTRIBUTION NUMBER: GL-08102

ELECTRONIC DOCUMENT LOCATION
AES Portal Server: http://portal/Procedures/Standard Operating Procedures

The attached Document has been reviewed by the individuals listed below. By signature, each of these individuals acknowledges that the document is ready for distribution, in a controlled manner, to all responsible parties for use and/or reference.

By definition, a "Controlled Copy" of a document cannot be changed without review and approval by designated members of management. At no time may a "controlled copy" be written on or otherwise defaced with notes or other unauthorized additions.

If an uncontrolled copy of this document is desired, please see the Quality Assurance or Laboratory Manager. They will issue you an uncontrolled copy. DO NOT MAKE THE COPY YOURSELF.

By signature below the following employees of Analytical Environmental Services, Inc. have approved this document for distribution.

Technical Director: Dana B. Tiu Date: 6/28/10

Laboratory Manager: Mehmet Yildirim Date: 6/28/10

Quality Assurance Manager: Date: 6/28/10

Department Supervisor: Date: 6/28/10

STANDARD OPERATING PROCEDURES FOR DETERMINING FERROUS IRON (Fe^{+2}) BY STANDARD METHODS 3500Fe B (20th Edition)

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1.0 SCOPE AND APPLICATION

This procedure is used to determine concentrations of Fe^{+2} ions in water and ground water. Ferrous (dissolved) Iron is soluble in water. Dissolved levels of iron in waters may stain clothing and porcelain. In this regard, dissolved iron is more of a nuisance than a health hazard.

2.0 SUMMARY OF METHOD

2.1 Iron in the reduced state is treated with 1,10-Phenanthroline at a pH of 3.2 to 3.3. Three molecules of 1,10-Phenanthroline chelate one molecule of Fe^{+2} to form an orange-red complex that is spectrophotmetrically measured at 510 nm. The amount of ferrous iron is calculated from a standard curve.

2.2. If Ferric Iron is desired, it can be calculated as the difference of the Total Iron result (analyzed by ICP) minus the result for the Ferrous Iron.

3.0 INTERFERENCES

3.1 Strong oxidizing agents, cyanide, nitrite, phosphates, and common metals interfere with the test procedure. In addition, silver precipitates phenanthroline and causes low results.

3.2 The initial boiling with acid converts polyphosphates to orthophosphate and removes cyanides and nitrite that would otherwise interfere. Boiling the sample with hydroxylamine reduces soluble ferric iron to ferrous iron. Boiling should not be performed when measuring only ferrous iron. Adding excess hydroxylamine eliminates error caused by high concentrations of strong oxidizing reagents. In the presence of interfering metal ions, use a larger excess of phenanthroline to replace that complexed by the interfering metals.

3.3 If noticeable amounts of color or organic matter are present, it may be necessary to evaporate the sample, gently ash the residue and redissolve in acid. The ashing may be carried out in silica, porcelain, or platinum crucibles that have been boiled for several hours in 1+1 HCl.

4.0 SAMPLE COLLECTION, PRESERVATION, AND HOLDING TIMES

4.1 Samples should be analyzed the day they are received in the laboratory. They should not be acidified as this will solublize ferric iron. Ferrous iron has no holding time.

5.0 REAGENTS AND STANDARDS

5.1 1,10-Phenanthroline. 0.1% purchase commercially.

5.2 200 mg/L Fe^{+2} working standard:

5.2.1 Slowly add 2mL of concentrated Sulfuric Acid to approximately 20mL of DI water in a 100mL volumetric flask..

5.2.2 Dissolve 0.1404g of Ferrous Ammonium Sulfate, Hexahydrate $Fe(NH_4)_2(SO_4)_2 \bullet 6H_2O$ in the acidified water (5.2.1).

5.2.3 When the compound is dissolved, add 5 drops of 5% (5g/L) Potassium Permanganate to the dissolved Ferrous Ammonium Sulfate solution for preservation.

5.2.4 Dilute to 100 ml. The final concentration of this solution is 200 mg/L ferrous iron. This solution expires in 6 months.

5.3 10mL of 200mg/L to 100mL distilled water gives 20mg/L ferrous iron solution. This solution expires in 6 months.

5.4 Ammonium acetate buffer solution. Dissolve 250 grams $NH_4C_2H_3O_2$ in 150 ml distilled water. Add 700 ml concentrated acetic acid.

5.5 Ferrous Iron Reagent (HACH).

5.6 Prepare a calibration curve from the following table.

Table 5-1
Calibration Standards for Ferrous Iron

ml Working Standard (5.3)	**Final Volume (ml)**	**Fe^{+2} Conc. (mg/l)**
0.0	100	0
0.5	100	0.10
1.0	100	0.20
2.5	100	0.50
5.0	100	1.00
10	100	2.00

5.7 Vendor Information. Table 5-2 lists the chemicals used in the test method and where they can be purchased.

Table 5-2
Ferrous Iron Standards and Chemicals

	Manufacturer	**Purity**	**Catalog Number**
1,10-phenathroline	VWR	Pure	VW3443-2
Hydrochloric Acid	EM Science	Concentrated	HX0603-3
Ammonium Acetate	Alfa Aesar	0.1 Percent	B07L02
Ferrous Ammonium Sulfate	EM Science	Pure	FX0205-1

Sulfuric Acid	EM Science	Concentrated	1244-5

6.0 APPARATUS AND MATERIALS

6.1 Spectrophotometer capable of reading 510 nm.

6.2 125-ml Erlenmeyer flasks

6.3 100-ml volumetric flasks

6.4 1,5,10-ml pipettes

6.5 25-ml volumetric flasks

7.0 PROCEDURE

7.1 Sample backlog report.

7.1.1 Each day the section supervisor reviews a backlog report. The log lists samples that are included in batches that have not been completed and closed in LIMS. IF A SAMPLE IS ON THIS LIST AND IT HAS BEEN ANALYZED, CHECK LIMS TO VERIFY THAT THE BATCH HAS BEEN CLOSED. Samples are listed on the work log in the order of due date.

7.1.1.1 Any samples that are received in a "rush" status will have a chain of custody delivered to the section supervisor by the project manager.

7.1.1.2 Prepare a written analysis log using the proper logbook that is kept in the supervisor's office. The following entries must be made in the log.

7.1.1.2.1 Date and time that the batch is opened.

7.1.1.2.2 All sample(s) included in the batch.

7.1.1.2.3 Volume of samples analyzed.

7.1.1.2.4 Analysis procedure employed.

7.1.1.2.5 The initials of the analysts.

7.1.1.2.6 Laboratory number of all reagents used including spiking standard.

7.1.1.2.7 Volume of all reagents used including spiking standard.

7.1.1.2.8 Final volume of all concentrates.

7.1.1.2.9 Date and time the batch is closed.

7.1.1.2.10 Initials of all spike witnesses as appropriate.

7.2 Table 7-1 indicates the number and type of samples that comprise an analytical batch. Note: NELAC requirements specify that the maximum number of client samples in an analytical batch can not exceed 20. Further, a batch can not be left "open" for a period that exceeds 24 hours.

Table 7-1
Samples required in an Analytical Batch

Method Blank (MB)/CCB
LCS/CCV
Client Samples
MS and MSD
LCS 2/CCV 2

Note that an opening and closing CCV/LCS must be included in the analytical "run". The concentrations of the two CCVs/LCSs must not be the same. It is suggested that the analyst alternate between a mid-range concentration and a low-range concentration each batch. If the % Recovery of the standard is between 85% and 115% the curve is considered valid and analysis can continue. If the % recovery is outside the limits a new curve must be analyzed

7.3 Turn on spectrophotometer, set wavelength to 510 nm and allow it to warm up for at least 15 minutes.

7.4 Fill out Ferrous Iron analysis Log Book page with all required information including reagent information.

7.5 Check and record pH of samples. Adjust pH with 0.5N HCL if needed. For MB and LCS acidify DI water.

7.6 Pour two 25 ml aliquots of each pH adjusted sample into two separate centrifuge tubes. One tube is for background reading the other for color development. For the sample to be used for MS and DUP, prepare two extra tubes. Use the same background tube for the sample, MS and DUP.

7.7 Prepare MB by adding one 25 ml aliquot of pH adjusted DI water to the centrifuge tube.

7.8 Prepare LCS 1 (0.5mg/L) by adding 2.5 ml of 20mg/L Ferrous Iron standard to a 100mL volumetric flask and dilute to 100 ml with acidified DI water. Record Standard ID on Log Sheet.

7.9 Prepare LCS 2 (0.8mg/L) by adding 8 ml of 10mg/L Ferrous Iron standard to a 100mL volumetric flask and dilute to 100ml with acidified DI water. Record Standard ID on Log Sheet.

7.10 Prepare MS (0.5mg/L) by CAREFULLY adding 2.5 ml of 20mg/L Ferrous Iron stock solution to the 100mL volume flask containing 100ml of the sample to be spiked.

7.11 Add 5 ml $NH_4C_2H_3O_2$ buffer solution to each tube and mix. Record reagent ID on Log Sheet.

7.12 Add 1 pack of Ferrous Iron reagent (HACH) and mix.

7.13 After 5 minutes and before 10 minutes, begin reading the absorbance of each background tube and the color developed tube at **510mn** using the square, **2.5 cm cell**. Background readings for MB and LCS/LCSD are not necessary. Record each absorbance reading on the Log Sheet.

7.14 Calculate Corrected Absorbance (Color Developed Absorbance – Background Absorbance) and record on Log Sheet.

7.15 Calculate Final Ferrous Iron value as follows:

Ferrous Iron, mg/L = [(Corrected Abs. x Slope) + Intercept] x Dilution Factor.

7.15 Record Final Ferrous Iron value on the Log Sheet.

7.16 If any Ferrous Iron values are greater than the highest standard on the Calibration Curve, sample must be diluted and reanalyzed, **INCLUDING DILUTED BACKGROUND READING**.

Table 7-2
Checklist for Ferrous Iron Analysis by SM3500

____ Turn on spectrophotometer, set wavelength to 510 nm and allow it to warm up for at least 15 minutes.

____ Fill out Ferrous Iron analysis Log Book page with all required information including reagent information.

____ Check and record pH of samples. Adjust pH with 0.5N HCL if needed. For MB and LCS acidify DI water.

____ Pour two 25 ml aliquots of each pH adjusted sample into two separate centrifuge tubes. One tube is for background reading the other for color development. For the sample to be used for MS and DUP, prepare two extra tubes. Use the same background tube for the sample, MS and DUP.

____ Prepare MB by adding one 25 ml aliquot of pH adjusted DI water to the centrifuge tube.

____ Prepare LCS 1 (0.5mg/L) by adding 2.5 ml of 20mg/L Ferrous Iron standard to a 100ml volumetric flask and dilute to 100 ml with acidified DI water. Record Standard ID on Log Sheet.

____ Prepare LCS 2 (0.8mg/L) by adding 8 ml of 10mg/L Ferrous Iron standard to a 100ml volumetric flask and dilute to 100ml with acidified DI water. Record Standard ID on Log Sheet.

____ Prepare MS (0.5mg/L) by CAREFULLY adding 2.5 ml of 20mg/L Ferrous Iron stock solution to the volumetric flask containing 100ml of the sample to be spiked.

____ Add 5 ml $NH_4C_2H_3O_2$ buffer solution to each tube and mix. Record reagent ID on Log Sheet.

____ Add 1 pack of Ferrous Iron reagent (HACH) and mix.

____ After 5 minutes and before 10 minutes, begin reading the absorbance of each background tube and the color developed tube at **510mn** using the square, **2.5 cm cell**. Background readings for MB and LCS/LCSD are not necessary. Record each absorbance reading on the Log Sheet.

____ Calculate Corrected Abs (Color Dev. Abs – Bkgd. Abs) and record on Log Sheet.

____ Calculate Final Ferrous Iron value as follows:

Ferrous Iron, mg/L = [(Corrected Abs x Slope) + Intercept] x Dilution Factor.

____ Record Final Ferrous Iron value on the Log Sheet.

____ If any Ferrous Iron values are greater than the highest standard on the Calibration Curve, sample must be diluted and reanalyzed, **INCLUDING DILUTED BACKGROUND READING.**

8.0 QUALITY ASSURANCE REQUIREMENTS

8.1 Each person using this procedure is required to comply with the formal quality control program specified by AES. The minimum requirements of this program consist of an initial demonstration of capability, and the periodic analysis of laboratory reagent blanks, fortified blanks, and other laboratory solutions as a continuing check on performance. The laboratory, through the analyst, is required to maintain performance records that define the quality of the data that are generated. Detailed quality assurance procedures can be found in SOP# QA-01000, "Quality Assurance Manual," Section 5. Subsequent sections define portions of the quality control program.

8.1.1 Demonstration of Capability. Each analyst must demonstrate proficiency for each method performed by performing Initial Demonstration of Capability (IDOC) prior to unsupervised analysis of analytical samples and Continuing Demonstration of Capability (CDOC) at least annually. Detailed descriptions of IDOC and CDOC requirements and acceptance limits can be found in Section 5 of SOP#QA-01000, "Quality Assurance Manual".

8.1.2 Calibration of the HACH spectrophotometer. This is accomplished through a 5-point calibration curve. The correlation coefficient must be ≥0.99 for the calibration curve to be acceptable.

8.1.3 Method Detection Limit Study. The method detection limit is calculated by analyzing at least seven replicates prepared in blank water at concentrations 1 to 5 times higher than the estimated detection limit. Quantitation limits are laboratory derived from the MDL study data set. MDL's are to be performed annually or whenever instrument conditions have changes that will affect the established detection limits.

8.1.4 Method blank. Reagent blank analyses must be performed at the following frequency: Every twenty (20) samples of similar concentration and/or sample matrix or whenever samples are extracted and analyzed by the same procedure at same time, whichever is more frequent. The concentration of the method blank of any analyte of interest should not exceed the laboratory established practical quantitation limit (PQL).

8.1.5 Laboratory control sample (LCS). The Laboratory Control Sample (LCS) is used to monitor, assess, and document laboratory method performance and is performed on every batch or twenty samples, whichever occurs more frequently. The recovery of the analytes must meet established laboratory guidelines as defined in Section 5 of SOP# QA-01000, "Quality Assurance Manual".

8.1.6 Sample spike and duplicate spike. Matrix spikes and matrix spike duplicates are used to determine the effect of the sample matrix on the recovery of analytes, and are analyzed for each analytical batch up to 20 samples. The recovery of the

analytes must meet established laboratory guidelines as defined in Section 5 of SOP# QA-01000, "Quality Assurance Manual".

8.2 Out of Control Conditions and Corrective Actions. Contingencies for handling out-of-control or unacceptable data are included in Section 5 of SOP# QA-01000, "Quality Assurance Manual". The tables in this section include corrective actions for failing QC and/or acceptance criteria.

8.3 Documentation of data. Document and record all analytical sequence, standard preparation, instrument maintenance, and any procedural deviations in appropriate logbooks.

9.0 HEALTH & SAFETY REQUIREMENTS

9.1 Health and Safety: Safety glasses and latex type gloves must be worn at all times when dealing with any chemicals, samples, or reagents. A lab coat is also highly recommended. Close-toed shoes and clothing that covers the legs (no shorts or dresses) must be worn any time an analyst is working in the laboratory.

9.2 The toxicity or carcinogenicity of each reagent used in this method has not been fully established. Each chemical should be regarded as a health hazard and exposure should be as kept low as reasonably possible. All health and safety concerns for any chemicals are listed in the Material Safety Data Sheets (MSDS) provided by the supplier or manufacturer of these chemicals. A copy of any MSDS is available for review at any time.

9.3 Proper disposal of all wastes is essential. Containers are provided for all waste according to the type. Section 17 of the Quality Assurance Manual discusses the disposal of various laboratory wastes in detail. Also, see Section 14.0 Pollution Management.

10.0 DATA REPORTING

10.1 Report results to three significant digits.

10.2 Current MDLs for all parameters may be found in Section 5 of SOP# QA-01000, "Quality Assurance Manual".

10.3 Out-Of-Control Data - Contingencies for handling out-of-control or unacceptable data are included in SOP #QA-01000, "Quality Assurance Manual" in Section 5 including corrective actions for failing QC and/or acceptance criteria.

10.4 The estimated MDL for this test procedure is 0.01 mg/L.

11.0 FILE MAINTENANCE

11.1 Data from this test is stored in logbooks. When the logbooks are complete, they are scanned and stored on the portal server for a period of 5 years.

11.2 New logbooks are either created or retired through the QA Manager.

11.3 Data is entered into the LIMS by the analyst performing the work

12.0 INSTRUMENT MAINTENANCE

12.1 Instrument logbooks. Instrument logbooks must be completed each time maintenance is performed on the instrument.

Each instrument logbook must have a cover page that includes the following information.

Equipment name. Example: GC-5
Manufacturers name. Example: Hewlett Packard 6890 GC
Serial Number. Example: 13226589A
Date Received. Example: 11/01/00
Date Placed into Service. Example: 11/05/00

12.2 Non-routine maintenance: Typical non-routine maintenance consists of the replacement of circuit boards and other items not associated with typical maintenance. Non-routine maintenance is performed when a system component malfunctions.

12.3 When non-routine maintenance is required, contact the Section Supervisor. The Section Supervisor will complete a maintenance request form and submit the same to the VP of Technical Services.

13.0 METHOD PERFORMANCE

13.1 The method detection limit (MDL) is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the value is above zero. The reporting limit RL is defined as the concentration of a substance that is above the level of uncertainty. The concentrations listed in the table in Section VIII were obtained using reagent water. Similar results can be achieved using representative wastewaters. The MDL actually achieved is a given analysis will vary depending on instrument sensitivity and matrix effects.

13.2 A synthetic sample containing 300 µg/l ferric iron per liter, 500µg Al/L, 50 µg Cd/L, 110 µg Cr/L, 470 µg Cu/L, 70 µg Pb/L, 120 µg Mn/L, 150 µg Ag/l, 650 µg Zn/L in distilled water was analyzed in 44 laboratories by the phenanthroline method with a relative standard deviation of 25.5% and a relative error of 13.3%.

14.0 POLLUTION MANAGEMENT

14.1 All laboratory analysis generates wastes. Some wastes can be hazardous such as acidic wastes, alkaline wastes, metal bearing wastes, and organic wastes.

14.2 Some wastes are generated because of the test procedure such as organic extractions and acid digestions.

14.3 The following procedures should be adhered to when disposing of hazardous wastes.

14.3.1 Wastes with pH levels above 12 or less than 4 should be neutralized prior to disposal.

14.3.2 Wastes with other pH levels may be directly discharged into the sinks.

14.3.3 SOP HS-03005 Waste Disposal and SOP SR-09002 Sample Receiving further discuss methods for disposal of samples and waste materials. Additional information can also be found in the QA Manual.

14.4 When disposing of laboratory wastes, the waste disposal log must be completed. To complete this log, supply the following information.

Sample Number
Method of disposal and treatment prior to disposal
Date of sample disposal
Name of person performing the disposal duty

15.0 DEFINITIONS

15.1 Primary Grade –A dry chemical that has been dried at 250°C for 4 hours cooled and stored in a desiccator.

15.2 LCS - Laboratory Control Check Standard. A known amount of sought for analyte is added to distilled water or clean soil and the concentration is measured after all procedures are applied to the sample. The resulting determined concentration must fall within test specified limits.

15.3 DI water- Deionized water

15.4 RSD – Relative Standard Deviation

15.5 RF – Response factor. Determined as the concentration of a sample divided by the chromatographic area of the peak produced by the sample.

15.6 MS- Matrix Spike. Procedure where a known amount of sought for analyte is added to a sample and the resulting concentration measured. The recovery is defined as the measured result of the spiked sample less the concentration of the same analyte in the unspiked sample multiplied by 100 percent.

15.7 MSD- Matrix Spike Duplicate.

15.8 CCV - Continuing calibration verification standard. Must be varied thoughout the daily runs, that is the concentration must be low, middle, and sometimes at the upper end of the calibration curve.

15.9 ICV – Initial calibration verification standard. This standard must be prepared from a second source than that used for the calibration curve. That is, it must be from a different manufacturer or lot that the calibration standard.

15.10 LCSD - Laboratory Check Standard Duplicate

16.0 REFERENCES

16.1 Standard Methods for the Examination of Water and Wastewater, Method 3500-Fe B, "Phenanthroline Method", 1998, 20th Edition.

16.2 Code of Federal Regulations, 40CFR part 136, Appendix B.

17.0 VALIDATION DATA

17.1 Method validation data in the form of MDL study data when applicable is available at AES Portal Server: http://home/aes/Quality Assurance/**MDL.**

17.2 Method validation data in the form of IDOC/CDOC study data when applicable is available at AES Portal Server: http://home/aes/Technical Management/**Demonstrations of Capability and SOP Sign Forms.**

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

PUBLIC NOTICE

Notice #07584-07777-12352-01
March 31, 2014

This notice is to inform the public that the S. C. Department of Health and Environmental Control (Agency) is taking public comments on a Corrective Action Plan (CAP). This CAP addresses the cleanup of soil and groundwater contamination at the facility listed below. The contamination was caused by Petroleum Products that were released from the underground storage tank system at these facilities.

FACILITY: UST Permit # 07584, University Mart, 2367 Taylor St., Columbia, SC
Release #1 reported January 30, 1991
Release #2 reported April 17, 1998
UST Permit # 07777, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 31, 1991
UST Permit # 12352, Clouds Chevron
Release reported December 30, 1991

APPLICANT: Crawford Environmental Services, 15 Church Avenue SW, Roanoke, VA 24011 on behalf of ACME Petroleum and Fuel Company, 543 Cox Road, Ste C, Gastonia, NC 28054 (University Mart UST#07584); Wallace M. Scott, 76 Whiteford Way, Lexington, SC 29072 (Clouds Chevron UST# 07777), and Jack and Alexandria Lee, 3733 Greenbriar Drive, Columbia, SC 29206 (Clouds Chevron UST#12352).

SUMMARY OF CAP: Petroleum and petroleum byproducts naturally break down over time through chemical, physical, and biological processes. These processes are called natural attenuation. Crawford Environmental Services has submitted a CAP proposing the use of the following technologies in addition to natural attenuation to clean up the contamination.

- Aggressive Fluid Vapor Recovery: A high-pressure vacuum is attached to recovery wells; it removes petroleum vapors, contaminated groundwater, and the petroleum product.
- Air Sparging & Soil Vapor Extraction: Air is pumped underground to evaporate petroleum products. The chemicals are removed using a vacuum system.
- Chemical Oxidation: Oxygen-rich chemicals are injected underground to change the petroleum product(s) into harmless compounds (water and carbon dioxide).
- Bioremediation: Microorganisms that live underground eat the petroleum product(s) and convert the product to water and carbon dioxide. Air and nutrients will be injected underground to assist the microbes in removing the petroleum product(s).

PUBLIC COMMENT PERIOD DEADLINE: The **deadline** for submitting written comments is **5 PM April 30, 2014**. Any interested person(s) may submit written comments concerning the cleanup to the Project Manager listed below. Please bring this notice to the attention of persons whom you know will be interested in this matter. Where there is a significant degree of public interest, the Agency will hold a public hearing.

John C. Bryant
SCDHEC - UST Management Division
2600 Bull Street
Columbia SC 29201
803-898-0606

CONTACT INFORMATION: For additional information, please call the Project Manager listed above. To view a copy of the CAP, contact the Freedom of Information Office at 803-898-3882.

Section 280.67 of the S.C. Underground Storage Tank Control Regulations (R.61-92) requires that any CAP prepared to meet the requirements of 280.66 be placed on notice for public comment.

D H E C
PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

ALLEN UNIVERSITY
1530 HARDEN STREET
COLUMBIA, SC 29204

MAR 2 7 2014

Re: **Public Notice of Proposed Corrective Action**
University Mart, 2367 Taylor Street, Columbia, SC
UST Permit # 07584; Release 1 and 2
Clouds Chevron, 1600 Two Notch Road, Columbia, SC
UST Permit # 07777 & 12352
Corrective Action Plan Received March 24, 2014
Richland County

To Whom It May Concern:

As you are aware, petroleum products have been identified in the soil and groundwater at the former University Mart and Clouds Chevron facilities. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services, Inc. (CES) has been retained to initiate corrective action of the impacted soil and groundwater. CES has submitted a Corrective Action Plan (CAP) for surfactant injection and vacuum extraction, in-situ chemical oxidation, and nutrient and biological injections in addition to natural attenuation. A copy of the CAP has been sent to you by CES. Please contact me if you do not receive the CAP.

Section 280.67 of the South Carolina Underground Storage Tank Regulations requires the South Carolina Department of Health and Environmental Control to provide notice to those members of the public that may be affected by a planned corrective action. A copy of the public notice is enclosed for your information. The installation of recovery/ injection wells on your property may be necessary as part of the corrective action. Additionally, periodic sampling of the monitoring wells on your property will be necessary. CES is required to coordinate any activity on your property with you. Your continued cooperation is appreciated.

If you have any questions or comments regarding the proposed corrective action, please contact me by phone at (803) 898-0606, by fax at (803) 898-0673, or by email at bryantjc@dhec.sc.gov. All comments should be submitted on or before April 30, 2014.

Sincerely,

John C. Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

enc: Public Notice
Citizens Guide

cc: Technical File (w/ PN)

D H E C
PROMOTE PROTECT PROSPER
Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

COLUMBIA GROCERY INC
1510 ONTARIO STREET
COLUMBIA, SC 29204

MAR 2 7 2014

Re: **Public Notice of Proposed Corrective Action**
University Mart, 2367 Taylor Street, Columbia, SC
UST Permit # 07584; Release 1 and 2
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UST Permit # 07777 & 12352
Corrective Action Plan Received March 24, 2014
Richland County

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Sincerely,

John C. Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

enc: Public Notice
Citizens Guide

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D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

MR ANDREW DIGGINGS
PROVIDENCE HOSPITAL
2345 FOREST DRIVE
COLUMBIA, SC 29204

MAR 2 7 2014

Re: **Public Notice of Proposed Corrective Action**
University Mart, 2367 Taylor Street, Columbia, SC
UST Permit # 07584; Release 1 and 2
Clouds Chevron, 1600 Two Notch Road, Columbia, SC
UST Permit # 07777 & 12352
Corrective Action Plan Received March 24, 2014
Richland County

Dear Mr. Diggins:

As you are aware, petroleum products have been identified in the soil and groundwater at the former University Mart and Clouds Chevron facilities. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services, Inc. (CES) has been retained to initiate corrective action of the impacted soil and groundwater. CES has submitted a Corrective Action Plan (CAP) for surfactant injection and vacuum extraction, in-situ chemical oxidation, and nutrient and biological injections in addition to natural attenuation. A copy of the CAP has been sent to you by CES. Please contact me if you do not receive the CAP.

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Sincerely,

John C. Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

enc: Public Notice
Citizens Guide

cc: Technical File (w/ PN)

D H E C
PROMOTE PROTECT PROSPER
Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

MILLWOOD AVENUE LLC
1330 DEVONSHIRE DRIVE
COLUMBIA, SC 29204

MAR 2 7 2014

Re: **Public Notice of Proposed Corrective Action**
University Mart, 2367 Taylor Street, Columbia, SC
UST Permit # 07584; Release 1 and 2
Clouds Chevron, 1600 Two Notch Road, Columbia, SC
UST Permit # 07777 & 12352
Corrective Action Plan Received March 24, 2014
Richland County

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Sincerely,

John C. Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

enc: Public Notice
Citizens Guide

cc: Technical File (w/ PN)

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

MR LAU FUNG
2300 TAYLOR STREET, STE D
COLUMBIA, SC 29204

MAR 2 7 2014

Re: **Public Notice of Proposed Corrective Action**
University Mart, 2367 Taylor Street, Columbia, SC
UST Permit # 07584; Release 1 and 2
Clouds Chevron, 1600 Two Notch Road, Columbia, SC
UST Permit # 07777 & 12352
Corrective Action Plan Received March 24, 2014
Richland County

Dear Mr. Fung:

As you are aware, petroleum products have been identified in the soil and groundwater at the former University Mart and Clouds Chevron facilities. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services, Inc. (CES) has been retained to initiate corrective action of the impacted soil and groundwater. CES has submitted a Corrective Action Plan (CAP) for surfactant injection and vacuum extraction, in-situ chemical oxidation, and nutrient and biological injections in addition to natural attenuation. A copy of the CAP has been sent to you by CES. Please contact me if you do not receive the CAP.

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Sincerely,

John C. Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

enc: Public Notice
Citizens Guide

cc: Technical File (w/ PN)

D H E C
PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

MR CHANG MOON SUENG
2358 TAYLOR STREET
COLUMBIA, SC 29204

MAR 2 7 2014

Re: **Public Notice of Proposed Corrective Action**
University Mart, 2367 Taylor Street, Columbia, SC
UST Permit # 07584; Release 1 and 2
Clouds Chevron, 1600 Two Notch Road, Columbia, SC
UST Permit # 07777 & 12352
Corrective Action Plan Received March 24, 2014
Richland County

Dear Mr. Sueng:

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Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

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D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

TAYLOR STREET LLC
200 GAULEY DRIVE
COLUMBIA, SC 29212

MAR 2 7 2014

Re: **Public Notice of Proposed Corrective Action**
University Mart, 2367 Taylor Street, Columbia, SC
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To Whom It May Concern:

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Section 280.67 of the South Carolina Underground Storage Tank Regulations requires the South Carolina Department of Health and Environmental Control to provide notice to those members of the public that may be affected by a planned corrective action. A copy of the public notice is enclosed for your information. The installation of recovery/ injection wells on your property may be necessary as part of the corrective action. Additionally, periodic sampling of the monitoring wells on your property will be necessary. CES is required to coordinate any activity on your property with you. Your continued cooperation is appreciated.

If you have any questions or comments regarding the proposed corrective action, please contact me by phone at (803) 898-0606, by fax at (803) 898-0673, or by email at bryantjc@dhec.sc.gov. All comments should be submitted on or before April 30, 2014.

Sincerely,

John C. Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

enc: Public Notice
Citizens Guide

cc: Technical File (w/ PN)

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

SYLVAN FOOD SYSTEMS, INC
1245 BOSTON AVENUE
WEST COLUMBIA, SC 29170

MAR 2 7 2014

Re: **Public Notice of Proposed Corrective Action**
University Mart, 2367 Taylor Street, Columbia, SC
UST Permit # 07584; Release 1 and 2
Clouds Chevron, 1600 Two Notch Road, Columbia, SC
UST Permit # 07777 & 12352
Corrective Action Plan Received March 24, 2014
Richland County

To Whom It May Concern:

As you are aware, petroleum products have been identified in the soil and groundwater at the former University Mart and Clouds Chevron facilities. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services, Inc. (CES) has been retained to initiate corrective action of the impacted soil and groundwater. CES has submitted a Corrective Action Plan (CAP) for surfactant injection and vacuum extraction, in-situ chemical oxidation, and nutrient and biological injections in addition to natural attenuation. A copy of the CAP has been sent to you by CES. Please contact me if you do not receive the CAP.

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Sincerely,

John C. Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

enc: Public Notice
Citizens Guide

cc: Technical File (w/ PN)

D H E C
PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

MS BETTE G BATEMAN
C/O JESSE T REESE
PO BOX 1026
COLUMBIA, SC 29201

MAR 2 7 2014

Re: **Public Notice of Proposed Corrective Action**
University Mart, 2367 Taylor Street, Columbia, SC
UST Permit # 07584; Release 1 and 2
Clouds Chevron, 1600 Two Notch Road, Columbia, SC
UST Permit # 07777 & 12352
Corrective Action Plan Received March 24, 2014
Richland County

Dear Ms. Bateman:

As you are aware, petroleum products have been identified in the soil and groundwater at the former University Mart and Clouds Chevron facilities. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services, Inc. (CES) has been retained to initiate corrective action of the impacted soil and groundwater. CES has submitted a Corrective Action Plan (CAP) for surfactant injection and vacuum extraction, in-situ chemical oxidation, and nutrient and biological injections in addition to natural attenuation. A copy of the CAP has been sent to you by CES. Please contact me if you do not receive the CAP.

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Sincerely,

John C. Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

enc: Public Notice
Citizens Guide

cc: Technical File (w/ PN)

D H E C
PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

MR MAHESH PATEL
FAST POINT FOOD STORES
2811 REIDVILLE ROAD, STE 11
SPARTANBURG, SC 29301

MAR 2 7 2014

Re: **Public Notice of Proposed Corrective Action**
University Mart, 2367 Taylor Street, Columbia, SC
UST Permit # 07584; Release 1 and 2
Clouds Chevron, 1600 Two Notch Road, Columbia, SC
UST Permit # 07777 & 12352
Corrective Action Plan Received March 24, 2014
Richland County

Dear Mr. Patel:

As you are aware, petroleum products have been identified in the soil and groundwater at the former University Mart and Clouds Chevron facilities. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services, Inc. (CES) has been retained to initiate corrective action of the impacted soil and groundwater. CES has submitted a Corrective Action Plan (CAP) for surfactant injection and vacuum extraction, in-situ chemical oxidation, and nutrient and biological injections in addition to natural attenuation. A copy of the CAP has been sent to you by CES. Please contact me if you do not receive the CAP.

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If you have any questions or comments regarding the proposed corrective action, please contact me by phone at (803) 898-0606, by fax at (803) 898-0673, or by email at bryantjc@dhec.sc.gov. All comments should be submitted on or before April 30, 2014.

Sincerely,

John C. Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

enc: Public Notice
Citizens Guide

cc: Technical File (w/ PN)

D H E C
PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

ATTN: DR DAVID H SWINTON
BENEDICT COLLEGE
1600 HARDEN STREET
COLUMBIA, SC 29204

MAR 2 7 2014

Re: **Public Notice of Proposed Corrective Action**
University Mart, 2367 Taylor Street, Columbia, SC
UST Permit # 07584; Release 1 and 2
Clouds Chevron, 1600 Two Notch Road, Columbia, SC
UST Permit # 07777 & 12352
Corrective Action Plan Received March 24, 2014
Richland County

Dear Dr. Swinton:

As you are aware, petroleum products have been identified in the soil and groundwater at the former University Mart and Clouds Chevron facilities. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services, Inc. (CES) has been retained to initiate corrective action of the impacted soil and groundwater. CES has submitted a Corrective Action Plan (CAP) for surfactant injection and vacuum extraction, in-situ chemical oxidation, and nutrient and biological injections in addition to natural attenuation. A copy of the CAP has been sent to you by CES. Please contact me if you do not receive the CAP.

Section 280.67 of the South Carolina Underground Storage Tank Regulations requires the South Carolina Department of Health and Environmental Control to provide notice to those members of the public that may be affected by a planned corrective action. A copy of the public notice is enclosed for your information. The installation of recovery/ injection wells on your property may be necessary as part of the corrective action. Additionally, periodic sampling of the monitoring wells on your property will be necessary. CES is required to coordinate any activity on your property with you. Your continued cooperation is appreciated.

If you have any questions or comments regarding the proposed corrective action, please contact me by phone at (803) 898-0606, by fax at (803) 898-0673, or by email at bryantjc@dhec.sc.gov. All comments should be submitted on or before April 30, 2014.

Sincerely,

John C. Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

enc: Public Notice
Citizens Guide

cc: Technical File (w/ PN)

D H E C
PROMOTE PROTECT PROSPER
Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

ATTN: MR GILBERT WALKER
COLUMBIA HOUSING AUTHORITY
PO BOX 4307
COLUMBIA, SC 29204

MAR 2 7 2014

Re: **Public Notice of Proposed Corrective Action**
University Mart, 2367 Taylor Street, Columbia, SC
UST Permit # 07584; Release 1 and 2
Clouds Chevron, 1600 Two Notch Road, Columbia, SC
UST Permit # 07777 & 12352
Corrective Action Plan Received March 24, 2014
Richland County

Dear Mr. Walker:

As you are aware, petroleum products have been identified in the soil and groundwater at the former University Mart and Clouds Chevron facilities. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services, Inc. (CES) has been retained to initiate corrective action of the impacted soil and groundwater. CES has submitted a Corrective Action Plan (CAP) for surfactant injection and vacuum extraction, in-situ chemical oxidation, and nutrient and biological injections in addition to natural attenuation. A copy of the CAP has been sent to you by CES. Please contact me if you do not receive the CAP.

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If you have any questions or comments regarding the proposed corrective action, please contact me by phone at (803) 898-0606, by fax at (803) 898-0673, or by email at bryantjc@dhec.sc.gov. All comments should be submitted on or before April 30, 2014.

Sincerely,

John C. Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

enc: Public Notice
Citizens Guide

cc: Technical File (w/ PN)

D H E C
PROMOTE PROTECT PROSPER
Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

MS LINDA WARREN
1527 LYON STREET
COLUMBIA, SC 29204

MAR 2 7 2014

Re: **Public Notice of Proposed Corrective Action**
University Mart, 2367 Taylor Street, Columbia, SC
UST Permit # 07584; Release 1 and 2
Clouds Chevron, 1600 Two Notch Road, Columbia, SC
UST Permit # 07777 & 12352
Corrective Action Plan Received March 24, 2014
Richland County

Dear Ms. Warren:

As you are aware, petroleum products have been identified in the soil and groundwater at the former University Mart and Clouds Chevron facilities. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services, Inc. (CES) has been retained to initiate corrective action of the impacted soil and groundwater. CES has submitted a Corrective Action Plan (CAP) for surfactant injection and vacuum extraction, in-situ chemical oxidation, and nutrient and biological injections in addition to natural attenuation. A copy of the CAP has been sent to you by CES. Please contact me if you do not receive the CAP.

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If you have any questions or comments regarding the proposed corrective action, please contact me by phone at (803) 898-0606, by fax at (803) 898-0673, or by email at bryantjc@dhec.sc.gov. All comments should be submitted on or before April 30, 2014.

Sincerely,

John C. Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

enc: Public Notice
Citizens Guide

cc: Technical File (w/ PN)

D H E C
PROMOTE PROTECT PROSPER
Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

MR JOE T SUDDETH
302 BIDDLE ROAD
COLUMBIA, SC 29212

MAR 2 7 2014

Re: **Public Notice of Proposed Corrective Action**
University Mart, 2367 Taylor Street, Columbia, SC
UST Permit # 07584; Release 1 and 2
Clouds Chevron, 1600 Two Notch Road, Columbia, SC
UST Permit # 07777 & 12352
Corrective Action Plan Received March 24, 2014
Richland County

Dear Mr. Suddeth:

As you are aware, petroleum products have been identified in the soil and groundwater at the former University Mart and Clouds Chevron facilities. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services, Inc. (CES) has been retained to initiate corrective action of the impacted soil and groundwater. CES has submitted a Corrective Action Plan (CAP) for surfactant injection and vacuum extraction, in-situ chemical oxidation, and nutrient and biological injections in addition to natural attenuation. A copy of the CAP has been sent to you by CES. Please contact me if you do not receive the CAP.

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If you have any questions or comments regarding the proposed corrective action, please contact me by phone at (803) 898-0606, by fax at (803) 898-0673, or by email at bryantjc@dhec.sc.gov. All comments should be submitted on or before April 30, 2014.

Sincerely,

John C. Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

enc: Public Notice
Citizens Guide

cc: Technical File (w/ PN)

D H E C
PROMOTE PROTECT PROSPER
Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

JACK AND ALEXANDRIA LEE
3733 GREENBRAIR DRIVE
COLUMBIA, SOUTH CAROLINA 29206

MAR 2 7 2014

Re: **Public Notice of Proposed Corrective Action**
Clouds Chevron, 1600 Two Notch Road, Columbia, SC
UST Permit # 12352
Corrective Action Plan Received March 24, 2014
Richland County

Dear Mr. Lee:

As you are aware, petroleum products have been identified in the soil and groundwater at the University Mart and Clouds Chevron facilities. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services has been retained to initiate corrective action of the impacted soil and groundwater. Crawford Environmental Services has submitted a Corrective Action Plan (CAP) for surfactant injection and vacuum extraction, in-situ chemical oxidation, and nutrient and biological injections in addition to natural attenuation. A copy of the CAP has been sent to you by Crawford Environmental Services. Please contact me if you do not receive the CAP.

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Sincerely,

John C. Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

enc: Public Notice
Citizens Guide

cc: Technical File (w/ PN)

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

WALLACE M. SCOTT
76 WHITEFORD WAY
LEXINGTON, SOUTH CAROLINA 29072

MAR 2 7 2014

Re: **Public Notice of Proposed Corrective Action**
Clouds Chevron, 1600 Two Notch Road, Columbia, SC
UST Permit # 07777
Corrective Action Plan Received March 24, 2014
Richland County

Dear Mr. Scott:

As you are aware, petroleum products have been identified in the soil and groundwater at the University Mart and Clouds Chevron facilities. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services has been retained to initiate corrective action of the impacted soil and groundwater. Crawford Environmental Services has submitted a Corrective Action Plan (CAP) for surfactant injection and vacuum extraction, in-situ chemical oxidation, and nutrient and biological injections in addition to natural attenuation. A copy of the CAP has been sent to you by Crawford Environmental Services. Please contact me if you do not receive the CAP.

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If you have any questions or comments regarding the proposed corrective action, please contact me by phone at (803) 898-0606, by fax at (803) 898-0673, or by email at bryantjc@dhec.sc.gov. All comments should be submitted on or before April 30, 2014.

Sincerely,

John C. Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

enc: Public Notice
Citizens Guide

cc: Technical File (w/ PN)

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

ACME PETROLEUM AND FUEL COMPANY
543 COX ROAD
STE C
GASTONIA, NORTH CAROLINA 28054

MAR 2 7 2014

Re: **Public Notice of Proposed Corrective Action**
University Mart, 2367 Taylor Street, Columbia, SC
UST Permit # 07584; Release 1 and 2
Corrective Action Plan Received March 24, 2014
Richland County

To Whom It May Concern:

As you are aware, petroleum products have been identified in the soil and groundwater at the University Mart and Clouds Chevron facilities. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services has been retained to initiate corrective action of the impacted soil and groundwater. Crawford Environmental Services has submitted a Corrective Action Plan (CAP) for surfactant injection and vacuum extraction, in-situ chemical oxidation, and nutrient and biological injections in addition to natural attenuation. A copy of the CAP has been sent to you by Crawford Environmental Services. Please contact me if you do not receive the CAP.

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Sincerely,

John C. Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

enc: Public Notice
Citizens Guide

cc: Technical File (w/ PN)

D H E C
PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

UST DOCKETING

MR CHARLES F. CRAWFORD, III
CRAWFORD ENVIRONMENTAL SERVICES
104 CORPORATE BLVD STE 412
WEST COLUMBIA SC 29169

MAR 2 7 2014

Re: **Corrective Action Award**
UST Permit # 07584, University Mart, 2367 Taylor St., Columbia, SC
Release #1 reported January 30, 1991; CA#47811
Release #2 reported April 17, 1998; CA#47812
UST Permit # 07777, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 31, 1991; CA#47813
UST Permit # 12352, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 30, 1991; CA#47814
Contract #IFB-5400007095-1/30/2014-EMW; PO # 4600322226
Richland County

Dear Mr. Crawford:

As you are aware, the Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control has determined that active corrective action is necessary at the referenced facility. On January 7, 2014, you were awarded the corrective action contract in the amount of $540,000.00, which will be funded by the State Underground Petroleum Environmental Response Bank (SUPERB) Account. Per contract requirements, the Quality Assurance Project Plan (QAPP) for the Initial Monitoring Report must be submitted within 15 days of the award date (Received March 21, 2014), the corrective action plan with a QAPP Addendum for corrective action must be submitted within 30 days of the award date (Received March 24, 2014), and the Initial Monitoring Report must be submitted within 45 days of the QAPP Addendum approval date (on or before May 25, 2014). A signed copy of the Right-of-Entry and the approved QAPP addendum for the referenced facility is enclosed. Please coordinate with each landowner for access and keep any inconveniences to the affected landowners to a minimum. Please also note that in accordance with contract specifications, copies of all plans and reports should be sent to all affected property owners listed in the bid solicitation appendix.

If you have any questions or need additional information, please contact me at (803) 898-0606 or bryantjc@dhec.sc.gov.

Sincerely,

John C. Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

enc: Cost Agreements
Right of Entry
Signed QAPP Addendum

cc: Richard E. Fay, 2020 Charlotte Plaza, 201 South College St., Charlotte NC 28244-2020 (w/o enc)
Mr. Pete Overton, Acme Petroleum and Fuel Company, 543 Cox Rd. Ste. C, Gastonia SC 28054 (w/o enc)
Mr. Mahesh Patel, Fast Point Food Stores, 2811 Reidville Rd. Ste. 11, Spartanburg SC 29301-3227 (w/o enc)
Mrs. Wallace Scott, 76 Whiteford Way, Lexington SC 29072 (w/o enc)
Mr. Andrew Diggins, Providence Hospital, 2345 Forest Dr., Columbia SC 29204 (w/o enc)
Ms. Bette Gordon Bateman, c/o Jesse T. Reese, PO Box 1026, Columbia, SC 29201 (w/o enc)
W.L. Boyd III, 455 Alexander Cir., Columbia SC 29206 (w/o enc)
James A. & Marilyn L. Bundrick, 217 Palmer Dr., Lexington SC 29072 (w/o enc)
Mr. James Morrison Jr., 1014 Laurens St., Columbia SC 29201 (w/o enc)
Pope D. Johnson III, McCutchen Blanton Johnson & Barnette LLP, PO Drawer 11209, Columbia SC 29211-1209 (w/o enc)
Mr. Joe T. Suddeth, 302 Biddle Rd., Columbia SC 29212 (w/o enc)
Chang Moon Sueng, 2358 Taylor St., Columbia SC 29204 (w/o enc)
Dr. David H. Swinton, Benedict College, 1600 Harden St., Columbia SC 29204 (w/o enc)
Sylvan Food Systems Inc., 1245 Boston Ave., West Columbia SC 29170 (w/o enc)
Ms. Linda Warren, 1527 Lyon St., Columbia SC 29204 (w/o enc)
Gilbert Walker, Columbia Housing Authority, PO Box 4307, Columbia SC 29204 (w/o enc)
Technical Files (w/o enc)

D H E C
PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

April 11, 2014

(BOW-GWPROT-CAW)
Mr. Charles F. Crawford
Crawford Environmental Services, Inc.
15 Church Ave, SW
Roanoke, VA 24011

Re: Underground Injection Control Permit #SCHE03020184M
Cloud's Chevron/Handy Panty #65/University Mart Site
Richland County

Dear Mr. Crawford:

Enclosed is a Permit to Construct for six (6) Class VA-I injection wells at the Cloud's Chevron/Handy Panty #65/University Mart Site, Richland County as requested in the permit application received March 27, 2014.

South Carolina Board of Health and Environmental Control
Guide to Board Review
Pursuant to S.C. Code Ann. § 44-1-60
Effective April 1, 2013

The decision of the South Carolina Department of Health and Environmental Control (Department) becomes the final agency decision fifteen (15) calendar days after notice of the decision has been mailed to the applicant, permittee, licensee and affected persons who have requested in writing to be notified, unless a written request for final review accompanied by a filing fee in the amount of $100 is filed with Department by the applicant, permittee, licensee or affected person.

Applicants, permittees, licensees, and affected parties are encouraged to engage in mediation during the final review process.

If the Board declines in writing to schedule a final review conference, the Department's decision becomes the final agency decision and an applicant, permittee, licensee, or affected person may request a contested case hearing before the Administrative Law Court within thirty (30) calendar days after notice is mailed that the Board declined to hold a final review conference.

I. Filing of Request for Final Review

1. A written Request for Final Review (RFR)and the required filing fee of one hundred dollars ($100) must be received by Clerk of the Board within fifteen (15)calendar days after notice of the staff decision has been mailed to the applicant, permittee, licensee, or affected persons. If the 15th day occurs on a weekend or State holiday, the RFR must be received by the Clerk on the next working day. RFRs will not be accepted after5:00 p.m.

2. RFRs shall be in writing and should include, at a minimum, the following information:

    - The grounds for amending, modifying, or rescinding the staff decision;
    - a statement of any significant issues or factors the Board should consider in deciding how to handle the matter;
    - the relief requested; and
    - a copy of the decision for which review is requested.

3. RFRs should be filed in person or by mail at the following address:

South Carolina Board of Health and Environmental Control

Attention: Clerk of the Board

2600 Bull Street

Columbia, South Carolina 29201

Alternatively, RFR's may be filed with the Clerk by facsimile (803-898-3393) or by electronic mail (boardclerk@dhec.sc.gov).

4. The filing fee maybe paid by cash, certified check or credit card. If a RFR is filed by facsimile or electronic mail, the filing fee may be mailed to the Clerk of the Board and the envelope must be postmarked within the time allowed for filing a RFR.

5. If there is any perceived discrepancy in compliance with this RFR filing procedure, the Clerk should consult with the Chairman or, if the Chairman is unavailable, the Vice-Chairman. The Chairman or the Vice-Chairman will determine whether the RFR is timely and properly filed and direct the Clerk to (1) process the RFR for consideration by the Board or (2) return the RFR and filing fee to the requestor with a cover letter explaining why the RFR was not timely or properly filed. Processing an RFR for consideration by the Board shall not be interpreted as a waiver of any claim or defense by the agency in subsequent proceedings concerning the RFR.

6. If the RFR will be processed for Board consideration, the Clerk will send an Acknowledgement of RFR to the Requestor and the applicant, permittee, or licensee, if other than the Requestor.

7. The Clerk will email the RFR to all Board members for review, and all Board members will confirm receipt of the RFR to the Clerk by email. If a Board member does not confirm receipt of the RFR within twenty-four (24) hour period, the Clerk will contact the Board member and confirm receipt. If a Board member believes the RFR should be considered by the RFR Committee, he or she will respond to the Clerk's email within forty-eight (48) hours and will request further review. If no Board member requests further review of the RFR within the forty-eight (48) hour period, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant, permittee, or licensee, if not the Requestor, stating the Board will not hold a Final Review Conference. A copy of the Notice of Appeal Procedure will be included with the letter.

NOTE: If the time periods described above end on a weekend or State holiday, the time is automatically extended to 5:00 p.m. on the next business day.

8. If the RFR is to be considered by the RFR Committee, the Clerk will forward a copy of the RFR to Department staff and Office of General Counsel. A Department response to the RFR should be provided by Department staff to the Clerk within eight (8) working days after the RFR is forwarded.

II. Final Review Conference Scheduling

1. If a Conference will be held, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant, permittee, or licensee, if not the Requestor, informing the Requestor of the determination.

2. The Clerk will request Department staff provide the Administrative Record.

3. The Clerk will send Notice of Final Review Conference to the parties at least ten (10) days before the Conference. The Conference will be publicly noticed and should:

   - include the place, date and time of the Conference;
   - state the presentation times allowed in the Conference;
   - state evidence may be presented at the Conference;
   - if the conference will be held by committee, include a copy of the Chairman's order appointing the committee; and
   - inform the Requestor of his or her right to request a transcript of the proceedings of the Conference prepared at Requestor's expense.

4. If a party requests a transcript of the proceedings of the Conference and agrees to pay all related costs in writing, including costs for the transcript, the Clerk will schedule a court reporter for the Conference.

III. **Final Review Conference and Decision**

1. The order of presentation in the Conference will, subject to the presiding officer's discretion, be as follows:

   - Department staff will provide an overview of the staff decision and the applicable law to include [10 minutes]:
     - Type of decision (permit, enforcement, etc.) and description of the program.
     - Parties
     - Description of facility/site
     - Applicable statutes and regulations
     - Decision and materials relied upon in the administrative record to support the staff decision.
   - Requestor(s) will state the reasons for protesting the staff decision and may provide evidence to support amending, modifying, or rescinding the staff decision. [15 minutes] *NOTE: The burden of proof is on the Requestor(s)*
   - Rebuttal by Department staff[15 minutes]
   - Rebuttal by Requestor(s)[10 minutes]

   Note: Times noted in brackets are for information only and are superseded by times stated in the Notice of Final Review Conference or by the presiding officer.

2. Parties may present evidence during the conference; however, the rules of evidence do not apply.
3. At any time during the conference, the officers conducting the conference may request additional information and may question the Requestor, the staff, and anyone else providing information at the conference.
4. The presiding officer, in his or her sole discretion, may allow additional time for presentations and may impose time limits on the Conference.
5. All Conferences are open to the public.
6. The officers may deliberate in closed session.
7. The officers may announce the decision at conclusion of the Conference or it may be reserved for consideration.
8. The Clerk will mail the written final agency decision (FAD) to parties within 30 days after the Conference. The written decision must explain the basis for the decision and inform the parties of their right to request a contested case hearing before the Administrative Law Court. The FAD will be sent by certified mail, return receipt requested.
9. Communications may also be sent by electronic mail, in addition to the forms stated herein, when electronic mail addresses are provided to the Clerk.

The above information is provided as a courtesy; parties are responsible for complying with all applicable legal requirements.

Please submit all of the well logs for the installed wells to schedule a well inspection. An inspection of the UIC System must be conducted prior to issuance of the Permit to Operate. If you have any questions, please call Christopher Wargo at (803) 898-3799.

Sincerely,

Christopher Wargo, Hydrogeologist
Groundwater Protection Section
Bureau of Water

cc: John Bryant, SCDHEC-BLWM-UST

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

WATER MONITORING ASSESSMENT & PROTECTION DIVISION

Injection Well Construction Permit
for
Class II, III, and V.A. Injection Well(s)

Permit #SCHE03020184M

Date Issued: April 11, 2014
Date Expired: April 11, 2015

For (Operator): Crawford Environmental Services, Inc.

In accordance with R.61-72 this permit will become final unless it is appealed within fifteen (15) days of the issuance date.

In accordance with provisions of Title 48, Chapter 1, South Carolina Code of Laws, 1976, as amended, permission is granted for construction of six (6) Class VA-I injection wells with a true diameter of four (4) inches, and a total depth of approximately thirty-five (35) feet located at Cloud's Chevron/Handy Panty #65/University Mart, Richland County, SC with the following provisions:

1) The operator shall submit completed SCDHEC well record forms to the Departments Water Monitoring, Assessment & Protection Division after completion of the injection wells.

2) Upon completion of construction, injection activities shall not commence prior to receiving approval from the Department to operate the injection wells.

3) When the injection wells are no longer in use, or upon request by the Department, within sixty (60) days all injection wells must be permanently abandoned in accordance with the South Carolina Well Standards and Regulations (R.61-71).

Charles Gorman, Director
Groundwater Protection Section
Bureau of Water

STATEMENT OF BASIS - UIC DRAFT PERMIT #SCHE03020184M

In accordance with the South Carolina Underground Injection Control Regulations, Section R61-87.13(J), this Statement of Basis has been prepared for the Cloud's Chevron/Handy Panty #65/University Mart Site Underground Injection Control permit application received March 27, 2014.

Ownership of the proposed injection wells is Crawford Environmental Services, Inc., 15 Church Ave, SW, Roanoke, VA 24011. The permit (UIC SCHE03020184M) is for the construction of six (6) injection wells for a corrective action system at the Cloud's Chevron/Handy Panty #65/University Mart Site. The intent of the injection wells is to inject surfactant,hydrogen peroxide, PetroBac and NutriMax into the subsurface to remediate contaminated groundwater as described in the cleanup plan dated March 20, 2014. The final permit for the underground injection proposal has been prepared based on staff review and the application of the Pollution Control Act of South Carolina and the Underground Injection Control Regulations of South Carolina.

Conditions of the permit issuance include the submittal of well records for all injection wells installed and the inspection of well construction by the Department prior to injection.

D H E C
PROMOTE PROTECT PROSPER
Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

April 11, 2014

(BOW-GWPROT-CAW)
Mr. Charles F. Crawford
Crawford Environmental Services, Inc.
15 Chruch Ave., SW
Roanoke, VA 24011

Re: Underground Injection Control Permit #SCHE03020184
Cloud's Chevron/Handy Panty #65/ University Mart Site
Richland County

Dear Mr. Crawford:

Enclosed is a Permit to Operate fifty-eight (58) Class VA-I (Aquifer Remediation) injection wells at the Cloud's Chevron/Handy Panty #65/ University Mart Site, Richland County, SC.

South Carolina Board of Health and Environmental Control
Guide to Board Review
Pursuant to S.C. Code Ann. § 44-1-60
Effective April 1, 2013

The decision of the South Carolina Department of Health and Environmental Control (Department) becomes the final agency decision fifteen (15) calendar days after notice of the decision has been mailed to the applicant, permittee, licensee and affected persons who have requested in writing to be notified, unless a written request for final review accompanied by a filing fee in the amount of $100 is filed with Department by the applicant, permittee, licensee or affected person.

Applicants, permittees, licensees, and affected parties are encouraged to engage in mediation during the final review process.

If the Board declines in writing to schedule a final review conference, the Department's decision becomes the final agency decision and an applicant, permittee, licensee, or affected person may request a contested case hearing before the Administrative Law Court within thirty (30) calendar days after notice is mailed that the Board declined to hold a final review conference.

I. **Filing of Request for Final Review**

1. A written Request for Final Review (RFR)and the required filing fee of one hundred dollars ($100) must be received by Clerk of the Board within fifteen (15)calendar days after notice of the staff decision has been mailed to the applicant, permittee, licensee, or affected persons. If the 15th day occurs on a weekend or State holiday, the RFR must be received by the Clerk on the next working day. RFRs will not be accepted after5:00 p.m.

2. RFRs shall be in writing and should include, at a minimum, the following information:

   - The grounds for amending, modifying, or rescinding the staff decision;
   - a statement of any significant issues or factors the Board should consider in deciding how to handle the matter;
   - the relief requested; and
   - a copy of the decision for which review is requested.

3. RFRs should be filed in person or by mail at the following address:

South Carolina Board of Health and Environmental Control

Attention: Clerk of the Board

2600 Bull Street

Columbia, South Carolina 29201

Alternatively, RFR's may be filed with the Clerk by facsimile (803-898-3393) or by electronic mail (boardclerk@dhec.sc.gov).

4. The filing fee maybe paid by cash, certified check or credit card. If a RFR is filed by facsimile or electronic mail, the filing fee may be mailed to the Clerk of the Board and the envelope must be postmarked within the time allowed for filing a RFR.

5. If there is any perceived discrepancy in compliance with this RFR filing procedure, the Clerk should consult with the Chairman or, if the Chairman is unavailable, the Vice-Chairman. The Chairman or the Vice-Chairman will determine whether the RFR is timely and properly filed and direct the Clerk to (1) process the RFR for consideration by the Board or (2) return the RFR and filing fee to the requestor with a cover letter explaining why the RFR was not timely or properly filed. Processing an RFR for consideration by the Board shall not be interpreted as a waiver of any claim or defense by the agency in subsequent proceedings concerning the RFR.

6. If the RFR will be processed for Board consideration, the Clerk will send an Acknowledgement of RFR to the Requestor and the applicant, permittee, or licensee, if other than the Requestor.

7. The Clerk will email the RFR to all Board members for review, and all Board members will confirm receipt of the RFR to the Clerk by email. If a Board member does not confirm receipt of the RFR within twenty-four (24) hour period, the Clerk will contact the Board member and confirm receipt. If a Board member believes the RFR should be considered by the RFR Committee, he or she will respond to the Clerk's email within forty-eight (48) hours and will request further review. If no Board member requests further review of the RFR within the forty-eight (48) hour period, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant, permittee, or licensee, if not the Requestor, stating the Board will not hold a Final Review Conference. A copy of the Notice of Appeal Procedure will be included with the letter.

NOTE: If the time periods described above end on a weekend or State holiday, the time is automatically extended to 5:00 p.m. on the next business day.

8. If the RFR is to be considered by the RFR Committee, the Clerk will forward a copy of the RFR to Department staff and Office of General Counsel. A Department response to the RFR should be provided by Department staff to the Clerk within eight (8) working days after the RFR is forwarded.

II. Final Review Conference Scheduling

1. If a Conference will be held, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant, permittee, or licensee, if not the Requestor, informing the Requestor of the determination.

2. The Clerk will request Department staff provide the Administrative Record.

3. The Clerk will send Notice of Final Review Conference to the parties at least ten (10) days before the Conference. The Conference will be publicly noticed and should:

   - include the place, date and time of the Conference;
   - state the presentation times allowed in the Conference;
   - state evidence may be presented at the Conference;
   - if the conference will be held by committee, include a copy of the Chairman's order appointing the committee; and
   - inform the Requestor of his or her right to request a transcript of the proceedings of the Conference prepared at Requestor's expense.

4. If a party requests a transcript of the proceedings of the Conference and agrees to pay all related costs in writing, including costs for the transcript, the Clerk will schedule a court reporter for the Conference.

III. **Final Review Conference and Decision**

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     - Description of facility/site
     - Applicable statutes and regulations
     - Decision and materials relied upon in the administrative record to support the staff decision.
   - Requestor(s) will state the reasons for protesting the staff decision and may provide evidence to support amending, modifying, or rescinding the staff decision. [15 minutes] *NOTE: The burden of proof is on the Requestor(s)*
   - Rebuttal by Department staff[15 minutes]
   - Rebuttal by Requestor(s)[10 minutes]

   Note: Times noted in brackets are for information only and are superseded by times stated in the Notice of Final Review Conference or by the presiding officer.

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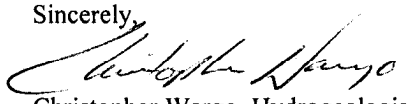
3. At any time during the conference, the officers conducting the conference may request additional information and may question the Requestor, the staff, and anyone else providing information at the conference.
4. The presiding officer, in his or her sole discretion, may allow additional time for presentations and may impose time limits on the Conference.
5. All Conferences are open to the public.
6. The officers may deliberate in closed session.
7. The officers may announce the decision at conclusion of the Conference or it may be reserved for consideration.
8. The Clerk will mail the written final agency decision (FAD) to parties within 30 days after the Conference. The written decision must explain the basis for the decision and inform the parties of their right to request a contested case hearing before the Administrative Law Court. The FAD will be sent by certified mail, return receipt requested.
9. Communications may also be sent by electronic mail, in addition to the forms stated herein, when electronic mail addresses are provided to the Clerk.

The above information is provided as a courtesy; parties are responsible for complying with all applicable legal requirements.

If you have any questions, please call Christopher Wargo at (803) 898-3799.

Sincerely,



Christopher Wargo, Hydrogeologist
Groundwater Protection Section
Bureau of Water

cc: John Bryant, SCHEC-BLWM-USTP

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

WATER MONITORING ASSESSMENT & PROTECTION DIVISION

Injection Well Operating Approval

for

Class II, III, and V.A. Injection Well(s)

Permit #SCHE03020184 Date of Issue: April 11, 2014

In accordance with R.61-72 this permit will become final unless it is appealed within fifteen (15) days of the issuance date.

In accordance with the provisions of Title 48, Chapter 1, South Carolina Code of Laws, 1976, as amended, and pursuant to receiving a Permit to Operate fifty-eight (58) Class VA-I (Aquifer Remediation) injection wells, authorization is granted to Crawford Environmental Services, Inc. to operate fifty-eight (58) Class VA-I (Aquifer Remediation) injection wells located at the Cloud's Chevron/Handy Panty #65/ University Mart Site, Richland County, SC, and are subject to the attached provisos noted for the operator.

The Class VA-I injection wells are one (1) inches in diameter and approximately thirty-five to forty-five (35-45) feet deep

Pursuant to Title 48, Chapter 1, South Carolina Code of Laws, 1976, as amended, this authorization may be rescinded if these injection wells should, at any time, contaminate, pollute, or otherwise adversely affect other water in the vicinity or for any other conditions contained in R61-87, Title 48, Chapter 1, South Carolina Code of Laws, 1976, as amended.

Expires: April 11, 2019

Date April 11, 2014

Charles Gorman, Director
Groundwater Protection Section
Bureau of Water

Provisions to the Injection Well Operating Approval
for
Underground Injection Well Permit #SCHE03020184
Cloud's Chevron/Handy Panty #65/ University Mart
Richland County, S.C.
April 11, 2014

1) Construction of new or abandonment of existing wells must be reported to the Department within thirty (30) days of completion.

2) Only ambient air, hydrogen peroxide, PetroBac (microbes) and NutriMax (nutrient mix) as described in the corrective action plan may be injected into the subsurface at the fifty-eight (58) Class VA-I (Aquifer Remediation) injection wells. Any changes in the system operation other than as presented in the UIC Permit Application must be reported to the Department prior to implementation.

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

APR 18 2014

CRAWFORD ENVIONMENTAL SERVICES
MR CHARLES F. CRAWFORD, III
15 CHURCH AVENUE SW
ROANOKE, VA 24011

UST DOCKETING 07584 246 tech

07777-180 tech

12352-115 tech

Re: **Corrective Action Award**
UST Permit # 07584, University Mart, 2367 Taylor St., Columbia, SC
Release #1 reported January 30, 1991; CA#47811
Release #2 reported April 17, 1998; CA#47812
UST Permit # 07777, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 31, 1991; CA#47813
UST Permit # 12352, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 30, 1991; CA#47814
Contract #IFB-5400007095-1/30/2014-EMW; PO # 4600322226
Richland County

Dear Mr. Crawford:

As you are aware, the Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control has determined that active corrective action is necessary at the referenced facility. On January 7, 2014, you were awarded the corrective action contract in the amount of $540,000.00, which will be funded by the State Underground Petroleum Environmental Response Bank (SUPERB) Account. Per contract requirements, the Quality Assurance Project Plan (QAPP) for the Initial Monitoring Report must be submitted within 15 days of the award date (Received March 21, 2014), the corrective action plan with a QAPP Addendum for corrective action must be submitted within 30 days of the award date (Received March 24, 2014), and the Initial Monitoring Report must be submitted within 45 days of the QAPP Addendum approval date (on or before May 25, 2014). A signed copy of the Right-of-Entry and the approved QAPP addendum for the referenced facility is enclosed. Please coordinate with each landowner for access and keep any inconveniences to the affected landowners to a minimum. Please also note that in accordance with contract specifications, copies of all plans and reports should be sent to all affected property owners listed in the bid solicitation appendix.

If you have any questions or need additional information, please contact me at (803) 898-0606 or bryantjc@dhec.sc.gov.

Sincerely,

John C. Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

enc: Cost Agreements
Signed QAPP Addendum

CRAWFORD ENVIRONMENTAL SERVICES

Section A: Project Management

A1 Title and Approval Page

Quality Assurance Project Plan
Addendum (Corrective Action Plan) to the SC DHEC UST Programmatic QAPP
For
Handy Pantry #65 / University Mart & Cloud's Chevron
UST Permit #: 07584, 07777 and 12352

1600 Two Notch Road, Columbia, SC

Prepared by:

Charles F. Crawford, III
Crawford Environmental Services
15 Church Ave., SW
Roanoke, VA 24015
SCDHEC Site Rehabilitation Contractor Certification Number: UCC-0388

Approvals

Susan Fulmer SC DHEC Project Manager	Signature	Date	3/24/14
Charles F. Crawford, III Site Rehabilitation Contractor	Signature	Date	03.21.14
Daniel J. Fisher Project Verifier	Signature	Date	03.21.14
Ashley Amick Laboratory Director Access Analytical Inc.	Signature	Date	03.21.14
Mehmet Yildrim Laboratory Director Analytical Environmental Services Inc.,	Signature	Date	03.21.14

Approved Cost Agreement 47814

Facility: 12352 CLOUDS CHEVRON
FULMERSB
PO Number:

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
22 CORRECTIVE ACTION						
	FP DISSO FREE PRODUCT DISSOLVE	1E	CAM/TI AND/OR OPERATIONAL	1.0000	540,000.00	54,000.00
		2E	FREE PRODUCT REMOVAL	1.0000	540,000.00	13,500.00
		3E	60% REDUCTION COC - REMOVAL FP	1.0000	540,000.00	13,500.00
		4E	90% REDUCTION OF COC	1.0000	540,000.00	5,400.00
		5E	100% REDUCTION OF COC	1.0000	540,000.00	5,400.00
		6E	100% RED IN COC/SYSTEM REMOVAL	1.0000	540,000.00	43,200.00
				Total Amount		135,000.00

Approved Cost Agreement 47813

Facility: 07777 CLOUDS CHEVRON
FULMERSB
PO Number:

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
22 CORRECTIVE ACTION						
	FP DISSO FREE PRODUCT DISSOLVE	1E	CAM/TI AND/OR OPERATIONAL	1.0000	540,000.00	54,000.00
		2E	FREE PRODUCT REMOVAL	1.0000	540,000.00	13,500.00
		3E	60% REDUCTION COC - REMOVAL FP	1.0000	540,000.00	13,500.00
		4E	90% REDUCTION OF COC	1.0000	540,000.00	5,400.00
		5E	100% REDUCTION OF COC	1.0000	540,000.00	5,400.00
		6E	100% RED IN COC/SYSTEM REMOVAL	1.0000	540,000.00	43,200.00
				Total Amount		135,000.00

Approved Cost Agreement 47811

Facility: 07584 UNIVERSITY MART
FULMERSB
PO Number:

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
22 CORRECTIVE ACTION						
	FP DISSO FREE PRODUCT DISSOLVE	1E	CAM/TI AND/OR OPERATIONAL	1.0000	540,000.00	54,000.00
		2E	FREE PRODUCT REMOVAL	1.0000	540,000.00	13,500.00
		3E	60% REDUCTION COC - REMOVAL FP	1.0000	540,000.00	13,500.00
		4E	90% REDUCTION OF COC	1.0000	540,000.00	5,400.00
		5E	100% REDUCTION OF COC	1.0000	540,000.00	5,400.00
		6E	100% RED IN COC/SYSTEM REMOVAL	1.0000	540,000.00	43,200.00
				Total Amount		135,000.00

Approved Cost Agreement 47812

Facility: 07584 UNIVERSITY MART
FULMERSB
PO Number:

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
22 CORRECTIVE ACTION						
	FP DISSO FREE PRODUCT DISSOLVE	1E	CAM/TI AND/OR OPERATIONAL	1.0000	540,000.00	54,000.00
		2E	FREE PRODUCT REMOVAL	1.0000	540,000.00	13,500.00
		3E	60% REDUCTION COC - REMOVAL FP	1.0000	540,000.00	13,500.00
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		6E	100% RED IN COC/SYSTEM REMOVAL	1.0000	540,000.00	43,200.00
				Total Amount		135,000.00

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

UST 181 tech DOCKETING

CRAWFORD ENVIONMENTAL SERVICES
MR CHARLES F. CRAWFORD, III
15 CHURCH AVENUE SW
ROANOKE, VA 24011

APR 30 2014

Re: **Notice to Proceed**
UST Permit # 07584, University Mart, 2367 Taylor St., Columbia, SC
Release #1 reported January 30, 1991; CA#47811
Release #2 reported April 17, 1998; CA#47812
UST Permit # 07777, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 31, 1991; CA#47813
UST Permit # 12352, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 30, 1991; CA#47814
Contract #IFB-5400007095-1/30/2014-EMW; PO # 4600322226
Corrective Action Plan received March 24, 2014
Public Notice Completed April 30, 2014
Richland County

Dear Mr. Charles Crawford:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (Agency) has reviewed the referenced documents. As required by Section 280.67 of the South Carolina Underground Storage Tank Regulations R.61-92, the UST Management Division has provided a public notice period including notice of the pending corrective actions to the surrounding landowners. No objections to the proposed actions were expressed; therefore, the Corrective Action Plan (CAP) is approved. All work must be completed in accordance with the referenced bid specifications. The UST Management Division recognizes that modifications to the CAP are usually necessary as site conditions change during implementation. If changes to the CAP are later deemed necessary to achieve the Site-Specific Target Levels in a timely manner, please notify the UST Management Division. Any changes or modifications to the CAP will not result in a change order. The required Underground Injection Control Permit is enclosed.

As stated in Section 3.5 B 5, the Corrective Action Plan is to be implemented within 30 days from receipt of this letter. As stated in Section 3.4 B 3, the Site Incentive Period will commence on the Corrective Action System Startup Date. As stated in Section 3.5 B 8, monitoring reports are to be submitted on a semi-annual basis. The first Corrective Action Status (CASE) Report will be due 90 days from the date of the CAP Implementation Report. **The details of the system installation, including injection well logs, should be documented in the CAP Implementation Report, due 60 days from this letter.**

The Agency grants pre-approval for transportation of virgin petroleum impacted soil and groundwater from the referenced site to a permitted treatment facility. There can be no spillage or leakage in transport. All investigation-derived waste (IDW) must be properly contained and labeled prior to disposal. **IDW should not be stored on-site longer than ninety (90) days.** A copy of the disposal manifest and/or acceptance letter from the receiving facility that clearly designates the quantity received must be included as an appendix to the report. If the chemicals of concern (COC) concentrations, based on laboratory analysis, are below Risk Based Screening Levels (RBSLs), please contact the project manager for approval to dispose of soil and/or groundwater on site. The State Underground Petroleum Environmental Response Bank (SUPERB) Account will not reimburse for transportation or treatment of soil and/or groundwater with concentrations below RBSLs.

All future invoices and/or other rehabilitation activities must comply with current SUPERB criteria per Section 44-2-20(2) and the referenced bid special conditions. Please reference Cost Agreement #'s 47811, 47812, 47813 and 47814 on all pay-for-performance invoices. The first pay-for-performance invoice in the amount of $216,000 (40%) may be submitted (on the invoice form available online at http://www.scdhec.gov/environment/admin/htm/EQC_forms.asp#Land) once the Underground Injection Control Permit to Operate has been issued and the treatment system has been placed into operation.

On all correspondence regarding this site, please reference UST Permit #'s 07777, 07584 and 12352. On the invoices, please reference the UST Permit Numbers and Cost Agreement Numbers. If you have questions concerning this correspondence, feel free to contact me by telephone at (803) 898-0606, by fax at (803) 898-0673, or bryantjc@dhec.sc.gov.

Sincerely,

John C. Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

enc: UIC Permit

cc: Technical File (w/enc)

D H E C
PROMOTE PROTECT PROSPER
Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

April 11, 2014

(BOW-GWPROT-CAW)
Mr. Charles F. Crawford
Crawford Environmental Services, Inc.
15 Church Ave, SW
Roanoke, VA 24011

Re: Underground Injection Control Permit #SCHE03020184M
Cloud's Chevron/Handy Panty #65/University Mart Site
Richland County

Dear Mr. Crawford:

Enclosed is a Permit to Construct for six (6) Class VA-I injection wells at the Cloud's Chevron/Handy Panty #65/University Mart Site, Richland County as requested in the permit application received March 27, 2014.

South Carolina Board of Health and Environmental Control
Guide to Board Review
Pursuant to S.C. Code Ann. § 44-1-60
Effective April 1, 2013

The decision of the South Carolina Department of Health and Environmental Control (Department) becomes the final agency decision fifteen (15) calendar days after notice of the decision has been mailed to the applicant, permittee, licensee and affected persons who have requested in writing to be notified, unless a written request for final review accompanied by a filing fee in the amount of $100 is filed with Department by the applicant, permittee, licensee or affected person.

Applicants, permittees, licensees, and affected parties are encouraged to engage in mediation during the final review process.

If the Board declines in writing to schedule a final review conference, the Department's decision becomes the final agency decision and an applicant, permittee, licensee, or affected person may request a contested case hearing before the Administrative Law Court within thirty (30) calendar days after notice is mailed that the Board declined to hold a final review conference.

I. Filing of Request for Final Review

1. A written Request for Final Review (RFR)and the required filing fee of one hundred dollars ($100) must be received by Clerk of the Board within fifteen (15)calendar days after notice of the staff decision has been mailed to the applicant, permittee, licensee, or affected persons. If the 15th day occurs on a weekend or State holiday, the RFR must be received by the Clerk on the next working day. RFRs will not be accepted after5:00 p.m.

2. RFRs shall be in writing and should include, at a minimum, the following information:

    - The grounds for amending, modifying, or rescinding the staff decision;
    - a statement of any significant issues or factors the Board should consider in deciding how to handle the matter;
    - the relief requested; and
    - a copy of the decision for which review is requested.

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South Carolina Board of Health and Environmental Control

Attention: Clerk of the Board

2600 Bull Street

Columbia, South Carolina 29201

Alternatively, RFR's may be filed with the Clerk by facsimile (803-898-3393) or by electronic mail (boardclerk@dhec.sc.gov).

4. The filing fee maybe paid by cash, certified check or credit card. If a RFR is filed by facsimile or electronic mail, the filing fee may be mailed to the Clerk of the Board and the envelope must be postmarked within the time allowed for filing a RFR.

5. If there is any perceived discrepancy in compliance with this RFR filing procedure, the Clerk should consult with the Chairman or, if the Chairman is unavailable, the Vice-Chairman. The Chairman or the Vice-Chairman will determine whether the RFR is timely and properly filed and direct the Clerk to (1) process the RFR for consideration by the Board or (2) return the RFR and filing fee to the requestor with a cover letter explaining why the RFR was not timely or properly filed. Processing an RFR for consideration by the Board shall not be interpreted as a waiver of any claim or defense by the agency in subsequent proceedings concerning the RFR.

6. If the RFR will be processed for Board consideration, the Clerk will send an Acknowledgement of RFR to the Requestor and the applicant, permittee, or licensee, if other than the Requestor.

7. The Clerk will email the RFR to all Board members for review, and all Board members will confirm receipt of the RFR to the Clerk by email. If a Board member does not confirm receipt of the RFR within twenty-four (24) hour period, the Clerk will contact the Board member and confirm receipt. If a Board member believes the RFR should be considered by the RFR Committee, he or she will respond to the Clerk's email within forty-eight (48) hours and will request further review. If no Board member requests further review of the RFR within the forty-eight (48) hour period, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant, permittee, or licensee, if not the Requestor, stating the Board will not hold a Final Review Conference. A copy of the Notice of Appeal Procedure will be included with the letter.

   NOTE: If the time periods described above end on a weekend or State holiday, the time is automatically extended to 5:00 p.m. on the next business day.

8. If the RFR is to be considered by the RFR Committee, the Clerk will forward a copy of the RFR to Department staff and Office of General Counsel. A Department response to the RFR should be provided by Department staff to the Clerk within eight (8) working days after the RFR is forwarded.

II. Final Review Conference Scheduling

1. If a Conference will be held, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant, permittee, or licensee, if not the Requestor, informing the Requestor of the determination.

2. The Clerk will request Department staff provide the Administrative Record.

3. The Clerk will send Notice of Final Review Conference to the parties at least ten (10) days before the Conference. The Conference will be publicly noticed and should:

   - include the place, date and time of the Conference;
   - state the presentation times allowed in the Conference;
   - state evidence may be presented at the Conference;
   - if the conference will be held by committee, include a copy of the Chairman's order appointing the committee; and
   - inform the Requestor of his or her right to request a transcript of the proceedings of the Conference prepared at Requestor's expense.

4. If a party requests a transcript of the proceedings of the Conference and agrees to pay all related costs in writing, including costs for the transcript, the Clerk will schedule a court reporter for the Conference.

III. **Final Review Conference and Decision**

1. The order of presentation in the Conference will, subject to the presiding officer's discretion, be as follows:

   - Department staff will provide an overview of the staff decision and the applicable law to include [10 minutes]:
     - Type of decision (permit, enforcement, etc.) and description of the program.
     - Parties
     - Description of facility/site
     - Applicable statutes and regulations
     - Decision and materials relied upon in the administrative record to support the staff decision.
   - Requestor(s) will state the reasons for protesting the staff decision and may provide evidence to support amending, modifying, or rescinding the staff decision. [15 minutes] *NOTE: The burden of proof is on the Requestor(s)*
   - Rebuttal by Department staff[15 minutes]
   - Rebuttal by Requestor(s)[10 minutes]

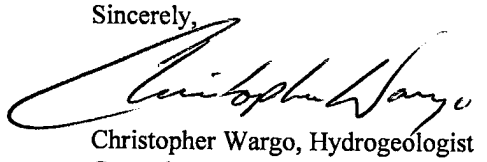
   Note: Times noted in brackets are for information only and are superseded by times stated in the Notice of Final Review Conference or by the presiding officer.

2. Parties may present evidence during the conference; however, the rules of evidence do not apply.
3. At any time during the conference, the officers conducting the conference may request additional information and may question the Requestor, the staff, and anyone else providing information at the conference.
4. The presiding officer, in his or her sole discretion, may allow additional time for presentations and may impose time limits on the Conference.
5. All Conferences are open to the public.
6. The officers may deliberate in closed session.
7. The officers may announce the decision at conclusion of the Conference or it may be reserved for consideration.
8. The Clerk will mail the written final agency decision (FAD) to parties within 30 days after the Conference. The written decision must explain the basis for the decision and inform the parties of their right to request a contested case hearing before the Administrative Law Court. The FAD will be sent by certified mail, return receipt requested.
9. Communications may also be sent by electronic mail, in addition to the forms stated herein, when electronic mail addresses are provided to the Clerk.

The above information is provided as a courtesy; parties are responsible for complying with all applicable legal requirements.

Please submit all of the well logs for the installed wells to schedule a well inspection. An inspection of the UIC System must be conducted prior to issuance of the Permit to Operate. If you have any questions, please call Christopher Wargo at (803) 898-3799.

Sincerely,



Christopher Wargo, Hydrogeologist
Groundwater Protection Section
Bureau of Water

cc: John Bryant, SCDHEC-BLWM-UST

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

WATER MONITORING ASSESSMENT & PROTECTION DIVISION

Injection Well Construction Permit
for
Class II, III, and V.A. Injection Well(s)

Permit #SCHE03020184M

Date Issued: April 11, 2014
Date Expired: April 11, 2015

For (Operator): Crawford Environmental Services, Inc.

In accordance with R.61-72 this permit will become final unless it is appealed within fifteen (15) days of the issuance date.

In accordance with provisions of Title 48, Chapter 1, South Carolina Code of Laws, 1976, as amended, permission is granted for construction of six (6) Class VA-I injection wells with a true diameter of four (4) inches, and a total depth of approximately thirty-five (35) feet located at Cloud's Chevron/Handy Panty #65/University Mart, Richland County, SC with the following provisions:

1) The operator shall submit completed SCDHEC well record forms to the Departments Water Monitoring, Assessment & Protection Division after completion of the injection wells.

2) Upon completion of construction, injection activities shall not commence prior to receiving approval from the Department to operate the injection wells.

3) When the injection wells are no longer in use, or upon request by the Department, within sixty (60) days all injection wells must be permanently abandoned in accordance with the South Carolina Well Standards and Regulations (R.61-71).

Charles Gorman, Director
Groundwater Protection Section
Bureau of Water

STATEMENT OF BASIS - UIC DRAFT PERMIT #SCHE03020184M

In accordance with the South Carolina Underground Injection Control Regulations, Section R61-87.13(J), this Statement of Basis has been prepared for the Cloud's Chevron/Handy Panty #65/University Mart Site Underground Injection Control permit application received March 27, 2014.

Ownership of the proposed injection wells is Crawford Environmental Services, Inc., 15 Church Ave, SW, Roanoke, VA 24011. The permit (UIC SCHE03020184M) is for the construction of six (6) injection wells for a corrective action system at the Cloud's Chevron/Handy Panty #65/University Mart Site. The intent of the injection wells is to inject surfactant,hydrogen peroxide, PetroBac and NutriMax into the subsurface to remediate contaminated groundwater as described in the cleanup plan dated March 20, 2014. The final permit for the underground injection proposal has been prepared based on staff review and the application of the Pollution Control Act of South Carolina and the Underground Injection Control Regulations of South Carolina.

Conditions of the permit issuance include the submittal of well records for all injection wells installed and the inspection of well construction by the Department prior to injection.

D H E C
PROMOTE PROTECT PROSPER
Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

April 11, 2014

(BOW-GWPROT-CAW)
Mr. Charles F. Crawford
Crawford Environmental Services, Inc.
15 Chruch Ave., SW
Roanoke, VA 24011

Re: Underground Injection Control Permit #SCHE03020184
Cloud's Chevron/Handy Panty #65/ University Mart Site
Richland County

Dear Mr. Crawford:

Enclosed is a Permit to Operate fifty-eight (58) Class VA-I (Aquifer Remediation) injection wells at the Cloud's Chevron/Handy Panty #65/ University Mart Site, Richland County, SC.

South Carolina Board of Health and Environmental Control
Guide to Board Review
Pursuant to S.C. Code Ann. § 44-1-60
Effective April 1, 2013

The decision of the South Carolina Department of Health and Environmental Control (Department) becomes the final agency decision fifteen (15) calendar days after notice of the decision has been mailed to the applicant, permittee, licensee and affected persons who have requested in writing to be notified, unless a written request for final review accompanied by a filing fee in the amount of $100 is filed with Department by the applicant, permittee, licensee or affected person.

Applicants, permittees, licensees, and affected parties are encouraged to engage in mediation during the final review process.

If the Board declines in writing to schedule a final review conference, the Department's decision becomes the final agency decision and an applicant, permittee, licensee, or affected person may request a contested case hearing before the Administrative Law Court within thirty (30) calendar days after notice is mailed that the Board declined to hold a final review conference.

I. Filing of Request for Final Review

1. A written Request for Final Review (RFR)and the required filing fee of one hundred dollars ($100) must be received by Clerk of the Board within fifteen (15)calendar days after notice of the staff decision has been mailed to the applicant, permittee, licensee, or affected persons. If the 15th day occurs on a weekend or State holiday, the RFR must be received by the Clerk on the next working day. RFRs will not be accepted after5:00 p.m.

2. RFRs shall be in writing and should include, at a minimum, the following information:

   - The grounds for amending, modifying, or rescinding the staff decision;
   - a statement of any significant issues or factors the Board should consider in deciding how to handle the matter;
   - the relief requested; and
   - a copy of the decision for which review is requested.

3. RFRs should be filed in person or by mail at the following address:

South Carolina Board of Health and Environmental Control

Attention: Clerk of the Board

2600 Bull Street

Columbia, South Carolina 29201

Alternatively, RFR's may be filed with the Clerk by facsimile (803-898-3393) or by electronic mail (boardclerk@dhec.sc.gov).

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If you have any questions, please call Christopher Wargo at (803) 898-3799.

Sincerely,

Christopher Wargo, Hydrogeologist
Groundwater Protection Section
Bureau of Water

cc: John Bryant, SCHEC-BLWM-USTP

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

WATER MONITORING ASSESSMENT & PROTECTION DIVISION

Injection Well Operating Approval

for

Class II, III, and V.A. Injection Well(s)

Permit #SCHE03020184 Date of Issue: April 11, 2014

In accordance with R.61-72 this permit will become final unless it is appealed within fifteen (15) days of the issuance date.

In accordance with the provisions of Title 48, Chapter 1, South Carolina Code of Laws, 1976, as amended, and pursuant to receiving a Permit to Operate fifty-eight (58) Class VA-I (Aquifer Remediation) injection wells, authorization is granted to Crawford Environmental Services, Inc. to operate fifty-eight (58) Class VA-I (Aquifer Remediation) injection wells located at the Cloud's Chevron/Handy Panty #65/ University Mart Site, Richland County, SC, and are subject to the attached provisos noted for the operator.

The Class VA-I injection wells are one (1) inches in diameter and approximately thirty-five to forty-five (35-45) feet deep

Pursuant to Title 48, Chapter 1, South Carolina Code of Laws, 1976, as amended, this authorization may be rescinded if these injection wells should, at any time, contaminate, pollute, or otherwise adversely affect other water in the vicinity or for any other conditions contained in R61-87, Title 48, Chapter 1, South Carolina Code of Laws, 1976, as amended.

Expires: April 11, 2019

Charles Gorman, Director
Groundwater Protection Section
Bureau of Water

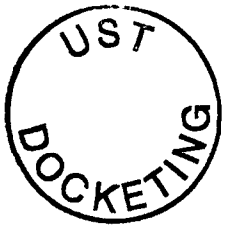
Date April 11, 2014

Provisions to the Injection Well Operating Approval
for
Underground Injection Well Permit #SCHE03020184
Cloud's Chevron/Handy Panty #65/ University Mart
Richland County, S.C.
April 11, 2014

1) Construction of new or abandonment of existing wells must be reported to the Department within thirty (30) days of completion.

2) Only ambient air, hydrogen peroxide, PetroBac (microbes) and NutriMax (nutrient mix) as described in the corrective action plan may be injected into the subsurface at the fifty-eight (58) Class VA-I (Aquifer Remediation) injection wells. Any changes in the system operation other than as presented in the UIC Permit Application must be reported to the Department prior to implementation.

CRAWFORD
ENVIRONMENTAL
SERVICES



May 16, 2014

Mr. John Bryant
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RE: Initial Monitoring Report
Handy Pantry #65/University Mart & Cloud's Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina
UST Permit # 07584 / 07777 / 12352

Dear Mr. Bryant:

Enclosed please find one copy of the Initial Monitoring Report (IMR) report prepared by Crawford Environmental Services, Inc. (CES) for the referenced site. Should you have any questions regarding the enclosed material, or if additional information is required, please feel free to contact Charlie Crawford or myself at 540.343.6256.

Best Regards,

Daniel Fisher
Division Manager

CRAWFORD
ENVIRONMENTAL
SERVICES

Initial Monitoring Report

Handy Pantry #65/University Mart & Cloud's Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina
UST Permit # 07584 / 07777 / 12352

May 16, 2014

INITIAL MONITORING REPORT

Handy Pantry #65/University Mart & Cloud's Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina
UST Permit # 07584 / 07777 / 12352

Submitted To:

South Carolina Department of Health and Environmental Control
Underground Storage Tank Program
Bureau of Land and Waste Management
2600 Bull Street
Columbia, South Carolina 29201-1708

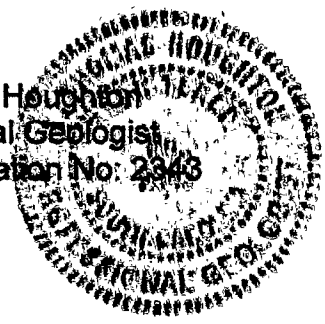
Submitted By:

Crawford Environmental Services
15 Church Avenue, SW
Roanoke, Virginia 24011
SCDHEC Site Rehabilitation Contractor Certification #: UCC-0388

May 16, 2014
CES Job Number: 7.0547

Daniel J. Fisher
Division Manager

B. Thomas Houghton
Professional Geologist
SC Registration No. 2343



CRAWFORD ENVIRONMENTAL SERVICES

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Figure 3: Concentrations of Concern Map
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Appendix B – Purge Water Disposal Manifest
Appendix C – Field Notes
Appendix D – Laboratory Data Reports and Chain of Custodies
Appendix E – QAPP Addendum Contractor Checklist

1.0 Project Information

1.1 Introduction

Crawford Environmental Services Inc., (CES) has completed an Initial Monitoring Report (IMR) for the Handy Pantry #65/University Mart and Cloud's Chevron properties. This report describes assessment activities conducted at the site in general accordance with the scope of work as defined in the QAPP Addendum Approval – dated March 20, 2014.

1.2 Facility Information:

1.2.1 Site Address

Handy Pantry #65 / University Mart / Clouds Chevron
2367 Taylor Street
Columbia, South Carolina

1.2.2 Property Owner Information

Mr. Mahesh Patel
2367 Taylor Street
Columbia, South Carolina

Mr. Andrew Diggins
1600 Block Two Notch Road
Columbia, South Carolina

1.2.3 Contractor Information

Crawford Environmental Services
15 Church Avenue, SW
Roanoke, Virginia 24011
1 (540) 343-6256
Contractor Number: UCC-0388

1.2.4 Laboratory Information

Access Analytical, Inc. (AA)
7478 Carlisle Street
Irmo, SC 29063
1 (803) 781-4243
SC Certification: 32575001

Analytical Environmental Services Inc. (AES)
3785 Presidential Pkwy.
Atlanta, GA 30340
1 (770) 457-8177
SC Certification: 98016003

1.3 Site Description

The subject property is located in a primarily commercial area of Columbia, South Carolina (Figure 1). The subject sites, operating as Handy Pantry #65/University Mart and former Cloud's Chevron, is bordered by light commercial properties in all directions. A site plan depicting pertinent features of the subject property is provided as Figure 2. Current site conditions are depicted in the photo-documentation provided as Attachment A.

2.0 Assessment Activities

2.1 Water Sample Collection

A comprehensive groundwater sampling event, including; recording equilibrated static water levels, product thicknesses, and the collection of chemical samples was completed by CES personnel on April 1, 2, and 3, 2014. CES personnel utilized an electronic water level indicator for water level measurements and an oil/water interface probe for free phase product measurements. Groundwater samples were collected from the shallow wells utilizing disposable polyethylene bailers. Groundwater elevation data is presented in Table 1.

Shallow monitoring wells were purged three to five well volumes, via pump or bailer or till dry before sampling. Bailers were lowered slowly to the top of the water column (after purging in some cases) allowed to fill one volume, then removed. Disposal Manifest for the purge water generated during the sampling event are included as Appendix B.

After collection, groundwater was transferred to the appropriate sampling containers and was then placed in coolers, maintaining 4°C, and delivered to AA. AA then transferred the samples to AES via FEDEX for laboratory analysis. Temperature, pH, specific conductance and dissolved oxygen readings were recorded during sampling. Groundwater chemical samples were submitted to Access Analytical, Inc., (AA) {SC Certification: 98016} for analysis.

2.1.1 Groundwater Sampling

Equilibrated static water levels and free-product thicknesses were recorded for monitoring MW-2, MW-3, MW-4, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-15, MW-16, MW-17, MW-18, MW-19, MW-20, MW-22, MW-23, MW-25, MW-26, MW-27, MW-28, MW-29, MW-30, MW-31, MW-32, MW-33, MW-34, MW-35, MW-36, MW-37, MW-38, MW-39, MW-40, MW-41, MW-42, MW-43, MW-44, MW-45, MW-46, MW-48, MW-51, MW-53, MW-54, MW-55, MW-56, MW-59, MW-62, MW-63, MW-67, MW-70, MW-5AR, PW-1R,

DW-1, DW-2, DW-3, DW-4, DW-5, DW-6, DW-7, AND DW-9 by CES personnel on April 1, 2, and 3, 2014.

Groundwater samples were unable to be collected from MW-1 and MW-5 due to an insufficient water column.

Groundwater samples were unable to be collected from MW-15 due to the presence of approximately 0.60-feet of free-phase petroleum.

Monitoring wells MW-49, MW-50, MW-58, MW-60, MW-65, and DW-5 were unable to be sampled due to being inaccessible, paved over, or abandoned.

Field notes from the sampling event are included as Appendix C.

Groundwater Samples were submitted for the following chemical analyses; Benzene, Toluene, Ethylbenzene, Xylenes (BTEX), Methy tert-butyl ether (MTBE), tert-Amyl Alcohol (TAA), tert-Amyl methyl ether (TAA), and tert-Butyl Alcohol (TBA) via standard method 8260. Laboratory Reports and Chain of Custody Documentation is included as Appendix D.

2.1.2 Surface Water Sampling

As part of IMR activities, CES collected a surface water sample from location SW-1 on April 2, 2014.

Table 2 presents the laboratory data for the submitted groundwater samples collected as part of this assessment. The Concentrations of Concern Map is included as Figure 3. A Groundwater Elevation Map is included as Figure 4.

3.0 Summary

During the assessment activities performed at the subject property, CES conducted a comprehensive groundwater monitoring event. The qualitative and quantitative data collected from recent assessment activities indicates the following regarding current site conditions;

1. Shallow groundwater flow at the above referenced facility was mapped with a southwestern component as inferred from the relative groundwater elevations and calculated gradients on April 1, and 2, 2014.

2. Free phase petroleum was observed in MW-15 (0.60-feet) during the April 2014 sampling event.

3. Groundwater samples collected from MW-2, MW-3, MW-9, MW-10, MW-12, MW-17, MW-18, MW-19, MW-20, MW-22, MW-23, MW-25, MW-31, MW-33, MW-35, MW-37, MW-54, MW-5AR, PW-1R, and DW-3 exhibited concentrations in excess of the Site Specific Target Levels (SSTLs). The following SSTL monitoring wells were unable to be sampled; MW-5 (Dry), MW-15 (Free Product), MW-58 (Abandoned) and MW-65 (Unable to Locate)

4. The current concentration reduction value has been calculated to be 53.29%.

5. The surface water sample collected from SW-1 exceeded the Site Specific Target Levels.

4.0 Limitations

This report is based upon a specific scope of work requested by SCDHEC. This report is intended only for the use of CES's client and anyone else specifically listed on this report. Some data contained within this report was previously collected by other consultants and is assumed to be correct. CES will not and cannot be liable for the unauthorized release by any third party. Other than as contained in this paragraph, CES makes no expressed or implied warranty as to the contents of this report.

APPENDIX A

Photo-Documentation

Initial Monitoring Report Photographic Documentation
Handy Pantry #65 / University Mart & Clouds Chevron
2367 Taylor Street
Columbia, South Carolina 29209
Page 1

Clouds Chevron # 1

View of Remedial Shed #1.

Clouds Chevron # 2

View of Remedial Shed #3.

Clouds Chevron # 3

View of Remedial Shed #3.

Clouds Chevron # 4

View of remedial trenching proximal to the southeast intersection of Two Notch Road and Forest Drive

Clouds Chevron # 5

View of remedial trenching proximal to Shed #3.

Clouds Chevron # 6

View of remedial trenching proximal to Lyons Street.

Clouds Chevron # 7

View of remedial trenching proximal to Shed #3.

Clouds Chevron # 8

View of remedial trenching proximal to the northwest corner of Two Notch Road and Forest Drive.

Clouds Chevron # 9

View of remedial trenching proximal to Shed #3.

Clouds Chevron # 10

View of remedial trenching at 2367 Taylor Street (University Mart).

APPENDIX B

Disposal Manifests

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
			TZS 4-8-14

5. Generator's Name and Mailing Address
SCDHEC
2600 Bull St
Columbia, SC
Generator's Phone: 864-436-6322

Generator's Site Address (if different than mailing address)
Petra-Tech Environmental (Agent for SCDHEC)
2435 E. North St Suite 1108-202
Greenville, SC 29615

6. Transporter 1 Company Name
Petra-Tech Environmental, LLC
U.S. EPA ID Number

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
VLS Recovery Services, LLC
305 S. Main St
Mauldin, SC 29662
Facility's Phone: 864.962.9953
U.S. EPA ID Number
SCR000762468

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non Haz/Non Regulated well water Profile # 16374 Reels Store UST16089	1	PVC Tank	55	gal	
2.	Clouds Chevron Final UST 07584/07777/10852	1	PVC tank	105	gal	
3.						
4.						

13. Special Handling Instructions and Additional Information

Zn - 6
Mn - 10

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Trever Z Slack
Signature:
Month: 4 Day: 8 Year: 14

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Trever Z. Slack
Signature:
Month: 4 Day: 8 Year: 14

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Daniel Fay
Signature:
Month: 4 Day: 8 Year: 14

GENERATION
MFL
TRANSPORTER
DESIGNATED FACILITY

DESIGNATED FACILITY'S COPY

APPENDIX G

Field Notes

[redacted]

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: Not Sampled	DATE: 4/2/14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 27	WELL SCREEN INTERVAL DEPTH: 17 feet to 27 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH (27 feet) - STATIC DEPTH TO WATER) feet) x WELL CAPACITY gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N FILTER SIZE:	
DUPLICATE COLLECTED: Y N		Filtration Equipment Type:	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (ml)	FINAL pH			

REMARKS: Not Sampled. Dry

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RPPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: MW-2	DATE: 4/2/14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 21.12	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (30 feet - 21.12 feet) X 0.16 gallons/foot = 1.42 gallons

TIME	VOLUME PURGED (Gallons)	CUMUL. VOLUME PURGED (Gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1247	—	—	24.6	—	6.6	—	151	—	1.1	—	48	—	C/C	Strong

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Trever Slack	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING DATE: 4/2/14	SAMPLING TIME: 1247
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: (Y) N	Dup BG 1251		

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCL	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO. [redacted]	SAMPLE ID: MW-3	DATE: 4/2/14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 29	WELL SCREEN INTERVAL DEPTH: 19 feet to 29 feet	STATIC DEPTH TO WATER (feet): 21.40	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (29 feet - 21.40 feet) X 0.16 gallons/foot = 1.22 gallons

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1013	—	—	25.7	—	6.0	—	273	—	0.8	—	19	—	Clr	Strong

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.66; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Trevor Clark	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4/2/14	SAMPLING TIME: 1013
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: (Y) N	Dup @ 1015		

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCl	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RPPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: MW-4	DATE: 4/2/14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 28	WELL SCREEN INTERVAL DEPTH: 18 feet to 28 feet	STATIC DEPTH TO WATER (feet): 21.31	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH (feet) 28 − STATIC DEPTH TO WATER (feet) 21.31) × WELL CAPACITY 0.16 gallons/foot = 1.07 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1809	—	—	26.1	—	6.8	—	161	—	2.3	—	86	—	clr	None

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Trever Slack	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4/2/14	SAMPLING TIME: 1809
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N)	FILTER SIZE:
DUPLICATE COLLECTED: Y		Filtration Equipment Type:	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCl	—	—	8260B	B	—

REMARKS

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO. [redacted]	SAMPLE ID	DATE: 4/2/14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 26	WELL SCREEN INTERVAL DEPTH: 16 feet to 26 feet	STATIC DEPTH TO WATER (feet): DRY	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (26 feet - feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS: DRY. Not Sampled

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RPPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: MW-6	DATE: 4/3/14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 22.61	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH 30 feet − STATIC DEPTH TO WATER 22.61 feet) × WELL CAPACITY 0.16 gallons/foot = 1.18 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
0849	—	—	24.1	—	6.2	—	131	—	1.1	—	49	—	Clr	mod

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Trever Slack	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING DATE: 4/3/14	SAMPLING TIME: 0849
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCl	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: MW-7	DATE: 4/3/14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 23.02	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH (30 feet) - STATIC DEPTH TO WATER (23.02 feet)) X WELL CAPACITY (0.16 gallons/foot) = 1.12 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1131	—	—	23.1	—	6.3	—	104	—	1.6	—	19	—	Clr	none

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Trever Slack	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4/3/14	SAMPLING TIME: 1131
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCL	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: MW-8	DATE: 4/3/14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 28	WELL SCREEN INTERVAL DEPTH: 18.5 feet to 28 feet	STATIC DEPTH TO WATER (feet): 19.95	PURGE PUMP TYPE OR BAILER: T

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (28 feet - 19.95 feet) X 0.16 gallons/foot = 1.29 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1209	—	—	19.9	—	6.3	—	121	—	1.9	—	81	—	clr	none

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Trever Slack	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4/3/14	SAMPLING TIME: 1209
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCl	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RPPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: MW-9	DATE: 4-2-14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 20.60	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
= (30 feet − 20.60 feet) X 0.16 gallons/foot = 1.50 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
15:00	—	—	26.9	—	6.0	—	401	—	1.0	—	207	—	clay	strong

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING DATE: 4-2-14	SAMPLING TIME: 15:00
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCl	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: MW-10	SAMPLE ID: MW-10	DATE: 4-1-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 28	WELL SCREEN INTERVAL DEPTH: 18 feet to 28 feet	STATIC DEPTH TO WATER (feet): 17.69	PURGE PUMP TYPE OR BAILER: P

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH (feet) 28 − STATIC DEPTH TO WATER (feet) 17.69) X WELL CAPACITY 0.16 gallons/foot = 1.65 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1428	—	—	21.2	—	7.0	—	663	—	0.7	—	209	—	cldy	strong
1442	2.0	2.0	22.4	1.8	6.9	0.2	661	2			104	105	sl cldy	↓
1502	2.0	4.0	22.7	3	6.8	0	622	39			12	92	clr	↓
1517	2.0	6.0	22.6	1	6.7	0.1	634	12			8.6	3.4	clr	↓

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Wolfe	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4-1-14	SAMPLING TIME: 15:17
PUMP OR TUBING DEPTH IN WELL (feet): 22	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40ml	HCL	—	—	826013	RFPP	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: MW-11	DATE: 4-2-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: ? feet to ? feet	STATIC DEPTH TO WATER (feet): 18.61	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH (feet) - STATIC DEPTH TO WATER (feet)) x WELL CAPACITY (gallons/foot) = (30 - 18.6) x 0.16 = 1.82 gallons

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1420	—	—	24.6	—	6.8	—	220	—	1.1	—	41	—	clr	mild
1440	3.5	3.5	23.1	1.5	6.5	0.3	194	26			186	145	sl clly	↓
1451	1.5	5.0	22.9	0.2	6.4	0.1	176	18			21	165	clr	
1501	2.0	7.0	22.9	0	6.4	0	171	5			9.8	11.2	clr	
1520	1.5	8.5	22.9	0	6.3	0.1	172	1			9.4	0.4	clr	↓

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4-2-14	SAMPLING TIME: 15:20
PUMP OR TUBING DEPTH IN WELL (feet): 24	TUBING MATERIAL CODE: PE	FIELD FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCL	—	—	8260B	RFPP	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: MW12	DATE: 4-2-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 24.65	WELL SCREEN INTERVAL DEPTH: ? feet to ? feet	STATIC DEPTH TO WATER (feet): 4.20	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH (feet) 24.65 - STATIC DEPTH TO WATER (feet) 4.20) X WELL CAPACITY (gallons/foot) 0.16 = 3.27 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1450	—	—	22.7	—	6.1	—	345	—	1.3	—	46	—	clr	mod
1505	3.0	3.0	22.4	0.3	6.4	0.3	301	44			62	16	clr	↓
1518	2.0	5.0	22.3	0.1	6.2	0.2	296	5			11	51	clr	
1528	2.5	7.5	22.5	0.2	5.9	0.3	294	2			10	1	clr	
1535	2.5	10.0	22.4	0.1	5.8	0.1	297	3			9.8	0.2	clr	
1549	3.0	13.0	22.3	0.1	5.8	0	295	2			9.5	0.3	clr	↓

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Carson Warlick	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING DATE: 4-2-14	SAMPLING TIME: 15:49
PUMP OR TUBING DEPTH IN WELL (feet): 20.0	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCl	—	—	8260B	RFPP	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: MW-13	DATE: 4-1-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30.10	WELL SCREEN INTERVAL DEPTH: ? feet to ? feet	STATIC DEPTH TO WATER (feet): 11.13	PURGE PUMP TYPE OR BAILER: P

WELL VOLUME PURGED: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY
= (30.10 feet - 11.13 feet) x 0.16 gallons/foot = 3.03 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1432	—	—	25.0	—	6.2	—	167	—	2.4	—	21	—	clr	none
1448	3.5	3.5	24.0	1.0	6.0	0.2	141	26			49	28	clr	"
1500	1.5	5.0	23.8	0.2	6.0	0	139	2			11	38	clr	"
1510	2.5	7.5	23.9	0.1	5.9	0.1	136	3			10.5	0.5	clr	"
1527	2.0	9.5	23.9	0	6.0	0.1	138	2			9.8	0.7	clr	↓

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Weslick	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING DATE: 4-1-14	SAMPLING TIME: 1532
PUMP OR TUBING DEPTH IN WELL (feet): 20.0	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCL	—	—	8260B	RFPP	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

.GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID:	DATE: 4/1/14

PURGING DATA

FP - no sample DTP 16.16

WELL DIAMETER (inches):	Total Well Depth (feet): 25	WELL SCREEN INTERVAL DEPTH: 15 feet to 25 feet	STATIC DEPTH TO WATER (feet): 16.0	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (25 feet - feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 6" = 1.02; 8" = 1.47; 12" = 6.88

SAMPLING DATA

SAMPLED BY (PRINT):	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS: 0.60 feet Free-product.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: MW-6	DATE: 4-2-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 25	WELL SCREEN INTERVAL DEPTH: 15 feet to 25 feet	STATIC DEPTH TO WATER (feet): 17.54	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (25 feet - 17.54 feet) X 0.16 gallons/foot = 1.19 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (SU)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
14:47	—	—	26.6	—	6.2	—	360	—	1.9	—	92	—	Clr	none

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING DATE: 4-2-14	SAMPLING TIME: 14:47
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCl	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: MW-17	SAMPLE ID: MW-17	DATE: 4/2/14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 22.00	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (30 feet - 22.00 feet) X 0.16 gallons/foot = 1.28 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
14:50	—	—	24.7	—	6.9	—	275	—	1.0	—	82	—	clr	none

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4-2-14	SAMPLING TIME: 14:50
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCL	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: MW18	DATE: 4-2-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 23.68	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) × WELL CAPACITY
= (30 feet − 23.68 feet) × 0.16 gallons/foot = 1.01 gallons

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
13:49	—	—	25.0	—	5.6	—	182	—	0.4	—	341	—	clr	strong

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING DATE: 4-2-14	SAMPLING TIME: 13:49
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCL	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: MW-19	DATE: 4/3/14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 23.33	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (30 feet - 23.33 feet) X 0.16 gallons/foot = 1.07 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (SU)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1435	—	—	23.4	—	6.3	—	194	—	0.8	—	164	—	slcldy	mod

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Trevor Slack	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4/3/14	SAMPLING TIME: 1435
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCl	—	—	826013	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: MW-20	DATE: 4/3/14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 25	WELL SCREEN INTERVAL DEPTH: 15 feet to 25 feet	STATIC DEPTH TO WATER (feet): 21.95	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (25 feet - 21.95 feet) X 0.16 gallons/foot = 0.49 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1315	—	—	23.4	—	6.1	—	136	—	0.7	—	71	—	Clr	mod

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 6" = 1.02; 8" = 1.47; 12" = 5.89

SAMPLING DATA

SAMPLED BY (PRINT): Trever Slack	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4/3/14	SAMPLING TIME: 1315
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: (Y) DUP			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCl	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: MW-22	SAMPLE ID: MW-22	DATE: 4/3/14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 21.11	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH (feet) - STATIC DEPTH TO WATER (feet)) x WELL CAPACITY
= (30 feet - 21.11 feet) x 0.16 gallons/foot = 1.42 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1244	—	—	24.8	—	6.6	—	241	—	1.4	—	37	—	Clr	mod.

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Trever Slack	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4/3/14	SAMPLING TIME: 1244
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINER	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (ml)	FINAL pH			
	2	CG	40ml	HCL	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: MW-23	DATE: 4/3/14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 23.65	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH 30 feet - STATIC DEPTH TO WATER 23.65 feet) x WELL CAPACITY 0.16 gallons/foot = 1.02 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (SU)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1425	—	—	24.2	—	6.5	—	201	—	1.9	—	96	—	clr	mod

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 6" = 1.02; 8" = 1.47; 12" = 6.88

SAMPLING DATA

SAMPLED BY (PRINT): Trevor Block	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING DATE: 4/3/14	SAMPLING TIME: 1435
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCL	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: MW-2-S	DATE: 4-1-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 25.6	WELL SCREEN INTERVAL DEPTH: ? feet to ? feet	STATIC DEPTH TO WATER (feet): 19.71	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH (feet) - STATIC DEPTH TO WATER (feet)) x WELL CAPACITY (gallons/foot) = (25.6 - 19.71) x 0.16 = 0.94 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
9:12	—	—	18.8	—	6.6	—	491	—	1.2	—	496	—	cldy	strong

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Werlick	SAMPLER(S) SIGNATURE(S): C Wer	SAMPLING DATE: 4-1-14	SAMPLING TIME: 9:12
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCL	—	—	8260B	13	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RPPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO. [redacted]	SAMPLE ID: MW-26	DATE: 4/3/14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30'	WELL SCREEN INTERVAL DEPTH: ? feet to ? feet	STATIC DEPTH TO WATER (feet): 20.01	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY
= (30 feet - 20.01 feet) x 0.16 gallons/foot = 1.60 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1155	—	—	20.9	—	7.0	—	191	—	1.2	—	296	—	Cldy	mod

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 6" = 1.02; 8" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Trevor Slack	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING DATE: 4/3/14	SAMPLING TIME: 1155
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (ml)	FINAL pH			
	2	CG	40ml	HCl	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RPPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: MW-27	DATE: 4-1-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet): 14.65	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH (30 feet) − STATIC DEPTH TO WATER (14.65 feet)) × WELL CAPACITY (0.16 gallons/foot) = 2.46 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
0819	—	—	19.3	—	6.7	—	400	—	2.3	—	86	—	clr	none
0831	3.0	3.0	18.3	1.0	6.3	0.4	387	13			31	55	clr	↓
0848	2.0	5.0	18.6	0.3	6.4	0.1	386	1			9.4	21.6	clr	↓
0907	2.5	7.5	18.6	0	6.3	0.1	382	4			9.6	0.2	clr.	↓

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING DATE: 4-1-14	SAMPLING TIME: 9:08
PUMP OR TUBING DEPTH IN WELL (feet): 19.0	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N)	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)		Filtration Equipment Type:	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCl	—	—	8260B	RSPP	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: MW-28	DATE: 4/1/14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet): 15.63	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH (30 feet) - STATIC DEPTH TO WATER (15.63 feet)) x WELL CAPACITY (0.16 gallons/foot) = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
9:03	—	—	18.6	—	6.3	—	181	—	2.8	—	188	—	clr	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 6" = 1.02; 8" = 1.47; 12" = 6.66

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING DATE: 4-1-14	SAMPLING TIME: 9:03
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCl	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RPPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: MW-20	DATE: 4-1-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 16 feet to 30 feet	STATIC DEPTH TO WATER (feet): 15.51	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH 30 feet - STATIC DEPTH TO WATER 15.51 feet) x WELL CAPACITY 0.16 gallons/foot = 2.46 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
0943	—	—	19.5	—	5.8	—	174	—	3.5	—	48	—	clr	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING DATE: 4-1-14	SAMPLING TIME: 9:43
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCL	—	—	8260B	PP	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO. [redacted]	SAMPLE ID MW-30	DATE 4-1-14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet): 20.50	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH (feet) 30 - STATIC DEPTH TO WATER (feet) 20.50) X WELL CAPACITY 0.16 gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
10:07	—	—	22.3	—	6.4	—	318	—	3.8	—	56	—	clr	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING DATE: 4-1-14	SAMPLING TIME: 10:07
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINER S	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCL	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: MW-3	DATE: 4-2-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 24.41	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH (35) feet - STATIC DEPTH TO WATER (24.41) feet) X WELL CAPACITY (0.16) gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
13:56	—	—	23.0	—	6.0	—	123	—	2.9	—	110	—	SLCLDY	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4-2-14	SAMPLING TIME: 13:56
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	C6	40ml	HCl	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloude Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: MW-32	DATE: 4-2-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet): 21.28	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGED: 1 WELL VOLUME = (TOTAL WELL DEPTH (30 feet) – STATIC DEPTH TO WATER (21.28 feet)) X WELL CAPACITY (0.16 gallons/foot) = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
10:15	—	—	22.8	—	5.5	—	218	—	2.1	—	195	—	clay	slight

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4-2-14	SAMPLING TIME: 10:15
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N)	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)		Filtration Equipment Type:	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINER S	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCl	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO. [redacted]	SAMPLE ID: MW-33	DATE: 4-1-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 23.18	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (35 feet - 23.18 feet) X 0.16 gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
10:24	—	—	24.1	—	6.3	—	274	—	2.0	—	383	—	cldy	strong

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4-1-14	SAMPLING TIME: 10:24
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (ml)	FINAL pH			
	2	CG	40ml	HCl	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO. ~~MW-34~~	SAMPLE ID MW-34	DATE 4-1-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 24.06	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (35 feet - 24.06 feet) X 0.16 gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
10:30	—	—	23.6	—	5.2	—	128	—	2.7	—	991	—	cldy	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Camaron Warlick	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4-1-14	SAMPLING TIME: 10:30
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCL	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron		SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC
WELL NO: [redacted]	SAMPLE ID: MW-35	DATE: 4-1-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 21.35	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY
= (35 feet - 21.35 feet) x 0.16 gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1035	—	—	24.2	—	5.8	—	197	—	1.8	—	501	—	cldy	Y

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.66; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING DATE: 4-1-14	SAMPLING TIME: 10:55
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (ml)	FINAL pH			
	2	CG	40ml	HCL	—	—	8260B	—	B

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC
WELL NO: [redacted]	SAMPLE ID:
	DATE: 4-1-14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 27.84	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH (feet) - STATIC DEPTH TO WATER (feet)) X WELL CAPACITY (gallons/foot) = gallons

= (35 feet - feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
10:19	—	—	23.4	—	5.9	—	220	—	2.6	—	86	—	Slcldy	Slight

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Jerlick	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4-1-14	SAMPLING TIME: 10:19
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)		Filtration Equipment Type:	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40mL	HCl	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID:	DATE: 4-1-14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 22.24	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH (feet) 35 – STATIC DEPTH TO WATER (feet)) X WELL CAPACITY (gallons/foot) = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
11:25	–	–	23.6	–	4.9	–	127	–	2.60	–	301	–	cldy	Slight

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 6" = 1.02; 8" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Walick	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4-1-14	SAMPLING TIME: 11:25
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (ml)	FINAL pH			
	2	CG	40mL	HCl	–	–	8260B	B	–

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO [redacted]	SAMPLE ID:	DATE: 4-1-14

PURGING DATA

WELL DIAMETER (inches)	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 24.6	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (35 feet - feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
11:35	-	-	24.7	-	4.8	-	118	-	3.72	-	198	-	cldy	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Cameron Warlick		4-1-14	11:35

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)		Filtration Equipment Type:	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mV/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
-	2	CG	40mL	HCL	-	-	8260B	B	-

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; BSP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: MW-39	SAMPLE ID:	DATE: 4-2-14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 25.59	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH 35 feet – STATIC DEPTH TO WATER feet) X WELL CAPACITY gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
12:13	–	–	23.6	–	5.9	–	49	–	2.4	–	88	–	Slight	Slight

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4-2-14	SAMPLING TIME: 12:13
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N FILTER SIZE: Filtration Equipment Type:	
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
–	2	CG	40mL	HCl	–	–	8260B	B	–

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]-40	SAMPLE ID:	DATE: 4-2-14

PURGING DATA

WELL DIAMETER (inches)	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 25.29	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (35 feet - feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
12:18	—	—	23.0	—	6.0	—	154	—	2.1	—	245	—	clear	Y

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Spencer Warlick	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4-2-14	SAMPLING TIME: 12:19
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
—	2	CG	40ml	HCl	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [illegible]	SAMPLE ID:	DATE: 4-1-14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 24.70	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH (35 feet) – STATIC DEPTH TO WATER (feet)) X WELL CAPACITY (gallons/foot) = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
K:27	—	—	24.9	—	6.9	—	321	—	2.7	—	401	—	clr	Slight

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING DATE: 4-1-14	SAMPLING TIME: 15:27
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N FILTER SIZE:	Filtration Equipment Type:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
—	2	CG	40mL	HCL	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID:	DATE: 4-1-14

PURGING DATA

WELL DIAMETER (inches)	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 25.35	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGED: 1 WELL VOLUME = (TOTAL WELL DEPTH (35 feet) – STATIC DEPTH TO WATER (feet)) X WELL CAPACITY (gallons/foot) = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
11:56	–	–	24.7	–	4.8	–	73	–	2.9	–	108	–	Cldy	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Wachlick	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING DATE: 4-1-14	SAMPLING TIME: 11:56
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
–	2	CG	40ml	HCL	–	–	8260B	B	–

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID:	DATE: 4-2-14

PURGING DATA

WELL DIAMETER (inches)	Total Well Depth (feet): 40	WELL SCREEN INTERVAL DEPTH: 20 feet to 40 feet	STATIC DEPTH TO WATER (feet): 24.00	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (40 feet - feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
14:28	-	-	26.4	-	4.7	-	124	-	3.6	-	55	-	Clr	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Werlick	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4-2-14	SAMPLING TIME: 14:28
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (ml)	FINAL pH			
-	2	CG	40ml	HCL	-	-	8260B	B	-

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PS = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; BSP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID:	DATE: 4-1-14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 31	WELL SCREEN INTERVAL DEPTH: 16 feet to 31 feet	STATIC DEPTH TO WATER (feet): 24.42	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH (31 feet) – STATIC DEPTH TO WATER (feet)) X WELL CAPACITY (gallons/foot) = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
14:20	–	–	25.2	–	4.6	–	111	–	3.2	–	88	–	SLCldy	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4-1-14	SAMPLING TIME: 14:20
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40mL	HCL	–	–	8260B	B	

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID:	DATE: 4-1-14

PURGING DATA

WELL DIAMETER (inches)	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet): 21.22	PURGE PUMP TYPE OR BAILER

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (30 feet - feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB. IDITY (NTU)	Δ	COLOR	ODOR
14:22	-	-	24.3	-	4.7	-	101	-	3.3	-	56	-	clr	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4-1-14	SAMPLING TIME: 14:22
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40mL	HCl	-	-	8260B	B	

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO. [redacted]	SAMPLE ID	DATE: 4-1-14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 28.56	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (35 feet - feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
14:30	-	-	26.9	-	6.9	-	221	-	3.8	-	171	-	cldy	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING DATE: 4-1-14	SAMPLING TIME: 14:30
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N FILTER SIZE: Filtration Equipment Type:	
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40mL	HCl	-	-	8260B	B	

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID:	DATE: 4-2-14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet): 19.70	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGED: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (30 feet - feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
14:38	-	-	25.4	-	6.4	-	233	-	9.0	-	33	-	clr	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING DATE: 4-2-14	SAMPLING TIME: 14:39
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
-	2	CG	40ml	HCl	-	-	8260B	B	-

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID:	DATE:

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet) 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (30 feet - feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet)	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS: Gate Locked. Not accessed

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO. [redacted]	SAMPLE ID:	DATE:

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (30 feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS: Gate Locked.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID	DATE: 4-2-14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 21.23	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (35 feet - feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
15:25	—	—	25.8	—	5.7	—	94	—	3.3	—	91	—	Clr	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 6" = 1.02; 8" = 1.47; 12" = 6.69

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING DATE: 4-2-14	SAMPLING TIME: 15:25
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (ml)	FINAL pH			
—	2	CG	40ml	HCl	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID:	DATE: 4/3/14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 20	WELL SCREEN INTERVAL DEPTH: 5 feet to 20 feet	STATIC DEPTH TO WATER (feet): 9.60	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (20 feet - 9.60 feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
0851	-	-	14.3	-	7.1	-	186	-	3.6	-	19	-	Clr	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Trevor Slack	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4/3/14	SAMPLING TIME: 0851
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)		Filtration Equipment Type:	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
-	2	CG	40mL	HCL	-	-	8260B	B	-

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RPPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID:	DATE: 4-1-14

PURGING DATA

WELL DIAMETER (inches)	Total Well Depth (feet): 20	WELL SCREEN INTERVAL DEPTH: 5 feet to 20 feet	STATIC DEPTH TO WATER (feet): 11.31	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH (feet) - STATIC DEPTH TO WATER (feet)) X WELL CAPACITY (gallons/foot) = gallons

= (20 feet - feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
15:45	-	-	24.0	-	6.0	-	227	-	3.3	-	50	90	Clr	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Carolina Worldwide	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4-1-14	SAMPLING TIME: 15:45
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
-	2	CG	40mL	HCl	-	-	8260B	B	

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID:	DATE: 4/3/14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 14	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 2.51	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (14 feet - 2.51 feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
0935	—	→	21.9	—	6.3	—	138	—	3.4	—	220	—	Slcly	diesel
0946	2.5	2.5	20.7	0.7	5.7	0.4	133	5			180	40	Slclky	
1000	3.0	5.5	20.3	0.4	5.7	0.2	134	1			101	79	Slclky	
1009	2.5	8.0	19.6	0.7	5.8	0.1	137	3			41	60	clr	
1015	3.0	11.0	19.5	0.1	5.8	0.0	139	2			9	32	clr	↓

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Trevor Z. Slack	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4/3/14	SAMPLING TIME: 1019
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
—	2	CG	40mL	HCl	—	—	8260B	B	—

REMARKS: Broken well Lid/missing bolts.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RPPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID:	DATE: 4/3/14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 20	WELL SCREEN INTERVAL DEPTH 5 feet to 20 feet	STATIC DEPTH TO WATER (feet): 5.12	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH (20 feet) - STATIC DEPTH TO WATER (feet)) X WELL CAPACITY (gallons/foot) = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
0941	—	—	24.3	—	6.18	—	160	—	3.7	—	33	—	clr	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Travis Slack	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4/3/14	SAMPLING TIME: 0941
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40 mL	HCl	—	—	8260B	B	

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RPPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO. [redacted]-58	SAMPLE ID:	DATE: 4-2-14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 19	WELL SCREEN INTERVAL DEPTH: 4 feet to 19 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (19 feet - feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT):	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS: Not Sampled. Abandoned.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID:	DATE:

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 17	WELL SCREEN INTERVAL DEPTH: 2 feet to 17 feet	STATIC DEPTH TO WATER (feet): 6.05	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (17 feet - feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1555	-	-	21.0	-	6.4	-	435	-	3.1	-	88	-	SLCldy	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Trevor Slack	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4/2/14	SAMPLING TIME: 1555
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40mL	HCL	-	-	8260B	B	

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID:	DATE:

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 14	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH 14 feet – STATIC DEPTH TO WATER feet) X WELL CAPACITY gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT):	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS: Not Located

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID:	DATE: 4-1-14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 22.32	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (35 feet - feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
13:38	-	-	23.1	-	5.0	-	238	-	2.8		405		cldy	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING DATE: 4-1-14	SAMPLING TIME: 13:38
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40mL	HCl	-	-	8260B	B	

REMARKS

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID:	DATE: 4-2-14

PURGING DATA

WELL DIAMETER (inches)	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 23.67	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (35 feet - feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
13:27	—	—	26.2	—	5.2	—	221	—	3.5	—	48	—	Clr	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4-2-14	SAMPLING TIME: 13:27
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINER S	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40ml	HCl	—	—	8260B	B	—

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID:	DATE:

PURGING DATA Not Found - New Construction

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (35 feet - feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS: Not Located. Likely Paved over during Construction

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID:	DATE: 4-1-14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 24.44	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH (35 feet) - STATIC DEPTH TO WATER (feet)) X WELL CAPACITY (gallons/foot) = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
12:42	-	-	21.7	-	5.5	-	111	-	3.16	-	506	-	clear	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4-1-14	SAMPLING TIME: 12:42
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40mL	HCl	-	-	8260B	B	-

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID:	DATE: 4/2/14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 24.70	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
= (35 feet − feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
13:01	–	–	24.3	–	5.9	–	137	–	2.4	–	28	–	clr	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4-2-14	SAMPLING TIME: 13:01
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	7	CG	40mL	HCl	–	–	8260B		

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID:	DATE: 4-1-14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 28	WELL SCREEN INTERVAL DEPTH: 18 feet to 28 feet	STATIC DEPTH TO WATER (feet): 21.24	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH 28 feet – STATIC DEPTH TO WATER feet) X WELL CAPACITY gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
9:30	–	–	20.7	–	6.8	–	987	–	1.8	–	203	–	Strong	Strong

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING DATE: 4-1-14	SAMPLING TIME: 9:30
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40mL	HCl	–	–	8260B		

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: MW-1R	SAMPLE ID:	DATE: 4/3/14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 50	WELL SCREEN INTERVAL DEPTH: 45 feet to 50 feet	STATIC DEPTH TO WATER (feet): 23.11	PURGE PUMP TYPE OR BAILER: P

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH (60 feet) – STATIC DEPTH TO WATER) feet x WELL CAPACITY gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1227	—	—	25.1	—	6.2	—	108	—	1.3	—	220	—	SLCLY	Y
1240	4.0	4.0	25.5	0.4	5.8	0.4	111	3			153	67	SLCLY	
1251	2.5	6.5	24.0	1.5	5.6	0.2	86	25			101	52	SLCLY	
1306	3.0	9.5	24.2	0.2	5.5	0.1	77	9			85	16	SLCLY	
1314	2.0	11.5	24.3	0.1	5.8	0.3	75	2			33	52	Clear	
1326	3.0	14.5	24.2	0.1	5.8	0.0	73	2			21	12	Clear	
1335	3.5	18.0	24.2	0.0	5.9	0.1	75	2			7	14	clear	

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Trevor Sluck	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4/3/14	SAMPLING TIME: 1335
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: (Y) N	DUP		

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	LG	40mL	HCL	—	—	8260B	B	

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: DW-1	DATE: 4/2/14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 70	WELL SCREEN INTERVAL DEPTH: 65 feet to 70 feet	STATIC DEPTH TO WATER (feet): 45.00	PURGE PUMP TYPE OR BAILER: P

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (70 feet - 45.00 feet) X 0.16 gallons/foot = 4.00 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1405	—	—	25.7		6.7	—	71	-	3.2	-	741	—	cldy	N
1414	5.5	5.5	26.0	0.3	6.9	0.2	85	14			496		cldy	N

DRY

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Trevor Slack	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4/2/14	SAMPLING TIME: 1420
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40mL	HCL	—	—	8260B	B	

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID: DW-2	DATE: 4/2/14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 75	WELL SCREEN INTERVAL DEPTH: 70 feet to 75 feet	STATIC DEPTH TO WATER (feet): 44.34	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (75 feet - 44.34 feet) X 0.16 gallons/foot = 4.91 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1440	—	—	25.2	—	7.0	—	155	—	3.2	—	62		clr	N
1458	6.5	6.5	26.0	0.8	7.2	0.2	135	20			601		cldy	N

Dry

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Trevor Sloat	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4/2/14	SAMPLING TIME: 1501
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40mL	HCl	—	—	8260B	B	

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO. [redacted]	SAMPLE ID:	DATE: 4/3/14

PURGING DATA

WELL DIAMETER (inches)	Total Well Depth (feet): 52	WELL SCREEN INTERVAL DEPTH 47 feet to 52 feet	STATIC DEPTH TO WATER (feet): 24.40	PURGE PUMP TYPE OR BAILER: P

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH 52 feet - STATIC DEPTH TO WATER 24.40 feet) x WELL CAPACITY 0.16 gallons/foot = 4.42 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1506	5	—	26.1	—	6.6	—	75	—	2.0	—	18	[illegible]	clr	Y
1515	5.0	5.0	27.2	1.1	7.2	0.6	101	26			491	473	cldy	
1522	2.0	7.0	26.8	0.4	6.5	0.7	111	10			204	287	cldy	
1530	2.5	9.5	25.7	1.1	6.4	0.1	88	23			113	91	sl cldy	
1539	3.0	12.5	25.6	0.1	6.4	0.0	87	1			72	41	clr	
1551	2.5	15.0	25.6	0.0	6.5	0.1	87	0			16	56	clr	
1600	2.0	17.0	25.6	0.0	6.6	0.1	88	1			9.0	7	clr	

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Trever Sluck	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4/3/14	SAMPLING TIME: 1601
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N	FILTER SIZE:
DUPLICATE COLLECTED: Y		Filtration Equipment Type:	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	1	CG	40mL	HCl	—	—	8260B	B	

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO. [redacted]	SAMPLE ID: DW-4	DATE: 4/3/14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 110	WELL SCREEN INTERVAL DEPTH: 105 feet to 110 feet	STATIC DEPTH TO WATER (feet): 44.60	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH 110 feet - STATIC DEPTH TO WATER) 44.60 feet X WELL CAPACITY 0.16 gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1240	—	—	22.8	—	7.4	+	100	—	2.9	—	61	—	clr	Slight
1252	4.5	4.5	24.2	0.4	7.9	0.5	149	49			892	831	cldy	Slight
1300	2.5	8.0	24.9	0.7	7.9	0.5	145	4			596	296	cldy	N
1311	3.0	11.0	25.3	0.4	8.1	0.7	133	12			184	412	slcldy	N
1321	2.0	13.0	25.0	0.3	7.9	0.2	130	3			100	84	slcldy	N
1328	2.5	15.5	25.0	0.0	7.5	0.4	88	42			32	68	clr	Slight
1337	4.0	19.5	25.1	0.1	7.3	1.2	87	1			16	16	clr	N
1351	3.5	23.0	25.1	0.0	7.1	0.2	88	1			12	4	clr	N
1405	4.0	27.0	25.2	0.1	7.1	0.0	88	0			8.4	3.6	clr	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Trevor Slack	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4/3/14	SAMPLING TIME: 1409
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40mL	HCL	—	—	8260B	B	

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO. [redacted]	SAMPLE ID:	DATE: 4-1-14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 70	WELL SCREEN INTERVAL DEPTH 65 feet to 70 feet	STATIC DEPTH TO WATER (feet): 44.22	PURGE PUMP TYPE OR BAILER: P

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH 70 feet – STATIC DEPTH TO WATER feet) X WELL CAPACITY 0.16 gallons/foot = 5 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1050	—	—	22.4	—	6.6	—	104	—	2.5	—	4000	—	cldy	Y
1100	5.0	5.0	22.6	0.2	7.0	0.4	1,114	10			346	10%	cldy	Y

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

Dry

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4-1-14	SAMPLING TIME: 11:00
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40mL	HCl	—	—	8260B	B	

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: [redacted]	SAMPLE ID:	DATE: 4-1-14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 70	WELL SCREEN INTERVAL DEPTH: 65 feet to 70 feet	STATIC DEPTH TO WATER (feet): 45.86	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) x WELL CAPACITY
= (70 feet - 45.86 feet) x 0.16 gallons/foot = 3.86 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
12:03	—	—	28.3	—	7.0	—	125	—	3.7	—	>1000	—	cldy	N
12:07	6.0	6.0	24.4	3.9	7.4	0.4	123	2			263	737	cldy	N
12:10	4.5	10.5	23.0	1.4	8.2	0.8	124	1			118	145	sl cldy	N
12:12	4.0	14.5	23.3	0.3	8.1	0.1	124	0			10	108	clr	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 6" = 1.02; 8" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4-1-14	SAMPLING TIME: 1918
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40mL	HCl	—	—	8260B	B	

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO [redacted]	SAMPLE ID: DW-7	DATE: 1517

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 55	WELL SCREEN INTERVAL DEPTH: 50 feet to 55 feet	STATIC DEPTH TO WATER (feet): 24.00	PURGE PUMP TYPE OR BAILER: P

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH (55 feet) – STATIC DEPTH TO WATER (feet)) X WELL CAPACITY (gallons/foot) = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1420	—	—	25.1	—	6.2	—	201	—	3.5	—	4000	—	clay	N
1431	5.0	5.0	24.8	0.3	7.2	1.0	141	60			173	827	silty	N
1440	3.5	8.5	24.6	0.2	7.5	0.3	135	6			48	125	clr	N
1451	4.0	12.5	24.6	0.0	7.5	0.0	120	15			22	26	clr	N
1506	4.0	16.5	24.6	0.0	7.5	0.0	121	1			13	9	clr	N
1515	4.5	21.0	24.7	0.1	7.5	0.0	120	1			8.9	4.1	clr	N

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Trevor Black	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4/3/14	SAMPLING TIME: 1617
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)		Filtration Equipment Type:	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40mL	HCl	—	—	8260B	B	

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron		SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC
WELL NO [redacted]	SAMPLE ID	DATE:

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 55	WELL SCREEN INTERVAL DEPTH: 50 feet to 55 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (55 feet - feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS: Not sampled. Abandoned,

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ± 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME	Clouds Chevron	SITE LOCATION	Taylors Street & Two Notch Road, Columbia, SC
WELL NO	[redacted]	SAMPLE ID:	DW-9
		DATE:	4/2/14

PURGING DATA

WELL DIAMETER (inches):	2	Total Well Depth (feet):	65	WELL SCREEN INTERVAL DEPTH:	60 feet to 65 feet	STATIC DEPTH TO WATER (feet):	25.00	PURGE PUMP TYPE OR BAILER:	B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
= (65 feet - 25.00 feet) X 0.16 gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1014	—	—	23.4	—	6.9	—	73	—	3.8	—	42	—	Clr	Slight
1023	5.0	5.0	21.8	1.6	6.7	0.2	47	26			196	154	cldy	one
1029	5.0	10.0	21.6	0.2	6.4	0.3	36	11			53	143	Clr	none
1036	5.0	15.0	21.6	0.0	6.0	0.4	30	6			18	35	clr	one
1048	5.0	20.0	21.6	0.0	6.1	0.1	33	3			10	8	clr	none

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT):	Trevor Slack	SAMPLER(S) SIGNATURE(S):		SAMPLING DATE:	4/2/14	SAMPLING TIME:	1055
PUMP OR TUBING DEPTH IN WELL (feet):		TUBING MATERIAL CODE:		FIELD-FILTERED: Y N		FILTER SIZE:	
DUPLICATE COLLECTED:	Y (N)			Filtration Equipment Type:			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	2	CG	40mL	HCl	—	—	8260B	B	

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylors Street & Two Notch Road, Columbia, SC	
WELL NO: SW-1	SAMPLE ID: SW-1	DATE: 4/2/14

PURGING DATA

WELL DIAMETER (inches)	Total Well Depth (feet)	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet)	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1158	—	—	19.6	—	6.7	—	396	—	3.4	—	276	—	slight	mod

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Trevor Sinclair	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 4/2/14	SAMPLING TIME: 1158
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: ± 0.2 mg/L or ± 10% Turbidity: ≤ 10 NTU or ± 10%

c2

APPENDIX D

Laboratory Reports
And
Chain-of-Custody Documentation

CRAWFORD
ENVIRONMENTAL
SERVICES

ACCESS
ANALYTICAL, INC.

ANALYTICAL REPORT

CLIENT

Crawford Environmental Services
15 Church Ave, SW
Roanoke VA 24011

ATTENTION
Charles Crawford

PROJECT ID
Clouds Chevron et. al.

LABORATORY REPORT NUMBER
1404588

DATE
April 16, 2014

Primary Data Review By

Chantelle Kanhai
Project Manager, AES

Secondary Data Review By

Ashley Amick

Project Manager, Access Analytical
aamick@axs-inc.com

PLEASE NOTE:

- **Unless otherwise noted, all analysis on this report performed at Analytical Environmental Services Inc. (AES Inc), 3080 Presidential Drive, Atlanta, GA 30340.**
- **AES is SCDHEC certified laboratory # 98016, NCDENR certified lab # 562, GA certified lab # FL-E87582, NELAP certified laboratory # E87582**
- Local support services for this project are provided by Access Analytical, Inc. Access Analytical is a representative of AES serving client in the SC/NC/GA areas. All questions regarding this report should be directed to your local Access Analytical representative at 803.781.4243 or toll fee at 883.315.4243

Access Analytical - Chain of Custody Record

LAB USE ONLY

Project Work Order # 1404588

Sales Order # _____ PO # _____ Access Quote # _____ Laboratory ID: _____

Company Name: Crawford Env
Report To: Charles Crawford
Address: 15 Church Ave SW
City: Roanoke State: Va Zip: 24011
Phone: 540.343.6256 Fax: 540.343.6259
Email: ccrawford@crawfordenvironmental.com
Project ID: Clouds Chevron et.al.
Sampled By: Trevor Slack

Preservative: (*see codes) 1
Container Type: (*see codes) G

↓ REQUESTED LAB ANALYSIS: ↓ 8260B BTEX + MTBE + TAME + TBA

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	# of containers collected	# of containers collected for analysis		NOTES / COMMENTS (if sample is a composite please use space below to note start/finish times & dates)
MW-1	~~4/2/14~~	~~1434~~							Not Sampled - Dry	
MW-2	4/2/14	1247	G	GW		2	2	2		C2
MW-3	4/2/14	1013	G	GW		2	2	2		C2
MW-4	4/2/14	1809	G	GW		2	2	2		C1
MW-5									Not Sampled - Dry	
MW-6	4/3/14	0849	G	GW		2	2	2		C1
MW-7	4/3/14	1131	G	GW		2	2	2		C1
MW-8	4/3/14	1209	G	GW		2	2	2		C1
MW-9	4/2/14	1500	G	GW		2	2	2		C1
MW-10	4/1/14	1317	G	GW		2	2	2		C1

*Preservative Codes (place corresponding # in block above analysis field): 0 = None, 1 = HCL, 2 = HNO_3, 3 = H_2SO_4, 4 = NaOH, 5 = $Na_2S_2O_3$, 6 = Method 5035 set w/ $NaHSO_4$ & CH_3OH, 7 = NaOH/ZnOAC, 8 = H_3PO_4

*Matrix Codes (place corresponding code in matrix column): GW = ground water, WW = waste water, DW = drinking water, S = soil, SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other (specify in comments section)

*Program Area Codes: CWA = Clean Water Act (for wastewaters), SDWA = Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous Wastes (for soils, ground waters and waste samples)

*Container Type: G = Glass, P = Plastic

ACCESS ANALYTICAL, INC.
7478 Carlisle Street
Irmo, SC 29063
Phone: (803) 781-4243
Fax: 781-4303
www.axs-inc.com

Turnaround Time:
___ Standard
___ RUSH*
*Date Required: _____
(For rush work, results emailed/faxed by end of business day on date required)

Project Location:
X SC
___ NC
___ Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
[signature]	Amark	4/3/14	1635	___Y ___N	_____(°C)	_____(N/A)
Amark	Fedex	4-3-14	1700	___Y ___N	_____(°C)	_____(N/A)
	[signature]	4/4/14	1150	___Y ___N	3.5 (°C)	_____(N/A)
				___Y ___N	_____(°C)	_____(N/A)

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Project Work Order # 1404588

Sales Order # _____ PO # _____ Access Quote # _____ Laboratory ID: _____

Company Name: Crawford Env
Report To: Charles Crawford
Address: 15 Church Ave SW
City: Roanoke State: Va Zip: 24011
Phone: 540.343.6256 Fax: 540.343.6259
Email: ccrawford@crawfordenvironmental.com
Project ID: Clouds Chevron et al
Sampled By: Trever Slack

Preservative: (*see codes) 1
Container Type: (*see codes) G

↓ REQUESTED LAB ANALYSIS: ↓ 8260B BTEX+MN+N+ TBA+TAME+ TAA

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	# of containers collected	# of containers per analysis		NOTES / COMMENTS (if sample is a composite please use space below to note start/finish times & dates)
MW-11	4/2/14	1520	G	GW		2	2	2		C2
MW-12	4/2/14	1549	G	GW		2	2	2		C2
MW-13	4/1/14	1527	G	GW		2	2	2		C1
MW-15	←	—	—	—	—	—	—	—	Not Sampled - Free Product	→
MW-16	4/2/14	1447	G	GW		2	2	2		C2
MW-17	4/2/14	1450	G	GW		2	2	2		C2
MW-18	4/2/14	1349	G	GW		2	2	2		C2
MW-19	4/3/14	1435	G	GW		2	2	2		C1
MW-20	4/3/14	1315	G	GW		2	2	2		C1
MW-22	4/3/14	1244	G	GW		2	2	2		C1

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Irmo, SC 29063
Phone: (803) 781-4243
Fax: 781-4303
www.axs-inc.com

*Preservative Codes (place corresponding # in block above analysis field): 0 = None, 1 = HCL, 2 = HNO_3, 3 = H_2SO_4, 4 = NaOH, 5 = $Na_2S_2O_3$, 6 = Method 5035 set w/ $NaHSO_4$ & CH_3OH, 7 = NaOH/ZnOAC, 8 = H_3PO_4

*Matrix Codes (place corresponding code in matrix column): GW = ground water, WW = waste water, DW = drinking water, S = soil, SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other (specify in comments section)

*Program Area Codes: CWA = Clean Water Act (for wastewaters), SDWA = Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous Wastes (for soils, ground waters and waste samples)

*Container Type: G = Glass, P = Plastic

Turnaround Time:
___ Standard
___ RUSH*
*Date Required: _____
(For rush work, results emailed/faxed by end of business day on date required)

Project Location:
X SC
___ NC
___ Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
[signature]	Amant	4/3/14	1635	___Y ___N	____(°C)	____(N/A)
Amant	Fedex	4-3-14	AM	___Y ___N	____(°C)	____(N/A)
	[signature]	4/4/14	1155	___Y ___N	3.5 (°C)	____(N/A)
				___Y ___N	____(°C)	____(N/A)

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LAB USE ONLY

Project Work Order # 1404588

Sales Order # _____ PO # _____ Access Quote # _____ Laboratory ID: _____

Company Name: Crawford Env.
Report To: Charles Crawford
Address: 15 Church Ave SW
City: Roanoke State: Va Zip: 24011
Phone: 540.343.6256 Fax: 540.343.6259
Email: ccrawford@crawfordenvironmental.com
Project ID: Clouds Chevron et al
Sampled By: Trevor Slack

Preservative: (*see codes) 1
Container Type: (*see codes) G

↓ REQUESTED LAB ANALYSIS: ↓ 8260B BTEX+MTBE+ EDB+EDC+TAME+ TBA

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	# of containers collected	# of containers returned	# of containers preserved	# of containers other	# of containers analyzed	NOTES / COMMENTS (if sample is a composite please use space below to note start/finish times & dates)
Mw-23	4/3/14	1435	G	GW		2					2	C1
Mw-25	4/1/14	0912	G	GW		2					2	C1
Mw-26	4/3/14	1155	G	GW		2					2	C1
Mw-27	4/1/14	0908	G	GW		2					2	C1
Mw-28	4/1/14	0903	G	GW		2					2	C1
Mw-29	4/1/14	0943	G	GW		2					2	C1
Mw-30	4/1/14	1007	G	GW		2					2	C1
Mw-31	4/2/14	1356	G	GW		2					2	C2
Mw-32	4/2/14	1015	G	GW		2					2	C2
Mw-33	4/1/14	1024	G	GW		2					2	C1

ACCESS ANALYTICAL, INC.
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Irmo, SC 29063
Phone: (803) 781-4243
Fax: 781-4303
www.axs-inc.com

*Preservative Codes (place corresponding # in block above analysis field): 0 = None, 1 = HCL, 2 = HNO_3, 3 = H_2SO_4, 4 = NaOH, 5 = $Na_2S_2O_3$, 6 = Method 5035 set w/ $NaHSO_4$ & CH_3OH, 7 = NaOH/ZnOAC, 8 = H_3PO_4

*Matrix Codes (place corresponding code in matrix column): GW = ground water, WW = waste water, DW = drinking water, S = soil, SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other (specify in comments section)

*Program Area Codes: CWA = Clean Water Act (for wastewaters), SDWA = Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous Wastes (for soils, ground waters and waste samples)

*Container Type: G = Glass, P = Plastic

Turnaround Time:
___ Standard
___ RUSH*
*Date Required: _____
(For rush work, results emailed/faxed by end of business day on date required)

Project Location:
X SC
___ NC
___ Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
[signature]	Grant	4/3/14	1635	___Y ___N	_____(°C)	_____(N/A)
Grant	Fedex	4-3-14	1700	___Y ___N	_____(°C)	_____(N/A)
	[signature]	4/4/14	1150	___Y ___N	3.5 (°C)	_____(N/A)
				___Y ___N	_____(°C)	_____(N/A)

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LAB USE ONLY

Project Work Order # 1404588

Sales Order # _____ PO # _____ Access Quote # _____ Laboratory ID: _____

Company Name: Crawford Env.
Report To: Charles Crawford
Address: 15 Church Avenue, SW
City: Roanoke State: Va Zip: 24011
Phone: 540.343.6256 Fax: 540.343.6259
Email: CCrawford@crawfordenvironmental.com
Project ID: Clouds Chevron etal
Sampled By: Trever Slack

Preservative (*see codes): 1
Container Type (*see codes): G

↓ REQUESTED LAB ANALYSIS: ↓

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	# of containers collected for analysis	8260B BTEX+MTBE+ TAA+TAME+ TBA	NOTES / COMMENTS (if sample is a composite please see space below to note start/finish times & dates)
MW-34	4/1/14	1030	G	GW		2	2	2	C1
MW-35	4/1/14	1055	G	GW		2	2	2	C1
MW-36	4/1/14	1019	G	GW		2	2	2	C1
MW-37	4/1/14	1125	G	GW		2	2	2	C1
MW-38	4/1/14	1135	G	GW		2	2	2	C1
MW-39	4/2/14	1213	G	GW		2	2	2	C2
MW-40	4/2/14	1218	G	GW		2	2	2	C2
MW-41	4/1/14	1227	G	GW		2	2	2	C1
MW-42	4/1/14	1156	G	GW		2	2	2	C1
MW-43	4/2/14	1428	G	GW		2	2	2	C2

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*Preservative Codes (place corresponding # in block above analysis field): 0 = None, 1 = HCL, 2 = HNO_3, 3 = H_2SO_4, 4 = NaOH, 5 = $Na_2S_2O_3$, 6 = Method 5035 set w/ $NaHSO_4$ & CH_3OH, 7 = NaOH/ZnOAC, 8 = H_3PO_4

*Matrix Codes (place corresponding code in matrix column): GW = ground water, WW = waste water, DW = drinking water, S = soil, SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other (specify in comments section)

*Program Area Codes: CWA = Clean Water Act (for wastewaters), SDWA = Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous Wastes (for soils, ground waters and waste samples)

*Container Type: G = Glass, P = Plastic

Turnaround Time:
___ Standard
___ RUSH*
*Date Required: _____
(For rush work, results emailed/faxed by end of business day on date required)

Project Location:
X SC
___ NC
___ Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
[signature]	AHart	4/3/14	1635	___Y ___N	_____(°C)	_____(N/A)
AHart	Fedex	4-3-14	1720	___Y ___N	_____(°C)	_____(N/A)
	[signature]	4/4/14	1115	___Y ___N	3.5 (°C)	_____(N/A)
				___Y ___N	_____(°C)	_____(N/A)

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Project Work Order #: 1404588

Sales Order #: _____ PO #: _____ Access Quote #: _____ Laboratory ID: _____

Company Name: Crawford Env.
Report To: Charles Crawford
Address: 15 Church Avenue, SW
City: Roanoke State: Va Zip: 24011
Phone: 540.343.6256 Fax: 540.343.6259
Email: ccrawford@crawfordenvironmental.com
Project ID: Clouds Chevron et al
Sampled By: Trever Slack

Preservative (*see codes): 1
Container Type (*see codes): G

↓ REQUESTED LAB ANALYSIS: ↓

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	# of containers collected	container type(s)	# per analysis	8260B BTEX + MTBE + TAA + TAME + TBA	NOTES / COMMENTS (if sample is a composite please see space below to note start/finish times & dates)
MW-44	4/1/14	1420	G	GW		2				2	C1
MW-45	4/1/14	1422	G	GW		2				2	C1
MW-46	4/1/14	1430	G	GW		2				2	C1
MW-48	4/2/14	1438	G	GW		2				2	C2
MW-49	←									Could not access - Gate Locked →	
MW-50	←									Could not access - Gate Locked →	
MW-51	4/2/14	1525	G	GW		2				2	C2
MW-53	4/3/14	0851	G	GW		2				2	C2
MW-54	4/1/14	1545	G	GW		2				2	C1
MW-55	4/3/14	1019	G	GW		2				2	C2

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*Matrix Codes (place corresponding code in matrix column): GW = ground water, WW = waste water, DW = drinking water, S = soil, SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other (specify in comments section)

*Program Area Codes: CWA = Clean Water Act (for wastewaters), SDWA = Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous Wastes (for soils, ground waters and waste samples)

*Container Type: G = Glass, P = Plastic

Turnaround Time:
___ Standard
___ RUSH*
*Date Required: _____
(For rush work, results emailed/faxed by end of business day on date required)

Project Location:
X SC
___ NC
___ Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
[signature]	Grant	4/3/14	1635	___Y ___N	_____(°C)	_____(N/A)
Grant	Fedex	4-3-14	1740	___Y ___N	_____(°C)	_____(N/A)
	[signature]	4/4/14	11:15	___Y ___N	3.5 (°C)	_____(N/A)
				___Y ___N	_____(°C)	_____(N/A)

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Report To: Charles Crawford
Address: 15 Church Ave, SW
City: Roanoke State: Va Zip: 24011
Phone: 540.343.6256 Fax: 540.343.6259
Email: ccrawford@crawfordenvironmental.com
Project ID: Clouds Chevron et al
Sampled By: Trever Slaut

Preservative: (*see codes) 1
Container Type: (*see codes) G

↓ REQUESTED LAB ANALYSIS: ↓ 8260B BTEX+MTBE TAA+TAME+ TBA

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	# of containers collected	Requested analysis
Mw-56	4/3/14	0941	G	GW		2	2	
Mw-58	~~4/3/14~~	~~1355~~	—	Abandoned				
Mw-59	4/2/14	1555	G	GW		2	2	
Mw-60	←						Not Located	→
Mw-62	4/1/14	1338	G	GW		2	2	
Mw-63	4/2/14	1327	G	GW		2	2	
mw-65	←						Not Located	→
Mw-67	4/1/14	1242	G	GW		2	2	
Mw-70	4/2/14	1301	G	GW		2	2	
Mw-5ar	4/1/14	0930	G	GW		2	2	

NOTES / COMMENTS
(if sample is a composite please see space below to note start/finish times & dates)

Mw-56	C2
Mw-58	C2 →
Mw-59	C2
Mw-60	→
Mw-62	C1
Mw-63	C2
mw-65	→
Mw-67	C1
Mw-70	C2
Mw-5ar	C1

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*Matrix Codes (place corresponding code in matrix column): GW = ground water, WW = waste water, DW = drinking water, S = soil, SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other (specify in comments section)

*Program Area Codes: CWA = Clean Water Act (for wastewaters), SDWA = Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous Wastes (for soils, ground waters and waste samples)

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Turnaround Time:
___ Standard
___ RUSH*
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Project Location:
X SC
___ NC
___ Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
[signature]	[signature]	4/3/14	1635	___Y ___N	_____(°C)	_____(N/A)
[signature]	[signature]	4-3-14	1705	___Y ___N	_____(°C)	_____(N/A)
	[signature]	4/4/14	1115	___Y ___N	3.5 (°C)	_____(N/A)
				___Y ___N	_____(°C)	_____(N/A)

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Address: 15 Church Ave SW
City: Roanoke State: Va Zip: 24011
Phone: 540.343.6256 Fax: 540.343.6259
Email: CCrawford@crawfordenvironmental.com
Project ID: Clouds Chevron etal
Sampled By: Trevor Sinclair

Preservative (*see codes): 1
Container Type (*see codes): G

↓ REQUESTED LAB ANALYSIS: ↓
8260B BTEX+MN+NV + TAA + TAME + TBA.

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	# of containers collected	# of containers collected for analysis	NOTES / COMMENTS (if sample is a composite please use space below to note start/finish times & dates)
Pw-1R	4/3/14	1335	G	Gw		2		2	C1
Dw-1	4/2/14	1420	G	Gw		2		2	C2
Dw-2	4/2/14	1501	G	Gw		2		2	C2
Dw-3	4/3/14	1601	G	Gw		2		2	C1
Dw-4	4/3/14	1409	G	Gw		2		2	C1
Dw-5	4/1/14	1100	G	Gw		2		2	C1
Dw-6	4/1/14	1218	G	Gw		2		2	C1
Dw-7	4/3/14	1517	G	Gw		2		2	C1
Dw-9	4/2/14	1055	G	Gw		2		2	C2
Sw-1	4/2/14	1158	G	Gw		2		2	C2

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___ RUSH*
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Project Location:
X SC
___ NC
___ Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
[signature]	[signature]	4/3/14	1635	___Y ___N	_____(°C)	_____(N/A)
[signature]	[signature]	4-3-14	1700	___Y ___N	_____(°C)	_____(N/A)
	[signature]	4/4/14	1115	___Y ___N	3.5 (°C)	_____(N/A)
				___Y ___N	_____(°C)	_____(N/A)

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Company Name: Crawford Env
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Address: 15 Church Ave SW
City: Roanoke State: Va Zip: 24011
Phone: 540-343-6256 Fax: 540-343-6259
Email: ccrawford@crawfordenvironmental.com
Project ID: Clouds Chevron ct. 91
Sampled By: Trevor Slack

Preservative: (*see codes) 1
Container Type: (*see codes) G

↓ REQUESTED LAB ANALYSIS: ↓ 8260B BTEX + MTBE + TAME + TAA + EDB + EDC + TBA + DIPE + ETBE + NAPH

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	# of containers collected for each analysis	NOTES / COMMENTS (if sample is a composite please use space below to note start/finish times & dates)
Trip Blank 1	—	—					1	C1
Trip Blank 2	—	—					1	C2
FB1	4/3/14	1001	G	GW		2	2	C2
FB2	4/2/14	1414	G	GW		2	2	C2
FB3	4/1/14	1149	G	GW		2	2	C2
Dup A	4/2/14	1025	G	GW		2	2	
Dup B	4/2/14	1251	G	GW		2	2	
Dup C	4/3/14	1320	G	GW		2	2	
Dup D	4/3/14	1340	G	GW		2	2	

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Project Location:
X SC
___ NC
___ Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
[signature]	[signature]	4/3/14	1635	___Y ___N	_____(°C)	_____(N/A)
[signature]	Fedex	4-3-14	1740	___Y ___N	_____(°C)	_____(N/A)
	W/	4/4/14	11:5	___Y ___N	3.5 (°C)	_____(N/A)
				___Y ___N	_____(°C)	_____(N/A)

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Analytical Environmental Services, Inc

Date: 16-Apr-14

Client:	Crawford Environmental Services
Project:	Clouds Chevron et. al.
Lab ID:	1404588

Case Narrative

Volatile Organic Compounds Analysis by Method 8260B:

Sample 1404588-060A as received did not meet method specified preservation requirements of pH <2. The laboratory proceeded with analysis

Due to sample matrix, samples 1404588-003A, -009A, -010A, -016A, -017A, -018A, -019A, -020A, -021A, -030A, -032A, -060A, -061A, -064A, -076A, -078A and -079A required dilution during preparation and/or analysis resulting in elevated reporting limits.

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-2
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 12:47:00 PM
Lab ID:	1404588-002	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	170		0.39	1.0	ug/L	189485	1	04/10/2014 20:38	NP
Ethylbenzene	200		0.40	1.0	ug/L	189485	1	04/10/2014 20:38	NP
Methyl tert-butyl ether	320		4.2	10	ug/L	189485	10	04/10/2014 21:04	NP
Naphthalene	150		2.0	50	ug/L	189485	10	04/10/2014 21:04	NP
Toluene	41		0.38	1.0	ug/L	189485	1	04/10/2014 20:38	NP
Xylenes, Total	960		8.3	10	ug/L	189485	10	04/10/2014 21:04	NP
Surr: 4-Bromofluorobenzene	87.1		0	66.2-120	%REC	189485	10	04/10/2014 21:04	NP
Surr: 4-Bromofluorobenzene	96.1		0	66.2-120	%REC	189485	1	04/10/2014 20:38	NP
Surr: Dibromofluoromethane	91		0	79.5-121	%REC	189485	1	04/10/2014 20:38	NP
Surr: Dibromofluoromethane	92		0	79.5-121	%REC	189485	10	04/10/2014 21:04	NP
Surr: Toluene-d8	88.2		0	77-117	%REC	189485	10	04/10/2014 21:04	NP
Surr: Toluene-d8	91		0	77-117	%REC	189485	1	04/10/2014 20:38	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	230		9.5	100	ug/L	189485	1	04/10/2014 20:38	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189485	1	04/10/2014 20:38	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189485	1	04/10/2014 20:38	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-3
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 10:13:00 AM
Lab ID:	1404588-003	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	6900		19	50	ug/L	189485	50	04/10/2014 16:03	NP
Ethylbenzene	1200		20	50	ug/L	189485	50	04/10/2014 16:03	NP
Methyl tert-butyl ether	1800		21	50	ug/L	189485	50	04/10/2014 16:03	NP
Naphthalene	600		10	250	ug/L	189485	50	04/10/2014 16:03	NP
Toluene	18000		190	500	ug/L	189485	500	04/10/2014 21:29	NP
Xylenes, Total	16000		41	50	ug/L	189485	50	04/10/2014 16:03	NP
Surr: 4-Bromofluorobenzene	87.8		0	66.2-120	%REC	189485	500	04/10/2014 21:29	NP
Surr: 4-Bromofluorobenzene	90.4		0	66.2-120	%REC	189485	50	04/10/2014 16:03	NP
Surr: Dibromofluoromethane	94		0	79.5-121	%REC	189485	50	04/10/2014 16:03	NP
Surr: Dibromofluoromethane	96.4		0	79.5-121	%REC	189485	500	04/10/2014 21:29	NP
Surr: Toluene-d8	88		0	77-117	%REC	189485	50	04/10/2014 16:03	NP
Surr: Toluene-d8	88.2		0	77-117	%REC	189485	500	04/10/2014 21:29	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	980	J	480	5000	ug/L	189485	50	04/10/2014 16:03	NP
tert-Amyl methyl ether	560		50	500	ug/L	189485	50	04/10/2014 16:03	NP
tert-Butyl Alcohol	BRL		340	5000	ug/L	189485	50	04/10/2014 16:03	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-4
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 6:09:00 PM
Lab ID:	1404588-004	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189485	1	04/09/2014 17:50	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	189485	1	04/09/2014 17:50	NP
Methyl tert-butyl ether	3.5		0.42	1.0	ug/L	189485	1	04/09/2014 17:50	NP
Naphthalene	BRL		0.20	5.0	ug/L	189485	1	04/09/2014 17:50	NP
Toluene	BRL		0.38	1.0	ug/L	189485	1	04/09/2014 17:50	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	189485	1	04/09/2014 17:50	NP
Surr: 4-Bromofluorobenzene	97.3		0	66.2-120	%REC	189485	1	04/09/2014 17:50	NP
Surr: Dibromofluoromethane	99.1		0	79.5-121	%REC	189485	1	04/09/2014 17:50	NP
Surr: Toluene-d8	97.9		0	77-117	%REC	189485	1	04/09/2014 17:50	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189485	1	04/09/2014 17:50	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189485	1	04/09/2014 17:50	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189485	1	04/09/2014 17:50	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-6
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/3/2014 8:49:00 AM
Lab ID:	1404588-006	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	2.6		0.39	1.0	ug/L	189485	1	04/10/2014 20:14	NP
Ethylbenzene	2.4		0.40	1.0	ug/L	189485	1	04/10/2014 20:14	NP
Methyl tert-butyl ether	2.5		0.42	1.0	ug/L	189485	1	04/10/2014 20:14	NP
Naphthalene	4.2	J	0.20	5.0	ug/L	189485	1	04/10/2014 20:14	NP
Toluene	BRL		0.38	1.0	ug/L	189485	1	04/10/2014 20:14	NP
Xylenes, Total	10		0.83	1.0	ug/L	189485	1	04/10/2014 20:14	NP
Surr: 4-Bromofluorobenzene	95.1		0	66.2-120	%REC	189485	1	04/10/2014 20:14	NP
Surr: Dibromofluoromethane	92.7		0	79.5-121	%REC	189485	1	04/10/2014 20:14	NP
Surr: Toluene-d8	92.7		0	77-117	%REC	189485	1	04/10/2014 20:14	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189485	1	04/10/2014 20:14	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189485	1	04/10/2014 20:14	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189485	1	04/10/2014 20:14	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-7
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/3/2014 11:31:00 AM
Lab ID:	1404588-007	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189485	1	04/09/2014 18:18	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	189485	1	04/09/2014 18:18	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189485	1	04/09/2014 18:18	NP
Naphthalene	BRL		0.20	5.0	ug/L	189485	1	04/09/2014 18:18	NP
Toluene	BRL		0.38	1.0	ug/L	189485	1	04/09/2014 18:18	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	189485	1	04/09/2014 18:18	NP
Surr: 4-Bromofluorobenzene	93.6		0	66.2-120	%REC	189485	1	04/09/2014 18:18	NP
Surr: Dibromofluoromethane	96.4		0	79.5-121	%REC	189485	1	04/09/2014 18:18	NP
Surr: Toluene-d8	96.8		0	77-117	%REC	189485	1	04/09/2014 18:18	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189485	1	04/09/2014 18:18	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189485	1	04/09/2014 18:18	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189485	1	04/09/2014 18:18	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-8
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/3/2014 12:09:00 PM
Lab ID:	1404588-008	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189485	1	04/09/2014 18:46	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	189485	1	04/09/2014 18:46	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189485	1	04/09/2014 18:46	NP
Naphthalene	BRL		0.20	5.0	ug/L	189485	1	04/09/2014 18:46	NP
Toluene	BRL		0.38	1.0	ug/L	189485	1	04/09/2014 18:46	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	189485	1	04/09/2014 18:46	NP
Surr: 4-Bromofluorobenzene	92.5		0	66.2-120	%REC	189485	1	04/09/2014 18:46	NP
Surr: Dibromofluoromethane	98.1		0	79.5-121	%REC	189485	1	04/09/2014 18:46	NP
Surr: Toluene-d8	96		0	77-117	%REC	189485	1	04/09/2014 18:46	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189485	1	04/09/2014 18:46	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189485	1	04/09/2014 18:46	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189485	1	04/09/2014 18:46	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-9
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 3:00:00 PM
Lab ID:	1404588-009	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	830		19	50	ug/L	189485	50	04/10/2014 22:19	NP
Ethylbenzene	1700		20	50	ug/L	189485	50	04/10/2014 22:19	NP
Methyl tert-butyl ether	BRL		21	50	ug/L	189485	50	04/10/2014 22:19	NP
Naphthalene	590		10	250	ug/L	189485	50	04/10/2014 22:19	NP
Toluene	7500		19	50	ug/L	189485	50	04/10/2014 22:19	NP
Xylenes, Total	14000		41	50	ug/L	189485	50	04/10/2014 22:19	NP
Surr: 4-Bromofluorobenzene	86.9		0	66.2-120	%REC	189485	50	04/10/2014 22:19	NP
Surr: Dibromofluoromethane	93.5		0	79.5-121	%REC	189485	50	04/10/2014 22:19	NP
Surr: Toluene-d8	88.6		0	77-117	%REC	189485	50	04/10/2014 22:19	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	1700	J	480	5000	ug/L	189485	50	04/10/2014 22:19	NP
tert-Amyl methyl ether	BRL		50	500	ug/L	189485	50	04/10/2014 22:19	NP
tert-Butyl Alcohol	BRL		340	5000	ug/L	189485	50	04/10/2014 22:19	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-10
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 1:17:00 PM
Lab ID:	1404588-010	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	1800		19	50	ug/L	189485	50	04/09/2014 16:43	NP
Ethylbenzene	350		20	50	ug/L	189485	50	04/09/2014 16:43	NP
Methyl tert-butyl ether	BRL		21	50	ug/L	189485	50	04/09/2014 16:43	NP
Naphthalene	690		10	250	ug/L	189485	50	04/09/2014 16:43	NP
Toluene	5700		19	50	ug/L	189485	50	04/09/2014 16:43	NP
Xylenes, Total	8500		41	50	ug/L	189485	50	04/09/2014 16:43	NP
Surr: 4-Bromofluorobenzene	90.4		0	66.2-120	%REC	189485	50	04/09/2014 16:43	NP
Surr: Dibromofluoromethane	101		0	79.5-121	%REC	189485	50	04/09/2014 16:43	NP
Surr: Toluene-d8	92.1		0	77-117	%REC	189485	50	04/09/2014 16:43	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		480	5000	ug/L	189485	50	04/09/2014 16:43	NP
tert-Amyl methyl ether	BRL		50	500	ug/L	189485	50	04/09/2014 16:43	NP
tert-Butyl Alcohol	BRL		340	5000	ug/L	189485	50	04/09/2014 16:43	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-11
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 3:20:00 PM
Lab ID:	1404588-011	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	2.3		0.39	1.0	ug/L	189485	1	04/11/2014 11:51	NP
Ethylbenzene	11		0.40	1.0	ug/L	189485	1	04/11/2014 11:51	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189485	1	04/11/2014 11:51	NP
Naphthalene	4.4	J	0.20	5.0	ug/L	189485	1	04/11/2014 11:51	NP
Toluene	1.1		0.38	1.0	ug/L	189485	1	04/11/2014 11:51	NP
Xylenes, Total	4.1		0.83	1.0	ug/L	189485	1	04/11/2014 11:51	NP
Surr: 4-Bromofluorobenzene	87.6		0	66.2-120	%REC	189485	1	04/11/2014 11:51	NP
Surr: Dibromofluoromethane	104		0	79.5-121	%REC	189485	1	04/11/2014 11:51	NP
Surr: Toluene-d8	95.5		0	77-117	%REC	189485	1	04/11/2014 11:51	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	120		9.5	100	ug/L	189485	1	04/11/2014 11:51	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189485	1	04/11/2014 11:51	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189485	1	04/11/2014 11:51	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-12
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 3:49:00 PM
Lab ID:	1404588-012	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	2.9		0.39	1.0	ug/L	189485	1	04/10/2014 18:34	NP
Ethylbenzene	1.6		0.40	1.0	ug/L	189485	1	04/10/2014 18:34	NP
Methyl tert-butyl ether	18		0.42	1.0	ug/L	189485	1	04/10/2014 18:34	NP
Naphthalene	4.7	J	0.20	5.0	ug/L	189485	1	04/10/2014 18:34	NP
Toluene	0.67	J	0.38	1.0	ug/L	189485	1	04/10/2014 18:34	NP
Xylenes, Total	0.91	J	0.83	1.0	ug/L	189485	1	04/10/2014 18:34	NP
Surr: 4-Bromofluorobenzene	87		0	66.2-120	%REC	189485	1	04/10/2014 18:34	NP
Surr: Dibromofluoromethane	95.6		0	79.5-121	%REC	189485	1	04/10/2014 18:34	NP
Surr: Toluene-d8	92.3		0	77-117	%REC	189485	1	04/10/2014 18:34	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	630		9.5	100	ug/L	189485	1	04/09/2014 19:15	NP
tert-Amyl methyl ether	9.3	J	1.0	10	ug/L	189485	1	04/09/2014 19:15	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189485	1	04/09/2014 19:15	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-13
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 3:27:00 PM
Lab ID:	1404588-013	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	0.62	J	0.39	1.0	ug/L	189485	1	04/09/2014 19:43	NP
Ethylbenzene	4.5		0.40	1.0	ug/L	189485	1	04/09/2014 19:43	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189485	1	04/09/2014 19:43	NP
Naphthalene	31		0.20	5.0	ug/L	189485	1	04/09/2014 19:43	NP
Toluene	8.8		0.38	1.0	ug/L	189485	1	04/09/2014 19:43	NP
Xylenes, Total	86		0.83	1.0	ug/L	189485	1	04/09/2014 19:43	NP
Surr: 4-Bromofluorobenzene	104		0	66.2-120	%REC	189485	1	04/09/2014 19:43	NP
Surr: Dibromofluoromethane	98.4		0	79.5-121	%REC	189485	1	04/09/2014 19:43	NP
Surr: Toluene-d8	97.9		0	77-117	%REC	189485	1	04/09/2014 19:43	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	10	J	9.5	100	ug/L	189485	1	04/10/2014 18:59	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189485	1	04/10/2014 18:59	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189485	1	04/10/2014 18:59	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-16
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 2:47:00 PM
Lab ID:	1404588-015	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189485	1	04/09/2014 20:11	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	189485	1	04/09/2014 20:11	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189485	1	04/09/2014 20:11	NP
Naphthalene	3.4	J	0.20	5.0	ug/L	189485	1	04/09/2014 20:11	NP
Toluene	BRL		0.38	1.0	ug/L	189485	1	04/09/2014 20:11	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	189485	1	04/09/2014 20:11	NP
Surr: 4-Bromofluorobenzene	97.8		0	66.2-120	%REC	189485	1	04/09/2014 20:11	NP
Surr: Dibromofluoromethane	97.3		0	79.5-121	%REC	189485	1	04/09/2014 20:11	NP
Surr: Toluene-d8	98.8		0	77-117	%REC	189485	1	04/09/2014 20:11	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189485	1	04/09/2014 20:11	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189485	1	04/09/2014 20:11	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189485	1	04/09/2014 20:11	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-17
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 2:50:00 PM
Lab ID:	1404588-016	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	280		19	50	ug/L	189485	50	04/10/2014 23:08	NP
Ethylbenzene	450		20	50	ug/L	189485	50	04/10/2014 23:08	NP
Methyl tert-butyl ether	BRL		21	50	ug/L	189485	50	04/10/2014 23:08	NP
Naphthalene	850		10	250	ug/L	189485	50	04/10/2014 23:08	NP
Toluene	5100		19	50	ug/L	189485	50	04/10/2014 23:08	NP
Xylenes, Total	13000		41	50	ug/L	189485	50	04/10/2014 23:08	NP
Surr: 4-Bromofluorobenzene	88.9		0	66.2-120	%REC	189485	50	04/10/2014 23:08	NP
Surr: Dibromofluoromethane	96.4		0	79.5-121	%REC	189485	50	04/10/2014 23:08	NP
Surr: Toluene-d8	90.6		0	77-117	%REC	189485	50	04/10/2014 23:08	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	2200	J	480	5000	ug/L	189485	50	04/10/2014 23:08	NP
tert-Amyl methyl ether	BRL		50	500	ug/L	189485	50	04/10/2014 23:08	NP
tert-Butyl Alcohol	BRL		340	5000	ug/L	189485	50	04/10/2014 23:08	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-18
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 1:49:00 PM
Lab ID:	1404588-017	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	1900		19	50	ug/L	189485	50	04/10/2014 23:33	NP
Ethylbenzene	630		20	50	ug/L	189485	50	04/10/2014 23:33	NP
Methyl tert-butyl ether	340		21	50	ug/L	189485	50	04/10/2014 23:33	NP
Naphthalene	370		10	250	ug/L	189485	50	04/10/2014 23:33	NP
Toluene	7200		19	50	ug/L	189485	50	04/10/2014 23:33	NP
Xylenes, Total	8300		41	50	ug/L	189485	50	04/10/2014 23:33	NP
Surr: 4-Bromofluorobenzene	89.8		0	66.2-120	%REC	189485	50	04/10/2014 23:33	NP
Surr: Dibromofluoromethane	95.8		0	79.5-121	%REC	189485	50	04/10/2014 23:33	NP
Surr: Toluene-d8	90.2		0	77-117	%REC	189485	50	04/10/2014 23:33	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	4900	J	480	5000	ug/L	189485	50	04/10/2014 23:33	NP
tert-Amyl methyl ether	70	J	50	500	ug/L	189485	50	04/10/2014 23:33	NP
tert-Butyl Alcohol	BRL		340	5000	ug/L	189485	50	04/10/2014 23:33	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-19
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/3/2014 2:35:00 PM
Lab ID:	1404588-018	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	300		19	50	ug/L	189485	50	04/10/2014 21:54	NP
Ethylbenzene	490		20	50	ug/L	189485	50	04/10/2014 21:54	NP
Methyl tert-butyl ether	BRL		21	50	ug/L	189485	50	04/10/2014 21:54	NP
Naphthalene	900		10	250	ug/L	189485	50	04/10/2014 21:54	NP
Toluene	1800		19	50	ug/L	189485	50	04/10/2014 21:54	NP
Xylenes, Total	12000		41	50	ug/L	189485	50	04/10/2014 21:54	NP
Surr: 4-Bromofluorobenzene	88.1		0	66.2-120	%REC	189485	50	04/10/2014 21:54	NP
Surr: Dibromofluoromethane	92.3		0	79.5-121	%REC	189485	50	04/10/2014 21:54	NP
Surr: Toluene-d8	87.5		0	77-117	%REC	189485	50	04/10/2014 21:54	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	610	J	480	5000	ug/L	189485	50	04/10/2014 21:54	NP
tert-Amyl methyl ether	BRL		50	500	ug/L	189485	50	04/10/2014 21:54	NP
tert-Butyl Alcohol	BRL		340	5000	ug/L	189485	50	04/10/2014 21:54	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-20
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/3/2014 1:15:00 PM
Lab ID:	1404588-019	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	1800		19	50	ug/L	189485	50	04/11/2014 18:37	NP
Ethylbenzene	460		20	50	ug/L	189485	50	04/11/2014 18:37	NP
Methyl tert-butyl ether	50		21	50	ug/L	189485	50	04/11/2014 18:37	NP
Naphthalene	960		10	250	ug/L	189485	50	04/11/2014 18:37	NP
Toluene	11000		190	500	ug/L	189485	500	04/11/2014 15:35	NP
Xylenes, Total	11000		41	50	ug/L	189485	50	04/11/2014 18:37	NP
Surr: 4-Bromofluorobenzene	86.1		0	66.2-120	%REC	189485	500	04/11/2014 15:35	NP
Surr: 4-Bromofluorobenzene	90		0	66.2-120	%REC	189485	50	04/11/2014 18:37	NP
Surr: Dibromofluoromethane	94		0	79.5-121	%REC	189485	50	04/11/2014 18:37	NP
Surr: Dibromofluoromethane	97		0	79.5-121	%REC	189485	500	04/11/2014 15:35	NP
Surr: Toluene-d8	87.2		0	77-117	%REC	189485	500	04/11/2014 15:35	NP
Surr: Toluene-d8	90.2		0	77-117	%REC	189485	50	04/11/2014 18:37	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	3100	J	480	5000	ug/L	189485	50	04/11/2014 18:37	NP
tert-Amyl methyl ether	65	J	50	500	ug/L	189485	50	04/11/2014 18:37	NP
tert-Butyl Alcohol	BRL		340	5000	ug/L	189485	50	04/11/2014 18:37	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-22
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/3/2014 12:44:00 PM
Lab ID:	1404588-020	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	5700		19	50	ug/L	189485	50	04/11/2014 00:23	NP
Ethylbenzene	880		20	50	ug/L	189485	50	04/11/2014 00:23	NP
Methyl tert-butyl ether	BRL		21	50	ug/L	189485	50	04/11/2014 00:23	NP
Naphthalene	990		10	250	ug/L	189485	50	04/11/2014 00:23	NP
Toluene	12000		190	500	ug/L	189485	500	04/11/2014 14:45	NP
Xylenes, Total	23000		410	500	ug/L	189485	500	04/11/2014 14:45	NP
Surr: 4-Bromofluorobenzene	88.9		0	66.2-120	%REC	189485	500	04/11/2014 14:45	NP
Surr: 4-Bromofluorobenzene	90.7		0	66.2-120	%REC	189485	50	04/11/2014 00:23	NP
Surr: Dibromofluoromethane	94.2		0	79.5-121	%REC	189485	50	04/11/2014 00:23	NP
Surr: Dibromofluoromethane	94.6		0	79.5-121	%REC	189485	500	04/11/2014 14:45	NP
Surr: Toluene-d8	88.2		0	77-117	%REC	189485	500	04/11/2014 14:45	NP
Surr: Toluene-d8	89.8		0	77-117	%REC	189485	50	04/11/2014 00:23	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	3600	J	480	5000	ug/L	189485	50	04/11/2014 00:23	NP
tert-Amyl methyl ether	BRL		50	500	ug/L	189485	50	04/11/2014 00:23	NP
tert-Butyl Alcohol	BRL		340	5000	ug/L	189485	50	04/11/2014 00:23	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-23
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/3/2014 2:35:00 PM
Lab ID:	1404588-021	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	4200		19	50	ug/L	189488	50	04/09/2014 15:03	NP
Ethylbenzene	880		20	50	ug/L	189488	50	04/09/2014 15:03	NP
Methyl tert-butyl ether	120		21	50	ug/L	189488	50	04/09/2014 15:03	NP
Naphthalene	1100		10	250	ug/L	189488	50	04/09/2014 15:03	NP
Toluene	16000		190	500	ug/L	189488	500	04/09/2014 16:18	NP
Xylenes, Total	19000		41	50	ug/L	189488	50	04/09/2014 15:03	NP
Surr: 4-Bromofluorobenzene	91.6		0	66.2-120	%REC	189488	500	04/09/2014 16:18	NP
Surr: 4-Bromofluorobenzene	93.1		0	66.2-120	%REC	189488	50	04/09/2014 15:03	NP
Surr: Dibromofluoromethane	101		0	79.5-121	%REC	189488	500	04/09/2014 16:18	NP
Surr: Dibromofluoromethane	102		0	79.5-121	%REC	189488	50	04/09/2014 15:03	NP
Surr: Toluene-d8	90.6		0	77-117	%REC	189488	500	04/09/2014 16:18	NP
Surr: Toluene-d8	93.6		0	77-117	%REC	189488	50	04/09/2014 15:03	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	5900		480	5000	ug/L	189488	50	04/09/2014 15:03	NP
tert-Amyl methyl ether	BRL		50	500	ug/L	189488	50	04/09/2014 15:03	NP
tert-Butyl Alcohol	BRL		340	5000	ug/L	189488	50	04/09/2014 15:03	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-25
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 9:12:00 AM
Lab ID:	1404588-022	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by G€/MS SW8260B					**(SW5030B)**				
Benzene	5.5		0.39	1.0	ug/L	189488	1	04/11/2014 13:31	NP
Ethylbenzene	320		20	50	ug/L	189488	50	04/11/2014 00:47	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189488	1	04/11/2014 13:31	NP
Naphthalene	1300		10	250	ug/L	189488	50	04/11/2014 00:47	NP
Toluene	200		19	50	ug/L	189488	50	04/11/2014 00:47	NP
Xylenes, Total	4400		41	50	ug/L	189488	50	04/11/2014 00:47	NP
Surr: 4-Bromofluorobenzene	91.4		0	66.2-120	%REC	189488	50	04/11/2014 00:47	NP
Surr: 4-Bromofluorobenzene	97.2		0	66.2-120	%REC	189488	1	04/11/2014 13:31	NP
Surr: Dibromofluoromethane	100		0	79.5-121	%REC	189488	50	04/11/2014 00:47	NP
Surr: Dibromofluoromethane	90.5		0	79.5-121	%REC	189488	1	04/11/2014 13:31	NP
Surr: Toluene-d8	90.4		0	77-117	%REC	189488	50	04/11/2014 00:47	NP
Surr: Toluene-d8	89		0	77-117	%REC	189488	1	04/11/2014 13:31	NP
Oxygenates (AES SOP OA-11010) SW8260B					**(SW5030B)**				
tert-Amyl alcohol	170		9.5	100	ug/L	189488	1	04/11/2014 13:31	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189488	1	04/11/2014 13:31	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189488	1	04/11/2014 13:31	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-26
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/3/2014 11:55:00 AM
Lab ID:	1404588-023	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189488	1	04/09/2014 20:39	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	189488	1	04/09/2014 20:39	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189488	1	04/09/2014 20:39	NP
Naphthalene	BRL		0.20	5.0	ug/L	189488	1	04/09/2014 20:39	NP
Toluene	BRL		0.38	1.0	ug/L	189488	1	04/09/2014 20:39	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	189488	1	04/09/2014 20:39	NP
Surr: 4-Bromofluorobenzene	96.4		0	66.2-120	%REC	189488	1	04/09/2014 20:39	NP
Surr: Dibromofluoromethane	98.2		0	79.5-121	%REC	189488	1	04/09/2014 20:39	NP
Surr: Toluene-d8	96.7		0	77-117	%REC	189488	1	04/09/2014 20:39	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189488	1	04/09/2014 20:39	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189488	1	04/09/2014 20:39	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189488	1	04/09/2014 20:39	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-27
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 9:08:00 AM
Lab ID:	1404588-024	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189488	1	04/09/2014 21:07	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	189488	1	04/09/2014 21:07	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189488	1	04/09/2014 21:07	NP
Naphthalene	BRL		0.20	5.0	ug/L	189488	1	04/09/2014 21:07	NP
Toluene	BRL		0.38	1.0	ug/L	189488	1	04/09/2014 21:07	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	189488	1	04/09/2014 21:07	NP
Surr: 4-Bromofluorobenzene	96.9		0	66.2-120	%REC	189488	1	04/09/2014 21:07	NP
Surr: Dibromofluoromethane	98.5		0	79.5-121	%REC	189488	1	04/09/2014 21:07	NP
Surr: Toluene-d8	95.7		0	77-117	%REC	189488	1	04/09/2014 21:07	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189488	1	04/09/2014 21:07	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189488	1	04/09/2014 21:07	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189488	1	04/09/2014 21:07	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-28
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 9:03:00 AM
Lab ID:	1404588-025	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189488	1	04/09/2014 21:35	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	189488	1	04/09/2014 21:35	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189488	1	04/09/2014 21:35	NP
Naphthalene	BRL		0.20	5.0	ug/L	189488	1	04/09/2014 21:35	NP
Toluene	BRL		0.38	1.0	ug/L	189488	1	04/09/2014 21:35	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	189488	1	04/09/2014 21:35	NP
Surr: 4-Bromofluorobenzene	95.3		0	66.2-120	%REC	189488	1	04/09/2014 21:35	NP
Surr: Dibromofluoromethane	99.6		0	79.5-121	%REC	189488	1	04/09/2014 21:35	NP
Surr: Toluene-d8	98.1		0	77-117	%REC	189488	1	04/09/2014 21:35	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189488	1	04/09/2014 21:35	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189488	1	04/09/2014 21:35	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189488	1	04/09/2014 21:35	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-29
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 9:43:00 AM
Lab ID:	1404588-026	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	189488	1	04/09/2014 22:03	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	189488	1	04/09/2014 22:03	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189488	1	04/09/2014 22:03	NP
Naphthalene	BRL		0.20	5.0	ug/L	189488	1	04/09/2014 22:03	NP
Toluene	BRL		0.38	1.0	ug/L	189488	1	04/09/2014 22:03	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	189488	1	04/09/2014 22:03	NP
Surr: 4-Bromofluorobenzene	93.4		0	66.2-120	%REC	189488	1	04/09/2014 22:03	NP
Surr: Dibromofluoromethane	100		0	79.5-121	%REC	189488	1	04/09/2014 22:03	NP
Surr: Toluene-d8	97.5		0	77-117	%REC	189488	1	04/09/2014 22:03	NP
Oxygenates (AES SOP OA-11010) SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	189488	1	04/09/2014 22:03	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189488	1	04/09/2014 22:03	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189488	1	04/09/2014 22:03	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-30
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 10:07:00 AM
Lab ID:	1404588-027	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189488	1	04/09/2014 22:32	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	189488	1	04/09/2014 22:32	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189488	1	04/09/2014 22:32	NP
Naphthalene	BRL		0.20	5.0	ug/L	189488	1	04/09/2014 22:32	NP
Toluene	BRL		0.38	1.0	ug/L	189488	1	04/09/2014 22:32	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	189488	1	04/09/2014 22:32	NP
Surr: 4-Bromofluorobenzene	91.8		0	66.2-120	%REC	189488	1	04/09/2014 22:32	NP
Surr: Dibromofluoromethane	102		0	79.5-121	%REC	189488	1	04/09/2014 22:32	NP
Surr: Toluene-d8	100		0	77-117	%REC	189488	1	04/09/2014 22:32	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189488	1	04/09/2014 22:32	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189488	1	04/09/2014 22:32	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189488	1	04/09/2014 22:32	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-31
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 1:56:00 PM
Lab ID:	1404588-028	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	0.90	J	0.39	1.0	ug/L	189488	1	04/09/2014 23:00	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	189488	1	04/09/2014 23:00	NP
Methyl tert-butyl ether	2.7		0.42	1.0	ug/L	189488	1	04/09/2014 23:00	NP
Naphthalene	BRL		0.20	5.0	ug/L	189488	1	04/09/2014 23:00	NP
Toluene	BRL		0.38	1.0	ug/L	189488	1	04/09/2014 23:00	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	189488	1	04/09/2014 23:00	NP
Surr: 4-Bromofluorobenzene	94.1		0	66.2-120	%REC	189488	1	04/09/2014 23:00	NP
Surr: Dibromofluoromethane	99.9		0	79.5-121	%REC	189488	1	04/09/2014 23:00	NP
Surr: Toluene-d8	99.6		0	77-117	%REC	189488	1	04/09/2014 23:00	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	59	J	9.5	100	ug/L	189488	1	04/09/2014 23:00	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189488	1	04/09/2014 23:00	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189488	1	04/09/2014 23:00	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-32
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 10:15:00 AM
Lab ID:	1404588-029	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	0.94	J	0.39	1.0	ug/L	189488	1	04/10/2014 19:24	NP
Ethylbenzene	1.9		0.40	1.0	ug/L	189488	1	04/10/2014 19:24	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189488	1	04/10/2014 19:24	NP
Naphthalene	6.6		0.20	5.0	ug/L	189488	1	04/10/2014 19:24	NP
Toluene	BRL		0.38	1.0	ug/L	189488	1	04/10/2014 19:24	NP
Xylenes, Total	2.4		0.83	1.0	ug/L	189488	1	04/10/2014 19:24	NP
Surr: 4-Bromofluorobenzene	89.9		0	66.2-120	%REC	189488	1	04/10/2014 19:24	NP
Surr: Dibromofluoromethane	90.7		0	79.5-121	%REC	189488	1	04/10/2014 19:24	NP
Surr: Toluene-d8	90.8		0	77-117	%REC	189488	1	04/10/2014 19:24	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	170		9.5	100	ug/L	189488	1	04/09/2014 23:28	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189488	1	04/09/2014 23:28	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189488	1	04/09/2014 23:28	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-33
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 10:24:00 AM
Lab ID:	1404588-030	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	560		19	50	ug/L	189488	50	04/11/2014 19:02	NP
Ethylbenzene	2500		20	50	ug/L	189488	50	04/11/2014 19:02	NP
Methyl tert-butyl ether	BRL		21	50	ug/L	189488	50	04/11/2014 19:02	NP
Naphthalene	670		10	250	ug/L	189488	50	04/11/2014 19:02	NP
Toluene	5200		19	50	ug/L	189488	50	04/11/2014 19:02	NP
Xylenes, Total	6900		41	50	ug/L	189488	50	04/11/2014 19:02	NP
Surr: 4-Bromofluorobenzene	89.3		0	66.2-120	%REC	189488	50	04/11/2014 19:02	NP
Surr: Dibromofluoromethane	94.6		0	79.5-121	%REC	189488	50	04/11/2014 19:02	NP
Surr: Toluene-d8	88.1		0	77-117	%REC	189488	50	04/11/2014 19:02	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	4100	J	480	5000	ug/L	189488	50	04/11/2014 19:02	NP
tert-Amyl methyl ether	BRL		50	500	ug/L	189488	50	04/11/2014 19:02	NP
tert-Butyl Alcohol	BRL		340	5000	ug/L	189488	50	04/11/2014 19:02	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-34
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 10:30:00 AM
Lab ID:	1404588-031	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189488	1	04/09/2014 23:56	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	189488	1	04/09/2014 23:56	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189488	1	04/09/2014 23:56	NP
Naphthalene	BRL		0.20	5.0	ug/L	189488	1	04/09/2014 23:56	NP
Toluene	BRL		0.38	1.0	ug/L	189488	1	04/09/2014 23:56	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	189488	1	04/09/2014 23:56	NP
Surr: 4-Bromofluorobenzene	95.8		0	66.2-120	%REC	189488	1	04/09/2014 23:56	NP
Surr: Dibromofluoromethane	100		0	79.5-121	%REC	189488	1	04/09/2014 23:56	NP
Surr: Toluene-d8	98.4		0	77-117	%REC	189488	1	04/09/2014 23:56	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	39	J	9.5	100	ug/L	189488	1	04/09/2014 23:56	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189488	1	04/09/2014 23:56	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189488	1	04/09/2014 23:56	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-35
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 10:55:00 AM
Lab ID:	1404588-032	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	3700		19	50	ug/L	189488	50	04/11/2014 01:37	NP
Ethylbenzene	2000		20	50	ug/L	189488	50	04/11/2014 01:37	NP
Methyl tert-butyl ether	160		21	50	ug/L	189488	50	04/11/2014 01:37	NP
Naphthalene	550		10	250	ug/L	189488	50	04/11/2014 01:37	NP
Toluene	4300		19	50	ug/L	189488	50	04/11/2014 01:37	NP
Xylenes, Total	6200		41	50	ug/L	189488	50	04/11/2014 01:37	NP
Surr: 4-Bromofluorobenzene	88.2		0	66.2-120	%REC	189488	50	04/11/2014 01:37	NP
Surr: Dibromofluoromethane	95.5		0	79.5-121	%REC	189488	50	04/11/2014 01:37	NP
Surr: Toluene-d8	89.1		0	77-117	%REC	189488	50	04/11/2014 01:37	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	5600		480	5000	ug/L	189488	50	04/11/2014 01:37	NP
tert-Amyl methyl ether	54	J	50	500	ug/L	189488	50	04/11/2014 01:37	NP
tert-Butyl Alcohol	BRL		340	5000	ug/L	189488	50	04/11/2014 01:37	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-36
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 10:19:00 AM
Lab ID:	1404588-033	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	5.1		0.39	1.0	ug/L	189488	1	04/10/2014 00:24	NP
Ethylbenzene	38		0.40	1.0	ug/L	189488	1	04/10/2014 00:24	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189488	1	04/10/2014 00:24	NP
Naphthalene	55		0.20	5.0	ug/L	189488	1	04/10/2014 00:24	NP
Toluene	BRL		0.38	1.0	ug/L	189488	1	04/10/2014 00:24	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	189488	1	04/10/2014 00:24	NP
Surr: 4-Bromofluorobenzene	99.8		0	66.2-120	%REC	189488	1	04/10/2014 00:24	NP
Surr: Dibromofluoromethane	98.2		0	79.5-121	%REC	189488	1	04/10/2014 00:24	NP
Surr: Toluene-d8	101		0	77-117	%REC	189488	1	04/10/2014 00:24	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	96	J	9.5	100	ug/L	189488	1	04/10/2014 00:24	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189488	1	04/10/2014 00:24	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189488	1	04/10/2014 00:24	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-37
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 11:25:00 AM
Lab ID:	1404588-034	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189488	1	04/10/2014 00:52	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	189488	1	04/10/2014 00:52	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189488	1	04/10/2014 00:52	NP
Naphthalene	3.7	J	0.20	5.0	ug/L	189488	1	04/10/2014 00:52	NP
Toluene	BRL		0.38	1.0	ug/L	189488	1	04/10/2014 00:52	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	189488	1	04/10/2014 00:52	NP
Surr: 4-Bromofluorobenzene	96.5		0	66.2-120	%REC	189488	1	04/10/2014 00:52	NP
Surr: Dibromofluoromethane	99.7		0	79.5-121	%REC	189488	1	04/10/2014 00:52	NP
Surr: Toluene-d8	97.7		0	77-117	%REC	189488	1	04/10/2014 00:52	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189488	1	04/10/2014 00:52	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189488	1	04/10/2014 00:52	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189488	1	04/10/2014 00:52	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-38
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 11:35:00 AM
Lab ID:	1404588-035	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189488	1	04/10/2014 09:55	SB
Ethylbenzene	BRL		0.40	1.0	ug/L	189488	1	04/10/2014 09:55	SB
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189488	1	04/10/2014 09:55	SB
Naphthalene	BRL		0.20	5.0	ug/L	189488	1	04/10/2014 09:55	SB
Toluene	BRL		0.38	1.0	ug/L	189488	1	04/10/2014 09:55	SB
Xylenes, Total	BRL		0.83	1.0	ug/L	189488	1	04/10/2014 09:55	SB
Surr: 4-Bromofluorobenzene	92.2		0	66.2-120	%REC	189488	1	04/10/2014 09:55	SB
Surr: Dibromofluoromethane	96.9		0	79.5-121	%REC	189488	1	04/10/2014 09:55	SB
Surr: Toluene-d8	96		0	77-117	%REC	189488	1	04/10/2014 09:55	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189488	1	04/10/2014 09:55	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189488	1	04/10/2014 09:55	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189488	1	04/10/2014 09:55	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-39
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 12:13:00 PM
Lab ID:	1404588-036	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189488	1	04/10/2014 10:24	SB
Ethylbenzene	2.2		0.40	1.0	ug/L	189488	1	04/10/2014 10:24	SB
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189488	1	04/10/2014 10:24	SB
Naphthalene	3.3	J	0.20	5.0	ug/L	189488	1	04/10/2014 10:24	SB
Toluene	3.2		0.38	1.0	ug/L	189488	1	04/10/2014 10:24	SB
Xylenes, Total	14		0.83	1.0	ug/L	189488	1	04/10/2014 10:24	SB
Surr: 4-Bromofluorobenzene	100		0	66.2-120	%REC	189488	1	04/10/2014 10:24	SB
Surr: Dibromofluoromethane	104		0	79.5-121	%REC	189488	1	04/10/2014 10:24	SB
Surr: Toluene-d8	98.5		0	77-117	%REC	189488	1	04/10/2014 10:24	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189488	1	04/10/2014 10:24	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189488	1	04/10/2014 10:24	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189488	1	04/10/2014 10:24	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-40
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 12:18:00 PM
Lab ID:	1404588-037	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	5.8		0.39	1.0	ug/L	189488	1	04/10/2014 10:52	SB
Ethylbenzene	2.0		0.40	1.0	ug/L	189488	1	04/10/2014 10:52	SB
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189488	1	04/10/2014 10:52	SB
Naphthalene	24		0.20	5.0	ug/L	189488	1	04/10/2014 10:52	SB
Toluene	14		0.38	1.0	ug/L	189488	1	04/10/2014 10:52	SB
Xylenes, Total	580		8.3	10	ug/L	189488	10	04/10/2014 18:52	SB
Surr: 4-Bromofluorobenzene	103		0	66.2-120	%REC	189488	10	04/10/2014 18:52	SB
Surr: 4-Bromofluorobenzene	109		0	66.2-120	%REC	189488	1	04/10/2014 10:52	SB
Surr: Dibromofluoromethane	96		0	79.5-121	%REC	189488	1	04/10/2014 10:52	SB
Surr: Dibromofluoromethane	99.9		0	79.5-121	%REC	189488	10	04/10/2014 18:52	SB
Surr: Toluene-d8	99.3		0	77-117	%REC	189488	1	04/10/2014 10:52	SB
Surr: Toluene-d8	98.8		0	77-117	%REC	189488	10	04/10/2014 18:52	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189488	1	04/10/2014 10:52	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189488	1	04/10/2014 10:52	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189488	1	04/10/2014 10:52	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-41
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 12:27:00 PM
Lab ID:	1404588-038	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189488	1	04/10/2014 12:45	SB
Ethylbenzene	BRL		0.40	1.0	ug/L	189488	1	04/10/2014 12:45	SB
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189488	1	04/10/2014 12:45	SB
Naphthalene	BRL		0.20	5.0	ug/L	189488	1	04/10/2014 12:45	SB
Toluene	BRL		0.38	1.0	ug/L	189488	1	04/10/2014 12:45	SB
Xylenes, Total	BRL		0.83	1.0	ug/L	189488	1	04/10/2014 12:45	SB
Surr: 4-Bromofluorobenzene	95.1		0	66.2-120	%REC	189488	1	04/10/2014 12:45	SB
Surr: Dibromofluoromethane	99.3		0	79.5-121	%REC	189488	1	04/10/2014 12:45	SB
Surr: Toluene-d8	96.5		0	77-117	%REC	189488	1	04/10/2014 12:45	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189488	1	04/10/2014 12:45	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189488	1	04/10/2014 12:45	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189488	1	04/10/2014 12:45	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-42
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 11:56:00 AM
Lab ID:	1404588-039	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189488	1	04/10/2014 11:48	SB
Ethylbenzene	BRL		0.40	1.0	ug/L	189488	1	04/10/2014 11:48	SB
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189488	1	04/10/2014 11:48	SB
Naphthalene	BRL		0.20	5.0	ug/L	189488	1	04/10/2014 11:48	SB
Toluene	BRL		0.38	1.0	ug/L	189488	1	04/10/2014 11:48	SB
Xylenes, Total	BRL		0.83	1.0	ug/L	189488	1	04/10/2014 11:48	SB
Surr: 4-Bromofluorobenzene	95.1		0	66.2-120	%REC	189488	1	04/10/2014 11:48	SB
Surr: Dibromofluoromethane	97.3		0	79.5-121	%REC	189488	1	04/10/2014 11:48	SB
Surr: Toluene-d8	94.8		0	77-117	%REC	189488	1	04/10/2014 11:48	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189488	1	04/10/2014 11:48	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189488	1	04/10/2014 11:48	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189488	1	04/10/2014 11:48	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-43
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 2:28:00 PM
Lab ID:	1404588-040	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189488	1	04/10/2014 12:17	SB
Ethylbenzene	BRL		0.40	1.0	ug/L	189488	1	04/10/2014 12:17	SB
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189488	1	04/10/2014 12:17	SB
Naphthalene	BRL		0.20	5.0	ug/L	189488	1	04/10/2014 12:17	SB
Toluene	BRL		0.38	1.0	ug/L	189488	1	04/10/2014 12:17	SB
Xylenes, Total	BRL		0.83	1.0	ug/L	189488	1	04/10/2014 12:17	SB
Surr: 4-Bromofluorobenzene	93.8		0	66.2-120	%REC	189488	1	04/10/2014 12:17	SB
Surr: Dibromofluoromethane	97		0	79.5-121	%REC	189488	1	04/10/2014 12:17	SB
Surr: Toluene-d8	96.7		0	77-117	%REC	189488	1	04/10/2014 12:17	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189488	1	04/10/2014 12:17	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189488	1	04/10/2014 12:17	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189488	1	04/10/2014 12:17	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-44
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 2:20:00 PM
Lab ID:	1404588-041	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189490	1	04/10/2014 13:13	SB
Ethylbenzene	BRL		0.40	1.0	ug/L	189490	1	04/10/2014 13:13	SB
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189490	1	04/10/2014 13:13	SB
Naphthalene	BRL		0.20	5.0	ug/L	189490	1	04/10/2014 13:13	SB
Toluene	BRL		0.38	1.0	ug/L	189490	1	04/10/2014 13:13	SB
Xylenes, Total	BRL		0.83	1.0	ug/L	189490	1	04/10/2014 13:13	SB
Surr: 4-Bromofluorobenzene	93		0	66.2-120	%REC	189490	1	04/10/2014 13:13	SB
Surr: Dibromofluoromethane	96.6		0	79.5-121	%REC	189490	1	04/10/2014 13:13	SB
Surr: Toluene-d8	95.4		0	77-117	%REC	189490	1	04/10/2014 13:13	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189490	1	04/10/2014 13:13	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189490	1	04/10/2014 13:13	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189490	1	04/10/2014 13:13	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-45
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 2:22:00 PM
Lab ID:	1404588-042	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189490	1	04/10/2014 13:41	SB
Ethylbenzene	BRL		0.40	1.0	ug/L	189490	1	04/10/2014 13:41	SB
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189490	1	04/10/2014 13:41	SB
Naphthalene	BRL		0.20	5.0	ug/L	189490	1	04/10/2014 13:41	SB
Toluene	BRL		0.38	1.0	ug/L	189490	1	04/10/2014 13:41	SB
Xylenes, Total	BRL		0.83	1.0	ug/L	189490	1	04/10/2014 13:41	SB
Surr: 4-Bromofluorobenzene	96		0	66.2-120	%REC	189490	1	04/10/2014 13:41	SB
Surr: Dibromofluoromethane	101		0	79.5-121	%REC	189490	1	04/10/2014 13:41	SB
Surr: Toluene-d8	97.6		0	77-117	%REC	189490	1	04/10/2014 13:41	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189490	1	04/10/2014 13:41	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189490	1	04/10/2014 13:41	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189490	1	04/10/2014 13:41	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-46
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 2:30:00 PM
Lab ID:	1404588-043	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189490	1	04/10/2014 14:09	SB
Ethylbenzene	BRL		0.40	1.0	ug/L	189490	1	04/10/2014 14:09	SB
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189490	1	04/10/2014 14:09	SB
Naphthalene	BRL		0.20	5.0	ug/L	189490	1	04/10/2014 14:09	SB
Toluene	BRL		0.38	1.0	ug/L	189490	1	04/10/2014 14:09	SB
Xylenes, Total	BRL		0.83	1.0	ug/L	189490	1	04/10/2014 14:09	SB
Surr: 4-Bromofluorobenzene	90.3		0	66.2-120	%REC	189490	1	04/10/2014 14:09	SB
Surr: Dibromofluoromethane	96.8		0	79.5-121	%REC	189490	1	04/10/2014 14:09	SB
Surr: Toluene-d8	97.4		0	77-117	%REC	189490	1	04/10/2014 14:09	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189490	1	04/10/2014 14:09	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189490	1	04/10/2014 14:09	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189490	1	04/10/2014 14:09	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-48
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 2:38:00 PM
Lab ID:	1404588-044	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189490	1	04/10/2014 14:37	SB
Ethylbenzene	BRL		0.40	1.0	ug/L	189490	1	04/10/2014 14:37	SB
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189490	1	04/10/2014 14:37	SB
Naphthalene	BRL		0.20	5.0	ug/L	189490	1	04/10/2014 14:37	SB
Toluene	BRL		0.38	1.0	ug/L	189490	1	04/10/2014 14:37	SB
Xylenes, Total	BRL		0.83	1.0	ug/L	189490	1	04/10/2014 14:37	SB
Surr: 4-Bromofluorobenzene	94.8		0	66.2-120	%REC	189490	1	04/10/2014 14:37	SB
Surr: Dibromofluoromethane	101		0	79.5-121	%REC	189490	1	04/10/2014 14:37	SB
Surr: Toluene-d8	97.4		0	77-117	%REC	189490	1	04/10/2014 14:37	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189490	1	04/10/2014 14:37	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189490	1	04/10/2014 14:37	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189490	1	04/10/2014 14:37	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-51
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 3:25:00 PM
Lab ID:	1404588-047	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189490	1	04/10/2014 15:06	SB
Ethylbenzene	BRL		0.40	1.0	ug/L	189490	1	04/10/2014 15:06	SB
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189490	1	04/10/2014 15:06	SB
Naphthalene	BRL		0.20	5.0	ug/L	189490	1	04/10/2014 15:06	SB
Toluene	BRL		0.38	1.0	ug/L	189490	1	04/10/2014 15:06	SB
Xylenes, Total	BRL		0.83	1.0	ug/L	189490	1	04/10/2014 15:06	SB
Surr: 4-Bromofluorobenzene	93.8		0	66.2-120	%REC	189490	1	04/10/2014 15:06	SB
Surr: Dibromofluoromethane	102		0	79.5-121	%REC	189490	1	04/10/2014 15:06	SB
Surr: Toluene-d8	98.2		0	77-117	%REC	189490	1	04/10/2014 15:06	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189490	1	04/10/2014 15:06	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189490	1	04/10/2014 15:06	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189490	1	04/10/2014 15:06	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-53
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/3/2014 8:51:00 AM
Lab ID:	1404588-048	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189490	1	04/10/2014 19:49	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	189490	1	04/10/2014 19:49	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189490	1	04/10/2014 19:49	NP
Naphthalene	4.1	J	0.20	5.0	ug/L	189490	1	04/10/2014 19:49	NP
Toluene	BRL		0.38	1.0	ug/L	189490	1	04/10/2014 19:49	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	189490	1	04/10/2014 19:49	NP
Surr: 4-Bromofluorobenzene	86.2		0	66.2-120	%REC	189490	1	04/10/2014 19:49	NP
Surr: Dibromofluoromethane	97		0	79.5-121	%REC	189490	1	04/10/2014 19:49	NP
Surr: Toluene-d8	88.3		0	77-117	%REC	189490	1	04/10/2014 19:49	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189490	1	04/10/2014 15:34	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189490	1	04/10/2014 15:34	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189490	1	04/10/2014 15:34	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-54
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 3:45:00 PM
Lab ID:	1404588-049	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	189490	1	04/10/2014 16:02	SB
Ethylbenzene	BRL		0.40	1.0	ug/L	189490	1	04/10/2014 16:02	SB
Methyl tert-butyl ether	9.6		0.42	1.0	ug/L	189490	1	04/10/2014 16:02	SB
Naphthalene	BRL		0.20	5.0	ug/L	189490	1	04/10/2014 16:02	SB
Toluene	BRL		0.38	1.0	ug/L	189490	1	04/10/2014 16:02	SB
Xylenes, Total	BRL		0.83	1.0	ug/L	189490	1	04/10/2014 16:02	SB
Surr: 4-Bromofluorobenzene	90.6		0	66.2-120	%REC	189490	1	04/10/2014 16:02	SB
Surr: Dibromofluoromethane	105		0	79.5-121	%REC	189490	1	04/10/2014 16:02	SB
Surr: Toluene-d8	97.8		0	77-117	%REC	189490	1	04/10/2014 16:02	SB
Oxygenates (AES SOP OA-11010) SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	189490	1	04/10/2014 16:02	SB
tert-Amyl methyl ether	6.7	J	1.0	10	ug/L	189490	1	04/10/2014 16:02	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189490	1	04/10/2014 16:02	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-55
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/3/2014 10:19:00 AM
Lab ID:	1404588-050	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	10		0.39	1.0	ug/L	189490	1	04/10/2014 21:42	SB
Ethylbenzene	3.5		0.40	1.0	ug/L	189490	1	04/10/2014 21:42	SB
Methyl tert-butyl ether	24		0.42	1.0	ug/L	189490	1	04/10/2014 21:42	SB
Naphthalene	3.9	J	0.20	5.0	ug/L	189490	1	04/10/2014 21:42	SB
Toluene	BRL		0.38	1.0	ug/L	189490	1	04/10/2014 21:42	SB
Xylenes, Total	BRL		0.83	1.0	ug/L	189490	1	04/10/2014 21:42	SB
Surr: 4-Bromofluorobenzene	93.4		0	66.2-120	%REC	189490	1	04/10/2014 21:42	SB
Surr: Dibromofluoromethane	99.2		0	79.5-121	%REC	189490	1	04/10/2014 21:42	SB
Surr: Toluene-d8	98		0	77-117	%REC	189490	1	04/10/2014 21:42	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	98	J	9.5	100	ug/L	189490	1	04/10/2014 21:42	SB
tert-Amyl methyl ether	6.4	J	1.0	10	ug/L	189490	1	04/10/2014 21:42	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189490	1	04/10/2014 21:42	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-56
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/3/2014 9:41:00 AM
Lab ID:	1404588-051	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189490	1	04/10/2014 22:10	SB
Ethylbenzene	BRL		0.40	1.0	ug/L	189490	1	04/10/2014 22:10	SB
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189490	1	04/10/2014 22:10	SB
Naphthalene	BRL		0.20	5.0	ug/L	189490	1	04/10/2014 22:10	SB
Toluene	BRL		0.38	1.0	ug/L	189490	1	04/10/2014 22:10	SB
Xylenes, Total	BRL		0.83	1.0	ug/L	189490	1	04/10/2014 22:10	SB
Surr: 4-Bromofluorobenzene	92.6		0	66.2-120	%REC	189490	1	04/10/2014 22:10	SB
Surr: Dibromofluoromethane	102		0	79.5-121	%REC	189490	1	04/10/2014 22:10	SB
Surr: Toluene-d8	97.9		0	77-117	%REC	189490	1	04/10/2014 22:10	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	50	J	9.5	100	ug/L	189490	1	04/10/2014 22:10	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189490	1	04/10/2014 22:10	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189490	1	04/10/2014 22:10	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-59
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 3:55:00 PM
Lab ID:	1404588-053	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	28		0.39	1.0	ug/L	189490	1	04/09/2014 17:33	NP
Ethylbenzene	300		4.0	10	ug/L	189490	10	04/10/2014 13:08	NP
Methyl tert-butyl ether	130		0.42	1.0	ug/L	189490	1	04/09/2014 17:33	NP
Naphthalene	45		0.20	5.0	ug/L	189490	1	04/09/2014 17:33	NP
Toluene	2.8		0.38	1.0	ug/L	189490	1	04/09/2014 17:33	NP
Xylenes, Total	6.4		0.83	1.0	ug/L	189490	1	04/09/2014 17:33	NP
Surr: 4-Bromofluorobenzene	88		0	66.2-120	%REC	189490	10	04/10/2014 13:08	NP
Surr: 4-Bromofluorobenzene	93.7		0	66.2-120	%REC	189490	1	04/09/2014 17:33	NP
Surr: Dibromofluoromethane	93.6		0	79.5-121	%REC	189490	10	04/10/2014 13:08	NP
Surr: Dibromofluoromethane	96.8		0	79.5-121	%REC	189490	1	04/09/2014 17:33	NP
Surr: Toluene-d8	89		0	77-117	%REC	189490	10	04/10/2014 13:08	NP
Surr: Toluene-d8	95.4		0	77-117	%REC	189490	1	04/09/2014 17:33	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	2600		95	1000	ug/L	189490	10	04/10/2014 13:08	NP
tert-Amyl methyl ether	42		1.0	10	ug/L	189490	1	04/09/2014 17:33	NP
tert-Butyl Alcohol	160		6.8	100	ug/L	189490	1	04/09/2014 17:33	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-62
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 1:38:00 PM
Lab ID:	1404588-055	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	0.86	J	0.39	1.0	ug/L	189490	1	04/10/2014 22:39	SB
Ethylbenzene	BRL		0.40	1.0	ug/L	189490	1	04/10/2014 22:39	SB
Methyl tert-butyl ether	3.0		0.42	1.0	ug/L	189490	1	04/10/2014 22:39	SB
Naphthalene	3.3	J	0.20	5.0	ug/L	189490	1	04/10/2014 22:39	SB
Toluene	BRL		0.38	1.0	ug/L	189490	1	04/10/2014 22:39	SB
Xylenes, Total	BRL		0.83	1.0	ug/L	189490	1	04/10/2014 22:39	SB
Surr: 4-Bromofluorobenzene	93.4		0	66.2-120	%REC	189490	1	04/10/2014 22:39	SB
Surr: Dibromofluoromethane	102		0	79.5-121	%REC	189490	1	04/10/2014 22:39	SB
Surr: Toluene-d8	98.5		0	77-117	%REC	189490	1	04/10/2014 22:39	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	260		9.5	100	ug/L	189490	1	04/10/2014 22:39	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189490	1	04/10/2014 22:39	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189490	1	04/10/2014 22:39	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-63
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 1:27:00 PM
Lab ID:	1404588-056	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189490	1	04/10/2014 23:07	SB
Ethylbenzene	BRL		0.40	1.0	ug/L	189490	1	04/10/2014 23:07	SB
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189490	1	04/10/2014 23:07	SB
Naphthalene	BRL		0.20	5.0	ug/L	189490	1	04/10/2014 23:07	SB
Toluene	BRL		0.38	1.0	ug/L	189490	1	04/10/2014 23:07	SB
Xylenes, Total	BRL		0.83	1.0	ug/L	189490	1	04/10/2014 23:07	SB
Surr: 4-Bromofluorobenzene	93.6		0	66.2-120	%REC	189490	1	04/10/2014 23:07	SB
Surr: Dibromofluoromethane	99		0	79.5-121	%REC	189490	1	04/10/2014 23:07	SB
Surr: Toluene-d8	97.4		0	77-117	%REC	189490	1	04/10/2014 23:07	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	120		9.5	100	ug/L	189490	1	04/10/2014 23:07	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189490	1	04/10/2014 23:07	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189490	1	04/10/2014 23:07	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-67
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 12:42:00 PM
Lab ID:	1404588-058	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189490	1	04/10/2014 23:35	SB
Ethylbenzene	BRL		0.40	1.0	ug/L	189490	1	04/10/2014 23:35	SB
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189490	1	04/10/2014 23:35	SB
Naphthalene	BRL		0.20	5.0	ug/L	189490	1	04/10/2014 23:35	SB
Toluene	BRL		0.38	1.0	ug/L	189490	1	04/10/2014 23:35	SB
Xylenes, Total	BRL		0.83	1.0	ug/L	189490	1	04/10/2014 23:35	SB
Surr: 4-Bromofluorobenzene	91.5		0	66.2-120	%REC	189490	1	04/10/2014 23:35	SB
Surr: Dibromofluoromethane	100		0	79.5-121	%REC	189490	1	04/10/2014 23:35	SB
Surr: Toluene-d8	97.8		0	77-117	%REC	189490	1	04/10/2014 23:35	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189490	1	04/10/2014 23:35	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189490	1	04/10/2014 23:35	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189490	1	04/10/2014 23:35	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-70
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 1:01:00 PM
Lab ID:	1404588-059	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189490	1	04/11/2014 00:03	SB
Ethylbenzene	BRL		0.40	1.0	ug/L	189490	1	04/11/2014 00:03	SB
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189490	1	04/11/2014 00:03	SB
Naphthalene	BRL		0.20	5.0	ug/L	189490	1	04/11/2014 00:03	SB
Toluene	BRL		0.38	1.0	ug/L	189490	1	04/11/2014 00:03	SB
Xylenes, Total	BRL		0.83	1.0	ug/L	189490	1	04/11/2014 00:03	SB
Surr: 4-Bromofluorobenzene	92.7		0	66.2-120	%REC	189490	1	04/11/2014 00:03	SB
Surr: Dibromofluoromethane	104		0	79.5-121	%REC	189490	1	04/11/2014 00:03	SB
Surr: Toluene-d8	98.8		0	77-117	%REC	189490	1	04/11/2014 00:03	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189490	1	04/11/2014 00:03	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189490	1	04/11/2014 00:03	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189490	1	04/11/2014 00:03	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-5ar
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 9:30:00 AM
Lab ID:	1404588-060	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	12000		190	500	ug/L	189490	500	04/11/2014 13:55	NP
Ethylbenzene	2400		20	50	ug/L	189490	50	04/11/2014 02:02	NP
Methyl tert-butyl ether	70		21	50	ug/L	189490	50	04/11/2014 02:02	NP
Naphthalene	1000		10	250	ug/L	189490	50	04/11/2014 02:02	NP
Toluene	13000		190	500	ug/L	189490	500	04/11/2014 13:55	NP
Xylenes, Total	13000		41	50	ug/L	189490	50	04/11/2014 02:02	NP
Surr: 4-Bromofluorobenzene	88.1		0	66.2-120	%REC	189490	500	04/11/2014 13:55	NP
Surr: 4-Bromofluorobenzene	88.2		0	66.2-120	%REC	189490	50	04/11/2014 02:02	NP
Surr: Dibromofluoromethane	93.4		0	79.5-121	%REC	189490	500	04/11/2014 13:55	NP
Surr: Dibromofluoromethane	93.6		0	79.5-121	%REC	189490	50	04/11/2014 02:02	NP
Surr: Toluene-d8	87.1		0	77-117	%REC	189490	500	04/11/2014 13:55	NP
Surr: Toluene-d8	89.7		0	77-117	%REC	189490	50	04/11/2014 02:02	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		480	5000	ug/L	189490	50	04/11/2014 02:02	NP
tert-Amyl methyl ether	160	J	50	500	ug/L	189490	50	04/11/2014 02:02	NP
tert-Butyl Alcohol	BRL		340	5000	ug/L	189490	50	04/11/2014 02:02	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	PW-1R
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/3/2014 1:35:00 PM
Lab ID:	1404588-061	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					**(SW5030B)**				
Benzene	460		19	50	ug/L	189490	50	04/11/2014 02:27	NP
Ethylbenzene	320		20	50	ug/L	189490	50	04/11/2014 02:27	NP
Methyl tert-butyl ether	BRL		21	50	ug/L	189490	50	04/11/2014 02:27	NP
Naphthalene	510		10	250	ug/L	189490	50	04/11/2014 02:27	NP
Toluene	3400		19	50	ug/L	189490	50	04/11/2014 02:27	NP
Xylenes, Total	9200		41	50	ug/L	189490	50	04/11/2014 02:27	NP
Surr: 4-Bromofluorobenzene	86.6		0	66.2-120	%REC	189490	50	04/11/2014 02:27	NP
Surr: Dibromofluoromethane	94.4		0	79.5-121	%REC	189490	50	04/11/2014 02:27	NP
Surr: Toluene-d8	88.4		0	77-117	%REC	189490	50	04/11/2014 02:27	NP
Oxygenates (AES SOP OA-11010) SW8260B					**(SW5030B)**				
tert-Amyl alcohol	710	J	480	5000	ug/L	189490	50	04/11/2014 02:27	NP
tert-Amyl methyl ether	BRL		50	500	ug/L	189490	50	04/11/2014 02:27	NP
tert-Butyl Alcohol	BRL		340	5000	ug/L	189490	50	04/11/2014 02:27	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DW-1
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 2:20:00 PM
Lab ID:	1404588-062	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					**(SW5030B)**				
Benzene	0.45	J	0.39	1.0	ug/L	189490	1	04/11/2014 00:31	SB
Ethylbenzene	1.7		0.40	1.0	ug/L	189490	1	04/11/2014 00:31	SB
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189490	1	04/11/2014 00:31	SB
Naphthalene	BRL		0.20	5.0	ug/L	189490	1	04/11/2014 00:31	SB
Toluene	1.2		0.38	1.0	ug/L	189490	1	04/11/2014 00:31	SB
Xylenes, Total	7.2		0.83	1.0	ug/L	189490	1	04/11/2014 00:31	SB
Surr: 4-Bromofluorobenzene	96.1		0	66.2-120	%REC	189490	1	04/11/2014 00:31	SB
Surr: Dibromofluoromethane	102		0	79.5-121	%REC	189490	1	04/11/2014 00:31	SB
Surr: Toluene-d8	95.1		0	77-117	%REC	189490	1	04/11/2014 00:31	SB
Oxygenates (AES SOP OA-11010) SW8260B					**(SW5030B)**				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189490	1	04/11/2014 00:31	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189490	1	04/11/2014 00:31	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189490	1	04/11/2014 00:31	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DW-2
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 3:01:00 PM
Lab ID:	1404588-063	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189490	1	04/11/2014 16:50	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	189490	1	04/11/2014 16:50	NP
Methyl tert-butyl ether	7.1		0.42	1.0	ug/L	189490	1	04/11/2014 16:50	NP
Naphthalene	4.1	J	0.20	5.0	ug/L	189490	1	04/11/2014 16:50	NP
Toluene	BRL		0.38	1.0	ug/L	189490	1	04/11/2014 16:50	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	189490	1	04/11/2014 16:50	NP
Surr: 4-Bromofluorobenzene	83.6		0	66.2-120	%REC	189490	1	04/11/2014 16:50	NP
Surr: Dibromofluoromethane	100		0	79.5-121	%REC	189490	1	04/11/2014 16:50	NP
Surr: Toluene-d8	93		0	77-117	%REC	189490	1	04/11/2014 16:50	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189490	1	04/11/2014 00:59	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189490	1	04/11/2014 00:59	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189490	1	04/11/2014 00:59	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DW-3
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/3/2014 4:01:00 PM
Lab ID:	1404588-064	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	9800		190	500	ug/L	189490	500	04/11/2014 16:00	NP
Ethylbenzene	3700		20	50	ug/L	189490	50	04/11/2014 19:27	NP
Methyl tert-butyl ether	990		21	50	ug/L	189490	50	04/11/2014 19:27	NP
Naphthalene	780		10	250	ug/L	189490	50	04/11/2014 19:27	NP
Toluene	22000		190	500	ug/L	189490	500	04/11/2014 16:00	NP
Xylenes, Total	17000		41	50	ug/L	189490	50	04/11/2014 19:27	NP
Surr: 4-Bromofluorobenzene	84.6		0	66.2-120	%REC	189490	500	04/11/2014 16:00	NP
Surr: 4-Bromofluorobenzene	88		0	66.2-120	%REC	189490	50	04/11/2014 19:27	NP
Surr: Dibromofluoromethane	95.7		0	79.5-121	%REC	189490	50	04/11/2014 19:27	NP
Surr: Dibromofluoromethane	97.6		0	79.5-121	%REC	189490	500	04/11/2014 16:00	NP
Surr: Toluene-d8	87.7		0	77-117	%REC	189490	500	04/11/2014 16:00	NP
Surr: Toluene-d8	88.5		0	77-117	%REC	189490	50	04/11/2014 19:27	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	10000		480	5000	ug/L	189490	50	04/11/2014 19:27	NP
tert-Amyl methyl ether	190	J	50	500	ug/L	189490	50	04/11/2014 19:27	NP
tert-Butyl Alcohol	BRL		340	5000	ug/L	189490	50	04/11/2014 19:27	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DW-4
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/3/2014 2:09:00 PM
Lab ID:	1404588-065	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189490	1	04/11/2014 11:27	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	189490	1	04/11/2014 11:27	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189490	1	04/11/2014 11:27	NP
Naphthalene	BRL		0.20	5.0	ug/L	189490	1	04/11/2014 11:27	NP
Toluene	BRL		0.38	1.0	ug/L	189490	1	04/11/2014 11:27	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	189490	1	04/11/2014 11:27	NP
Surr: 4-Bromofluorobenzene	82.8		0	66.2-120	%REC	189490	1	04/11/2014 11:27	NP
Surr: Dibromofluoromethane	107		0	79.5-121	%REC	189490	1	04/11/2014 11:27	NP
Surr: Toluene-d8	91.7		0	77-117	%REC	189490	1	04/11/2014 11:27	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189490	1	04/11/2014 11:27	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189490	1	04/11/2014 11:27	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189490	1	04/11/2014 11:27	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DW-5
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 11:00:00 AM
Lab ID:	1404588-066	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	3300		19	50	ug/L	189491	50	04/09/2014 17:08	NP
Ethylbenzene	37		0.40	1.0	ug/L	189491	1	04/09/2014 15:53	NP
Methyl tert-butyl ether	940		21	50	ug/L	189491	50	04/09/2014 17:08	NP
Naphthalene	81		0.20	5.0	ug/L	189491	1	04/09/2014 15:53	NP
Toluene	68		0.38	1.0	ug/L	189491	1	04/09/2014 15:53	NP
Xylenes, Total	1000		41	50	ug/L	189491	50	04/09/2014 17:08	NP
Surr: 4-Bromofluorobenzene	90.5		0	66.2-120	%REC	189491	50	04/09/2014 17:08	NP
Surr: 4-Bromofluorobenzene	93.3		0	66.2-120	%REC	189491	1	04/09/2014 15:53	NP
Surr: Dibromofluoromethane	99.9		0	79.5-121	%REC	189491	50	04/09/2014 17:08	NP
Surr: Dibromofluoromethane	96.4		0	79.5-121	%REC	189491	1	04/09/2014 15:53	NP
Surr: Toluene-d8	90.3		0	77-117	%REC	189491	50	04/09/2014 17:08	NP
Surr: Toluene-d8	94		0	77-117	%REC	189491	1	04/09/2014 15:53	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	4300		95	1000	ug/L	189491	10	04/10/2014 14:23	NP
tert-Amyl methyl ether	83		1.0	10	ug/L	189491	1	04/09/2014 15:53	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189491	1	04/09/2014 15:53	NP
Surr: 4-Bromofluorobenzene	89.3		0	66.2-120	%REC	189491	10	04/10/2014 14:23	NP
Surr: Dibromofluoromethane	92.7		0	79.5-121	%REC	189491	10	04/10/2014 14:23	NP
Surr: Toluene-d8	90.3		0	77-117	%REC	189491	10	04/10/2014 14:23	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DW-6
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 12:18:00 PM
Lab ID:	1404588-067	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	8.5		0.39	1.0	ug/L	189491	1	04/11/2014 01:28	SB
Ethylbenzene	1.6		0.40	1.0	ug/L	189491	1	04/11/2014 01:28	SB
Methyl tert-butyl ether	3.0		0.42	1.0	ug/L	189491	1	04/11/2014 01:28	SB
Naphthalene	BRL		0.20	5.0	ug/L	189491	1	04/11/2014 01:28	SB
Toluene	1.2		0.38	1.0	ug/L	189491	1	04/11/2014 01:28	SB
Xylenes, Total	7.2		0.83	1.0	ug/L	189491	1	04/11/2014 01:28	SB
Surr: 4-Bromofluorobenzene	92.2		0	66.2-120	%REC	189491	1	04/11/2014 01:28	SB
Surr: Dibromofluoromethane	102		0	79.5-121	%REC	189491	1	04/11/2014 01:28	SB
Surr: Toluene-d8	96.4		0	77-117	%REC	189491	1	04/11/2014 01:28	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189491	1	04/11/2014 01:28	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189491	1	04/11/2014 01:28	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189491	1	04/11/2014 01:28	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DW-7
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/3/2014 3:17:00 PM
Lab ID:	1404588-068	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	0.52	J	0.39	1.0	ug/L	189491	1	04/11/2014 11:02	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	189491	1	04/11/2014 11:02	NP
Methyl tert-butyl ether	2.6		0.42	1.0	ug/L	189491	1	04/11/2014 11:02	NP
Naphthalene	4.2	J	0.20	5.0	ug/L	189491	1	04/11/2014 11:02	NP
Toluene	0.46	J	0.38	1.0	ug/L	189491	1	04/11/2014 11:02	NP
Xylenes, Total	1.4		0.83	1.0	ug/L	189491	1	04/11/2014 11:02	NP
Surr: 4-Bromofluorobenzene	83.4		0	66.2-120	%REC	189491	1	04/11/2014 11:02	NP
Surr: Dibromofluoromethane	104		0	79.5-121	%REC	189491	1	04/11/2014 11:02	NP
Surr: Toluene-d8	90		0	77-117	%REC	189491	1	04/11/2014 11:02	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189491	1	04/11/2014 11:02	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189491	1	04/11/2014 11:02	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189491	1	04/11/2014 11:02	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DW-9
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 10:55:00 AM
Lab ID:	1404588-069	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189491	1	04/11/2014 02:24	SB
Ethylbenzene	BRL		0.40	1.0	ug/L	189491	1	04/11/2014 02:24	SB
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189491	1	04/11/2014 02:24	SB
Naphthalene	BRL		0.20	5.0	ug/L	189491	1	04/11/2014 02:24	SB
Toluene	BRL		0.38	1.0	ug/L	189491	1	04/11/2014 02:24	SB
Xylenes, Total	BRL		0.83	1.0	ug/L	189491	1	04/11/2014 02:24	SB
Surr: 4-Bromofluorobenzene	93.8		0	66.2-120	%REC	189491	1	04/11/2014 02:24	SB
Surr: Dibromofluoromethane	102		0	79.5-121	%REC	189491	1	04/11/2014 02:24	SB
Surr: Toluene-d8	97.1		0	77-117	%REC	189491	1	04/11/2014 02:24	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189491	1	04/11/2014 02:24	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189491	1	04/11/2014 02:24	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189491	1	04/11/2014 02:24	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	SW-1
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 11:58:00 AM
Lab ID:	1404588-070	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	180		0.39	1.0	ug/L	189491	1	04/11/2014 02:52	SB
Ethylbenzene	30		0.40	1.0	ug/L	189491	1	04/11/2014 02:52	SB
Methyl tert-butyl ether	42		0.42	1.0	ug/L	189491	1	04/11/2014 02:52	SB
Naphthalene	6.5		0.20	5.0	ug/L	189491	1	04/11/2014 02:52	SB
Toluene	8.4		0.38	1.0	ug/L	189491	1	04/11/2014 02:52	SB
Xylenes, Total	53		0.83	1.0	ug/L	189491	1	04/11/2014 02:52	SB
Surr: 4-Bromofluorobenzene	98		0	66.2-120	%REC	189491	1	04/11/2014 02:52	SB
Surr: Dibromofluoromethane	97.9		0	79.5-121	%REC	189491	1	04/11/2014 02:52	SB
Surr: Toluene-d8	96.1		0	77-117	%REC	189491	1	04/11/2014 02:52	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	350		9.5	100	ug/L	189491	1	04/11/2014 02:52	SB
tert-Amyl methyl ether	9.5	J	1.0	10	ug/L	189491	1	04/11/2014 02:52	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189491	1	04/11/2014 02:52	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	TRIP BLANK 1
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/4/2014
Lab ID:	1404588-071	**Matrix:**	Aqueous

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					**(SW5030B)**				
Benzene	BRL		0.39	1.0	ug/L	189491	1	04/10/2014 20:46	SB
Ethylbenzene	BRL		0.40	1.0	ug/L	189491	1	04/10/2014 20:46	SB
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189491	1	04/10/2014 20:46	SB
Naphthalene	BRL		0.20	5.0	ug/L	189491	1	04/10/2014 20:46	SB
Toluene	BRL		0.38	1.0	ug/L	189491	1	04/10/2014 20:46	SB
Xylenes, Total	BRL		0.83	1.0	ug/L	189491	1	04/10/2014 20:46	SB
Surr: 4-Bromofluorobenzene	94.4		0	66.2-120	%REC	189491	1	04/10/2014 20:46	SB
Surr: Dibromofluoromethane	99.3		0	79.5-121	%REC	189491	1	04/10/2014 20:46	SB
Surr: Toluene-d8	96.7		0	77-117	%REC	189491	1	04/10/2014 20:46	SB
Oxygenates (AES SOP OA-11010) SW8260B					**(SW5030B)**				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189491	1	04/10/2014 20:46	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189491	1	04/10/2014 20:46	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189491	1	04/10/2014 20:46	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	TRIP BLANK 2
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/4/2014
Lab ID:	1404588-072	**Matrix:**	Aqueous

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189491	1	04/10/2014 21:14	SB
Ethylbenzene	BRL		0.40	1.0	ug/L	189491	1	04/10/2014 21:14	SB
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189491	1	04/10/2014 21:14	SB
Naphthalene	BRL		0.20	5.0	ug/L	189491	1	04/10/2014 21:14	SB
Toluene	BRL		0.38	1.0	ug/L	189491	1	04/10/2014 21:14	SB
Xylenes, Total	BRL		0.83	1.0	ug/L	189491	1	04/10/2014 21:14	SB
Surr: 4-Bromofluorobenzene	94.3		0	66.2-120	%REC	189491	1	04/10/2014 21:14	SB
Surr: Dibromofluoromethane	99.3		0	79.5-121	%REC	189491	1	04/10/2014 21:14	SB
Surr: Toluene-d8	96.2		0	77-117	%REC	189491	1	04/10/2014 21:14	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189491	1	04/10/2014 21:14	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189491	1	04/10/2014 21:14	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189491	1	04/10/2014 21:14	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	FB 1
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/3/2014 10:01:00 AM
Lab ID:	1404588-073	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	189491	1	04/10/2014 19:21	SB
Ethylbenzene	BRL		0.40	1.0	ug/L	189491	1	04/10/2014 19:21	SB
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189491	1	04/10/2014 19:21	SB
Naphthalene	BRL		0.20	5.0	ug/L	189491	1	04/10/2014 19:21	SB
Toluene	BRL		0.38	1.0	ug/L	189491	1	04/10/2014 19:21	SB
Xylenes, Total	BRL		0.83	1.0	ug/L	189491	1	04/10/2014 19:21	SB
Surr: 4-Bromofluorobenzene	93.7		0	66.2-120	%REC	189491	1	04/10/2014 19:21	SB
Surr: Dibromofluoromethane	101		0	79.5-121	%REC	189491	1	04/10/2014 19:21	SB
Surr: Toluene-d8	96.3		0	77-117	%REC	189491	1	04/10/2014 19:21	SB
Oxygenates (AES SOP OA-11010) SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	189491	1	04/10/2014 19:21	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189491	1	04/10/2014 19:21	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189491	1	04/10/2014 19:21	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	FB 2
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 2:14:00 PM
Lab ID:	1404588-074	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189491	1	04/10/2014 19:49	SB
Ethylbenzene	BRL		0.40	1.0	ug/L	189491	1	04/10/2014 19:49	SB
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189491	1	04/10/2014 19:49	SB
Naphthalene	BRL		0.20	5.0	ug/L	189491	1	04/10/2014 19:49	SB
Toluene	BRL		0.38	1.0	ug/L	189491	1	04/10/2014 19:49	SB
Xylenes, Total	BRL		0.83	1.0	ug/L	189491	1	04/10/2014 19:49	SB
Surr: 4-Bromofluorobenzene	96.6		0	66.2-120	%REC	189491	1	04/10/2014 19:49	SB
Surr: Dibromofluoromethane	105		0	79.5-121	%REC	189491	1	04/10/2014 19:49	SB
Surr: Toluene-d8	99.1		0	77-117	%REC	189491	1	04/10/2014 19:49	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189491	1	04/10/2014 19:49	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189491	1	04/10/2014 19:49	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189491	1	04/10/2014 19:49	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	FB 3
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/1/2014 11:49:00 AM
Lab ID:	1404588-075	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	BRL		0.39	1.0	ug/L	189491	1	04/10/2014 20:17	SB
Ethylbenzene	BRL		0.40	1.0	ug/L	189491	1	04/10/2014 20:17	SB
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	189491	1	04/10/2014 20:17	SB
Naphthalene	BRL		0.20	5.0	ug/L	189491	1	04/10/2014 20:17	SB
Toluene	BRL		0.38	1.0	ug/L	189491	1	04/10/2014 20:17	SB
Xylenes, Total	BRL		0.83	1.0	ug/L	189491	1	04/10/2014 20:17	SB
Surr: 4-Bromofluorobenzene	90.9		0	66.2-120	%REC	189491	1	04/10/2014 20:17	SB
Surr: Dibromofluoromethane	99.4		0	79.5-121	%REC	189491	1	04/10/2014 20:17	SB
Surr: Toluene-d8	98.6		0	77-117	%REC	189491	1	04/10/2014 20:17	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		9.5	100	ug/L	189491	1	04/10/2014 20:17	SB
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189491	1	04/10/2014 20:17	SB
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189491	1	04/10/2014 20:17	SB

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DUP A
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 10:15:00 AM
Lab ID:	1404588-076	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	8300		19	50	ug/L	189491	50	04/11/2014 03:41	NP
Ethylbenzene	1500		20	50	ug/L	189491	50	04/11/2014 03:41	NP
Methyl tert-butyl ether	2200		21	50	ug/L	189491	50	04/11/2014 03:41	NP
Naphthalene	650		10	250	ug/L	189491	50	04/11/2014 03:41	NP
Toluene	18000		190	500	ug/L	189491	500	04/11/2014 14:21	NP
Xylenes, Total	20000		41	50	ug/L	189491	50	04/11/2014 03:41	NP
Surr: 4-Bromofluorobenzene	87.3		0	66.2-120	%REC	189491	500	04/11/2014 14:21	NP
Surr: 4-Bromofluorobenzene	90.5		0	66.2-120	%REC	189491	50	04/11/2014 03:41	NP
Surr: Dibromofluoromethane	93.4		0	79.5-121	%REC	189491	500	04/11/2014 14:21	NP
Surr: Dibromofluoromethane	95.8		0	79.5-121	%REC	189491	50	04/11/2014 03:41	NP
Surr: Toluene-d8	86.1		0	77-117	%REC	189491	500	04/11/2014 14:21	NP
Surr: Toluene-d8	88.7		0	77-117	%REC	189491	50	04/11/2014 03:41	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	860	J	480	5000	ug/L	189491	50	04/11/2014 03:41	NP
tert-Amyl methyl ether	660		50	500	ug/L	189491	50	04/11/2014 03:41	NP
tert-Butyl Alcohol	BRL		340	5000	ug/L	189491	50	04/11/2014 03:41	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DUP B
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/2/2014 12:51:00 PM
Lab ID:	1404588-077	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	150		0.39	1.0	ug/L	189491	1	04/11/2014 12:41	NP
Ethylbenzene	180		0.40	1.0	ug/L	189491	1	04/11/2014 12:41	NP
Methyl tert-butyl ether	510		4.2	10	ug/L	189491	10	04/11/2014 13:06	NP
Naphthalene	140		0.20	5.0	ug/L	189491	1	04/11/2014 12:41	NP
Toluene	39		0.38	1.0	ug/L	189491	1	04/11/2014 12:41	NP
Xylenes, Total	1500		8.3	10	ug/L	189491	10	04/11/2014 13:06	NP
Surr: 4-Bromofluorobenzene	86.1		0	66.2-120	%REC	189491	10	04/11/2014 13:06	NP
Surr: 4-Bromofluorobenzene	98.5		0	66.2-120	%REC	189491	1	04/11/2014 12:41	NP
Surr: Dibromofluoromethane	96.4		0	79.5-121	%REC	189491	1	04/11/2014 12:41	NP
Surr: Dibromofluoromethane	98.5		0	79.5-121	%REC	189491	10	04/11/2014 13:06	NP
Surr: Toluene-d8	89		0	77-117	%REC	189491	10	04/11/2014 13:06	NP
Surr: Toluene-d8	94		0	77-117	%REC	189491	1	04/11/2014 12:41	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	200		9.5	100	ug/L	189491	1	04/11/2014 12:41	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	189491	1	04/11/2014 12:41	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	189491	1	04/11/2014 12:41	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DUP C
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/3/2014 1:20:00 PM
Lab ID:	1404588-078	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	2300		19	50	ug/L	189491	50	04/11/2014 19:52	NP
Ethylbenzene	580		20	50	ug/L	189491	50	04/11/2014 19:52	NP
Methyl tert-butyl ether	60		21	50	ug/L	189491	50	04/11/2014 19:52	NP
Naphthalene	1100		10	250	ug/L	189491	50	04/11/2014 19:52	NP
Toluene	11000		190	500	ug/L	189491	500	04/11/2014 15:10	NP
Xylenes, Total	14000		41	50	ug/L	189491	50	04/11/2014 19:52	NP
Surr: 4-Bromofluorobenzene	87.4		0	66.2-120	%REC	189491	500	04/11/2014 15:10	NP
Surr: 4-Bromofluorobenzene	88.9		0	66.2-120	%REC	189491	50	04/11/2014 19:52	NP
Surr: Dibromofluoromethane	94.2		0	79.5-121	%REC	189491	50	04/11/2014 19:52	NP
Surr: Dibromofluoromethane	94.3		0	79.5-121	%REC	189491	500	04/11/2014 15:10	NP
Surr: Toluene-d8	86.7		0	77-117	%REC	189491	500	04/11/2014 15:10	NP
Surr: Toluene-d8	90.1		0	77-117	%REC	189491	50	04/11/2014 19:52	NP
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	3900	J	480	5000	ug/L	189491	50	04/11/2014 19:52	NP
tert-Amyl methyl ether	80	J	50	500	ug/L	189491	50	04/11/2014 19:52	NP
tert-Butyl Alcohol	BRL		340	5000	ug/L	189491	50	04/11/2014 19:52	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 16-Apr-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DUP D
Project Name:	Clouds Chevron et. al.	**Collection Date:**	4/3/2014 1:40:00 PM
Lab ID:	1404588-079	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	420		19	50	ug/L	189491	50	04/11/2014 03:20	SB
Ethylbenzene	260		20	50	ug/L	189491	50	04/11/2014 03:20	SB
Methyl tert-butyl ether	BRL		21	50	ug/L	189491	50	04/11/2014 03:20	SB
Naphthalene	370		10	250	ug/L	189491	50	04/11/2014 03:20	SB
Toluene	3300		19	50	ug/L	189491	50	04/11/2014 03:20	SB
Xylenes, Total	6800		41	50	ug/L	189491	50	04/11/2014 03:20	SB
Surr: 4-Bromofluorobenzene	104		0	66.2-120	%REC	189491	50	04/11/2014 03:20	SB
Surr: Dibromofluoromethane	105		0	79.5-121	%REC	189491	50	04/11/2014 03:20	SB
Surr: Toluene-d8	98.1		0	77-117	%REC	189491	50	04/11/2014 03:20	SB
Oxygenates (AES SOP OA-11010) SW8260B					(SW5030B)				
tert-Amyl alcohol	5300		480	5000	ug/L	189491	50	04/11/2014 03:20	SB
tert-Amyl methyl ether	BRL		50	500	ug/L	189491	50	04/11/2014 03:20	SB
tert-Butyl Alcohol	BRL		340	5000	ug/L	189491	50	04/11/2014 03:20	SB

Qualifiers:

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

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client ACCW Work Order Number 1404588

Checklist completed by WJ 4/4/14
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 3.5° 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: Crawford Environmental Services
Project Name: Clouds Chevron et. al.
Workorder: 1404588

ANALYTICAL QC SUMMARY REPORT

BatchID: 189485

Sample ID: **MB-189485**	Client ID:				Units: **ug/L**		Prep Date: **04/09/2014**		Run No: **265148**	
SampleType: **MBLK**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **189485**		Analysis Date: **04/09/2014**		Seq No: **5585198**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Benzene	BRL	1.0								
Ethylbenzene	BRL	1.0								
Methyl tert-butyl ether	BRL	1.0								
Naphthalene	BRL	5.0								
Toluene	BRL	1.0								
Xylenes, Total	BRL	1.0								
Surr: 4-Bromofluorobenzene	44.91	0	50.00		89.8	70	130			
Surr: Dibromofluoromethane	50.91	0	50.00		102	70	130			
Surr: Toluene-d8	46.05	0	50.00		92.1	70	130			

Sample ID: **MB-189485**	Client ID:				Units: **ug/L**		Prep Date: **04/09/2014**		Run No: **265148**	
SampleType: **MBLK**	TestCode: **Oxygenates (AES SOP OA-11010) SW8260B**				BatchID: **189485**		Analysis Date: **04/09/2014**		Seq No: **5585933**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
tert-Amyl alcohol	BRL	100								
tert-Amyl methyl ether	BRL	10								
tert-Butyl Alcohol	BRL	100								

Sample ID: **LCS-189485**	Client ID:				Units: **ug/L**		Prep Date: **04/09/2014**		Run No: **265148**	
SampleType: **LCS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **189485**		Analysis Date: **04/09/2014**		Seq No: **5585188**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Benzene	41.62	1.0	50.00		83.2	70	130			
Ethylbenzene	53.21	1.0	50.00		106	70	130			
Naphthalene	45.29	5.0	50.00		90.6	70	130			
Toluene	43.53	1.0	50.00		87.1	70	130			
Xylenes, Total	153.7	1.0	150.0		102	70	130			
Surr: 4-Bromofluorobenzene	48.92	0	50.00		97.8	70	130			

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: Crawford Environmental Services
Project Name: Clouds Chevron et. al.
Workorder: 1404588

ANALYTICAL QC SUMMARY REPORT

BatchID: 189485

Sample ID: LCS-189485	Client ID:				Units: ug/L		Prep Date: 04/09/2014		Run No: 265148	
SampleType: LCS	TestCode: Volatile Organic Compounds by GC/MS SW8260B				BatchID: 189485		Analysis Date: 04/09/2014		Seq No: 5585188	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: Dibromofluoromethane	50.05	0	50.00		100	70	130				
Surr: Toluene-d8	48.35	0	50.00		96.7	70	130				

Sample ID: LCS-189485	Client ID:				Units: ug/L		Prep Date: 04/09/2014		Run No: 265148	
SampleType: LCS	TestCode: Oxygenates (AES SOP OA-11010) SW8260B				BatchID: 189485		Analysis Date: 04/09/2014		Seq No: 5585926	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	941.3	100	1000		94.1	70	130				
tert-Amyl methyl ether	171.9	10	200.0		85.9	70	130				
tert-Butyl Alcohol	962.7	100	1000		96.3	70	130				

Sample ID: 1404588-010AMS	Client ID: MW-10				Units: ug/L		Prep Date: 04/09/2014		Run No: 265148	
SampleType: MS	TestCode: Volatile Organic Compounds by GC/MS SW8260B				BatchID: 189485		Analysis Date: 04/09/2014		Seq No: 5585589	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	3765	50	2500	1833	77.3	70.2	138				
Ethylbenzene	3380	50	2500	352.0	121	71.9	133				
Naphthalene	3418	250	2500	687.5	109	54.6	130				
Toluene	6783	50	2500	5651	45.3	70	139				S
Xylenes, Total	15500	50	7500	8516	93.2	70.7	136				
Surr: 4-Bromofluorobenzene	2396	0	2500		95.8	66.2	120				
Surr: Dibromofluoromethane	2362	0	2500		94.5	79.5	121				
Surr: Toluene-d8	2343	0	2500		93.7	77	117				

Sample ID: 1404588-010AMS	Client ID: MW-10				Units: ug/L		Prep Date: 04/09/2014		Run No: 265148	
SampleType: MS	TestCode: Oxygenates (AES SOP OA-11010) SW8260B				BatchID: 189485		Analysis Date: 04/09/2014		Seq No: 5586129	
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		

Analytical Environmental Services, Inc

Date: 16-Apr-14

Client: Crawford Environmental Services
Project Name: Clouds Chevron et. al.
Workorder: 1404588

ANALYTICAL QC SUMMARY REPORT

BatchID: 189485

Sample ID: **1404588-010AMS**	Client ID: **MW-10**			Units: **ug/L**		Prep Date: **04/09/2014**		Run No: **265148**	
SampleType: **MS**	TestCode: **Oxygenates (AES SOP OA-11010) SW8260B**			BatchID: **189485**		Analysis Date: **04/09/2014**		Seq No: **5586129**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	59760	5000	50000		120	54.6	145				
tert-Amyl methyl ether	10040	500	10000		100	71.1	129				
tert-Butyl Alcohol	64920	5000	50000		130	50.3	149				

Sample ID: **1404588-010AMSD**	Client ID: **MW-10**			Units: **ug/L**		Prep Date: **04/09/2014**		Run No: **265148**	
SampleType: **MSD**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**			BatchID: **189485**		Analysis Date: **04/09/2014**		Seq No: **5585592**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	3510	50	2500	1833	67.1	70.2	138	3765	7.00	20	S
Ethylbenzene	3044	50	2500	352.0	108	71.9	133	3380	10.5	20	
Naphthalene	3107	250	2500	687.5	96.8	54.6	130	3418	9.55	21.4	
Toluene	6307	50	2500	5651	26.2	70	139	6783	7.27	20	S
Xylenes, Total	14120	50	7500	8516	74.7	70.7	136	15500	9.34	20	
Surr: 4-Bromofluorobenzene	2376	0	2500		95.0	66.2	120	2396	0	0	
Surr: Dibromofluoromethane	2408	0	2500		96.3	79.5	121	2362	0	0	
Surr: Toluene-d8	2323	0	2500		92.9	77	117	2343	0	0	

Sample ID: **1404588-010AMSD**	Client ID: **MW-10**			Units: **ug/L**		Prep Date: **04/09/2014**		Run No: **265148**	
SampleType: **MSD**	TestCode: **Oxygenates (AES SOP OA-11010) SW8260B**			BatchID: **189485**		Analysis Date: **04/09/2014**		Seq No: **5586132**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	55040	5000	50000		110	54.6	145	59760	8.22	23.5	
tert-Amyl methyl ether	9304	500	10000		93.0	71.1	129	10040	7.59	20	
tert-Butyl Alcohol	58470	5000	50000		117	50.3	149	64920	10.4	33.5	

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 **Date:** 16-Apr-14

Client: Crawford Environmental Services
Project Name: Clouds Chevron et. al.
Workorder: 1404588

ANALYTICAL QC SUMMARY REPORT

BatchID: 189488

Sample ID: **MB-189488**	Client ID:			Units: **ug/L**		Prep Date: **04/09/2014**		Run No: **265148**	
SampleType: **MBLK**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**			BatchID: **189488**		Analysis Date: **04/09/2014**		Seq No: **5585200**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	BRL	1.0									
Ethylbenzene	BRL	1.0									
Methyl tert-butyl ether	BRL	1.0									
Naphthalene	BRL	5.0									
Toluene	BRL	1.0									
Xylenes, Total	BRL	1.0									
Surr: 4-Bromofluorobenzene	43.57	0	50.00		87.1	70	130				
Surr: Dibromofluoromethane	51.71	0	50.00		103	70	130				
Surr: Toluene-d8	46.46	0	50.00		92.9	70	130				

Sample ID: **MB-189488**	Client ID:			Units: **ug/L**		Prep Date: **04/09/2014**		Run No: **265148**	
SampleType: **MBLK**	TestCode: **Oxygenates (AES SOP OA-11010) SW8260B**			BatchID: **189488**		Analysis Date: **04/09/2014**		Seq No: **5585934**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	BRL	100									
tert-Amyl methyl ether	BRL	10									
tert-Butyl Alcohol	BRL	100									

Sample ID: **LCS-189488**	Client ID:			Units: **ug/L**		Prep Date: **04/09/2014**		Run No: **265148**	
SampleType: **LCS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**			BatchID: **189488**		Analysis Date: **04/09/2014**		Seq No: **5585193**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	42.79	1.0	50.00		85.6	70	130				
Ethylbenzene	52.90	1.0	50.00		106	70	130				
Naphthalene	51.36	5.0	50.00		103	70	130				
Toluene	44.24	1.0	50.00		88.5	70	130				
Xylenes, Total	152.6	1.0	150.0		102	70	130				
Surr: 4-Bromofluorobenzene	48.90	0	50.00		97.8	70	130				

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: Crawford Environmental Services
Project Name: Clouds Chevron et. al.
Workorder: 1404588

ANALYTICAL QC SUMMARY REPORT

BatchID: 189488

Sample ID: LCS-189488	Client ID:				Units: ug/L		Prep Date: 04/09/2014		Run No: 265148	
SampleType: LCS	TestCode: Volatile Organic Compounds by GC/MS SW8260B				BatchID: 189488		Analysis Date: 04/09/2014		Seq No: 5585193	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Surr: Dibromofluoromethane	50.46	0	50.00		101	70	130			
Surr: Toluene-d8	48.87	0	50.00		97.7	70	130			

Sample ID: LCS-189488	Client ID:				Units: ug/L		Prep Date: 04/09/2014		Run No: 265148	
SampleType: LCS	TestCode: Oxygenates (AES SOP OA-11010) SW8260B				BatchID: 189488		Analysis Date: 04/09/2014		Seq No: 5585927	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
tert-Amyl alcohol	1008	100	1000		101	70	130			
tert-Amyl methyl ether	172.4	10	200.0		86.2	70	130			
tert-Butyl Alcohol	1038	100	1000		104	70	130			

Sample ID: 1404588-021AMS	Client ID: MW-23				Units: ug/L		Prep Date: 04/09/2014		Run No: 265148	
SampleType: MS	TestCode: Volatile Organic Compounds by GC/MS SW8260B				BatchID: 189488		Analysis Date: 04/09/2014		Seq No: 5585585	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Benzene	27160	500	25000	4170	91.9	70.2	138			
Ethylbenzene	30110	500	25000	680.0	118	71.9	133			
Naphthalene	25870	2500	25000	2995	91.5	54.6	130			
Toluene	41790	500	25000	15980	103	70	139			
Xylenes, Total	102200	500	75000	15810	115	70.7	136			
Surr: 4-Bromofluorobenzene	23950	0	25000		95.8	66.2	120			
Surr: Dibromofluoromethane	24790	0	25000		99.1	79.5	121			
Surr: Toluene-d8	23760	0	25000		95.0	77	117			

Sample ID: 1404588-021AMS	Client ID: MW-23				Units: ug/L		Prep Date: 04/09/2014		Run No: 265148	
SampleType: MS	TestCode: Oxygenates (AES SOP OA-11010) SW8260B				BatchID: 189488		Analysis Date: 04/09/2014		Seq No: 5586126	
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		

Analytical Environmental Services, Inc

Date: 16-Apr-14

Client: Crawford Environmental Services
Project Name: Clouds Chevron et. al.
Workorder: 1404588

ANALYTICAL QC SUMMARY REPORT

BatchID: 189488

Sample ID: **1404588-021AMS**	Client ID: **MW-23**	Units: **ug/L**	Prep Date: **04/09/2014**	Run No: **265148**
SampleType: **MS**	TestCode: **Oxygenates (AES SOP OA-11010) SW8260B**	BatchID: **189488**	Analysis Date: **04/09/2014**	Seq No: **5586126**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	479400	50000	500000	46630	86.6	54.6	145				
tert-Amyl methyl ether	92130	5000	100000		92.1	71.1	129				
tert-Butyl Alcohol	465400	50000	500000		93.1	50.3	149				

Sample ID: **1404588-021AMSD**	Client ID: **MW-23**	Units: **ug/L**	Prep Date: **04/09/2014**	Run No: **265148**
SampleType: **MSD**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**	BatchID: **189488**	Analysis Date: **04/09/2014**	Seq No: **5585588**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	25920	500	25000	4170	87.0	70.2	138	27160	4.67	20	
Ethylbenzene	29350	500	25000	680.0	115	71.9	133	30110	2.54	20	
Naphthalene	25590	2500	25000	2995	90.4	54.6	130	25870	1.07	21.4	
Toluene	39870	500	25000	15980	95.5	70	139	41790	4.71	20	
Xylenes, Total	98400	500	75000	15810	110	70.7	136	102200	3.82	20	
Surr: 4-Bromofluorobenzene	24050	0	25000		96.2	66.2	120	23950	0	0	
Surr: Dibromofluoromethane	24280	0	25000		97.1	79.5	121	24790	0	0	
Surr: Toluene-d8	23590	0	25000		94.4	77	117	23760	0	0	

Sample ID: **1404588-021AMSD**	Client ID: **MW-23**	Units: **ug/L**	Prep Date: **04/09/2014**	Run No: **265148**
SampleType: **MSD**	TestCode: **Oxygenates (AES SOP OA-11010) SW8260B**	BatchID: **189488**	Analysis Date: **04/09/2014**	Seq No: **5586127**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	508600	50000	500000	46630	92.4	54.6	145	479400	5.90	23.5	
tert-Amyl methyl ether	86160	5000	100000		86.2	71.1	129	92130	6.70	20	
tert-Butyl Alcohol	520600	50000	500000		104	50.3	149	465400	11.2	33.5	

Qualifiers:

>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
DRL	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: Crawford Environmental Services
Project Name: Clouds Chevron et. al.
Workorder: 1404588

ANALYTICAL QC SUMMARY REPORT

BatchID: 189490

Sample ID: **MB-189490**	Client ID:				Units: **ug/L**		Prep Date: **04/09/2014**		Run No: **265148**	
SampleType: **MBLK**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **189490**		Analysis Date: **04/09/2014**		Seq No: **5585201**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Benzene	BRL	1.0								
Ethylbenzene	BRL	1.0								
Methyl tert-butyl ether	BRL	1.0								
Naphthalene	BRL	5.0								
Toluene	BRL	1.0								
Xylenes, Total	BRL	1.0								
Surr: 4-Bromofluorobenzene	42.67	0	50.00		85.3	70	130			
Surr: Dibromofluoromethane	52.73	0	50.00		105	70	130			
Surr: Toluene-d8	46.71	0	50.00		93.4	70	130			

Sample ID: **MB-189490**	Client ID:				Units: **ug/L**		Prep Date: **04/09/2014**		Run No: **265148**	
SampleType: **MBLK**	TestCode: **Oxygenates (AES SOP OA-11010) SW8260B**				BatchID: **189490**		Analysis Date: **04/09/2014**		Seq No: **5585936**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
tert-Amyl alcohol	BRL	100								
tert-Amyl methyl ether	BRL	10								
tert-Butyl Alcohol	BRL	100								

Sample ID: **LCS-189490**	Client ID:				Units: **ug/L**		Prep Date: **04/09/2014**		Run No: **265148**	
SampleType: **LCS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **189490**		Analysis Date: **04/09/2014**		Seq No: **5585194**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Benzene	45.73	1.0	50.00		91.5	70	130			
Ethylbenzene	58.40	1.0	50.00		117	70	130			
Naphthalene	49.34	5.0	50.00		98.7	70	130			
Toluene	47.93	1.0	50.00		95.9	70	130			
Xylenes, Total	166.4	1.0	150.0		111	70	130			
Surr: 4-Bromofluorobenzene	48.80	0	50.00		97.6	70	130			

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: Crawford Environmental Services
Project Name: Clouds Chevron et. al.
Workorder: 1404588

ANALYTICAL QC SUMMARY REPORT

BatchID: 189490

Sample ID: **LCS-189490**	Client ID:				Units: **ug/L**		Prep Date: **04/09/2014**		Run No: **265148**	
SampleType: **LCS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **189490**		Analysis Date: **04/09/2014**		Seq No: **5585194**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Surr: Dibromofluoromethane	50.17	0	50.00		100	70	130			
Surr: Toluene-d8	47.61	0	50.00		95.2	70	130			

Sample ID: **LCS-189490**	Client ID:				Units: **ug/L**		Prep Date: **04/09/2014**		Run No: **265148**	
SampleType: **LCS**	TestCode: **Oxygenates (AES SOP OA-11010) SW8260B**				BatchID: **189490**		Analysis Date: **04/09/2014**		Seq No: **5585929**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
tert-Amyl alcohol	1014	100	1000		101	70	130			
tert-Amyl methyl ether	174.5	10	200.0		87.2	70	130			
tert-Butyl Alcohol	1104	100	1000		110	70	130			

Sample ID: **1404588-053AMS**	Client ID: **MW-59**				Units: **ug/L**		Prep Date: **04/09/2014**		Run No: **265148**	
SampleType: **MS**	TestCode: **Oxygenates (AES SOP OA-11010) SW8260B**				BatchID: **189490**		Analysis Date: **04/09/2014**		Seq No: **5586133**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
tert-Amyl alcohol	52970	5000	50000	1575	103	54.6	145			
tert-Amyl methyl ether	8350	500	10000		83.5	71.1	129			
tert-Butyl Alcohol	52150	5000	50000		104	50.3	149			

Sample ID: **1404588-053AMS**	Client ID: **MW-59**				Units: **ug/L**		Prep Date: **04/09/2014**		Run No: **265237**	
SampleType: **MS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **189490**		Analysis Date: **04/10/2014**		Seq No: **5586754**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Benzene	460.2	10	500.0	20.10	88.0	70.2	138			
Ethylbenzene	827.4	10	500.0	301.6	105	71.9	133			
Naphthalene	508.6	50	500.0	65.30	88.7	54.6	130			
Toluene	447.2	10	500.0		89.4	70	139			
Xylenes, Total	1584	10	1500		106	70.7	136			

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: Crawford Environmental Services
Project Name: Clouds Chevron et. al.
Workorder: 1404588

ANALYTICAL QC SUMMARY REPORT

BatchID: 189490

Sample ID: 1404588-053AMS	Client ID: MW-59			Units: ug/L		Prep Date: 04/09/2014		Run No: 265237	
SampleType: MS	TestCode: Volatile Organic Compounds by GC/MS SW8260B			BatchID: 189490		Analysis Date: 04/10/2014		Seq No: 5586754	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: 4-Bromofluorobenzene	460.8	0	500.0		92.2	66.2	120				
Surr: Dibromofluoromethane	474.7	0	500.0		94.9	79.5	121				
Surr: Toluene-d8	460.5	0	500.0		92.1	77	117				

Sample ID: 1404588-053AMSD	Client ID: MW-59			Units: ug/L		Prep Date: 04/09/2014		Run No: 265148	
SampleType: MSD	TestCode: Oxygenates (AES SOP OA-11010) SW8260B			BatchID: 189490		Analysis Date: 04/09/2014		Seq No: 5586134	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	58190	5000	50000	1575	113	54.6	145	52970	9.40	23.5	
tert-Amyl methyl ether	9360	500	10000		93.6	71.1	129	8350	11.4	20	
tert-Butyl Alcohol	57120	5000	50000		114	50.3	149	52150	9.09	33.5	

Sample ID: 1404588-053AMSD	Client ID: MW-59			Units: ug/L		Prep Date: 04/09/2014		Run No: 265237	
SampleType: MSD	TestCode: Volatile Organic Compounds by GC/MS SW8260B			BatchID: 189490		Analysis Date: 04/10/2014		Seq No: 5587151	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	437.7	10	500.0	20.10	83.5	70.2	138	460.2	5.01	20	
Ethylbenzene	782.7	10	500.0	301.6	96.2	71.9	133	827.4	5.55	20	
Naphthalene	500.2	50	500.0	65.30	87.0	54.6	130	508.6	1.67	21.4	
Toluene	425.9	10	500.0		85.2	70	139	447.2	4.88	20	
Xylenes, Total	1506	10	1500		100	70.7	136	1584	5.04	20	
Surr: 4-Bromofluorobenzene	456.9	0	500.0		91.4	66.2	120	460.8	0	0	
Surr: Dibromofluoromethane	470.4	0	500.0		94.1	79.5	121	474.7	0	0	
Surr: Toluene-d8	458.5	0	500.0		91.7	77	117	460.5	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: Crawford Environmental Services
Project Name: Clouds Chevron et. al.
Workorder: 1404588

ANALYTICAL QC SUMMARY REPORT

BatchID: 189491

Sample ID: MB-189491	Client ID:				Units: ug/L		Prep Date: 04/09/2014		Run No: 265148	
SampleType: MBLK	TestCode: Volatile Organic Compounds by GC/MS SW8260B				BatchID: 189491		Analysis Date: 04/09/2014		Seq No: 5585204	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Benzene	BRL	1.0								
Ethylbenzene	BRL	1.0								
Methyl tert-butyl ether	BRL	1.0								
Naphthalene	BRL	5.0								
Toluene	BRL	1.0								
Xylenes, Total	BRL	1.0								
Surr: 4-Bromofluorobenzene	42.62	0	50.00		85.2	70	130			
Surr: Dibromofluoromethane	54.64	0	50.00		109	70	130			
Surr: Toluene-d8	46.98	0	50.00		94.0	70	130			

Sample ID: MB-189491	Client ID:				Units: ug/L		Prep Date: 04/09/2014		Run No: 265148	
SampleType: MBLK	TestCode: Oxygenates (AES SOP OA-11010) SW8260B				BatchID: 189491		Analysis Date: 04/09/2014		Seq No: 5585938	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
tert-Amyl alcohol	BRL	100								
tert-Amyl methyl ether	BRL	10								
tert-Butyl Alcohol	BRL	100								

Sample ID: LCS-189491	Client ID:				Units: ug/L		Prep Date: 04/09/2014		Run No: 265237	
SampleType: LCS	TestCode: Volatile Organic Compounds by GC/MS SW8260B				BatchID: 189491		Analysis Date: 04/10/2014		Seq No: 5586628	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Benzene	41.65	1.0	50.00		83.3	70	130			
Ethylbenzene	51.61	1.0	50.00		103	70	130			
Naphthalene	44.61	5.0	50.00		89.2	70	130			
Toluene	42.13	1.0	50.00		84.3	70	130			
Xylenes, Total	152.0	1.0	150.0		101	70	130			
Surr: 4-Bromofluorobenzene	47.61	0	50.00		95.2	70	130			

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 **Date:** 16-Apr-14

Client: Crawford Environmental Services
Project Name: Clouds Chevron et. al.
Workorder: 1404588

ANALYTICAL QC SUMMARY REPORT

BatchID: 189491

Sample ID: LCS-189491	Client ID:				Units: ug/L		Prep Date: 04/09/2014		Run No: 265237	
SampleType: LCS	TestCode: Volatile Organic Compounds by GC/MS SW8260B				BatchID: 189491		Analysis Date: 04/10/2014		Seq No: 5586628	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: Dibromofluoromethane	48.45	0	50.00		96.9	70	130				
Surr: Toluene-d8	46.96	0	50.00		93.9	70	130				

Sample ID: LCS-189491	Client ID:				Units: ug/L		Prep Date: 04/09/2014		Run No: 265237	
SampleType: LCS	TestCode: Oxygenates (AES SOP OA-11010) SW8260B				BatchID: 189491		Analysis Date: 04/10/2014		Seq No: 5586638	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	977.2	100	1000		97.7	70	130				
tert-Amyl methyl ether	186.7	10	200.0		93.3	70	130				
tert-Butyl Alcohol	978.6	100	1000		97.9	70	130				

Sample ID: 1404588-066AMS	Client ID: DW-5				Units: ug/L		Prep Date: 04/09/2014		Run No: 265148	
SampleType: MS	TestCode: Volatile Organic Compounds by GC/MS SW8260B				BatchID: 189491		Analysis Date: 04/09/2014		Seq No: 5585598	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	4804	50	2500	3304	60.0	70.2	138				S
Ethylbenzene	2580	50	2500	30.00	102	71.9	133				
Naphthalene	2344	250	2500	247.0	83.9	54.6	130				
Toluene	2090	50	2500	66.00	80.9	70	139				
Xylenes, Total	8192	50	7500	1031	95.5	70.7	136				
Surr: 4-Bromofluorobenzene	2313	0	2500		92.5	66.2	120				
Surr: Dibromofluoromethane	2320	0	2500		92.8	79.5	121				
Surr: Toluene-d8	2270	0	2500		90.8	77	117				

Sample ID: 1404588-066AMS	Client ID: DW-5				Units: ug/L		Prep Date: 04/09/2014		Run No: 265148	
SampleType: MS	TestCode: Oxygenates (AES SOP OA-11010) SW8260B				BatchID: 189491		Analysis Date: 04/09/2014		Seq No: 5586135	
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
DRL	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 **Date:** 16-Apr-14

Client: Crawford Environmental Services
Project Name: Clouds Chevron et. al.
Workorder: 1404588

ANALYTICAL QC SUMMARY REPORT

BatchID: 189491

Sample ID: 1404588-066AMS	Client ID: DW-5	Units: ug/L	Prep Date: 04/09/2014	Run No: 265148
SampleType: MS	TestCode: Oxygenates (AES SOP OA-11010) SW8260B	BatchID: 189491	Analysis Date: 04/09/2014	Seq No: 5586135

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	55970	5000	50000	4148	104	54.6	145				
tert-Amyl methyl ether	8842	500	10000	77.00	87.6	71.1	129				
tert-Butyl Alcohol	52110	5000	50000		104	50.3	149				

Sample ID: 1404588-066AMSD	Client ID: DW-5	Units: ug/L	Prep Date: 04/09/2014	Run No: 265148
SampleType: MSD	TestCode: Volatile Organic Compounds by GC/MS SW8260B	BatchID: 189491	Analysis Date: 04/09/2014	Seq No: 5585600

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	5480	50	2500	3304	87.0	70.2	138	4804	13.1	20	
Ethylbenzene	2845	50	2500	30.00	113	71.9	133	2580	9.79	20	
Naphthalene	2435	250	2500	247.0	87.5	54.6	130	2344	3.81	21.4	
Toluene	2344	50	2500	66.00	91.1	70	139	2090	11.5	20	
Xylenes, Total	8936	50	7500	1031	105	70.7	136	8192	8.70	20	
Surr: 4-Bromofluorobenzene	2315	0	2500		92.6	66.2	120	2313	0	0	
Surr: Dibromofluoromethane	2356	0	2500		94.3	79.5	121	2320	0	0	
Surr: Toluene-d8	2336	0	2500		93.4	77	117	2270	0	0	

Sample ID: 1404588-066AMSD	Client ID: DW-5	Units: ug/L	Prep Date: 04/09/2014	Run No: 265148
SampleType: MSD	TestCode: Oxygenates (AES SOP OA-11010) SW8260B	BatchID: 189491	Analysis Date: 04/09/2014	Seq No: 5586136

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	61000	5000	50000	4148	114	54.6	145	55970	8.59	23.5	
tert-Amyl methyl ether	9779	500	10000	77.00	97.0	71.1	129	8842	10.1	20	
tert-Butyl Alcohol	59060	5000	50000		118	50.3	149	52110	12.5	33.5	

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			

APPENDIX E

QAPP Addendum Contractor Checklist

CRAWFORD
ENVIRONMENTAL
SERVICES

UST Programmatic QAPP Contractor Checklist				
Item #:	Item	Yes	No	N/A
1	Is Facility Name, Permit #, and address provided?	Yes		
2	Is UST Owner/Operator name, address, provided?	Yes		
3	Is name, address, & phone number of current property owner provided?	Yes		
4	Is the SCDHEC Certified UST Site Rehabilitation Contractor's name, address, phone number, and certification number provided?	Yes		
5	Is the name, address ,telephone number, and certification number of the well driller that installed the boring/monitoring wells provided?	Yes		
6	Is the name, address, telephone number, and certification number of the certified laboratories performing analytical analyses provided	Yes		
7	Has the facility history be summarized?			N/A
8	Has the regional geology and hydrogeology been summarized?			N/A
9	Are the receptor survey results provided as required?			N/A
10	Has the current use of the site and adjacent land been described?	Yes		
11	Has the site specific geology been described?			N/A
12	Has the primary soil type been described?			N/A
13	Have the field screening results been described?			N/A
14	Has a description of the soil sample collection and preservation been detailed?			N/A
15	Has the field screening methodology been detailed?			N/A
16	Has the monitoring well installation and development dates been provided?			N/A
17	Has the method of well development been detailed? (Table 2)			N/A
18	Has the justification been provided for the locations of the monitoring wells?			N/A
19	Have the monitoring wells been labeled in accordance with the UST QAPP guidelines?			N/A
20	Has the groundwater sampling methodology been detailed?	Yes		
21	Have the groundwater sampling dates and groundwater measurements been provided?	Yes		
22	Has the purging methodology been detailed?	Yes		
23	Has the volume of water purged from each well been provided along with the measurements to verify purging is complete?	Yes		
24	If free-product is present, has the thickness been provided?			N/A
25	Does the report include a brief discussion of the assessment done and the results?	Yes		

UST Programmatic QAPP Contractor Checklist				
26	Does the report include a brief discussion of the aquifer evaluation and the results?			N/A
27	Does the report include a brief discussion of the fate & transport models used?			N/A
28	Are the site-conceptual tables included (Tier 1 risk evaluation)			N/A
29	Have the exposure pathways been analyzed (Tier 2 risk evauluation)			N/A
30	Have the SSTLs for each compound and pathway been calculated? (Tier 2 risk evaluation)			N/A
31	Have recommendations for further action been provided and explained?			N/A
32	Has the soil analytical data for the site been provided in tabular format? (Table 5)			N/A
33	Has the potentiometric data for the site been provided in tabular format?	Yes		
34	Has the current and historical laboratory data been provided in tabular format			N/A
35	Have the aquifer characteristics been provided and summarized on the appropriate form?			N/A
36	Have the Site conceptual model tables been included (Tier 1 risk evaluation)			N/A
37	Has the topographic map been provided with all the required elements?	Yes		
38	Has the site base map been provided with all the required elements?	Yes		
39	Have the CoC maps been provided?	Yes		
40	Have the potentiometric maps been provided?			N/A
41	Have the geologic cross-sections been provided			N/A
42	Have maps showing the predicted migration of the CoCs through time been provided?			N/A
43	Has the site survey been provided and include all necessary elements? (Appendix A)			N/A
44	Have the sampling logs, chain of custody forms and analytical data package been included with all elements? (Appendix B)	Yes		
45	Is the laboratory performing the analyses properly certified? (Appendix B)	Yes		
46	Has the tax map been included with all necessary elements? (Appendix C)			N/A
47	Have the soil/boring field screening logs been provided? (Appendix D)			N/A
48	Have the well completion logs been provided? (Appendix E)			N/A
49	Have the aquifer evaluation forms,data, graphs, equations,etc. been provided? (Appendix F)			N/A
50	Have the disposal manifests been provided? (Appendix G)	Yes		
51	Has a copy of the local zoning regulations been provided? (Appendix H)			N/A

UST Programmatic QAPP Contractor Checklist				
52	Has all fate and transport modeling been provided? (Appendix I)			N/A
53	Have copies of all access agreements obtained by the contractor been provided? (Appendix J)			N/A
54	Has a copy of this form been attached to the final report and are explainations for any missing or incomplete data been provided?	Yes		
Comments:				

TABLES

Table 1: Well Construction and Historical Groundwater Elevation Summary
Table 2: Groundwater Laboratory Analytical Result Summary
Table 3: Site Specific Target Levels

Table 1

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST Permit ID: 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — CES Project Number: 7.0547

Well Construction and Historical Groundwater Elevation Summary

Monitor Well	Well Depth (ft)	Screened Interval		Top of Casing (ft)	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)
MW-1	27	17	27	93.89	4/2/2014	NA	DRY	NA	NA	DRY
MW-2	30	20	30	94.70	4/2/2014	NA	21.12	NA	NA	73.58
MW-3	29	19	29	94.45	4/2/2014	NA	21.40	NA	NA	73.05
MW-4	28	18	28	94.85	4/2/2014	NA	21.31	NA	NA	73.54
MW-5	26	16	26	95.26	4/2/2014	NA	DRY	NA	NA	DRY
MW-6	30	20	30	94.96	4/3/2014	NA	22.61	NA	NA	72.35
MW-7	30	20	30	95.93	4/3/2014	NA	23.02	NA	NA	72.91
MW-8	28	18.5	28	94.79	4/3/2014	NA	19.95	NA	NA	74.84
MW-9	30	20	30	92.30	4/2/2014	NA	20.60	NA	NA	71.70
MW-10	28	18	28	85.98	4/1/2014	NA	17.69	NA	NA	68.29
MW-11	30	Unknown		88.46	4/2/2014	NA	18.61	NA	NA	69.85
MW-12	24.65	Unknown		72.80	4/2/2014	NA	4.20	NA	NA	68.60
MW-13	30.1	Unknown		80.44	4/1/2014	NA	11.13	NA	NA	69.31
MW-15	25	15	25	86.44	4/1/2014	**16.60**	**16.00**	**0.60**	**69.84**	70.88*
MW-16	25	15	25	88.19	4/2/2014	NA	17.54	NA	NA	70.65
MW-17	22	20	30	92.45	4/2/2014	NA	22.00	NA	NA	70.45
MW-18	30	20	30	94.81	4/2/2014	NA	23.68	NA	NA	71.13
MW-19	30	20	30	93.96	4/3/2014	NA	23.33	NA	NA	70.63
MW-20	25	15	25	94.12	4/3/2014	NA	21.95	NA	NA	72.17
MW-22	30	20	30	94.25	4/3/2014	NA	21.11	NA	NA	73.14
MW-23	30	20	30	94.43	4/3/2014	NA	23.65	NA	NA	70.78
MW-25	25.6	Unknown		93.09	4/1/2014	NA	19.71	NA	NA	73.38
MW-26	30	Unknown		95.96	4/3/2014	NA	20.01	NA	NA	75.95
MW-27	30	15	30	91.40	4/1/2014	NA	14.65	NA	NA	76.75
MW-28	30	15	30	91.46	4/1/2014	NA	15.63	NA	NA	75.83
MW-29	30	15	30	91.09	4/1/2014	NA	15.51	NA	NA	75.58
MW-30	30	15	30	92.77	4/1/2014	NA	20.50	NA	NA	72.27
MW-31	35	20	35	95.20	4/2/2014	NA	24.41	NA	NA	70.79
MW-32	30	15	30	92.87	4/2/2014	NA	21.28	NA	NA	71.59
MW-33	35	20	35	93.84	4/1/2014	NA	23.18	NA	NA	70.66
MW-34	35	20	35	94.77	4/1/2014	NA	24.06	NA	NA	70.71
MW-35	35	20	35	93.71	4/1/2014	NA	21.35	NA	NA	72.36
MW-36	35	20	35	93.89	4/1/2014	NA	22.84	NA	NA	71.05
MW-37	35	20	35	93.78	4/1/2014	NA	22.24	NA	NA	71.54
MW-38	35	20	35	95.53	4/1/2014	NA	24.61	NA	NA	70.92
MW-39	35	20	35	96.19	4/2/2014	NA	25.59	NA	NA	70.60
MW-40	35	20	35	95.69	4/2/2014	NA	25.29	NA	NA	70.40
MW-41	35	20	35	94.85	4/1/2014	NA	24.70	NA	NA	70.15
MW-42	35	20	35	95.81	4/1/2014	NA	25.35	NA	NA	70.46
MW-43	40	20	40	95.15	4/2/2014	NA	24.00	NA	NA	71.15
MW-44	31	16	31	94.57	4/1/2014	NA	24.42	NA	NA	70.15
MW-45	30	15	30	92.51	4/1/2014	NA	21.22	NA	NA	71.29
MW-46	35	20	35	94.50	4/1/2014	NA	23.55	NA	NA	70.95
MW-48	30	15	30	89.95	4/2/2014	NA	19.70	NA	NA	70.25
MW-49	30	15	30	88.18	4/2/2014	Unable to Access - Locked Gate				
MW-50	30	15	30	84.09	4/2/2014	Unable to Access - Locked Gate				
MW-51	35	20	35	93.91	4/2/2014	NA	21.23	NA	NA	72.68
MW-53	20	5	20	79.60	4/3/2014	NA	9.60	NA	NA	70.00
MW-54	20	5	20	77.58	4/1/2014	NA	11.31	NA	NA	66.27
MW-55	14	4	14	71.22	4/3/2014	NA	2.51	NA	NA	68.71
MW-56	20	5	20	76.39	4/3/2014	NA	5.12	NA	NA	71.27
MW-58	19	4	19	76.37	4/2/2014	Abandoned				
MW-59	17	2	17	68.02	4/2/2014	NA	6.05	NA	NA	61.97
MW-60	14	4	14	67.94	4/2/2014	Unable to Locate				
MW-62	35	20	35	94.05	4/1/2014	NA	22.32	NA	NA	71.73
MW-63	35	20	35	94.65	4/2/2014	NA	23.07	NA	NA	71.58
MW-65	35	20	35	94.04	4/2/2014	Unable to Locate - Paved over				
MW-67	35	20	35	96.10	4/1/2014	NA	24.44	NA	NA	71.66
MW-70	35	20	35	95.49	4/2/2014	NA	24.70	NA	NA	70.79
MW-5AR	28	18	28	94.18	4/1/2014	NA	21.24	NA	NA	72.94
PW-1R	50	45	50	93.75	4/3/2014	NA	23.11	NA	NA	70.64
DW-1	70	65	70	94.66	4/2/2014	NA	45.00	NA	NA	49.66
DW-2	75	70	75	94.02	4/2/2014	NA	44.34	NA	NA	49.68
DW-3	52	47	52	93.75	4/3/2014	NA	24.40	NA	NA	69.35
DW-4	110	105	110	93.79	4/3/2014	NA	44.60	NA	NA	49.19
DW-5	70	65	70	93.74	4/1/2014	NA	44.22	NA	NA	49.52
DW-6	70	65	70	95.90	4/1/2014	NA	45.86	NA	NA	50.04

Table 1

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST Permit ID: 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — CES Project Number: 7.0547

Well Construction and Historical Groundwater Elevation Summary

Monitor Well	Well Depth (ft)	Screened Interval		Top of Casing (ft)	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)
DW-7	55	50	55	72.79	4/3/2014	NA	24.00	NA	NA	48.79
DW-8	55	50	55	68.63	4/2/2014	Abandoned				
DW-9	65	60	65	76.47	4/2/2014	NA	25.00	NA	NA	51.47

INA = Information not available

* = GW Elevation Corrected for The Presence of Free Product

n/a = not applicable

CRAWFORD ENVIRONMENTAL SERVICES

Table 2

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352
Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Groundwater Laboratory Analytical Result Summary

Well ID:	Date:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphthalene	TAA	TAME	TBA
MW-1	4/2/2014	Dry								
MW-2	4/2/2014	170	41	200	960	320	150	230	1	6.8
MW-3	4/2/2014	6900	18000	1200	16000	1800	600	980	560.000	340
MW-4	4/2/2014	<1	<1	<1	<1	3.5	<5	<100	10.000	<100
MW-5	4/2/2014	Dry								
MW-6	4/3/2014	2.6	<1	2.4	10	2.5	4.2	<100	<10	<100
MW-7	4/3/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-8	4/3/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-9	4/2/2014	830	7500	1700	14000	50	590	1700	5000	5000
MW-10	4/1/2014	1800	5700	350	8500	50	690	5000	500.000	5000
MW-11	4/2/2014	2.3	4.1	11	4.1	<1	4.4	120	<10	<100
MW-12	4/2/2014	2.9	0.67	1.6	0.91	18	4.7	630	9.300	<100
MW-13	4/1/2014	0.62	8.8	4.5	86	<1	31	10	<10	<100
MW-15	4/1/2014	0.60-Feet of Free Product								
MW-16	4/2/2014	<1	<1	<1	<1	<1	3.4	<100	<10	<100
MW-17	4/2/2014	280	5100	450	13000	50	850	2200	500.000	5000
MW-18	4/2/2014	1900	7200	630	8300	340	370	4900	70.000	5000
MW-19	4/3/2014	300	1800	490	12000	50	900	610	500.000	5000
MW-20	4/3/2014	1800	11000	460	11000	50	960	3100	65.000	5000
MW-22	4/3/2014	5700	12000	880	23000	50	990	3600	500.000	5000
MW-23	4/3/2014	4200	16000	880	19000	120	1100	5900	500.000	5000
MW-25	4/1/2014	5.5	200	320	4400	<1	1300	170	<10	<100
MW-26	4/3/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-27	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-28	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-29	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-30	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-31	4/2/2014	0.9	<1	<1	<1	2.7	<5	59	<10	<100
MW-32	4/2/2014	0.94	<1	1.9	2.4	<1	6.6	170	<10	<100
MW-33	4/1/2014	560	5200	2500	6900	50	670	4100	500.000	5000
MW-34	4/1/2014	<1	<1	<1	<1	<1	<5	39	<10	<100
MW-35	4/1/2014	3700	4300	2000	6200	160	550	5600	54.000	5000
MW-36	4/1/2014	5.1	<1	38	<1	<1	55	96	<10	<100
MW-37	4/1/2014	<1	<1	<1	<1	<1	3.7	<100	<10	<100
MW-38	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-39	4/2/2014	<1	3.2	2.2	14	<1	3.3	<100	<10	<100
MW-40	4/2/2014	5.8	14	2	580	<1	24	<100	<10	<100
MW-41	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-42	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-43	4/2/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-44	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-45	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-46	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-48	4/2/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-49	4/2/2014	Unable to Access - Locked Gate								
MW-50	4/2/2014	Unable to Access - Locked Gate								
MW-51	4/2/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-53	4/3/2014	<1	<1	<1	<1	<1	4.1	<100	<10	<100
MW-54	4/1/2014	<1	<1	<1	<1	9.6	<5	<100	6.700	<100
MW-55	4/3/2014	10	1	3.5	<1	24	3.9	98	6.400	<100
MW-56	4/3/2014	<1	<1	<1	<1	<1	<5	50	<10	<100
MW-58	4/2/2014	Abandoned								
MW-59	4/2/2014	28	2.8	300	6.4	130	45	2600	42.000	160
MW-60	4/2/2014	Unable to Locate								
MW-62	4/1/2014	0.86	<1	<1	<1	3	3.3	260	<10	<100
MW-63	4/2/2014	<1	<1	<1	<1	<1	5	120	<10	<100
MW-65	4/2/2014	Unable to Locate - Paved over								
MW-67	4/1/2014	<1	<1	<1	<1	<1	5	<100	<10	<100
MW-70	4/2/2014	<1	<1	<1	<1	<1	5	<100	<10	<100
MW-5AR	4/1/2014	12000	13000	2400	13000	70	1000	<5000	160.000	<5000
PW-1R	4/3/2014	460	3400	320	9200	<50	<250	710	<500	<5000
DW-1	4/2/2014	0.45	1.2	1.7	7.2	<1.0	<5.0	<100	<10	<100
DW-2	4/2/2014	<1.0	<1.0	<1.0	<1.0	7.1	4.1	<100	<10	<100
DW-3	4/3/2014	9800	22000	3700	17000	990	780	10000	190.000	<5000
DW-4	4/3/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-5	4/1/2014	3300	68	37	1000	940	81	4300	83.000	<100
DW-6	4/1/2014	8.5	1.2	1.6	7.2	3	5	<100	<10	<100

Table 2

Facility Name:	Handy Pantry #65 / University Mart & Clouds Chevron	UST	07584 / 07777 / 12352
Address:	2367 Taylor Street Columbia, South Carolina	Crawford Project No.	7.0547

Groundwater Laboratory Analytical Result Summary

Well ID:	Date:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphthalene	TAA	TAME	TBA
DW-7	4/3/2014	0.52	0.46	<1.0	1.4	2.6	4.2	<100	<10	<100
DW-8	4/2/2014	Abandoned								
DW-9	4/2/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
SW-1	4/2/2014	180	8.4	30	53	42	6.5	350	9.500	100

BDL= Below Detectable Limit
RBSL= Risk Based Screening Levels
NE= Not Established

CRAWFORD ENVIRONMENTAL SERVICES

1,2 DCA = 1,2 Dichloroethane
J = Estimated value detected below reporting limit

Table 3

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352
Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Site Specific Target Level Summary

Well ID:	Item	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphth	TAA	TAME	TBA	Total	
MW-2	Initial	140.0	280.0	56.0	460.0	380.0	54.0	200.0	9.2	140.0	1719.2	-1269.84%
	SSTL	77.0	280.0	56.0	460.0	380.0	54.0	200.0	9.2	140.0	1656.2	
	Initial > SSTL	63.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	63.0	
	Subsequent	170.0	41.0	200.0	960.0	320.0	150.0	230.0	1.0	6.8	2078.8	
	SSTL	77.0	280.0	56.0	460.0	380.0	54.0	200.0	9.2	140.0	1656.2	
	Subsequent > SSTL	93.0	0.0	144.0	500.0	0.0	96.0	30.0	0.0	0.0	863.0	
MW-3	Initial	3000.0	7400.0	260.0	4500.0	3300.0	260.0	2000.0	340.0	1300.0	22360.0	-600%
	SSTL	111.0	7400.0	260.0	4500.0	1976.0	108.0	2000.0	340.0	1300.0	17995.0	
	Initial > SSTL	2889.0	0.0	0.0	0.0	1324.0	152.0	0.0	0.0	0.0	4365.0	
	Subsequent	6900.0	18000.0	1200.0	16000.0	1800.0	600.0	980.0	560.0	340.0	46380.0	
	SSTL	111.0	7400.0	260.0	4500.0	1976.0	108.0	2000.0	340.0	1300.0	17995.0	
	Subsequent > SSTL	6789.0	10600.0	940.0	11500.0	0.0	492.0	0.0	220.0	0.0	30541.0	
MW-5	Initial	50.0	50.0	50.0	30.5	946.0	50.0	1000.0	100.0	1000.0	3276.5	Dry
	SSTL	50.0	50.0	50.0	30.5	946.0	50.0	1000.0	100.0	1000.0	3276.5	
	Initial > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Subsequent	Dry										
	SSTL	50.0	50.0	50.0	30.5	946.0	50.0	1000.0	100.0	1000.0	3276.5	
	Subsequent > SSTL	Dry										
MW-9	Initial	4100.0	27000.0	2500.0	19000.0	150.0	960.0	1600.0	2000.0	20000.0	77310.0	77%
	SSTL	35.0	7134.0	2500.0	19000.0	150.0	68.0	809.0	270.0	15628.0	45594.0	
	Initial > SSTL	4065.0	19866.0	0.0	0.0	0.0	892.0	791.0	1730.0	4372.0	31716.0	
	Subsequent	830.0	7500.0	1700.0	14000.0	50.0	590.0	1700.0	5000.0	5000.0	36370.0	
	SSTL	35.0	7134.0	2500.0	19000.0	150.0	68.0	809.0	270.0	15628.0	45594.0	
	Subsequent > SSTL	795.0	366.0	0.0	0.0	0.0	522.0	891.0	4730.0	0.0	7304.0	
MW-10	Initial	740.0	7800.0	2500.0	15000.0	2500.0	950.0	50000.0	5000.0	50000.0	134490.0	93%
	SSTL	24.0	7800.0	2500.0	15000.0	294.0	53.0	793.0	707.0	11042.0	38213.0	
	Initial > SSTL	716.0	0.0	0.0	0.0	2206.0	897.0	49207.0	4293.0	38958.0	96277.0	
	Subsequent	1800.0	5700.0	350.0	8500.0	50.0	690.0	5000.0	500.0	5000.0	27590.0	
	SSTL	24.0	7800.0	2500.0	15000.0	294.0	53.0	793.0	707.0	11042.0	38213.0	
	Subsequent > SSTL	1776.0	0.0	0.0	0.0	0.0	637.0	4207.0	0.0	0.0	6620.0	
MW-12	Initial	1.7	5.0	11.0	5.0	5.6	4.7	370.0	1.5	19.0	423.5	-36140%
	SSTL	1.7	5.0	11.0	5.0	5.6	4.7	370.0	1.5	19.0	423.5	
	Initial > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	
	Subsequent	2.9	0.7	1.6	0.9	18.0	4.7	630.0	9.3	100.0	768.1	
	SSTL	1.7	5.0	11.0	5.0	5.6	4.7	370.0	1.5	19.0	423.5	
	Subsequent > SSTL	1.2	0.0	0.0	0.0	12.4	0.0	260.0	7.8	81.0	362.4	
MW-15	Initial	Free Product										Free Product
	SSTL	16.0	3198.0	3700.0	21680.0	730.0	45.0	492.0	199.0	5838.0	35898.0	
	Initial > SSTL											
	Subsequent	Free Product										
	SSTL	16.0	3198.0	3700.0	21680.0	730.0	45.0	492.0	199.0	5838.0	35898.0	
	Subsequent > SSTL										0.0	

Table 3

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352
Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Site Specific Target Level Summary

Well ID:	Item	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphth	TAA	TAME	TBA	Total	
MW-17	Initial	1400.0	26000.0	2500.0	23000.0	1000.0	1000.0	9400.0	2000.0	20000.0	86300.0	93%
	SSTL	32.0	6631.0	2500.0	21680.0	1000.0	66.0	773.0	263.0	14286.0	47231.0	
	Initial > SSTL	1368.0	19369.0	0.0	1320.0	0.0	934.0	8627.0	1737.0	5714.0	39069.0	
	Subsequent	280.0	5100.0	450.0	13000.0	50.0	850.0	2200.0	500.0	5000.0	27430.0	
	SSTL	32.0	6631.0	2500.0	21680.0	1000.0	66.0	773.0	263.0	14286.0	47231.0	
	Subsequent > SSTL	248.0	0.0	0.0	0.0	0.0	784.0	1427.0	237.0	0.0	2696.0	
MW-18	Initial	1900.0	7200.0	630.0	8300.0	340.0	370.0	4900.0	70.0	5000.0	28710.0	0%
	SSTL	40.0	19326.0	3700.0	21680.0	4260.0	348.0	938.0	4989.0	54462.0	109743.0	
	Initial > SSTL	1860.0	0.0	0.0	0.0	0.0	22.0	3962.0	0.0	0.0	5844.0	
	Subsequent	1900.0	7200.0	630.0	8300.0	340.0	370.0	4900.0	70.0	5000.0	28710.0	
	SSTL	40.0	19326.0	3700.0	21680.0	4260.0	348.0	938.0	4989.0	54462.0	109743.0	
	Subsequent > SSTL	1860.0	0.0	0.0	0.0	0.0	22.0	3962.0	0.0	0.0	5844.0	
MW-19	Initial	300.0	1800.0	490.0	12000.0	50.0	900.0	610.0	500.0	5000.0	21650.0	0%
	SSTL	54.0	11081.0	3700.0	21680.0	16080.0	86.0	1065.0	320.0	26814.0	80880.0	
	Initial > SSTL	246.0	0.0	0.0	0.0	0.0	814.0	0.0	180.0	0.0	1240.0	
	Subsequent	300.0	1800.0	490.0	12000.0	50.0	900.0	610.0	500.0	5000.0	21650.0	
	SSTL	54.0	11081.0	3700.0	21680.0	16080.0	86.0	1065.0	320.0	26814.0	80880.0	
	Subsequent > SSTL	246.0	0.0	0.0	0.0	0.0	814.0	0.0	180.0	0.0	1240.0	
MW-20	Initial	412.0	2930.0	728.0	8820.0	88.7	817.0	2850.0	200.0	2000.0	18845.7	-605%
	SSTL	83.0	2930.0	728.0	8820.0	88.7	108.0	1403.0	200.0	2000.0	16360.7	
	Initial > SSTL	329.0	0.0	0.0	0.0	0.0	709.0	1447.0	0.0	0.0	2485.0	
	Subsequent	1800.0	11000.0	460.0	11000.0	50.0	960.0	3100.0	65.0	5000.0	33435.0	
	SSTL	83.0	2930.0	728.0	8820.0	88.7	108.0	1403.0	200.0	2000.0	16360.7	
	Subsequent > SSTL	1717.0	8070.0	0.0	2180.0	0.0	852.0	1697.0	0.0	3000.0	17516.0	
MW-22	Initial	3300.0	17000.0	2900.0	20000.0	1000.0	640.0	6200.0	130.0	20000.0	71170.0	-42%
	SSTL	90.0	17000.0	2900.0	20000.0	1000.0	112.0	1469.0	130.0	20000.0	62701.0	
	Initial > SSTL	3210.0	0.0	0.0	0.0	0.0	528.0	4731.0	0.0	0.0	8469.0	
	Subsequent	5700.0	12000.0	880.0	23000.0	50.0	990.0	3600.0	500.0	5000.0	51720.0	
	SSTL	90.0	17000.0	2900.0	20000.0	1000.0	112.0	1469.0	130.0	20000.0	62701.0	
	Subsequent > SSTL	5610.0	0.0	0.0	3000.0	0.0	878.0	2131.0	370.0	0.0	11989.0	
MW-23	Initial	4200.0	16000.0	880.0	19000.0	120.0	1100.0	5900.0	500.0	5000.0	52700.0	0%
	SSTL	72.0	14880.0	3700.0	21680.0	33368.0	100.0	1279.0	359.0	38475.0	113913.0	
	Initial > SSTL	4128.0	1120.0	0.0	0.0	0.0	1000.0	4621.0	141.0	0.0	11010.0	
	Subsequent	4200.0	16000.0	880.0	19000.0	120.0	1100.0	5900.0	500.0	5000.0	52700.0	
	SSTL	72.0	14880.0	3700.0	21680.0	33368.0	100.0	1279.0	359.0	38475.0	113913.0	
	Subsequent > SSTL	4128.0	1120.0	0.0	0.0	0.0	1000.0	4621.0	141.0	0.0	11010.0	
MW-25	Initial	5000.0	3000.0	1900.0	23000.0	5000.0	5000.0	100000.0	10000.0	100000.0	252900.0	100%
	SSTL	104.0	3000.0	1900.0	23000.0	5000.0	121.0	1612.0	415.0	60494.0	95646.0	
	Initial > SSTL	4896.0	0.0	0.0	0.0	0.0	4879.0	98388.0	9585.0	39506.0	157254.0	
	Subsequent										0.0	
	SSTL	104.0	3000.0	1900.0	23000.0	5000.0	121.0	1612.0	415.0	60494.0	95646.0	
	Subsequent > SSTL										0.0	

Table 3

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352
Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Site Specific Target Level Summary

Well ID:	Item	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphth	TAA	TAME	TBA	Total	
MW-31	Initial	57.0	90.0	520.0	250.0	12.0	210.0	510.0	50.0	500.0	2199.0	-89067%
	SSTL	51.0	90.0	520.0	250.0	12.0	210.0	510.0	50.0	500.0	2193.0	
	Initial > SSTL	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	
	Subsequent	5.5	200.0	320.0	4400.0	1.0	1300.0	170.0	10.0	100.0	6506.5	
	SSTL	51.0	90.0	520.0	250.0	12.0	210.0	510.0	50.0	500.0	2193.0	
	Subsequent > SSTL	0.0	110.0	0.0	4150.0	0.0	1090.0	0.0	0.0	0.0	5350.0	
MW-33	Initial	520.0	7200.0	1500.0	7200.0	500.0	410.0	3200.0	1000.0	10000.0	31530.0	-87%
	SSTL	53.0	7200.0	1500.0	7200.0	500.0	410.0	1136.0	1000.0	10000.0	28999.0	
	Initial > SSTL	467.0	0.0	0.0	0.0	0.0	0.0	2064.0	0.0	0.0	2531.0	
	Subsequent	560.0	5200.0	2500.0	6900.0	50.0	670.0	4100.0	500.0	5000.0	25480.0	
	SSTL	53.0	7200.0	1500.0	7200.0	500.0	410.0	1136.0	1000.0	10000.0	28999.0	
	Subsequent > SSTL	507.0	0.0	1000.0	0.0	0.0	260.0	2964.0	0.0	0.0	4731.0	
MW-35	Initial	4400.0	2000.0	1700.0	3500.0	300.0	580.0	5300.0	51.0	5000.0	22831.0	-57%
	SSTL	56.0	2000.0	1700.0	3500.0	300.0	542.0	1181.0	51.0	5000.0	14330.0	
	Initial > SSTL	4344.0	0.0	0.0	0.0	0.0	38.0	4119.0	0.0	0.0	8501.0	
	Subsequent	3700.0	4300.0	2000.0	6200.0	160.0	550.0	5600.0	54.0	5000.0	27564.0	
	SSTL	56.0	2000.0	1700.0	3500.0	300.0	542.0	1181.0	51.0	5000.0	14330.0	
	Subsequent > SSTL	3644.0	2300.0	300.0	2700.0	0.0	8.0	4419.0	3.0	0.0	13374.0	
MW-37	Initial	240.0	34.0	270.0	240.0	11.0	220.0	850.0	50.0	44.0	1959.0	63%
	SSTL	90.0	34.0	270.0	240.0	11.0	220.0	850.0	50.0	44.0	1809.0	
	Initial > SSTL	150.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	150.0	
	Subsequent	1.0	1.0	1.0	1.0	1.0	3.7	100.0	10.0	100.0	218.7	
	SSTL	90.0	34.0	270.0	240.0	11.0	220.0	850.0	50.0	44.0	1809.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	56.0	56.0	
MW-39	Initial	13.0	1300.0	460.0	4200.0	250.0	330.0	5000.0	500.0	5000.0	17053.0	100%
	SSTL	13.0	1300.0	460.0	4200.0	250.0	330.0	1607.0	500.0	5000.0	13660.0	
	Initial > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	3393.0	0.0	0.0	3393.0	
	Subsequent	1.0	3.2	2.2	14.0	1.0	3.3	100.0	10.0	100.0	234.7	
	SSTL	13.0	1300.0	460.0	4200.0	250.0	330.0	1607.0	500.0	5000.0	13660.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MW-40	Initial	290.0	2900.0	650.0	7100.0	500.0	530.0	10000.0	1000.0	10000.0	32970.0	100%
	SSTL	113.0	2900.0	650.0	7100.0	500.0	530.0	1876.0	1000.0	10000.0	24669.0	
	Initial > SSTL	177.0	0.0	0.0	0.0	0.0	0.0	8124.0	0.0	0.0	8301.0	
	Subsequent	5.8	14.0	2.0	580.0	1.0	24.0	100.0	10.0	100.0	836.8	
	SSTL	113.0	2900.0	650.0	7100.0	500.0	530.0	1876.0	1000.0	10000.0	24669.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MW-41	Initial	260.0	1000.0	1100.0	1000.0	1000.0	420.0	20000.0	2000.0	20000.0	46780.0	100%
	SSTL	257.0	1000.0	1100.0	1000.0	1000.0	420.0	3234.0	2000.0	20000.0	30011.0	
	Initial > SSTL	3.0	0.0	0.0	0.0	0.0	0.0	16766.0	0.0	0.0	16769.0	
	Subsequent	1.0	1.0	1.0	1.0	1.0	5.0	100.0	10.0	100.0	220.0	
	SSTL	257.0	1000.0	1100.0	1000.0	1000.0	420.0	3234.0	2000.0	20000.0	30011.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Table 3

Facility Name:	Handy Pantry #65 / University Mart & Clouds Chevron	UST	07584 / 07777 / 12352
Address:	2367 Taylor Street Columbia, South Carolina	Crawford Project No.	7.0547

Site Specific Target Level Summary

Well ID:	Item	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphth	TAA	TAME	TBA	Total	
MW-54	Initial	5.0	5.0	5.0	5.0	5.0	5.0	100.0	10.0	100.0	240.0	-1%
	SSTL	5.0	5.0	5.0	5.0	5.0	5.0	110.0	2.0	14.0	156.0	
	Initial > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	86.0	94.0	
	Subsequent	1.0	1.0	1.0	1.0	9.6	5.0	100.0	6.7	100.0	225.3	
	SSTL	5.0	5.0	5.0	5.0	5.0	5.0	110.0	2.0	14.0	156.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	4.6	0.0	0.0	4.7	86.0	95.3	
MW-58	Initial	4.8	25.0	20.0	25.0	93.0	11.0	1800.0	15.0	100.0	2093.8	Abandoned
	SSTL	4.8	25.0	20.0	25.0	51.0	11.0	279.0	15.0	100.0	530.8	
	Initial > SSTL	0.0	0.0	0.0	0.0	42.0	0.0	1521.0	0.0	0.0	0.0	
	Subsequent	Abandoned										
	SSTL	4.8	25.0	20.0	25.0	51.0	11.0	279.0	15.0	100.0	530.8	
	Subsequent > SSTL	Abandoned										
MW-65	Initial	420.0	398.0	234.0	262.0	16.4	168.0	648.0	50.0	500.0	2696.4	Unable to Locate
	SSTL	326.0	398.0	234.0	262.0	16.4	168.0	648.0	50.0	500.0	2602.4	
	Initial > SSTL	94.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Subsequent	Unable to Locate - Paved Over										
	SSTL	326.0	398.0	234.0	262.0	16.4	168.0	648.0	50.0	500.0	2602.4	
	Subsequent > SSTL	Unable to Locate - Paved Over										
MW-5AR	Initial	9200.0	1000.0	1400.0	4400.0	160.0	810.0	1300.0	1000.0	10000.0	29270.0	-265%
	SSTL	83.0	1000.0	1400.0	4400.0	160.0	108.0	1300.0	381.0	10000.0	18832.0	
	Initial > SSTL	9117.0	0.0	0.0	0.0	0.0	702.0	0.0	619.0	0.0	10438.0	
	Subsequent	12000.0	13000.0	2400.0	13000.0	70.0	1000.0	5000.0	160.0	5000.0	51630.0	
	SSTL	83.0	1000.0	1400.0	4400.0	160.0	108.0	1300.0	381.0	10000.0	18832.0	
	Subsequent > SSTL	11917.0	12000.0	1000.0	8600.0	0.0	892.0	3700.0	0.0	0.0	38109.0	
PW-1R	Initial	460.0	3400.0	320.0	9200.0	50.0	250.0	710.0	500.0	5000.0	19890.0	0%
	SSTL	58.0	11928.0	3700.0	21680.0	290.0	19298.0	1114.0	330.0	29344.0	87742.0	
	Initial > SSTL	402.0	0.0	0.0	0.0	0.0	0.0	0.0	170.0	0.0	572.0	
	Subsequent	460.0	3400.0	320.0	9200.0	50.0	250.0	710.0	500.0	5000.0	19890.0	
	SSTL	58.0	11928.0	3700.0	21680.0	290.0	19298.0	1114.0	330.0	29344.0	87742.0	
	Subsequent > SSTL	402.0	0.0	0.0	0.0	0.0	0.0	0.0	170.0	0.0	572.0	
DW-3	Initial	2600.0	19000.0	2200.0	10000.0	1000.0	620.0	3600.0	2000.0	20000.0	61020.0	-193%
	SSTL	45.0	8470.0	2200.0	10000.0	1000.0	620.0	3600.0	2000.0	20000.0	47935.0	
	Initial > SSTL	2555.0	10530.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13085.0	
	Subsequent	9800.0	22000.0	3700.0	17000.0	990.0	780.0	10000.0	190.0	5000.0	69460.0	
	SSTL	45.0	8470.0	2200.0	10000.0	1000.0	620.0	3600.0	2000.0	20000.0	47935.0	
	Subsequent > SSTL	9755.0	13530.0	1500.0	7000.0	0.0	160.0	6400.0	0.0	0.0	38345.0	
SW-1	Initial	130.0	2.8	23.0	36.0	17.0	6.5	340.0	2.6	23.0	580.9	-88%
	SSTL	5.0	2.8	23.0	36.0	17.0	6.5	240.0	2.6	23.0	355.9	
	Initial > SSTL	125.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	225.0	
	Subsequent	180.0	8.4	30.0	53.0	42.0	6.5	350.0	9.5	100.0	779.4	
	SSTL	5.0	2.8	23.0	36.0	17.0	6.5	240.0	2.6	23.0	355.9	
	Subsequent > SSTL	175.0	5.6	7.0	17.0	25.0	0.0	110.0	6.9	77.0	423.5	

SSTL = Site Specific Target Level
RBSL= Risk Based Screening Levels
MtBE= Methyl Tert-Butyl Ether
n/a = not applicable
0.0 - Excluded from Calculations

CRAWFORD ENVIRONMENTAL SERVICES

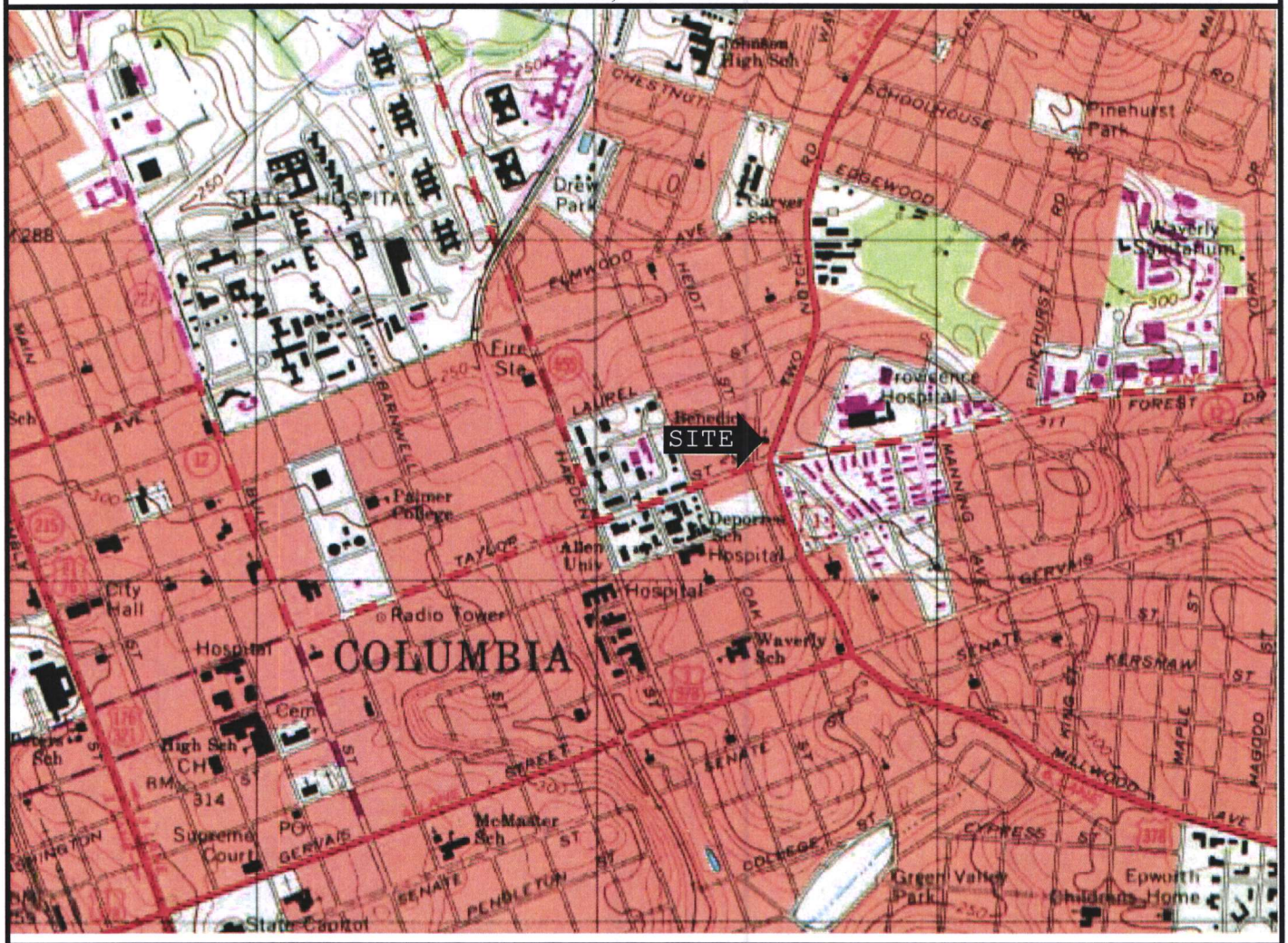
Initial>SSTL	421858.00
Subsequent>SSTL	197041.20
COC Reduction	53.29%

Figures

Figure 1: Topographic Map
Figure 2: Site Facility Base Map
Figure 3: Chemicals of Concern Map
Figure 4: Groundwater Elevation Map

FIGURE 1

Site Location Map
Handy Pantry #65 / University Mart / Clouds Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina



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15 Church Avenue, SW
Roanoke Virginia, 24011

540-343-6256 (office) 540-343-6259 (fax)

NORTH COLUMBIA, SOUTH CAROLINA

Source: U.S.G.S. Topographic Map of the Columbia North Quadrangle, Virginia, 7.5 Minute Series (1977, revised 1988)
Scale: 1:24,000 Contour Interval: 20 Feet
Vertical Datum: National Geodetic Vertical Datum 1929
Horizontal Datum: North American Datum1927

Project: Initial Monitoring Report

Client: SCDHEC

CES Job #: 7.0547

Latitude:
034"00'42.72"N
Longitude:
081"01'00.13"W

LEGEND

Gasoline Dispenser	Air Sparge Well	M	Mail Boxes		Propane Tank
Diesel Dispenser	Future Recovery Well	S	Sign		Overhead Utility
Utility Pole	Flag Pole	P	Pay Phone		Metal Fence
Water Meter	Water Spigot		Air Conditioning Unit		Wooden Fence
Monitoring Well	Light Pole		Compressed Air		Manway
Storm Drain	Grease Trap		Waste Receptacle		UST Access

REV	BY	DATE

Initial Monitoring Report

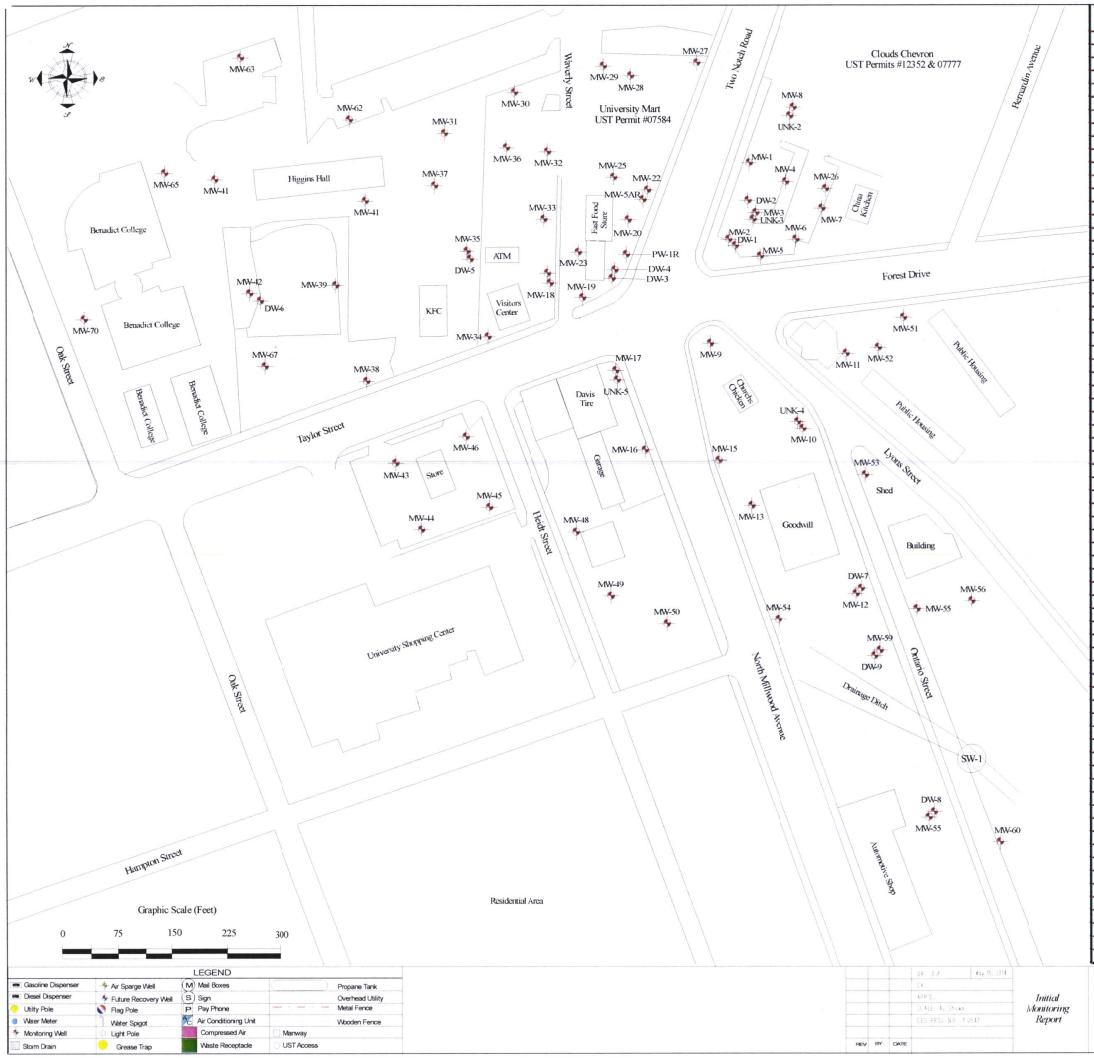
CRAWFORD ENVIRONMENTAL SERVICES

15 Church Avenue, SW
Roanoke, Virginia 24011

540-343-6256
540-343-6259 (fax)

Figure Title
Site Plan
Handy Pantry/University Mart/Clouds Chevron
UST Permits # 07584 / 07777 / 12352
Intersection of Taylor and Two Notch Road
Columbia, South Carolina

CRAWFORD NUMBER | REV
Figure 2 | 0



Well ID	Date	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphthalene	TAA	TAME	TBA
MW-1	4/2/2014	Dry								
MW-2	4/2/2014	170	41	200	960	320	150	230	1	6.8
MW-3	4/2/2014	6900	18000	1200	16000	1800	600	980	560 000	340
MW-4	4/2/2014	<1	<1	<1	<1	3.5	<5	<100	10 000	<100
MW-5	4/2/2014	Dry								
MW-6	4/3/2014	2.6	<1	2.4	10	2.5	4.2	<100	<10	<100
MW-7	4/3/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-8	4/3/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-9	4/2/2014	830	7500	1700	14000	50	590	1700	5000	5000
MW-10	4/1/2014	1800	5700	350	8500	50	690	5000	500 000	5000
MW-11	4/2/2014	2.3	4.1	11	4.1	<1	4.4	120	<10	<100
MW-12	4/2/2014	2.9	0.67	1.6	0.91	18	4.7	630	9.300	<100
MW-13	4/1/2014	0.62	8.8	4.5	86	<1	31	10	<10	<100
MW-15	4/1/2014	0.60-Feet of Free Product								
MW-16	4/2/2014	<1	<1	<1	<1	3.4	<5	<100	<10	<100
MW-17	4/2/2014	280	5100	450	13000	50	850	2200	500 000	5000
MW-18	4/2/2014	1900	7200	630	8300	340	370	4900	70 000	5000
MW-19	4/3/2014	300	1800	490	12000	50	900	610	500 000	5000
MW-20	4/3/2014	1800	11000	460	11000	50	960	3100	65 000	5000
MW-22	4/3/2014	5700	12000	880	23000	50	990	3600	500 000	5000
MW-23	4/3/2014	4200	16000	880	19000	120	1100	5900	500 000	5000
MW-25	4/1/2014	5.5	200	320	4400	<1	1300	170	<10	<100
MW-26	4/3/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-27	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-28	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-29	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-30	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-31	4/2/2014	0.9	<1	<1	2.7	<5	59	<10	<100	
MW-32	4/2/2014	0.94	<1	1.9	2.4	<1	6.6	170	<10	<100
MW-33	4/1/2014	560	5200	2500	6900	50	670	4100	500 000	5000
MW-34	4/1/2014	<1	<1	<1	<1	<1	<5	39	<10	<100
MW-35	4/1/2014	3700	4300	2000	6200	160	550	5600	54 000	5000
MW-36	4/1/2014	5.1	<1	38	<1	<1	55	95	<10	<100
MW-37	4/1/2014	<1	<1	<1	<1	<1	3.7	<100	<10	<100
MW-38	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-39	4/2/2014	<1	3.2	2.2	14	<1	3.3	<100	<10	<100
MW-40	4/2/2014	5.8	14	2	580	<1	24	<100	<10	<100
MW-41	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-42	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-43	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-44	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-45	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-46	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-48	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-49	4/2/2014	Unable to Access - Locked Gate								
MW-50	4/2/2014	Unable to Access - Locked Gate								
MW-51	4/2/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-53	4/3/2014	<1	<1	<1	<1	<1	4.1	<100	<10	<100
MW-54	4/1/2014	<1	<1	<1	<1	9.6	<5	<100	6.700	<100
MW-55	4/3/2014	10	1	3.5	<1	24	3.9	58	6.400	<100
MW-56	4/3/2014	<1	<1	<1	<1	<1	<5	50	<10	<100
MW-58	4/2/2014	Abandoned								
MW-59	4/2/2014	28	2.8	300	6.4	130	45	2600	42 000	160
MW-60	4/2/2014	Unable to Locate								
MW-62	4/1/2014	0.86	<1	<1	<1	3	3.3	260	<10	<100
MW-63	4/2/2014	<1	<1	<1	<1	5	120	<10	<100	
MW-65	4/2/2014	Unable to Locate - Paved over								
MW-67	4/1/2014	<1	<1	<1	<1	<1	5	<100	<10	<100
MW-70	4/2/2014	<1	<1	<1	<1	<1	5	<100	<10	<100
MW-5AR	4/1/2014	12000	13000	2400	13000	70	1000	<5000	160 000	<5000
PW-1R	4/3/2014	460	3400	320	9200	<50	<250	710	<500	<5000
DW-1	4/2/2014	0.45	1.2	1.7	7.2	<1.0	<5.0	<100	<10	<100
DW-2	4/2/2014	<1.0	<1.0	<1.0	<1.0	7.1	4.1	<100	<10	<100
DW-3	4/3/2014	9800	22000	3700	17000	990	780	10000	190 000	<5000
DW-4	4/3/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-5	4/1/2014	3300	68	37	1000	940	81	4300	93 000	<100
DW-6	4/1/2014	8.5	1.2	1.6	7.2	3	5	<100	<10	<100
DW-7	4/3/2014	0.52	0.46	<1.0	1.4	2.6	4.2	<100	<10	<100
DW-8	4/2/2014	Abandoned								
DW-9	4/2/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
SW-1	4/2/2014	180	8.4	30	53	42	6.5	350	9 500	100

Initial Monitoring Report

CRAWFORD ENVIRONMENTAL SERVICES

15 Church Avenue, SW
Roanoke, Virginia 24011
540-343-6256
540-343-6259 (fax)

Figure Title
Concentrations of Concern Map
Handy Pantry/University Mart/Clouds Chevron
UST Permits # 07584 / 07777 / 12352
Intersection of Taylor and Two Notch Road
Columbia, South Carolina

DRAWING NUMBER: Figure 3

REV: 0

Monitor Well	Top of Casing (ft)	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)
MW-1	93.89	4/2/2014	NA	DRY	NA	NA	DRY
MW-2	94.70	4/2/2014	NA	21.12	NA	NA	73.58
MW-3	94.45	4/2/2014	NA	21.40	NA	NA	73.05
MW-4	94.85	4/2/2014	NA	21.31	NA	NA	73.54
MW-5	95.26	4/2/2014	NA	DRY	NA	NA	DRY
MW-6	94.96	4/3/2014	NA	22.61	NA	NA	72.35
MW-7	95.93	4/3/2014	NA	23.02	NA	NA	72.91
MW-8	94.79	4/3/2014	NA	19.95	NA	NA	74.84
MW-9	92.30	4/2/2014	NA	20.60	NA	NA	71.70
MW-10	85.98	4/1/2014	NA	17.69	NA	NA	68.29
MW-11	88.46	4/2/2014	NA	18.61	NA	NA	69.85
MW-12	72.80	4/2/2014	NA	4.20	NA	NA	68.60
MW-13	80.44	4/1/2014	NA	11.13	NA	NA	69.31
MW-15	86.44	4/1/2014	**16.60**	**16.00**	**0.60**	**69.84**	70.68*
MW-16	88.19	4/2/2014	NA	17.54	NA	NA	70.65
MW-17	92.45	4/2/2014	NA	22.00	NA	NA	70.45
MW-18	94.81	4/2/2014	NA	23.68	NA	NA	71.13
MW-19	93.96	4/3/2014	NA	23.33	NA	NA	70.63
MW-20	94.12	4/3/2014	NA	21.95	NA	NA	72.17
MW-22	94.25	4/3/2014	NA	21.11	NA	NA	73.14
MW-23	94.43	4/3/2014	NA	23.65	NA	NA	70.78
MW-25	93.09	4/1/2014	NA	19.71	NA	NA	73.38
MW-26	95.96	4/3/2014	NA	20.01	NA	NA	75.95
MW-27	91.40	4/1/2014	NA	14.65	NA	NA	76.75
MW-28	91.46	4/1/2014	NA	15.63	NA	NA	75.83
MW-29	91.09	4/1/2014	NA	15.51	NA	NA	75.58
MW-30	92.77	4/1/2014	NA	20.50	NA	NA	72.27
MW-31	95.20	4/2/2014	NA	24.41	NA	NA	70.79
MW-32	92.87	4/2/2014	NA	21.28	NA	NA	71.59
MW-33	93.84	4/1/2014	NA	23.18	NA	NA	70.66
MW-34	94.77	4/1/2014	NA	24.06	NA	NA	70.71
MW-35	93.71	4/1/2014	NA	21.35	NA	NA	72.36
MW-36	93.89	4/1/2014	NA	22.84	NA	NA	71.05
MW-37	93.78	4/1/2014	NA	22.24	NA	NA	71.54
MW-38	95.53	4/1/2014	NA	24.61	NA	NA	70.92
MW-39	96.19	4/2/2014	NA	25.59	NA	NA	70.60
MW-40	95.69	4/2/2014	NA	25.29	NA	NA	70.40
MW-41	94.85	4/1/2014	NA	24.70	NA	NA	70.15
MW-42	95.81	4/1/2014	NA	25.35	NA	NA	70.46
MW-43	95.15	4/2/2014	NA	24.00	NA	NA	71.15
MW-44	94.57	4/1/2014	NA	24.42	NA	NA	70.15
MW-45	92.51	4/1/2014	NA	21.22	NA	NA	71.29
MW-46	94.50	4/1/2014	NA	23.55	NA	NA	70.95
MW-48	89.95	4/2/2014	NA	19.70	NA	NA	70.25
MW-49	88.18	4/2/2014	Unable to Access - Locked Gate				
MW-50	84.09	4/2/2014	Unable to Access - Locked Gate				
MW-51	93.91	4/2/2014	NA	21.23	NA	NA	72.68
MW-53	79.60	4/3/2014	NA	9.60	NA	NA	70.00
MW-54	77.58	4/1/2014	NA	11.31	NA	NA	66.27
MW-55	71.22	4/3/2014	NA	2.51	NA	NA	68.71
MW-56	76.39	4/3/2014	NA	5.12	NA	NA	71.27
MW-58	76.37	4/2/2014	Abandoned				
MW-59	68.02	4/2/2014	NA	6.05	NA	NA	61.97
MW-60	67.94	4/2/2014	Unable to Locate				
MW-62	94.05	4/1/2014	NA	22.32	NA	NA	71.73
MW-63	94.65	4/2/2014	NA	23.07	NA	NA	71.58
MW-65	94.04	4/2/2014	Unable to Locate - Paved over				
MW-67	96.10	4/1/2014	NA	24.44	NA	NA	71.66
MW-70	95.49	4/2/2014	NA	24.70	NA	NA	70.79
MW-5AR	94.18	4/1/2014	NA	21.24	NA	NA	72.94
PW-1R	93.75	4/3/2014	NA	23.11	NA	NA	70.64
DW-1	94.66	4/2/2014	NA	45.00	NA	NA	49.66
DW-2	94.02	4/2/2014	NA	44.34	NA	NA	49.68
DW-3	93.75	4/3/2014	NA	24.40	NA	NA	69.35
DW-4	93.79	4/3/2014	NA	44.60	NA	NA	49.19
DW-5	93.74	4/1/2014	NA	44.22	NA	NA	49.52
DW-6	95.90	4/1/2014	NA	45.86	NA	NA	50.04
DW-7	72.79	4/3/2014	NA	24.00	NA	NA	48.79
DW-8	68.63	4/2/2014	Abandoned				
DW-9	76.47	4/2/2014	NA	25.00	NA	NA	51.47

Initial Monitoring Report

CRAWFORD ENVIRONMENTAL SERVICES
15 Church Avenue, SW
Roanoke, Virginia 24011
540-343-6256
540-343-6259 (fax)

Figure Title
Groundwater Elevation Map
Handy Pantry/University Mart/Clouds Chevron
UST Permits # 07584 / 07777 / 12352
Intersection of Taylor and Two Notch Road
Columbia, South Carolina

DRAWING NUMBER
Figure 4

REV
0

May 16, 2014

Mr. John Bryant
State of South Carolina
Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RE: Corrective Action Plan Implementation
Handy Pantry #65/University Mart & Cloud's Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina
UST Permit # 07584 / 07777 / 12352

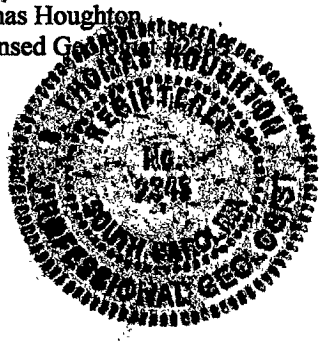
Dear Mr. Bryant:

Enclosed please find one copy of the *Corrective Action Plan* Implementation (CAP-IMP) prepared by Crawford Environmental Services, Inc. (CES) for the referenced site. Should you have any questions regarding the enclosed material, or if additional information is required, please feel free to contact me or Charlie Crawford at 540.343.6256.

Best Regards,

Daniel J. Fisher
Division Manager

B. Thomas Houghton
SC Licensed Geologist



cc:

CRAWFORD
ENVIRONMENTAL
SERVICES

CORRECTIVE ACTION PLAN IMPLEMENTATION

Handy Pantry #65/University Mart & Cloud's Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina
UST Permit # 07584 / 07777 / 12352

Submitted To:
Mr. John Bryant
State of South Carolina
Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Prepared For:
Mr. John Bryant
State of South Carolina
Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

May 16, 2014
CES Job Number: 7.0547

Prepared By:
Daniel J. Fisher
Division Manager

Reviewed By:
Charles F. Crawford
President

Approved By:
B. Thomas Houghton
Licensed Geologist

CRAWFORD ENVIRONMENTAL SERVICES

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Appendix A. Photo-Documentation
Appendix B. Well Completion Logs

SIGNATURE/CERTIFICATION PAGE

Prepared By:

Name: Daniel J. Fisher, Division Manager

Signature: _____

Reviewed By:

As a registered geologist, I certify that I am a qualified groundwater professional, as defined by the South Carolina Board of Registration for Geologists. All off the information in this plan and in all of the attachments is true, accurate, complete, and in accordance with applicable State Rules and Regulations.

Name: B. Thomas Houghton, P.G. – SC Licensed Geologist #23

Signature: _____

Approved By:

I certify that I have prepared or supervised preparation of the attached report, that it has been prepared in accordance with industry practices and standards, and that the information contained herein is truthful and accurate to the best of my knowledge.

Name: Charles F. Crawford III – President

Signature: _____

Company: Crawford Environmental Services, Inc.
15 Church Avenue, SW
Roanoke, Virginia 24011
(540) 343-6256 [phone]
(540) 343-6259 [facsimile]

1.0 INTRODUCTION

On behalf of the South Carolina Department of Health and Environmental Control (SCDHEC), Crawford Environmental Services, Inc. (CES) has prepared a Corrective Action Plan Implementation (CAP-IMP) report for the Handy Pantry #65/University Mart and Cloud's Chevron properties located proximal to the intersection of Two Notch Road and Taylor Street in Columbia, South Carolina.

1.1 Site Description

The subject property is located in a primarily commercial area of Columbia, South Carolina (Figure 1). The subject sites, operating as Handy Pantry #65/University Mart and former Cloud's Chevron, is bordered by light commercial properties in all directions. A site plan depicting pertinent features of the subject property is provided as Figure 2.

1.2 Adjacent Properties

As part of CAP development activities, CES reviewed the applicable tax maps for the site and surrounding area. Properties maintaining the presence of monitoring wells and/or those with confirmed petroleum releases are presented in Table 1. A copy of the tax map with the corresponding tax map number is included as Figure 3.

Table 1.

Summary of Adjacent Properties

Tax Map #	I.D. #	Owner Name	Address
R11412-10-16	1	Mr. Mahesh Patel	2367 Taylor Street, Columbia, SC
R11412-09-014A	2	Mr. Andrew Diggins	1600 Block Two Notch Road, Columbia, SC
R11412-09-13	3	Mr. Andrew Diggins	1600 Block Two Notch Road, Columbia, SC
R11411-02-01	4	Ms. Bette Gordon Bateman & Mr. John Bateman	2436 Taylor Street, Columbia, SC
R11411-01-02	5	2368 Taylor Street LLC.	2368 Taylor Street, Columbia, SC
R11411-01-03	6	2368 Taylor Street LLC.	1512 Heidt Street, Columbia, SC
R11411-01-01	7	Chang Moon Sueng	2358 Taylor Street, Columbia, SC
R11408-10-31	8	Mr. Soloman Addico	2361 Taylor Street, Columbia, SC
R11408-10-30	9	Mr. Soloman Addico	1613 Waverly Street, Columbia, SC
R11408-10-29	10	Mr. Soloman Addico	1617 Waverly Street, Columbia, SC
R11407-06-01	11	Mr. Soloman Addico	1616 Oak Street, Columbia, SC
R11407-06-03	12	Mr. Soloman Addico	1604 Oak Street, Columbia, SC
R11407-06-02	13	Mr. Soloman Addico	2305 Taylor Street, Columbia, SC
R11408-10-12	14	Allen University	2315 Taylor Street, Columbia, SC
R11408-10-31	15	Sylvan Food Systems, Inc.	2349 Taylor Street, Columbia, SC
R11411-03-01	16	Ms. Linda Warren	1527 Lyon Street, Columbia, SC
R11411-03-02	17	Ms. Linda Warren	1510 Lyon Street, Columbia, SC

Table 1 (Cont'd).

Summary of Adjacent Properties

Tax Map #	I.D. #	Owner Name	Address
R11411-04-01	18	Gilbert Walker	1505 Garden Plaza, Columbia, SC
R11411-02-02	19	1500 Millwood Ave LLC.	1527 Ontario Street, Columbia, SC
R11411-02-03	20	John M. Suddeth	Ontario Street, Columbia SC
R11407-07-02	21	Fung Lau	2324 Taylor Street, Columbia, SC

1.3 Topography

The subject site is located within the jurisdictional limits of Richland County, South Carolina and is situated within the Piedmont Physiographic Province. According to the U.S. Geological Survey 7.5 Minute Series Topographic Map of the North Columbia Quadrangle, South Carolina, the site elevation is approximately 293.0 feet above mean sea level.

2.0 REMEDIATION SYSTEM DESIGN

In accordance with the CAP dated March 21, 2014, CES performed maintenance activities on the three existing remedial systems (Shed 1, Shed 2, and Shed 3) located at the subject site to facilitate continued remediation via air sparging (AS) and soil vapor extraction (SVE). Details of the activities are provided below;

2.1 Re-Activation of Existing Remedial Components

CES mobilized to the subject site on April 18, 2014 to perform site cleaning, inspections of the remedial systems, and to secure the remedial systems. Approximately 15-cubic yards of debris was removed from the areas proximal to remedial sheds #1 and #3. Following clearing operations, the sheds were secured and the above ground piping was inspected for signs of failure. CES remobilized to the subject site on May 5, 2014 with an Atlas Copco Certified Compressor Technician to perform routine maintenance of the AS compressors located at remedial sheds #1, #2, and #3. Each compressor had a full service including; replacement of lubricants, filters, and drive belts. Following receipt of the notice to proceed on May 8, 2014, CES placed the remedial system back into operation on May 16, 2014. Due to the elevated temperatures during the summer months, CES has programmed the remedial systems to operate between 8:00 PM and 8:00 AM. The air sparge compressors have been initially set to delivery 2.5 cubic feet per minute (CFM) to each of the 58 on- and off-site air sparge wells. The existing soil vapor extraction units were inspected for proper operation and set to operate in conjunction with the air sparging. CES will conduct weekly visits of the air sparge / SVE systems for the first three months of operation to ensure proper operation. Photo-documentation of the CAP-IMP activities are included as Appendix A. Existing air sparge well completions logs are included as Appendix B with their corresponding locations shown on Figure 4.

3.0 FUTURE REMEDIAL ACTIVITIES

Following approximately one quarter of operation of the existing remedial systems, CES will evaluate site data to determine if additional remedial activities are warranted. Proposed additional remedial measures are presented below;

3.1 Surfactant Enhanced Recovery Events

Should site conditions indicate the presence of free-phase petroleum, CES will mobilize to the subject site and install a maximum of six free-product recovery wells. Eight-inch diameter soil borings will be installed utilizing hollow-stem auger techniques to facilitate the construction of six, four-inch recovery / injection wells. Each recovery / injection point will be installed to approximately 35.0 feet below ground surface (bgs). Recovery / injection wells will be equipped with screened intervals from approximately two feet above source area contaminants to the terminal depth of the boring. Each recovery / injection point will maintain an estimated eight-inch diameter waterproof manway installed within an estimated two foot by two foot concrete pad. Proposed recovery / injection point locations are presented on Figure 4.

Following installation of the injections wells, CES will mobilize to the site with remedial injection equipment and approximately 60-gallons of PetroSolv Surfactant (PetroSolv). CES will mix a 3.0% surfactant solution utilizing approximately 50-gallons of PetroSolv and approximately 600-gallons of potable water (acquired on-site). Over an estimated period of one to three days, CES will inject approximately 660-gallons of surfactant solution to injection points IW-1, IW-2, IW-3, IW-4, IW-5, and IW-6. During these injection events, CES will utilize a surge block to actively pressurize the surfactant solution into the formation creating direct contact with the free- and adsorbed-phase compounds. Following completion of the injection activities, CES will utilize a vacuum truck to extract approximately 150-gallons of petroleum impacted groundwater from each of the referenced injection wells.

3.2 Chemical Oxidation

Following achievement of the 60% concentrations of concern (COC) milestone, CES proposes to use a dilute Fenton's reagent process at the subject site to oxidize adsorbed- and dissolved-phase petroleum constituents in the subsurface The Fenton's reagent process utilizes a metal catalyst (ferrous sulfate) and hydrogen peroxide to produce hydroxyl radicals. These hydroxyl radicals rapidly oxidize petroleum hydrocarbons upon contact, ultimately producing by-products of carbon dioxide, water, and dissolved oxygen. Residual petroleum hydrocarbon mass and simple organic acids usually remain after the chemical oxidation process but can be treated with biological amendments. Fenton's reagent process is shown in the following steps:

$$(1)\ Fe^{2+} + H_2O_2 \rightarrow Fe^{3+} + OH\cdot + OH^-$$
$$(2)\ Fe^{3+} + H_2O_2 \rightarrow Fe^{2+} + OOH\cdot + H^+$$

The hydrogen peroxide will be injected into the estimated 58 existing air-sparge wells utilizing the existing piping as subsurface conveyance conduits. The six recovery / injection wells referenced in

Section 3.1 also will be utilized for the injection of hydrogen peroxide on an as needed basis. The injection events will be performed episodically until an approximate COC reduction of 75-80% is achieved. CES estimates that each ChemOx injection event can be completed in approximately one to two weeks, however, the duration of these events will be controlled by the site's ability to sustain the desired rates of injection. CES estimates that approximately 3,000-gallons of 5.0% hydrogen peroxide solution will be utilized at the subject site.

3.3 Biological Injections

Directly following the final ChemOx injection, the holding tank will be cleansed prior to the introduction of bacteria and nutrient-amended water. CES will utilize the PetroBac™ product bundle which contains a TPH Bacterial Consortium and Enzyme Accelerator. The NutriMax™ nutrient mix also will be utilized to increase biological degradation of the hydrocarbon mass at the site. Over the course of an estimated three to five days, CES will inject approximately 1,000 lbs. of CBN nutrients and approximately 20 gallons of A2 bacteria mixed with an estimated 3,500-gallons of potable water. The biological amendments will be gravity fed to the injection points in order to facilitate physical contact with the adsorbed-phase compounds. The amendments will react with the residual TPH mass to produce carbon dioxide and water as by-products.

4.0 MONITORING SCHEDULES

4.1 Remedial Monitoring Schedule

The remedial operation and monitoring (O & M) schedule presented below has been developed to assess the overall effectiveness and operating efficiency of the implemented remedial techniques. Table 2 is a summary of the O & M schedule for the corrective action efforts to be implemented at the subject sites in Columbia, South Carolina.

Table 2.

Summary of Remedial Operation & Monitoring Schedule

Location	Frequency	Parameters	Methods	Media
SVE and system components	Weekly inspections for first month; bi-monthly thereafter	N/A	Routine system O&M	N/A
SVE vapor effluents	Weekly inspections for first month; bi-monthly thereafter	TPH	PID	Vapor
On- and Off-site Monitoring Wells	Semi-Annually from the Date of the CAP-IMP Report	BTEX, Naphthalene, MTBE, TAA, TAME, TBA.	8260B, 8260-OXY	Groundwater

4.2 Post-Operational Schedule

Following achievement of the third interim Chemical of Concern (CoC) concentration goal for 30 consecutive days, CES will complete two quarters of post corrective action monitoring to ensure that dissolved-phase endpoints have been maintained. Upon verification of endpoint maintenance for two consecutive quarters, CES will mobilize to the subject site to remove/abandon all assessment and corrective action equipment. This process will include removal of the injection equipment and abandonment of all on- and off-site monitoring/injection wells.

5.0 SUMMARY AND RECOMMENDATIONS

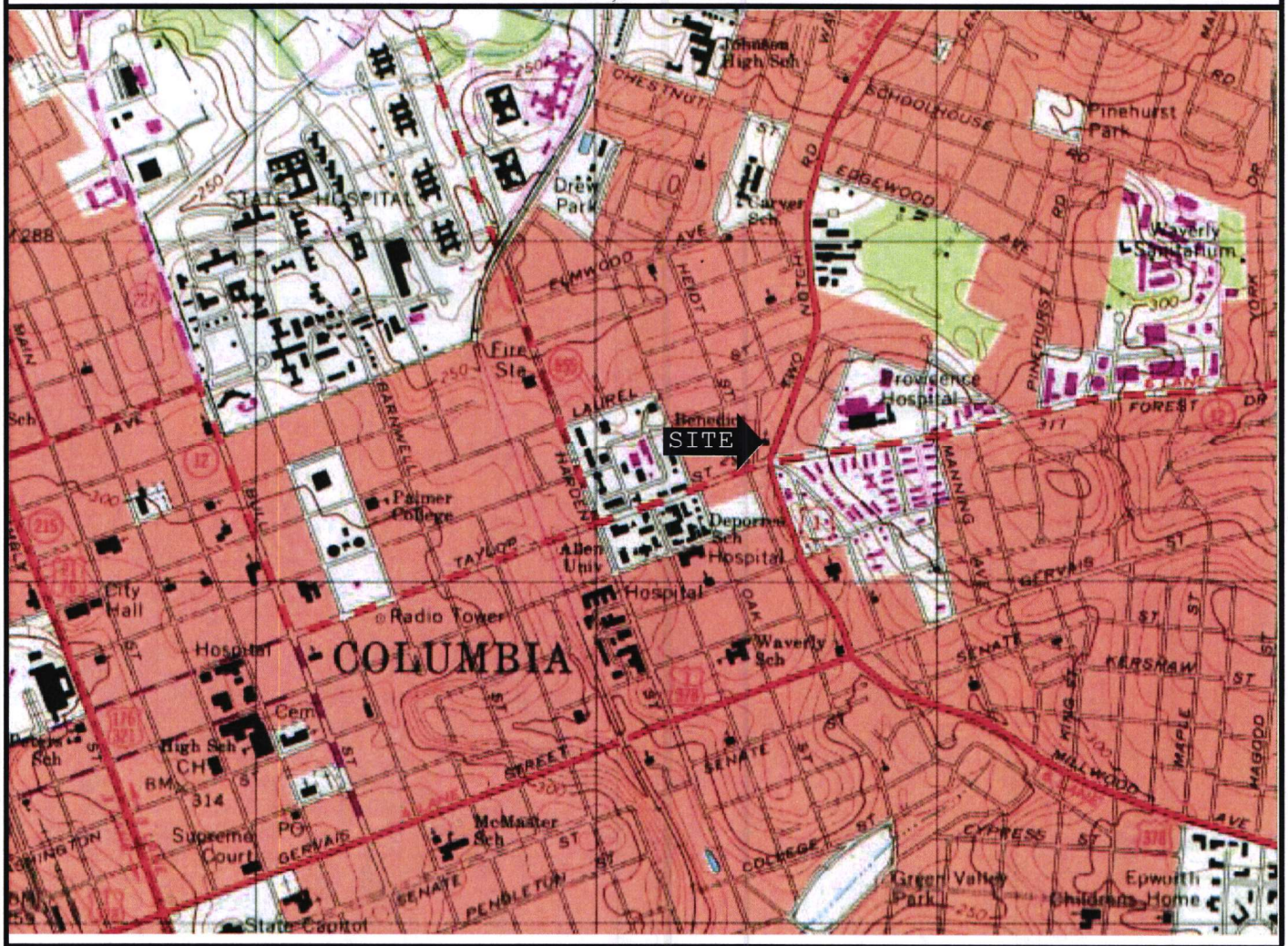
During the first quarter of CAP implementation, the existing remedial systems were re-activated on May 16, 2014. CES is currently scheduled to mobilize to the subject site weekly to perform system inspections to ensure proper operation. This CAP-IMP is being submitted to Mr. John Bryant of the South Carolina Department of Health and Environmental Control UST Management Department.

Figures

Figure 1 – Topographic Map
Figure 2 – Site Map
Figure 3 – Tax ID Map
Figure 4 – Injection Point Location Map

FIGURE 1

Site Location Map
Handy Pantry #65 / University Mart / Clouds Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina



CRAWFORD ENVIRONMENTAL SERVICES

15 Church Avenue, SW
Roanoke Virginia, 24011

540-343-6256 (office) 540-343-6259 (fax)

NORTH COLUMBIA, SOUTH CAROLINA

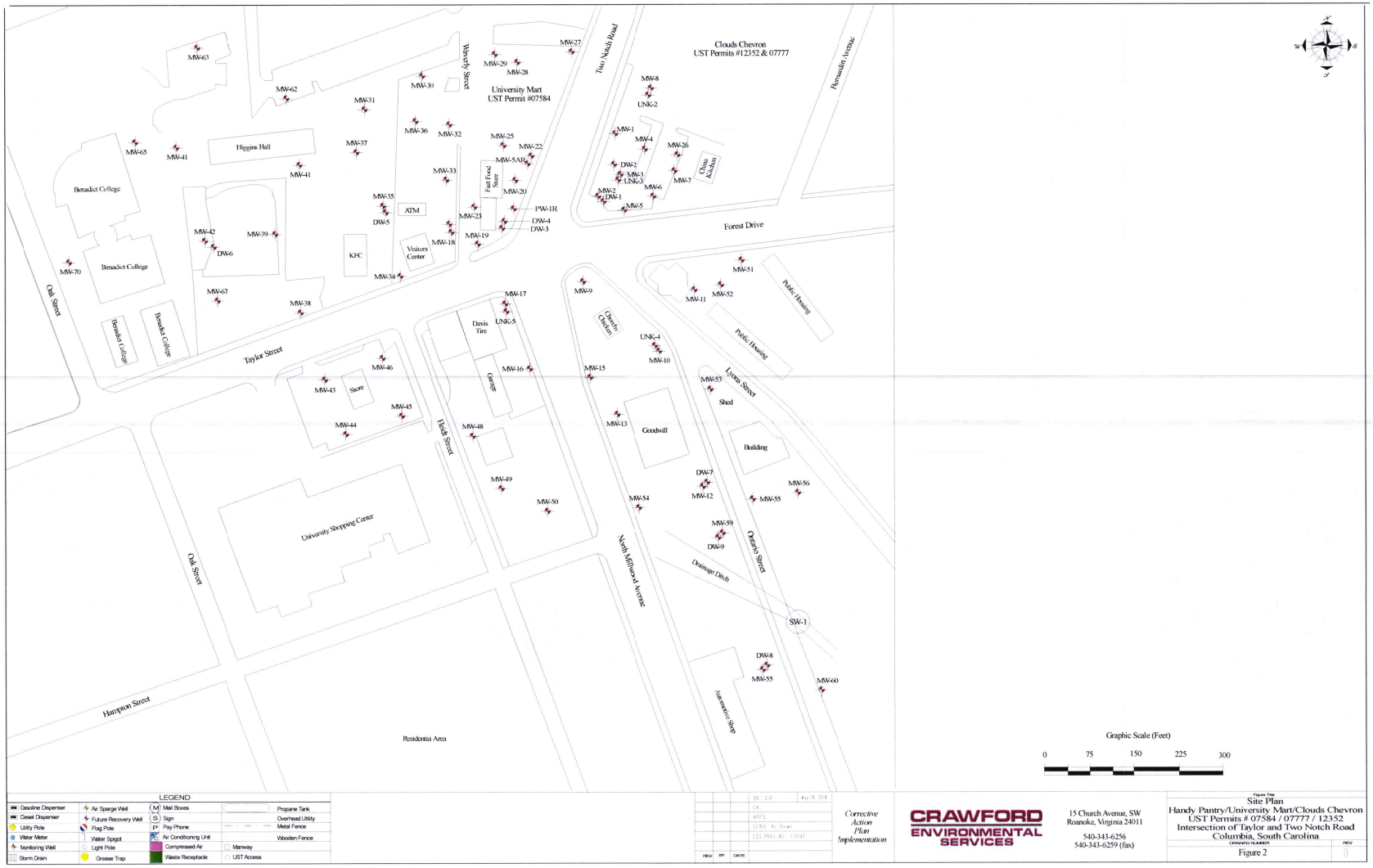
Source: U.S.G.S. Topographic Map of the Columbia North Quadrangle, Virginia, 7.5 Minute Series (1977, revised 1988)
Scale: 1:24,000 Contour Interval: 20 Feet
Vertical Datum: National Geodetic Vertical Datum 1929
Horizontal Datum: North American Datum1927

Project: Corrective Action Plan Implementation

Client: SCDHEC

CES Job #: 7.0547

Latitude:
034"00'42.72"N
Longitude:
081"01'00.13"W


Clouds Chevron
UST Permits #12352 & 07777
University Mart
UST Permit #07584
Waverly Street
Two Notch Road
Bernadin Avenue
Forest Drive
Oak Street
Taylor Street
Hampton Street
Holt Street
North Millwood Avenue
Ontario Street
Lewis Street
Benedict College
Higgins Hall
Benedict College
Benedict College
Benedict College
Fast Food Store
ATM
KFC
Visitors Center
Davis Tire
Garage
Store
Charlie Chicken
China Kitchen
Public Housing
Public Housing
Goodwill
Shed
Building
University Shopping Center
Drainage Ditch
Automotive Shop
Residential Area
MW-1
MW-2
MW-3
MW-4
MW-5
MW-5AR
MW-6
MW-7
MW-8
MW-9
MW-10
MW-11
MW-12
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MW-65
MW-67
MW-70
DW-1
DW-2
DW-3
DW-4
DW-5
DW-6
DW-7
DW-8
DW-9
PW-1R
UNK-1
UNK-2
UNK-3
UNK-4
UNK-5
SW-1
Graphic Scale (Feet)
0
75
150
225
300
LEGEND
Gasoline Dispenser
Diesel Dispenser
Utility Pole
Water Meter
Monitoring Well
Storm Drain
Air Sparge Well
Future Recovery Well
Flag Pole
Water Spigot
Light Pole
Grease Trap
Mail Boxes
Sign
Pay Phone
Air Conditioning Unit
Compressed Air
Waste Receptacle
Propane Tank
Overhead Utility
Metal Fence
Wooden Fence
Manway
UST Access
Corrective Action Plan Implementation
CRAWFORD ENVIRONMENTAL SERVICES
15 Church Avenue, SW
Roanoke, Virginia 24011
540-343-6256
540-343-6259 (fax)
Figure Title
Site Plan
Handy Pantry/University Mart/Clouds Chevron
UST Permits # 07584 / 07777 / 12352
Intersection of Taylor and Two Notch Road
Columbia, South Carolina
DRAWING NUMBER
Figure 2
REV

			DR.: DJF	May 14, 2014	
			CK.:		
			APP'D.: CFC		
			SCALE: NA		
			CES PROJ. NO.: 7.0547		
REV	BY	DATE			

Corrective Action Plan Implementation

CRAWFORD ENVIRONMENTAL SERVICES

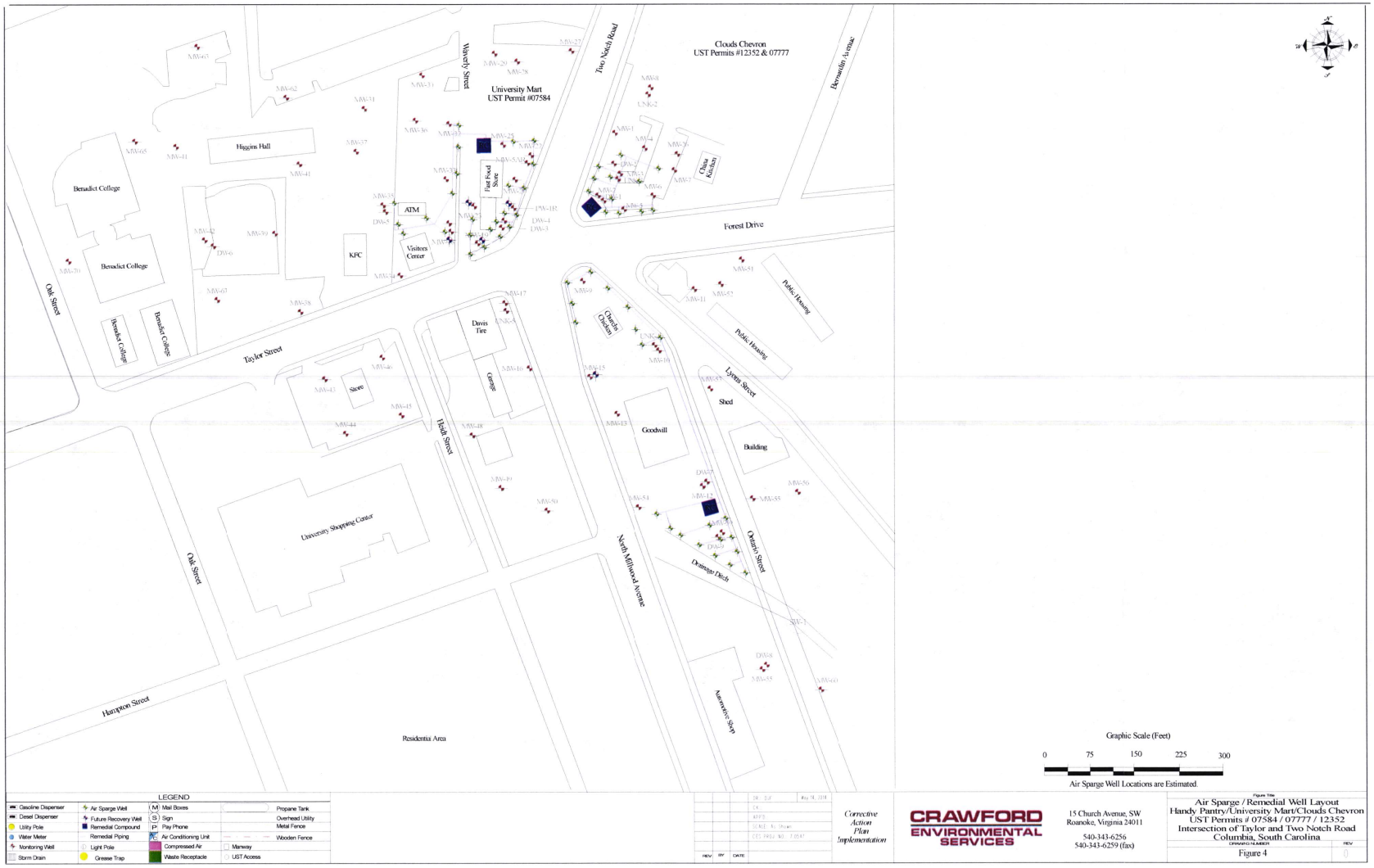
15 Church Avenue, SW
Roanoke, Virginia 24011

540-343-6256
540-343-6259 (fax)

Figure Title

Tax Map
Handy Pantry/University Mart/Clouds Chevron
UST Permits # 07584 / 07777 / 12352
Intersection of Taylor and Two Notch Road
Columbia, South Carolina

DRAWING NUMBER	REV
Figure 3	0


Clouds Chevron
UST Permits #12352 & 07777
University Mart
UST Permit #07584
Waverly Street
Two Notch Road
Bernadin Avenue
Forest Drive
Higgins Hall
Benedict College
Benedict College
Benedict College
Benedict College
Oak Street
Taylor Street
ATM
Visitors Center
KFC
Fast Food Store
Davis Tire
Garage
Store
Hall Street
Charles Chicken
Public Housing
Public Housing
Lyons Street
Shed
Goodwill
Building
Ontario Street
North Millwood Avenue
Drainage Ditch
University Shopping Center
Oak Street
Hampton Street
Residential Area
Automotive Shop
Graphic Scale (Feet)
0
75
150
225
300
Air Sparge Well Locations are Estimated.
LEGEND
Gasoline Dispenser
Diesel Dispenser
Utility Pole
Water Meter
Monitoring Well
Storm Drain
Air Sparge Well
Future Recovery Well
Remedial Compound
Remedial Piping
Light Pole
Grease Trap
Mail Boxes
Sign
Pay Phone
Air Conditioning Unit
Compressed Air
Waste Receptacle
Propane Tank
Overhead Utility
Metal Fence
Wooden Fence
Manway
UST Access
Corrective Action Plan Implementation
CRAWFORD ENVIRONMENTAL SERVICES
15 Church Avenue, SW
Roanoke, Virginia 24011
540-343-6256
540-343-6259 (fax)
Figure Title
Air Sparge / Remedial Well Layout
Handy Pantry/University Mart/Clouds Chevron
UST Permits # 07584 / 07777 / 12352
Intersection of Taylor and Two Notch Road
Columbia, South Carolina
DRAWING NUMBER
Figure 4
REV
0

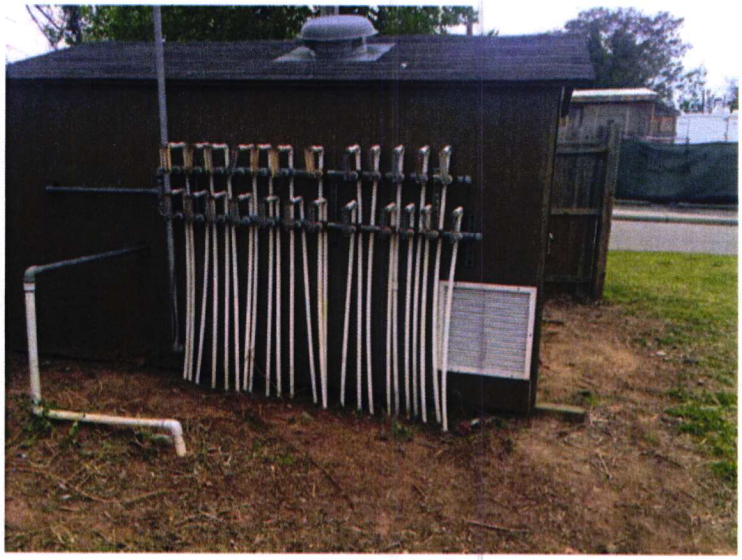
Appendix A

Photo-Documentation

CAP-IMP Photographic Documentation
Handy Pantry #65 / University Mart & Clouds Chevron
2367 Taylor Street
Columbia, South Carolina 29209

Clouds Chevron # 1

View of Remedial Shed #1 following clearing activities.



Clouds Chevron # 2

View of Remedial Manifold at Remedial Shed #1.

Clouds Chevron # 3

View of Remedial Shed #3 following clearing activities.

Clouds Chevron # 4

View of Remedial Manifold at Remedial Shed #1 prior to repairs.

Appendix B

Well Completion Records

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

RECEIVED
JAN 18 2007

UNDERGROUND STORAGE TANK PROGRAM

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-1
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

RECEIVED
JAN 18 2007
UNDERGROUND STORAGE TANK PROGRAM

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-2
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

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☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes ☑ No
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

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Authorized Representative

RECEIVED
JAN 18 2007

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

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City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-3
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

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5. REMARKS:

6. PERMIT NUMBER: 877 UNDERGROUND STORAGE TANK PROGRAM

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

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☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-4
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected upon completion ☐ Yes Type: ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-5
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 In. to 45 feet depth
In. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)436-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-6
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-7
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-8
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) 45 ft. **Date Started:** 9/28/2006
Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Authorized Representative Date: 12/27/2006

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-9
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected upon completion ☐ Yes ☑ No Type: Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-10
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/26/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-11
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-12
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 ft. to 45 feet depth
ft. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-13
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-14
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 ft. to 45 feet depth
ft. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2486 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (603)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-15
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) 45 ft. **Date Started:** 9/28/2006
Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
___ in. to ___ feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
___ ft. and ___ ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
___ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
___ ft. after ___ hrs. Pumping ___ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes ☑ No
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ___ ft. ___ direction
Type well disinfected upon completion ☐ Yes ☑ No Type: Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. ___ Volts ___ Length of drop pipe ___ ft. Capacity ___ gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley **CERT. NO.:** 934
Address: 2486 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-16
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/26/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 ft. to 45 feet depth
ft. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)436-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-17
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2465 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-18
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-19
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes ☑ No
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-20
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
_____ in. to _____ feet depth
Height: Above/Below Surface _____
Weight _____
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
_____ ft. and _____ ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
_____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
_____ ft. after ____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size _____ Uniformity Coefficient _____

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other _____
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. ___ direction
_____ Type well disinfected ☐ Yes Type: _____
upon completion ☑ No Amount: _____

18. PUMP: Date Installed: _____ Not Installed ☑
Mfr. Name: _____ Model No.: _____
H.P. ____ Volts _____ Length of drop pipe _____ ft. Capacity _____ gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-21
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-22
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
_____ in. to _____ feet depth
Height: Above/Below Surface _____
Weight _____
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
_____ ft. and _____ ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
_____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
_____ ft. after ____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size _____ Uniformity Coefficient _____

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other _____
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. ___ direction
Type well disinfected upon completion ☐ Yes ☑ No Type: _____ Amount: _____

18. PUMP: Date Installed: _____ Not Installed ☑
Mfr. Name: _____ Model No.: _____
H.P. ____ Volts _____ Length of drop pipe _____ ft. Capacity _____ gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-23
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-24
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-25
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 ft. to 45 feet depth
ft. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-26
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2486 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-27
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-28
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) 45 ft. **Date Started:** 9/26/2006
Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-29
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-30
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/26/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-31
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
_____ in. to _____ feet depth
Height: Above/Below Surface _____
Weight _____
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
_____ ft. and _____ ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
_____ ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
_____ ft. after ____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size _____ Uniformity Coefficient _____

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other _____
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. ___ direction
Type well disinfected ☐ Yes Type: _____
unpon completion ☑ No Amount: _____

18. PUMP: Date Installed: _____ Not Installed ☑
Mfr. Name: _____ Model No.: _____
H.P. ____ Volts _____ Length of drop pipe _____ ft. Capacity _____ gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-32
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2486 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-33
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 834
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-34
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-35
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Authorized Representative Date: 12/27/2006

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-36
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
_____ in. to _____ feet depth
Height: Above/Below Surface _____
Weight _____
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
_____ ft. and _____ ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
_____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
_____ ft. after ____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size _____ Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other _____
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. ___ direction
Type well disinfected ☐ Yes Type: _____
unpon completion ☑ No Amount: _____

18. PUMP: Date Installed: _____ Not Installed ☑
Mfr. Name: _____ Model No.: _____
H.P. ____ Volts _____ Length of drop pipe _____ ft. Capacity _____ gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-37
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROTECT PROVIDE PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-38
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes ☑ No
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-39
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-40
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)436-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-41
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
_____ in. to _____ feet depth
Height: Above/Below Surface _____
Weight _____
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
_____ ft. and _____ ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
_____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
_____ ft. after ____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size _____ Uniformity Coefficient _____

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other _____
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. ___ direction
_____ Type well disinfected ☐ Yes Type: _____
_____ unpon completion ☑ No Amount: _____

18. PUMP: Date Installed: _____ Not Installed ☑
Mfr. Name: _____ Model No.: _____
H.P. ____ Volts _____ Length of drop pipe _____ ft. Capacity _____ gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-42
Name: Handy Pantry #66/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/26/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-43
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2486 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-44
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-45
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-46
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-47
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected upon completion ☐ Yes Type: ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-48
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-49
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-50
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) **Date Started:** 9/28/2006
45 ft. **Date Completed:** 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surgace after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysi ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-51
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-52
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-53
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
_____ in. to _____ feet depth
Height: Above/Below Surface _____
Weight _____
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
_____ ft. and _____ ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
_____ ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
_____ ft. after ____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size _____ Uniformity Coefficient _____

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other _____
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. ___ direction
Type well disinfected ☐ Yes Type: _____
upon completion ☑ No Amount: _____

18. PUMP: Date Installed: _____ Not Installed ☑
Mfr. Name: _____ Model No.: _____
H.P. ____ Volts _____ Length of drop pipe _____ ft. Capacity _____ gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-54
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) 45 ft. **Date Started:** 9/28/2006
Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-55
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) **Date Started:** 9/28/2006
45 ft. **Date Completed:** 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-56
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) **Date Started:** 9/28/2006
45 ft. **Date Completed:** 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-57
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected upon completion ☐ Yes ☑ No Type: Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: AS-58
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	27'	27'
Yellow to gray clayey sand (wet)	18'	45'
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
45 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 1"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 45 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 4"
Slot/Gauge: .020 Length: 20'
Set Between: 1 ft. and 10 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 44 ft. to 45 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 10 ft. to 40 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
unpon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: RW-1
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34° 00.77 Longitude: 81° 00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No

Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	35	35
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
35 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 2"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 25 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 2"
Slot/Gauge: .020 Length: 10'
Set Between: 25 ft. and 35 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 24 ft. to 35 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 0 ft. to 24 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: RW-2
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34° 00.77 Longitude: 81° 00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	35	35
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
35 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 2"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 25 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 2"
Slot/Gauge: .020 Length: 10'
Set Between: 25 ft. and 35 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 24 ft. to 35 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 0 ft. to 24 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected upon completion ☐ Yes Type: ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2485 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: RW-3
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81° 00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	35	35
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
35 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 2"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 25 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 2"
Slot/Gauge: .020 Length: 10'
Set Between: 25 ft. and 35 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 24 ft. to 35 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 0 ft. to 24 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2465 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

Water Well Record
Bureau of Water
2600 Bull St., Columbia, SC 29201-1708; (803)898-4300

1. WELL OWNER INFORMATION:
Name: Palmetto Environmental Group, Inc. (last) (first)
Address: P. O. Box 427
City: Elgin State: SC Zip:29045
Telephone: Work: Home:

2. LOCATION OF WELL: RW-4
Name: Handy Pantry #65/Cloud's Chevron/Site
Street Address: 2367 Taylor St./1600 Two Notch
City: Columbia, SC Zip:
COUNTY: Richland
Latitude: 34°00.77 Longitude: 81°00.97

3. SYSTEM NAME: **SYSTEM NUMBER:**

4. CUTTING SAMPLES: ☐ Yes ☑ No
Geophysical Logs: ☐ Yes ☑ No

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Red/brown clayey sand	35	35
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:

6. PERMIT NUMBER: 877

7. USE:
☐ Residential ☐ Public Supply ☑ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☐ Monitoring Well ☐ Replacement

8. WELL DEPTH (completed) Date Started: 9/28/2006
35 ft. Date Completed: 12/15/2006

9. ☐ Mud Rotary ☐ Jetted ☑ Bored
☐ Dug ☐ Air Rotary ☐ Driven
☐ Cable Tool ☐ Other

10. CASING: ☐ Threaded ☑ Welded
Diam.: 2"
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 25 feet depth
in. to feet depth
Height: Above/Below Surface
Weight
Drive Shoe? ☐ Yes ☑ No

11. SCREEN
Type: PVC Diam.: 2"
Slot/Gauge: .020 Length: 10'
Set Between: 25 ft. and 35 ft.
ft. and ft.
Sieve Analysis ☐ Yes (please enclose) ☑ No

12. STATIC WATER LEVEL
ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☑ No
Yield:

14. WATER QUALITY
Chemical Analysis ☐ Yes ☑ No Bacterial Analysis ☐ Yes No ☑
Please enclose lab results

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 24 ft. to 35 ft.
Effective size Uniformity Coefficient

16. WELL GROUTED? ☑ Yes ☐ No
☑ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 0 ft. to 24 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☑ No Amount:

18. PUMP: Date Installed: Not Installed ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
Type: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: Robyn Barkley CERT. NO.: 934
Address: 2486 Watson
Elgin, SC 29045
Telephone No.: (803)438-1331

20. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

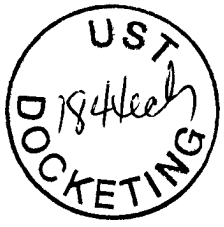
Signed: Robyn Barkley Date: 12/27/2006
Authorized Representative

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment



CRAWFORD ENVIONMENTAL SERVICES
MR CHARLES F. CRAWFORD, III
15 CHURCH AVENUE SW
ROANOKE, VA 24011

MAY 27 2014

Re: **Corrective Action Status Report Review**
UST Permit # 07584, University Mart, 2367 Taylor St., Columbia, SC
Release #1 reported January 30, 1991; CA#47811
Release #2 reported April 17, 1998; CA#47812
UST Permit # 07777, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 31, 1991; CA#47813
UST Permit # 12352, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 30, 1991; CA#47814
Contract #IFB-5400007095-1/30/2014-EMW; PO # 4600322226
Richland County

Dear Mr. Crawford:

The Underground Storage Tank Management Division understands that corrective action commenced on May 16, 2014 when the former remedial system was placed back into operation. Therefore, the 36-month "Site Incentive Period" also commenced on May 16, 2014. As outlined in Specific Requirement #3 of the bid solicitation, a 10% incentive will be paid to Crawford Environmental Services provided that corrective action at the referenced facility is completed on or before midnight on May 17, 2017.

The next Corrective Action System Evaluation (CASE) Report is due on or before August 23, 2014.

On all correspondence regarding this site, please reference the UST Permit #07584, 07777, or 12352. If you have any questions, please contact me by phone at (803) 898-0606, by fax at (803) 898-0673, or via email at bryantjc@dhec.sc.gov.

Sincerely,

John Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

Document Receipt Information

☒ Hard Copy ☒ CD ☐ Email

Date Received 2-19-15

Permit Number 07584 / 07777 / 12352

Project Manager Sonya UTZ

Name of Contractor Crawford Environment

UST Certification Number

Docket Number 251 tech (07584) 185 tech (07777) 120 tech (12352)

Scanned

CASE - November 2014 (Sampling Date)

CRAWFORD
ENVIRONMENTAL
SERVICES

February 13, 2015

Ms. Sonya Utz
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RE: Corrective Action System Evaluation – November 2014 (Sampling Date)
Handy Pantry #65/University Mart & Cloud's Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina
UST Permit # 07584 / 07777 / 12352

Dear Ms. Utz:

Enclosed please find one copy of the November 2014 Corrective Action System Evaluation (CASE) report prepared by Crawford Environmental Services, Inc. (CES) for the referenced site. Should you have any questions regarding the enclosed material, or if additional information is required, please feel free to contact Charlie Crawford or myself at 540.343.6256.

Best Regards,

Daniel Fisher
Division Manager

cc:

CRAWFORD
ENVIRONMENTAL
SERVICES

Corrective Action System Evaluation Report

Handy Pantry #65/University Mart & Cloud's Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina
UST Permit # 07584 / 07777 / 12352
February 13, 2015
Revision 0

CORRETIVE ACTION SYSTEM EVALUATION REPORT

Handy Pantry #65/University Mart & Cloud's Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina
UST Permit # 07584 / 07777 / 12352

Submitted To:
Ms. Sonya Utz
State of South Carolina
Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Prepared For:
Ms. Sonya Utz
State of South Carolina
Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

February 13, 2015
CES Job Number: 7.0547

Prepared By:
Daniel J. Fisher
Division Manager

Reviewed By:
Charles F. Crawford
President / CEO

Approved By:
B. Thomas Houghton
P.G. #2343

CRAWFORD ENVIRONMENTAL SERVICES

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Table 2: Groundwater Laboratory Analytical Result Summary
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Figure 2: Site Facility Base Map
Figure 3 Groundwater Chemicals of Concern
Figure 4 Groundwater Elevation Map

Appendix A - Purge Water Disposal Manifest
Appendix B – Groundwater Sampling Data Sheets
Appendix C - Laboratory Data Reports, Chain of Custodies and Field Data Information Sheets
Appendix D - Data Verification Checklist

1.0 Facility Information

The subject property is located in a primarily commercial area of Columbia, South Carolina (Figure 1). The subject sites, operating as Handy Pantry #65/University Mart and former Cloud's Chevron, is bordered by light commercial properties in all directions. A site plan depicting pertinent features of the subject property is provided as Figure 2.

1.1 Project Information Summary:

1.2.1 Site Address

Handy Pantry #65 / University Mart / Clouds Chevron
2367 Taylor Street
Columbia, South Carolina

1.2.2 Property Owner Information

Mr. Mahesh Patel
2367 Taylor Street
Columbia, South Carolina

Mr. Andrew Diggins
1600 Block Two Notch Road
Columbia, South Carolina

1.2.3 Contractor Information

Crawford Environmental Services
15 Church Avenue, SW
Roanoke, Virginia 24011
1 (540) 343-6256
Contractor Number: UCC-0388

1.2.4 Laboratory Information

Access Analytical, Inc. (AA)
7478 Carlisle Street
Irmo, SC 29063
1 (803) 781-4243
SC Certification: 32575001

Analytical Environmental Services Inc. (AES)
3785 Presidential Pkwy.
Atlanta, GA 30340
1 (770) 457-8177
SC Certification: 98016003

2.0 Corrective Action Activities

Corrective Action activities at the facility for this phase of work included the following:

-Regular O&M of the Air Sparge / Soil Vapor Extraction Systems.
-Bi-Annual Sampling Event

2.1 Water Sample Collection

A comprehensive groundwater sampling event, including; recording equilibrated static water levels, product thicknesses, and the collection of chemical samples was completed by CES personnel on November 10/11/12/13, 2014. CES personnel utilized an electronic water level indicator for water level measurements and an oil/water interface probe for free phase product measurements. Samples for the shallow wells were collected utilizing disposable polyethylene bailers. Shallow wells that exhibited groundwater above the screened bracket were purged of at least three well volumes or purged till dry before sample collection. Deep and intermediate wells exhibiting groundwater above the screened bracket were purged utilizing submersible pumps with dedicated tubing. For sample collection, disposable polyethylene bailers were lowered slowly to the top of the water column (after purging in some cases) allowed to fill one volume, then removed. Disposal records for the 105-gallons of purge water generated are included as Appendix A. Groundwater was then transferred to the appropriate sampling containers and was then placed in coolers, maintaining 4˚C, and delivered to an independent laboratory. Groundwater chemical samples were submitted to Access Analytical, Inc., {SC Certification: 32575001} for analysis.

2.1.1 Groundwater Sampling

Equilibrated static water levels and free-product thicknesses were recorded for monitoring MW-2, MW-3, MW-4, MW-5AR, MW-6, MW-7, MW-8, MW-9, MW-11, MW-12, MW-13, MW-16, MW-17, MW-18, MW-19, MW-20, MW-22, MW-23, MW-25, MW-26, MW-27, MW-28, MW-29, MW-30, MW-31, MW-32, MW-33, MW-34, MW-35, MW-36, MW-37, MW-38, MW-39, MW-40, MW-41, MW-42, MW-43, MW-44, MW-45, MW-46, MW-51, MW-53, MW-59, MW-62, MW-67, MW-70, PWR-1, DW-1, DW-2, DW-3, DW-4, DW-5, DW-6, DW-7 and DW-9 Samples were collected by CES personnel (B. Ewing / M. Price). Groundwater sampling data sheets are included as Appendix B.

During the referenced sampling event, CES was unable to access monitoring wells MW-48, MW-49, MW-50, MW-54, MW-55, MW-60, MW-63 and MW-65. Monitoring wells MW-10 and MW-15 maintained free phase petroleum and were not sampled. Monitoring wells MW-1 and MW-5 did not maintain sufficient water columns to collect groundwater samples. CES also utilized a metal detector to locate the wells, however, the overgrown site conditions did not permit the location of the aforementioned monitoring wells.

CES sampled the monitoring wells, as part of the November, 11/12/13, sampling events, for the following chemical analyses: Benzene/Toluene/Ethylbenzene/Xylenes (BTEX), naphthalene, Methyl Tert-Butyl Ether (MTBE), Tert-Amyl Methyl Ether (TAME), Tert-Butyl Alcohol (TBA), and Tert-Amyl Alcohol (TAA).

During the sampling event CES collected duplicate samples of MW-2, MW-25, and MW-MW-30 on November 11, 12, and 13, 2014, respectively. Review of the duplicate samples collected from aforementioned monitoring well samples did not yield significant data gaps.

In addition to duplicate samples, CES also collected field blank samples at the conclusion of the sample events on November 11, 12, and 13, 2014. The samples were collected at the conclusion of the day to be representative of all samples that were collected during that day.

Table 2 presents the laboratory data for the submitted groundwater samples collected as part of this assessment. The groundwater isoconcentration maps are included as Figure 3. The groundwater elevation map is included as Figure 4.

3.0 Summary

During the corrective action activities performed at the subject property, CES conducted a comprehensive groundwater monitoring event, in an effort to determine the effectiveness of the current corrective action plan. The qualitative and quantitative data collected from recent assessment activities indicates the following regarding current site conditions;

1. An SSTL reduction value of 65.17% has been calculated for the monitoring wells that were sampled during this sampling event.

2. Free-phase petroleum was observed at monitoring wells MW-10 and MW-15.

3. Based on the results of the previous sampling events, CES is scheduled to install injection wells proximal to MW-10 and MW-15 to perform limited surfactant injection / extraction events. CES estimates well installation will begin in early March 2015 with injections following as soon as the permit to operate is received.

Tables

Table 1: Summary of Groundwater Elevation Data
Table 2: Summary of Groundwater Analytical Data
Table 3: Site Specific Target Levels Summary

Table 1

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST Permit ID: 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — CES Project Number: 7.0547

Well Construction and Historical Groundwater Elevation Summary

Monitor Well	Well Depth (ft)	Screened Interval		Top of Casing (ft)	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)
MW-1	27	17	27	93.89	4/2/2014	NA	DRY	NA	NA	DRY
					11/4/2014	NA	DRY	NA	NA	DRY
MW-2	30	20	30	94.70	4/2/2014	NA	21.12	NA	NA	73.58
					11/4/2014	NA	23.03	NA	NA	71.67
MW-3	29	19	29	94.45	4/2/2014	NA	21.40	NA	NA	73.05
					11/12/2014	NA	23.16	NA	NA	71.29
MW-4	28	18	28	94.85	4/2/2014	NA	21.31	NA	NA	73.54
					11/11/2014	NA	21.76	NA	NA	73.09
MW-5	26	16	26	95.26	4/2/2014	NA	DRY	NA	NA	DRY
					11/11/2014	NA	DRY	NA	NA	DRY
MW-6	30	20	30	94.96	4/3/2014	NA	22.61	NA	NA	72.35
					11/11/2014	NA	23.98	NA	NA	70.98
MW-7	30	20	30	95.93	4/3/2014	NA	23.02	NA	NA	72.91
					11/11/2014	NA	24.12	NA	NA	71.81
MW-8	28	18.5	28	94.79	4/3/2014	NA	19.95	NA	NA	74.84
					11/11/2014	NA	21.43	NA	NA	73.36
MW-9	30	20	30	92.30	4/2/2014	NA	20.60	NA	NA	71.70
					11/11/2014	NA	21.69	NA	NA	70.61
MW-10	28	18	28	85.98	4/1/2014	NA	17.69	NA	NA	68.29
					11/11/2014	Interface Probe Failure - 1.25-Feet of Product Observed in Bailer				
MW-11	30	Unknown		88.46	4/2/2014	NA	18.61	NA	NA	69.85
					11/11/2014	NA	19.38	NA	NA	69.08
MW-12	24.65	Unknown		72.80	4/2/2014	NA	4.20	NA	NA	68.60
					11/11/2014	NA	4.63	NA	NA	68.17
MW-13	30.1	Unknown		80.44	4/1/2014	NA	11.13	NA	NA	69.31
					11/11/2014	NA	12.15	NA	NA	68.29
MW-15	25	15	25	86.44	4/1/2014	**16.60**	**16.00**	**0.60**	**69.84**	70.88*
					11/11/2014	Interface Probe Failure - 0.25-Feet of Product Observed in Bailer				
MW-16	25	15	25	88.19	4/2/2014	NA	17.54	NA	NA	70.65
					11/12/2014	NA	18.98	NA	NA	69.21
MW-17	22	20	30	92.45	4/2/2014	NA	22.00	NA	NA	70.45
					11/12/2014	NA	23.45	NA	NA	69.00
MW-18	30	20	30	94.81	4/2/2014	NA	23.68	NA	NA	71.13
					11/12/2014	NA	25.08	NA	NA	69.73
MW-19	30	20	30	93.96	4/3/2014	NA	23.33	NA	NA	70.63
					11/13/2014	NA	24.56	NA	NA	69.40
MW-20	25	15	25	94.12	4/3/2014	NA	21.95	NA	NA	72.17
					11/13/2014	NA	23.28	NA	NA	70.84
MW-22	30	20	30	94.25	4/3/2014	NA	21.11	NA	NA	73.14
					11/11/2014	NA	22.68	NA	NA	71.57
MW-23	30	20	30	94.43	4/3/2014	NA	23.65	NA	NA	70.78
					11/13/2014	NA	24.98	NA	NA	69.45
MW-25	25.6	Unknown		93.09	4/1/2014	NA	19.71	NA	NA	73.38
					11/10/2014	NA	21.60	NA	NA	71.49
MW-26	30	Unknown		95.96	4/3/2014	NA	20.01	NA	NA	75.95
					11/11/2014	NA	22.95	NA	NA	73.01
MW-27	30	15	30	91.40	4/1/2014	NA	14.65	NA	NA	76.75
					11/13/2014	NA	18.85	NA	NA	72.55
MW-28	30	15	30	91.46	4/1/2014	NA	15.63	NA	NA	75.83
					11/13/2014	NA	19.75	NA	NA	71.71
MW-29	30	15	30	91.09	4/1/2014	NA	15.51	NA	NA	75.58
					11/13/2014	NA	19.92	NA	NA	71.17
MW-30	30	15	30	92.77	4/1/2014	NA	20.50	NA	NA	72.27
					11/10/2014	NA	22.90	NA	NA	69.87
MW-31	35	20	35	95.20	4/2/2014	NA	24.41	NA	NA	70.79
					11/12/2014	NA	26.36	NA	NA	68.84
MW-32	30	15	30	92.87	4/2/2014	NA	21.28	NA	NA	71.59
					11/12/2014	NA	23.16	NA	NA	69.71
MW-33	35	20	35	93.84	4/1/2014	NA	23.18	NA	NA	70.66
					11/12/2014	NA	24.65	NA	NA	69.19
MW-34	35	20	35	94.77	4/1/2014	NA	24.06	NA	NA	70.71
					11/12/2014	NA	25.49	NA	NA	69.28

Table 1

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST Permit ID: 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — CES Project Number: 7.0547

Well Construction and Historical Groundwater Elevation Summary

Monitor Well	Well Depth (ft)	Screened Interval		Top of Casing (ft)	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)
MW-35	35	20	35	93.71	4/1/2014	NA	21.35	NA	NA	72.36
					11/12/2014	NA	24.66	NA	NA	69.05
MW-36	35	20	35	93.89	4/1/2014	NA	22.84	NA	NA	71.05
					11/12/2014	NA	24.72	NA		69.17
MW-37	35	20	35	93.78	4/1/2014	NA	22.24	NA	NA	71.54
					11/12/2014	NA	24.87	NA	NA	68.91
MW-38	35	20	35	95.53	4/1/2014	NA	24.61	NA	NA	70.92
					11/12/2014	NA	26.17	NA	NA	69.36
MW-39	35	20	35	96.19	4/2/2014	NA	25.59	NA	NA	70.60
					11/12/2014	NA	27.36	NA	NA	68.83
MW-40	35	20	35	95.69	4/2/2014	NA	25.29	NA	NA	70.40
					11/12/2014	NA	27.01	NA	NA	68.68
MW-41	35	20	35	94.85	4/1/2014	NA	24.70	NA	NA	70.15
					11/11/2014	NA	26.99	NA	NA	67.86
MW-42	35	20	35	95.81	4/1/2014	NA	25.35	NA	NA	70.46
					11/12/2014	NA	27.22	NA	NA	68.59
MW-43	40	20	40	95.15	4/2/2014	NA	24.00	NA	NA	71.15
					11/11/2014	NA	25.61	NA	NA	69.54
MW-44	31	16	31	94.57	4/1/2014	NA	24.42	NA	NA	70.15
					11/11/2014	NA	24.23	NA	NA	70.34
MW-45	30	15	30	92.51	4/1/2014	NA	21.22	NA	NA	71.29
					11/11/2014	NA	22.63	NA	NA	69.88
MW-46	35	20	35	94.50	4/1/2014	NA	23.55	NA	NA	70.95
					11/11/2014	NA	24.95	NA	NA	69.55
MW-48	30	15	30	89.95	4/2/2014	NA	19.70	NA	NA	70.25
					11/11/2014	Unable to Access - Locked Gate				
MW-49	30	15	30	88.18	4/2/2014	Unable to Access - Locked Gate				
					11/11/2014					
MW-50	30	15	30	84.09	4/2/2014	Unable to Access - Locked Gate				
					11/11/2014					
MW-51	35	20	35	93.91	4/2/2014	NA	21.23	NA	NA	72.68
					11/11/2014	NA	24.29	NA	NA	69.62
MW-53	20	5	20	79.60	4/3/2014	NA	9.60	NA	NA	70.00
					11/11/2014	NA	11.02	NA	NA	68.58
MW-54	20	5	20	77.58	4/1/2014	NA	11.31	NA	NA	66.27
					11/11/2014	Unable to Locate - Overgrown Field				
MW-55	14	4	14	71.22	4/3/2014	NA	2.51	NA	NA	68.71
					11/11/2014	Unable to Locate - Overgrown Field				
MW-56	20	5	20	76.39	4/3/2014	NA	5.12	NA	NA	71.27
					11/11/2014	Unable to Locate - Overgrown Field				
MW-58	19	4	19	76.37	4/2/2014	Abandoned				
					11/11/2014					
MW-59	17	2	17	68.02	4/2/2014	NA	6.05	NA	NA	61.97
					11/11/2014	NA	6.69	NA	NA	61.33
MW-60	14	4	14	67.94	4/2/2014	Unable to Locate				
					11/11/2014					
MW-62	35	20	35	94.05	4/1/2014	NA	22.32	NA	NA	71.73
					11/12/2014	NA	24.75	NA	NA	69.30
MW-63	35	20	35	94.65	4/2/2014	NA	23.07	NA	NA	71.58
					11/12/2015	Unable to Locate				
MW-65	35	20	35	94.04	4/2/2014	Unable to Locate - Paved over				
					11/11/2014					
MW-67	35	20	35	96.10	4/1/2014	NA	24.44	NA	NA	71.66
					11/12/2014	NA	27.28	NA	NA	68.82
MW-70	35	20	35	95.49	4/2/2014	NA	24.70	NA	NA	70.79
					11/11/2014	NA	26.22	NA	NA	69.27
MW-5AR	28	18	28	94.18	4/1/2014	NA	21.24	NA	NA	72.94
					11/13/2014	NA	22.64	NA	NA	71.54
PW-1R	50	45	50	93.75	4/3/2014	NA	23.11	NA	NA	70.64
					11/13/2014	NA	23.92	NA	NA	69.83
DW-1	70	65	70	94.66	4/2/2014	NA	45.00	NA	NA	49.66
					11/10/2014	NA	45.42	NA	NA	49.24
DW-2	75	70	75	94.02	4/2/2014	NA	44.34	NA	NA	49.68
					11/11/2014	NA	44.88	NA	NA	49.14

Table 1

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST Permit ID: 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — CES Project Number: 7.0547

Well Construction and Historical Groundwater Elevation Summary

Monitor Well	Well Depth (ft)	Screened Interval		Top of Casing (ft)	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)
DW-3	52	47	52	93.75	4/3/2014	NA	24.40	NA	NA	69.35
					11/13/2014	NA	24.42	NA	NA	69.33
DW-4	110	105	110	93.79	4/3/2014	NA	44.60	NA	NA	49.19
					11/13/2014	NA	3.45	NA	NA	90.34
DW-5	70	65	70	93.74	4/1/2014	NA	44.22	NA	NA	49.52
					11/12/2014	NA	44.75	NA	NA	48.99
DW-6	70	65	70	95.90	4/1/2014	NA	45.86	NA	NA	50.04
					11/12/2014	NA	46.64	NA	NA	49.26
DW-7	55	50	55	72.79	4/3/2014	NA	24.00	NA	NA	48.79
					11/11/2014	NA	24.75	NA	NA	48.04
DW-8	55	50	55	68.63	4/2/2014	Abandoned				
					11/11/2014					
DW-9	65	60	65	76.47	4/2/2014	NA	25.00	NA	NA	51.47
					11/11/2014	NA	24.44	NA	NA	52.03

INA = Information not available

* = GW Elevation Corrected for The Presence of Free Product

n/a = not applicable

CRAWFORD ENVIRONMENTAL SERVICES

Table 2

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Groundwater Laboratory Analytical Result Summary

Well ID:	Date:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphthalene	TAA	TAME	TBA
MW-1	4/2/2014	Dry								
	11/11/2014									
MW-2	4/2/2014	170	41	200	960	320	150	230	1	6.8
	11/4/2014	140	300	220	1300	410	160	210	<10	<100
MW-3	4/2/2014	6900	18000	1200	16000	1800	600	980	560.000	340
	11/12/2014	4600	11000	620	8700	1300	280	<5000	310.000	<5000
MW-4	4/2/2014	<1	<1	<1	<1	3.5	<5	<100	10.000	<100
	11/11/2014	<1	<1	<1	<1	1.6	<5	<100	<10	<1000
MW-5	4/2/2014	Dry								
	11/11/2014									
MW-6	4/3/2014	2.6	<1	2.4	10	2.5	4.2	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	0.8	<5	<100	<10	<100
MW-7	4/3/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	0.71	<1	<1	<1	<1	<5	<100	<10	<100
MW-8	4/3/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-9	4/2/2014	830	7500	1700	14000	50	590	1700	5000	5000
	11/11/2014	380	11000	1900	13000	5	650	1100	<10	<100
MW-10	4/1/2014	1800	5700	350	8500	50	690	5000	500.000	5000
	11/11/2014	1.25-Feet of Free Product								
MW-11	4/2/2014	2.3	4.1	11	4.1	<1	4.4	120	<10	<100
	11/11/2014	0.53	<1	<1	<1	<1	<5	80	<10	58
MW-12	4/2/2014	2.9	0.67	1.6	0.91	18	4.7	630	9.300	<100
	11/11/2014	990	19	910	140	21	180	3600	14.000	<100
MW-13	4/1/2014	0.62	8.8	4.5	86	<1	31	10	<10	<100
	11/11/2014	<1	<1	<	<1	<1	<5	<100	<10	<100
MW-15	4/1/2014	0.60-Feet of Free Product								
	11/11/2014	0.25-Feet of Free Product								
MW-16	4/2/2014	<1	<1	<1	<1	<1	3.4	<100	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-17	4/2/2014	280	5100	450	13000	50	850	2200	500.000	5000
	11/12/2014	32	3000	450	8300	<10	690	270	<100	<1000
MW-18	4/2/2014	1900	7200	630	8300	340	370	4900	70.000	5000
	11/12/2014	3100	11000	560	8700	510	290	12000	<1000	<10000
MW-19	4/3/2014	300	1800	490	12000	50	900	610	500.000	5000
	11/13/2014	1400	2800	1600	24000	<50	1400	1300	<50	<5000
MW-20	4/3/2014	1800	11000	460	11000	50	960	3100	65.000	5000
	11/13/2014	1400	12000	500	14000	120	1100	<10000	<1000	<10000
MW-22	4/3/2014	5700	12000	880	23000	50	990	3600	500.000	5000
	11/11/2014	6300	23000	700	21000	<20	1200	9600	<20	<140
MW-23	4/3/2014	4200	16000	880	19000	120	1100	5900	500.000	5000
	11/13/2014	890	3600	450	16000	<50	1200	1500	<50	<340
MW-25	4/1/2014	5.5	200	320	4400	<1	1300	170	<10	<100
	11/10/2014	38	140	200	2600	1.9	490	2800	<10	<100
MW-26	4/3/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-27	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/13/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-28	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/13/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-29	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/13/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-30	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/10/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-31	4/2/2014	0.9	<1	<1	<1	2.7	<5	59	<10	<100
	11/12/2014	30	9.8	310	9.3	4.1	160	460	<10	<100
MW-32	4/2/2014	0.94	<1	1.9	2.4	<1	6.6	170	<10	<100
	11/12/2014	4	13	72	10	<1	45	<100	<10	<100
MW-33	4/1/2014	560	5200	2500	6900	50	670	4100	500.000	5000
	11/12/2014	130	410	210	550	1.2	71	1000	<10	<100
MW-34	4/1/2014	<1	<1	<1	<1	<1	<5	39	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	39	<10	<100
MW-35	4/1/2014	3700	4300	2000	6200	160	550	5600	54.000	5000
	11/12/2014	6000	7200	2800	7400	330	700	4700	76.000	<100

Table 2

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron | UST | 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina | Crawford Project No. | 7.0547

Groundwater Laboratory Analytical Result Summary

Well ID:	Date:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphthalene	TAA	TAME	TBA
MW-36	4/1/2014	5.1	<1	38	<1	<1	55	96	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-37	4/1/2014	<1	<1	<1	<1	<1	3.7	<100	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-38	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-39	4/2/2014	<1	3.2	2.2	14	<1	3.3	<100	<10	<100
	11/12/2014	11	1500	1000	3700	<1	340	220	<10	<100
MW-40	4/2/2014	5.8	14	2	580	<1	24	<100	<10	<100
	11/12/2014	140	970	300	2900	12	150	600	<10	<100
MW-41	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-42	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-43	4/2/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-44	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-45	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-46	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-48	4/2/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	Unable to Access - Locked Gate								
MW-49	4/2/2014	Unable to Access - Locked Gate								
	11/11/2014									
MW-50	4/2/2014	Unable to Access - Locked Gate								
	11/11/2014									
MW-51	4/2/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-53	4/3/2014	<1	<1	<1	<1	<1	4.1	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	4.1	<100	<10	<100
MW-54	4/1/2014	<1	<1	<1	<1	9.6	<5	<100	6.700	<100
	11/11/2014	Unable to Locate								
MW-55	4/3/2014	10	1	3.5	<1	24	3.9	98	6.400	<100
	11/11/2014	Unable to Locate								
MW-56	4/3/2014	<1	<1	<1	<1	<1	<5	50	<10	<100
	11/11/2014	Unable to Locate								
MW-58	4/2/2014	Abandoned								
	11/11/2014									
MW-59	4/2/2014	28	2.8	300	6.4	130	45	2600	42.000	160
	11/11/2014	81	3.6	730	14	91	96	4500	27.000	<100
MW-60	4/2/2014	Unable to Locate								
	11/11/2014									
MW-62	4/1/2014	0.86	<1	<1	<1	3	3.3	260	<10	<100
	11/12/2014	51	<1	<1	0.93	2.6	65	730	<10	<100
MW-63	4/2/2014	<1	<1	<1	<1	<1	5	120	<10	<100
	11/12/2014	Unable to Locate								
MW-65	4/2/2014	Unable to Locate - Paved over								
	11/11/2014	Unable to Locate - Paved over								
MW-67	4/1/2014	<1	<1	<1	<1	<1	5	<100	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-70	4/2/2014	<1	<1	<1	<1	<1	5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	1.5	<100	<10	<100
MW-5AR	4/1/2014	12000	13000	2400	13000	70	1000	<5000	160.000	<5000
	11/13/2014	830	180	98	670	13	130	<100	13.000	<100
PW-1R	4/3/2014	460	3400	320	9200	<50	<250	710	<500	<5000
	11/13/2014	850	6900	580	18000	<50	1300	<5000	<500	<5000
DW-1	4/2/2014	0.45	1.2	1.7	7.2	<1.0	<5.0	<100	<10	<100
	11/10/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-2	4/2/2014	<1.0	<1.0	<1.0	<1.0	7.1	4.1	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	10	<5	<100	<10	<100
DW-3	4/3/2014	9800	22000	3700	17000	990	780	10000	190.000	<5000
	11/13/2014	2000	20000	2800	10000	23	650	2700	<20	<140

Table 2

Facility Name:	Handy Pantry #65 / University Mart & Clouds Chevron	UST	07584 / 07777 / 12352
Address:	2367 Taylor Street Columbia, South Carolina	Crawford Project No.	7.0547

Groundwater Laboratory Analytical Result Summary

Well ID:	Date:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphthalene	TAA	TAME	TBA
DW-4	4/3/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/13/2014	<1	1	<1	<1	<1	<5	<100	<10	<100
DW-5	4/1/2014	3300	68	37	1000	940	81	4300	83.000	<100
	11/12/2014	6700	380	240	3100	1400	190	5300	110.000	<100
DW-6	4/1/2014	8.5	1.2	1.6	7.2	3	5	<100	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-7	4/3/2014	0.52	0.46	<1.0	1.4	2.6	4.2	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-8	4/2/2014	Abandoned								
	11/11/2014									
DW-9	4/2/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	2.8	<1	<1	<1	<5	<100	<10	<100
SW-1	4/2/2014	180	8.4	30	53	42	6.5	350	9.500	100
	11/12/2014	Unable to Access - Overgrown Brush								

BDL= Below Detectable Limit
RBSL= Risk Based Screening Levels
NE= Not Established

CRAWFORD ENVIRONMENTAL SERVICES

1,2 DCA = 1,2 Dichloroethane
J = Estimated value detected below reporting limit

Table 3

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Site Specific Target Level Summary

Well ID:	Item	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphth	TAA	TAME	TBA	Total	
MW-2	Initial	140.0	280.0	56.0	460.0	380.0	54.0	200.0	9.2	140.0	1719.2	-1857.14%
	SSTL	77.0	280.0	56.0	460.0	380.0	54.0	200.0	9.2	140.0	1656.2	
	Initial > SSTL	63.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	63.0	
	Subsequent	140.0	300.0	220.0	1300.0	410.0	160.0	210.0	1.0	6.8	2747.8	
	SSTL	77.0	280.0	56.0	460.0	380.0	54.0	200.0	9.2	140.0	1656.2	
	Subsequent > SSTL	63.0	20.0	164.0	840.0	30.0	106.0	10.0	0.0	0.0	1233.0	
MW-3	Initial	3000.0	7400.0	260.0	4500.0	3300.0	260.0	2000.0	340.0	1300.0	22360.0	-194%
	SSTL	111.0	7400.0	260.0	4500.0	1976.0	108.0	2000.0	340.0	1300.0	17995.0	
	Initial > SSTL	2889.0	0.0	0.0	0.0	1324.0	152.0	0.0	0.0	0.0	4365.0	
	Subsequent	4600.0	11000.0	620.0	8700.0	1300.0	280.0	480.0	310.0	340.0	27630.0	
	SSTL	111.0	7400.0	260.0	4500.0	1976.0	108.0	2000.0	340.0	1300.0	17995.0	
	Subsequent > SSTL	4489.0	3600.0	360.0	4200.0	0.0	172.0	0.0	0.0	0.0	12821.0	
MW-5	Initial	50.0	50.0	50.0	30.5	946.0	50.0	1000.0	100.0	1000.0	3276.5	Dry
	SSTL	50.0	50.0	50.0	30.5	946.0	50.0	1000.0	100.0	1000.0	3276.5	
	Initial > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Subsequent	Dry										
	SSTL	50.0	50.0	50.0	30.5	946.0	50.0	1000.0	100.0	1000.0	3276.5	
	Subsequent > SSTL	Dry										
MW-9	Initial	4100.0	27000.0	2500.0	19000.0	150.0	960.0	1600.0	2000.0	20000.0	77310.0	84%
	SSTL	35.0	7134.0	2500.0	19000.0	150.0	68.0	809.0	270.0	15628.0	45594.0	
	Initial > SSTL	4065.0	19866.0	0.0	0.0	0.0	892.0	791.0	1730.0	4372.0	31716.0	
	Subsequent	380.0	11000.0	1900.0	13000.0	5.0	650.0	1100.0	1.0	6.8	28042.8	
	SSTL	35.0	7134.0	2500.0	19000.0	150.0	68.0	809.0	270.0	15628.0	45594.0	
	Subsequent > SSTL	345.0	3866.0	0.0	0.0	0.0	582.0	291.0	0.0	0.0	5084.0	
MW-10	Initial	740.0	7800.0	2500.0	15000.0	2500.0	950.0	50000.0	5000.0	50000.0	134490.0	Free Product
	SSTL	24.0	7800.0	2500.0	15000.0	294.0	53.0	793.0	707.0	11042.0	38213.0	
	Initial > SSTL	716.0	0.0	0.0	0.0	2206.0	897.0	49207.0	4293.0	38958.0	96277.0	
	Subsequent											
	SSTL	24.0	7800.0	2500.0	15000.0	294.0	53.0	793.0	707.0	11042.0	38213.0	
	Subsequent > SSTL											
MW-12	Initial	1.7	5.0	11.0	5.0	5.6	4.7	370.0	1.5	19.0	423.5	-546850%
	SSTL	1.7	5.0	11.0	5.0	5.6	4.7	370.0	1.5	19.0	423.5	
	Initial > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	
	Subsequent	990.0	19.0	910.0	140.0	21.0	180.0	3600.0	14.0	6.8	5880.8	
	SSTL	1.7	5.0	11.0	5.0	5.6	4.7	370.0	1.5	19.0	423.5	
	Subsequent > SSTL	988.3	14.0	899.0	135.0	15.4	175.3	3230.0	12.5	0.0	5469.5	
MW-15	Initial	Free Product										Free Product
	SSTL	16.0	3198.0	3700.0	21680.0	730.0	45.0	492.0	199.0	5838.0	35898.0	
	Initial > SSTL											
	Subsequent	Free Product										
	SSTL	16.0	3198.0	3700.0	21680.0	730.0	45.0	492.0	199.0	5838.0	35898.0	
	Subsequent > SSTL										0.0	

Table 3

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352
Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Site Specific Target Level Summary

Well ID:	Item	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphth	TAA	TAME	TBA	Total	
MW-17	Initial	1400.0	26000.0	2500.0	23000.0	1000.0	1000.0	9400.0	2000.0	20000.0	86300.0	98%
	SSTL	32.0	6631.0	2500.0	21680.0	1000.0	66.0	773.0	263.0	14286.0	47231.0	
	Initial > SSTL	1368.0	19369.0	0.0	1320.0	0.0	934.0	8627.0	1737.0	5714.0	39069.0	
	Subsequent	32.0	3000.0	450.0	8300.0	4.2	690.0	270.0	10.0	68.0	12824.2	
	SSTL	32.0	6631.0	2500.0	21680.0	1000.0	66.0	773.0	263.0	14286.0	47231.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	624.0	0.0	0.0	0.0	624.0	
MW-18	Initial	1900.0	7200.0	630.0	8300.0	340.0	370.0	4900.0	70.0	5000.0	28710.0	-142%
	SSTL	40.0	19326.0	3700.0	21680.0	4260.0	348.0	938.0	4989.0	54462.0	109743.0	
	Initial > SSTL	1860.0	0.0	0.0	0.0	0.0	22.0	3962.0	0.0	0.0	5844.0	
	Subsequent	3100.0	11000.0	560.0	8700.0	510.0	290.0	12000.0	100.0	680.0	36940.0	
	SSTL	40.0	19326.0	3700.0	21680.0	4260.0	348.0	938.0	4989.0	54462.0	109743.0	
	Subsequent > SSTL	3060.0	0.0	0.0	0.0	0.0	0.0	11062.0	0.0	0.0	14122.0	
MW-19	Initial	300.0	1800.0	490.0	12000.0	50.0	900.0	610.0	500.0	5000.0	21650.0	-115%
	SSTL	54.0	11081.0	3700.0	21680.0	16080.0	86.0	1065.0	320.0	26814.0	80880.0	
	Initial > SSTL	246.0	0.0	0.0	0.0	0.0	814.0	0.0	180.0	0.0	1240.0	
	Subsequent	1400.0	28000.0	1600.0	24000.0	21.0	1400.0	1300.0	50.0	340.0	58111.0	
	SSTL	54.0	11081.0	3700.0	21680.0	16080.0	86.0	1065.0	320.0	26814.0	80880.0	
	Subsequent > SSTL	1346.0	0.0	0.0	0.0	0.0	1314.0	0.0	0.0	0.0	2660.0	
MW-20	Initial	412.0	2930.0	728.0	8820.0	88.7	817.0	2850.0	200.0	2000.0	18845.7	-566%
	SSTL	83.0	2930.0	728.0	8820.0	88.7	108.0	1403.0	200.0	2000.0	16360.7	
	Initial > SSTL	329.0	0.0	0.0	0.0	0.0	709.0	1447.0	0.0	0.0	2485.0	
	Subsequent	1400.0	12000.0	500.0	14000.0	120.0	1100.0	950.0	100.0	680.0	30850.0	
	SSTL	83.0	2930.0	728.0	8820.0	88.7	108.0	1403.0	200.0	2000.0	16360.7	
	Subsequent > SSTL	1317.0	9070.0	0.0	5180.0	0.0	992.0	0.0	0.0	0.0	16559.0	
MW-22	Initial	3300.0	17000.0	2900.0	20000.0	1000.0	640.0	6200.0	130.0	20000.0	71170.0	-93%
	SSTL	90.0	17000.0	2900.0	20000.0	1000.0	112.0	1469.0	130.0	20000.0	62701.0	
	Initial > SSTL	3210.0	0.0	0.0	0.0	0.0	528.0	4731.0	0.0	0.0	8469.0	
	Subsequent	6300	23000	700	21000	20	1200	9600	20.000	140	61980.0	
	SSTL	90.0	17000.0	2900.0	20000.0	1000.0	112.0	1469.0	130.0	20000.0	62701.0	
	Subsequent > SSTL	6210.0	0.0	0.0	1000.0	0.0	1088.0	8131.0	-110.0	0.0	16319.0	
MW-23	Initial	4200.0	16000.0	880.0	19000.0	120.0	1100.0	5900.0	500.0	5000.0	52700.0	81%
	SSTL	72.0	14880.0	3700.0	21680.0	33368.0	100.0	1279.0	359.0	38475.0	113913.0	
	Initial > SSTL	4128.0	1120.0	0.0	0.0	0.0	1000.0	4621.0	141.0	0.0	11010.0	
	Subsequent	890.0	3600.0	450.0	16000.0	21.0	1200.0	1500.0	50.0	340.0	24051.0	
	SSTL	72.0	14880.0	3700.0	21680.0	33368.0	100.0	1279.0	359.0	38475.0	113913.0	
	Subsequent > SSTL	818.0	0.0	0.0	0.0	0.0	1100.0	221.0	0.0	0.0	2139.0	
MW-25	Initial	5000.0	3000.0	1900.0	23000.0	5000.0	5000.0	100000.0	10000.0	100000.0	252900.0	99%
	SSTL	104.0	3000.0	1900.0	23000.0	5000.0	121.0	1612.0	415.0	60494.0	95646.0	
	Initial > SSTL	4896.0	0.0	0.0	0.0	0.0	4879.0	98388.0	9585.0	39506.0	157254.0	
	Subsequent	38.0	140.0	200.0	2600.0	1.9	490.0	2800.0	1.0	6.8	6277.7	
	SSTL	104.0	3000.0	1900.0	23000.0	5000.0	121.0	1612.0	415.0	60494.0	95646.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	369.0	1188.0	0.0	0.0	1557.0	

Table 3

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Site Specific Target Level Summary

Well ID:	Item	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphth	TAA	TAME	TBA	Total	
MW-31	Initial	57.0	90.0	520.0	250.0	12.0	210.0	510.0	50.0	500.0	2199.0	100%
	SSTL	51.0	90.0	520.0	250.0	12.0	210.0	510.0	50.0	500.0	2193.0	
	Initial > SSTL	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	
	Subsequent	30.0	9.8	310.0	9.3	4.1	160.0	460.0	1.0	6.8	991.0	
	SSTL	51.0	90.0	520.0	250.0	12.0	210.0	510.0	50.0	500.0	2193.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MW-33	Initial	520.0	7200.0	1500.0	7200.0	500.0	410.0	3200.0	1000.0	10000.0	31530.0	97%
	SSTL	53.0	7200.0	1500.0	7200.0	500.0	410.0	1136.0	1000.0	10000.0	28999.0	
	Initial > SSTL	467.0	0.0	0.0	0.0	0.0	0.0	2064.0	0.0	0.0	2531.0	
	Subsequent	130.0	410.0	210.0	550.0	1.2	71.0	1000.0	1.0	6.8	2380.0	
	SSTL	53.0	7200.0	1500.0	7200.0	500.0	410.0	1136.0	1000.0	10000.0	28999.0	
	Subsequent > SSTL	77.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	77.0	
MW-35	Initial	4400.0	2000.0	1700.0	3500.0	300.0	580.0	5300.0	51.0	5000.0	22831.0	-133%
	SSTL	56.0	2000.0	1700.0	3500.0	300.0	542.0	1181.0	51.0	5000.0	14330.0	
	Initial > SSTL	4344.0	0.0	0.0	0.0	0.0	38.0	4119.0	0.0	0.0	8501.0	
	Subsequent	6000.0	7200.0	2800.0	7400.0	330.0	700.0	4700.0	76.0	340.0	29546.0	
	SSTL	56.0	2000.0	1700.0	3500.0	300.0	542.0	1181.0	51.0	5000.0	14330.0	
	Subsequent > SSTL	5944.0	5200.0	1100.0	3900.0	0.0	158.0	3519.0	25.0	0.0	19846.0	
MW-37	Initial	240.0	34.0	270.0	240.0	11.0	220.0	850.0	50.0	44.0	1959.0	100%
	SSTL	90.0	34.0	270.0	240.0	11.0	220.0	850.0	50.0	44.0	1809.0	
	Initial > SSTL	150.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	150.0	
	Subsequent	0.4	0.4	0.4	0.8	0.4	0.2	9.5	1.0	6.8	19.9	
	SSTL	90.0	34.0	270.0	240.0	11.0	220.0	850.0	50.0	44.0	1809.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MW-39	Initial	13.0	1300.0	460.0	4200.0	250.0	330.0	5000.0	500.0	5000.0	17053.0	100%
	SSTL	13.0	1300.0	460.0	4200.0	250.0	330.0	1607.0	500.0	5000.0	13660.0	
	Initial > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	3393.0	0.0	0.0	3393.0	
	Subsequent	11.0	1500.0	1000.0	3700.0	0.4	340.0	220.0	1.0	6.8	6779.2	
	SSTL	13.0	1300.0	460.0	4200.0	250.0	330.0	1607.0	500.0	5000.0	13660.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MW-40	Initial	290.0	2900.0	650.0	7100.0	500.0	530.0	10000.0	1000.0	10000.0	32970.0	100%
	SSTL	113.0	2900.0	650.0	7100.0	500.0	530.0	1876.0	1000.0	10000.0	24669.0	
	Initial > SSTL	177.0	0.0	0.0	0.0	0.0	0.0	8124.0	0.0	0.0	8301.0	
	Subsequent	140.0	970.0	300.0	2900.0	12.0	150.0	600.0	1.0	6.8	5079.8	
	SSTL	113.0	2900.0	650.0	7100.0	500.0	530.0	1876.0	1000.0	10000.0	24669.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MW-41	Initial	260.0	1000.0	1100.0	1000.0	1000.0	420.0	20000.0	2000.0	20000.0	46780.0	100%
	SSTL	257.0	1000.0	1100.0	1000.0	1000.0	420.0	3234.0	2000.0	20000.0	30011.0	
	Initial > SSTL	3.0	0.0	0.0	0.0	0.0	0.0	16766.0	0.0	0.0	16769.0	
	Subsequent	0.4	0.4	0.4	0.4	0.4	0.2	9.5	1.0	6.8	19.5	
	SSTL	257.0	1000.0	1100.0	1000.0	1000.0	420.0	3234.0	2000.0	20000.0	30011.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Table 3

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Site Specific Target Level Summary

Well ID:	Item	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphth	TAA	TAME	TBA	Total	
MW-54	Initial	5.0	5.0	5.0	5.0	5.0	5.0	100.0	10.0	100.0	240.0	Unable to Locate
	SSTL	5.0	5.0	5.0	5.0	5.0	5.0	110.0	2.0	14.0	156.0	
	Initial > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	86.0	94.0	
	Subsequent											
	SSTL	5.0	5.0	5.0	5.0	5.0	5.0	110.0	2.0	14.0	156.0	
	Subsequent > SSTL											
MW-58	Initial	4.8	25.0	20.0	25.0	93.0	11.0	1800.0	15.0	100.0	2093.8	Abandoned
	SSTL	4.8	25.0	20.0	25.0	51.0	11.0	279.0	15.0	100.0	530.8	
	Initial > SSTL	0.0	0.0	0.0	0.0	42.0	0.0	1521.0	0.0	0.0	0.0	
	Subsequent	Abandoned										
	SSTL	4.8	25.0	20.0	25.0	51.0	11.0	279.0	15.0	100.0	530.8	
	Subsequent > SSTL	Abandoned										
MW-65	Initial	420.0	398.0	234.0	262.0	16.4	168.0	648.0	50.0	500.0	2696.4	Unable to Locate
	SSTL	326.0	398.0	234.0	262.0	16.4	168.0	648.0	50.0	500.0	2602.4	
	Initial > SSTL	94.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Subsequent	Unable to Locate - Paved Over										
	SSTL	326.0	398.0	234.0	262.0	16.4	168.0	648.0	50.0	500.0	2602.4	
	Subsequent > SSTL	Unable to Locate - Paved Over										
MW-5AR	Initial	9200.0	1000.0	1400.0	4400.0	160.0	810.0	1300.0	1000.0	10000.0	29270.0	93%
	SSTL	83.0	1000.0	1400.0	4400.0	160.0	108.0	1300.0	381.0	10000.0	18832.0	
	Initial > SSTL	9117.0	0.0	0.0	0.0	0.0	702.0	0.0	619.0	0.0	10438.0	
	Subsequent	830.0	180.0	98.0	670.0	13.0	130.0	9.5	13.0	6.8	1950.3	
	SSTL	83.0	1000.0	1400.0	4400.0	160.0	108.0	1300.0	381.0	10000.0	18832.0	
	Subsequent > SSTL	747.0	0.0	0.0	0.0	0.0	22.0	0.0	0.0	0.0	769.0	
PW-1R	Initial	460.0	3400.0	320.0	9200.0	50.0	250.0	710.0	500.0	5000.0	19890.0	-38%
	SSTL	58.0	11928.0	3700.0	21680.0	290.0	19298.0	1114.0	330.0	29344.0	87742.0	
	Initial > SSTL	402.0	0.0	0.0	0.0	0.0	0.0	0.0	170.0	0.0	572.0	
	Subsequent	850.0	6900.0	580.0	18000.0	21.0	1300.0	480.0	50.0	340.0	28521.0	
	SSTL	58.0	11928.0	3700.0	21680.0	290.0	19298.0	1114.0	330.0	29344.0	87742.0	
	Subsequent > SSTL	792.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	792.0	
DW-3	Initial	2600.0	19000.0	2200.0	10000.0	1000.0	620.0	3600.0	2000.0	20000.0	61020.0	-1%
	SSTL	45.0	8470.0	2200.0	10000.0	1000.0	620.0	3600.0	2000.0	20000.0	47935.0	
	Initial > SSTL	2555.0	10530.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13085.0	
	Subsequent	2000	20000	2800	10000	23	650	2700	20.000	140	38333.0	
	SSTL	45.0	8470.0	2200.0	10000.0	1000.0	620.0	3600.0	2000.0	20000.0	47935.0	
	Subsequent > SSTL	1955.0	11530.0	600.0	0.0	0.0	30.0	-900.0	0.0	0.0	13215.0	
SW-1	Initial	130.0	2.8	23.0	36.0	17.0	6.5	340.0	2.6	23.0	580.9	Unable to Access
	SSTL	5.0	2.8	23.0	36.0	17.0	6.5	240.0	2.6	23.0	355.9	
	Initial > SSTL	125.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	225.0	
	Subsequent											
	SSTL	5.0	2.8	23.0	36.0	17.0	6.5	240.0	2.6	23.0	355.9	
	Subsequent > SSTL											

SSTL = Site Specific Target Level
RBSL= Risk Based Screening Levels
MtBE= Methyl Tert-Butyl Ether
n/a = not applicable
0.0 - Excluded from Calculations

CRAWFORD ENVIRONMENTAL SERVICES

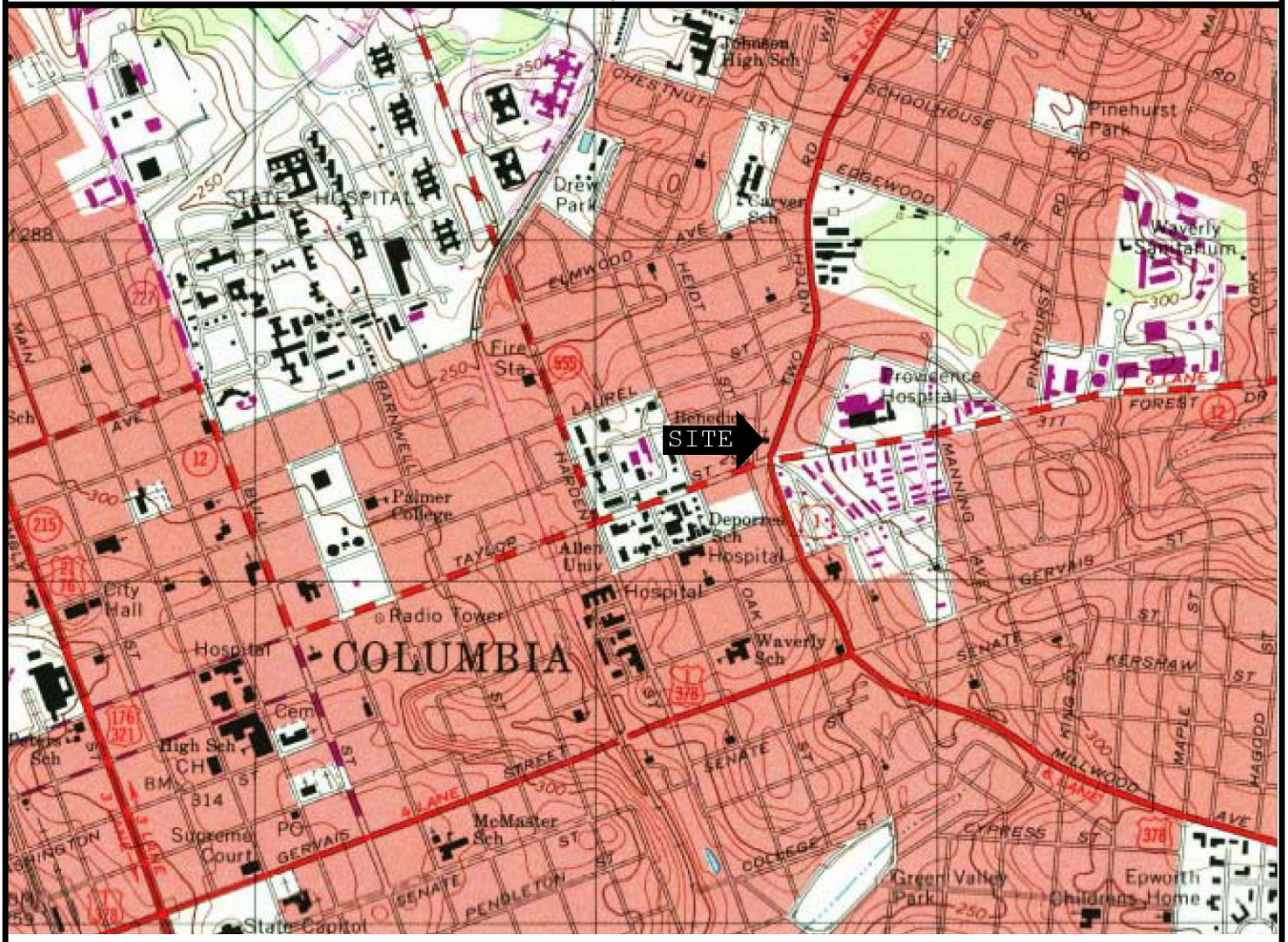
Initial>SSTL	325262.00
Subsequent>SSTL	113286.50
COC Reduction	65.17%

Figures

Figure 1: Topographic Map
Figure 2: Site Facility Base Map
Figure 3: Groundwater Chemicals of Concern Map
Figure 4: Groundwater Elevation Map

FIGURE 1

Site Location Map
Handy Pantry #65 / University Mart / Clouds Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina



CRAWFORD ENVIRONMENTAL SERVICES

15 Church Avenue, SW
Roanoke Virginia, 24011

540-343-6256 (office) 540-343-6259 (fax)

NORTH COLUMBIA, SOUTH CAROLINA

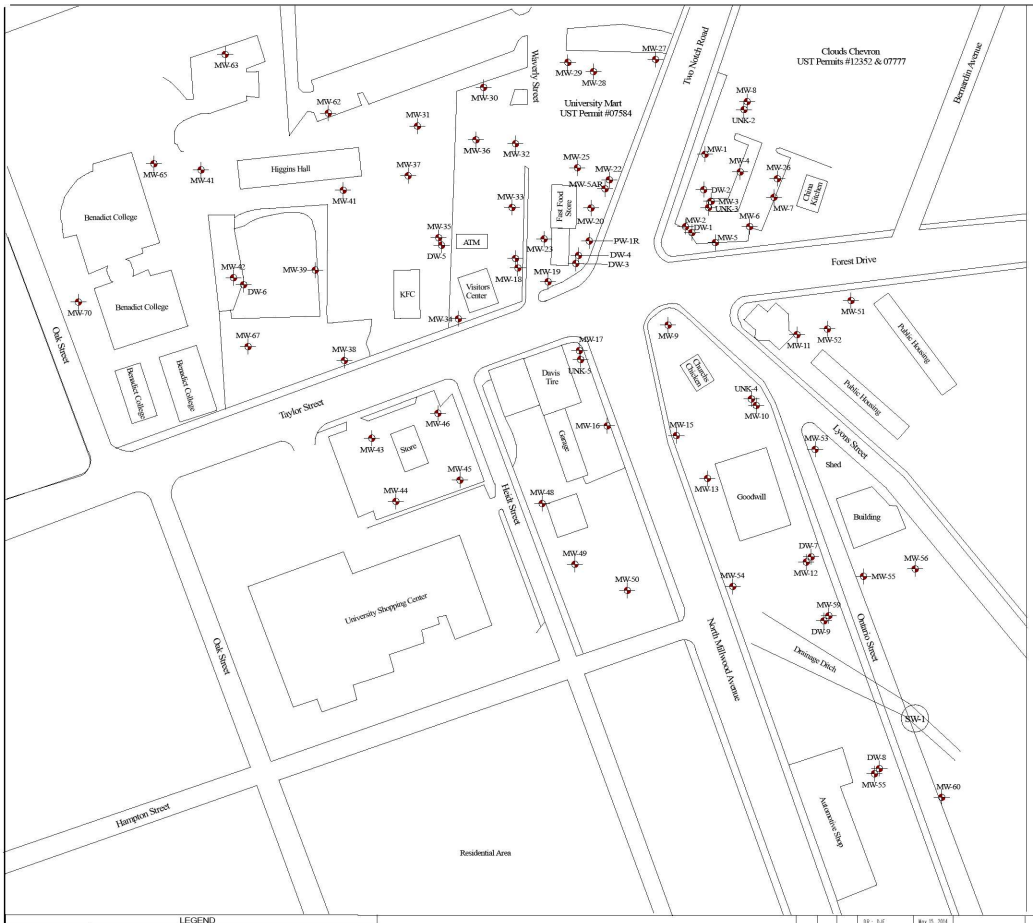
Source: U.S.G.S. Topographic Map of the Columbia North Quadrangle, Virginia, 7.5 Minute Series (1977, revised 1988)
Scale: 1:24,000 Contour Interval: 20 Feet
Vertical Datum: National Geodetic Vertical Datum 1929
Horizontal Datum: North American Datum1927

Project: CASE Report

Client: SCDHEC

CES Job #: 7.0547

Latitude:
034”00’42.72”N
Longitude:
081”01’00.13”W



LEGEND

Gasoline Dispenser	Air Sparge Well	Mail Boxes	Propane Tank
Diesel Dispenser	Future Recovery Well	Sign	Overhead Utility
Utility Pole	Flag Pole	Pay Phone	Metal Fence
Water Meter	Water Spigot	Air Conditioning Unit	Wooden Fence
Monitoring Well	Light Pole	Compressed Air	Manway
Storm Drain	Grease Trap	Waste Receptacle	UST Access

REV.	BY	DATE	
			DR.: DJF — May 15, 2014
			CK.:
			APP'D.:
			SCALE: As Shown
			CES PROJ. NO.: 7.0547

Corrective Action System Evaluation

CRAWFORD ENVIRONMENTAL SERVICES

15 Church Avenue, SW
Roanoke, Virginia 24011

540-343-6256
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Figure Title
Site Plan
Handy Pantry/University Mart/Clouds Chevron
UST Permits # 07584 / 07777 / 12352
Intersection of Taylor and Two Notch Road
Columbia, South Carolina

DRAWING NUMBER: Figure 2 — REV.: 0

Well ID:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphthalene	TAA	TAME	TBA
MW-1	Dry								
MW-2	140	300	220	1300	410	160	210	<10	<100
MW-3	4600	11000	620	8700	1300	280	<5000	310.000	<5000
MW-4	<1	<1	<1	<1	1.6	<5	<100	<10	<1000
MW-5	Dry								
MW-6	<1	<1	<1	<1	0.8	<5	<100	<10	<100
MW-7	0.71	<1	<1	<1	<1	<5	<100	<10	<100
MW-8	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-9	380	11000	1900	13000	5	650	1100	<10	<100
MW-10	1.25-Feet of Free Product								
MW-11	0.53	<1	<1	<1	<1	<5	80	<10	58
MW-12	990	19	910	140	21	180	3600	14.000	<100
MW-13	<1	<1	<	<1	<1	<5	<100	<10	<100
MW-15	0.25-Feet of Free Product								
MW-16	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-17	32	3000	450	8300	<10	690	270	<100	<1000
MW-18	3100	11000	560	8700	510	290	12000	<1000	<10000
MW-19	1400	2800	1600	24000	<50	1400	1300	<50	<5000
MW-20	1400	12000	500	14000	120	1100	<10000	<1000	<10000
MW-22	6300	23000	700	21000	<20	1200	9600	<20	<140
MW-23	890	3600	450	16000	<50	1200	1500	<50	<340
MW-25	38	140	200	2600	1.9	490	2800	<10	<100
MW-26	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-27	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-28	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-29	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-30	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-31	30	9.8	310	9.3	4.1	160	460	<10	<100
MW-32	4	13	72	10	<1	45	<100	<10	<100
MW-33	130	410	210	550	1.2	71	1000	<10	<100
MW-34	<1	<1	<1	<1	<1	<5	39	<10	<100
MW-35	6000	7200	2800	7400	330	700	4700	76.000	<100
MW-36	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-37	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-38	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-39	11	1500	1000	3700	<1	340	220	<10	<100
MW-40	140	970	300	2900	12	150	600	<10	<100
MW-41	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-42	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-43	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-44	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-45	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-46	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-48	Unable to Access - Locked Gate								
MW-49	Unable to Access - Locked Gate								
MW-50	Unable to Access - Locked Gate								
MW-51	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-53	<1	<1	<1	<1	<1	4.1	<100	<10	<100
MW-54	Unable to Locate								
MW-55	Unable to Locate								
MW-56	Unable to Locate								
MW-58	Abandoned								
MW-59	81	3.6	730	14	91	96	4500	27.000	<100
MW-60	Unable to Locate								
MW-62	51	<1	<1	0.93	2.6	65	730	<10	<100
MW-63	Unable to Locate								
MW-65	Unable to Locate - Paved over								
MW-67	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-70	<1	<1	<1	<1	<1	1.5	<100	<10	<100
MW-5AR	830	180	98	670	13	130	<100	13.000	<100
PW-1R	850	6900	580	18000	<50	1300	<5000	<500	<5000
DW-1	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-2	<1	<1	<1	<1	10	<5	<100	<10	<100
DW-3	2000	20000	2800	10000	23	650	2700	<20	<140
DW-4	<1	1	<1	<1	<1	<5	<100	<10	<100
DW-5	6700	380	240	3100	1400	190	5300	110.000	<100
DW-6	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-7	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-8	Abandoned								
DW-9	<1	2.8	<1	<1	<1	<5	<100	<10	<100
SW-1	Unable to Access - Overgrown Brush								

LEGEND

Gasoline Dispenser	Air Sparge Well	Mail Boxes	Propane Tank
Diesel Dispenser	Future Recovery Well	Sign	Overhead Utility
Utility Pole	Flag Pole	Pay Phone	Metal Fence
Water Meter	Water Spigot	Air Conditioning Unit	Wooden Fence
Monitoring Well	Light Pole	Compressed Air	Manway
Storm Drain	Grease Trap	Waste Receptacle	UST Access

DR.: BJF Feb 12 2015
CK.:
APP'D.:
SCALE: As Shown
CES PROJ. NO.: 7.0547

REV.	BY	DATE

Corrective Action System Evaluation

CRAWFORD ENVIRONMENTAL SERVICES
15 Church Avenue, SW
Roanoke, Virginia 24011
540-343-6256
540-343-6259 (fax)

Figure Title
Concentrations of Concern Map
Handy Pantry/University Mart/Clouds Chevron
UST Permits # 07584 / 07777 / 12352
Intersection of Taylor and Two Notch Road
Columbia, South Carolina

DRAWING NUMBER: Figure 3 | REV.: 0

Monitor Well	Top of Casing (ft)	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)
MW-1	93.89	11/4/2014	NA	DRY	NA	NA	DRY
MW-2	94.70	11/4/2014	NA	23.03	NA	NA	71.67
MW-3	94.45	11/12/2014	NA	23.16	NA	NA	71.29
MW-4	94.85	11/11/2014	NA	21.76	NA	NA	73.09
MW-5	95.26	11/11/2014	NA	DRY	NA	NA	DRY
MW-6	94.96	11/11/2014	NA	23.98	NA	NA	70.98
MW-7	95.93	11/11/2014	NA	24.12	NA	NA	71.81
MW-8	94.79	11/11/2014	NA	21.43	NA	NA	73.36
MW-9	92.30	11/11/2014	NA	21.69	NA	NA	70.61
MW-10	85.98	11/11/2014	Interface Probe Failure - 1.25-Feet of Product				
MW-11	88.46	11/11/2014	NA	19.38	NA	NA	69.08
MW-12	72.80	11/11/2014	NA	4.63	NA	NA	68.17
MW-13	80.44	11/11/2014	NA	12.15	NA	NA	68.29
MW-15	86.44	11/11/2014	Interface Probe Failure - 0.25-Feet of Product				
MW-16	88.19	11/12/2014	NA	18.98	NA	NA	69.21
MW-17	92.45	11/12/2014	NA	23.45	NA	NA	69.00
MW-18	94.81	11/12/2014	NA	25.08	NA	NA	69.73
MW-19	93.96	11/13/2014	NA	24.56	NA	NA	69.40
MW-20	94.12	11/13/2014	NA	23.28	NA	NA	70.84
MW-22	94.25	11/11/2014	NA	22.68	NA	NA	71.57
MW-23	94.43	11/13/2014	NA	24.98	NA	NA	69.45
MW-25	93.09	11/10/2014	NA	21.60	NA	NA	71.49
MW-26	95.96	11/11/2014	NA	22.95	NA	NA	73.01
MW-27	91.40	11/13/2014	NA	18.85	NA	NA	72.55
MW-28	91.46	11/13/2014	NA	19.75	NA	NA	71.71
MW-29	91.09	11/13/2014	NA	19.92	NA	NA	71.17
MW-30	92.77	11/10/2014	NA	22.90	NA	NA	69.87
MW-31	95.20	11/12/2014	NA	26.36	NA	NA	68.84
MW-32	92.87	11/12/2014	NA	23.16	NA	NA	69.71
MW-33	93.84	11/12/2014	NA	24.65	NA	NA	69.19
MW-34	94.77	11/12/2014	NA	25.49	NA	NA	69.28
MW-35	93.71	11/12/2014	NA	24.66	NA	NA	69.05
MW-36	93.89	11/12/2014	NA	24.72	NA	NA	69.17
MW-37	93.78	11/12/2014	NA	24.87	NA	NA	68.91
MW-38	95.53	11/12/2014	NA	26.17	NA	NA	69.36
MW-39	96.19	11/12/2014	NA	27.36	NA	NA	68.83
MW-40	95.69	11/12/2014	NA	27.01	NA	NA	68.68
MW-41	94.85	11/11/2014	NA	26.99	NA	NA	67.86
MW-42	96.81	11/11/2014	NA	27.22	NA	NA	68.59
MW-43	95.15	11/11/2014	NA	25.61	NA	NA	69.54
MW-44	94.57	11/11/2014	NA	24.23	NA	NA	70.34
MW-45	92.51	11/11/2014	NA	22.63	NA	NA	69.88
MW-46	94.50	11/11/2014	NA	24.95	NA	NA	69.55
MW-48	89.95	11/11/2014	Unable to Access - Locked Gate				
MW-49	88.18	11/11/2014	Unable to Access - Locked Gate				
MW-50	84.09	11/11/2014	Unable to Access - Locked Gate				
MW-51	93.91	11/11/2014	NA	24.29	NA	NA	69.62
MW-53	79.60	11/11/2014	NA	11.02	NA	NA	68.58
MW-54	77.58	11/11/2014	Unable to Locate - Overgrown Field				
MW-55	71.22	11/11/2014	Unable to Locate - Overgrown Field				
MW-56	76.39	11/11/2014	Unable to Locate - Overgrown Field				
MW-58	76.37	11/11/2014	Unable to Locate				
MW-59	68.02	11/11/2014	NA	6.69	NA	NA	61.33
MW-60	67.94	11/11/2014					
MW-62	94.05	11/12/2014	NA	24.75	NA	NA	69.30
MW-63	94.65	11/12/2015	Unable to Locate				
MW-65	94.04	11/11/2014	Unable to Locate				
MW-67	96.10	11/12/2014	NA	27.28	NA	NA	68.82
MW-70	95.49	11/11/2014	NA	26.22	NA	NA	69.27
MW-5AR	94.18	11/13/2014	NA	22.64	NA	NA	71.54
PW-1R	93.75	11/13/2014	NA	23.92	NA	NA	69.83
DW-1	94.66	11/10/2014	NA	45.42	NA	NA	49.24
DW-2	94.02	11/11/2014	NA	44.88	NA	NA	49.14
DW-3	93.75	11/13/2014	NA	24.42	NA	NA	69.33
DW-4	93.79	11/13/2014	NA	3.45	NA	NA	90.34
DW-5	93.74	11/12/2014	NA	44.75	NA	NA	48.99
DW-6	95.90	11/12/2014	NA	46.64	NA	NA	49.26
DW-7	72.79	11/11/2014	NA	24.75	NA	NA	48.04
DW-8	68.63	11/11/2014	Abandoned				
DW-9	76.47	11/11/2014	NA	24.44	NA	NA	52.03

LEGEND

Gasoline Dispenser	Air Sparge Well	Mail Boxes	Propane Tank
Diesel Dispenser	Future Recovery Well	Sign	Overhead Utility
Utility Pole	Flag Pole	Pay Phone	Metal Fence
Water Meter	Water Spigot	Air Conditioning Unit	Wooden Fence
Monitoring Well	Light Pole	Compressed Air	Manway
Storm Drain	Grease Trap	Waste Receptacle	UST Access

DR.: BJF May 15, 2014
CK.:
APP'D.:
SCALE: As Shown
CES PROJ. NO.: 7.0547

REV. BY DATE

Corrective Action System Evaluation

CRAWFORD ENVIRONMENTAL SERVICES
15 Church Avenue, SW
Roanoke, Virginia 24011
540-343-6256
540-343-6259 (fax)

FIGURE TITLE
Groundwater Elevation Map
Handy Pantry/University Mart/Clouds Chevron
UST Permits # 07584 / 07777 / 12352
Intersection of Taylor and Two Notch Road
Columbia, South Carolina

DRAWING NUMBER: Figure 4 | REV: 0

APPENDIX A

Purge Water Disposal Manifest

CRAWFORD
ENVIRONMENTAL
SERVICES

February 13, 2015

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management
Underground Storage Tank Management Division
2600 Bull Street
Columbia, SC 29201

Re: Purge Water Report- Development & Groundwater Sampling
Handy Pantry #65/University Mart & Cloud's Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina
UST Permit # 07584 / 07777 / 12352

Dear Project Manager;

The letter presents the certification that Crawford Environmental Services (CES) treated purge waters referenced below with a granular activated carbon unit prior to discharge. This was completed in accordance with the conditions laid out in the "Proposed Conditions for use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater" produced by the SCDHEC Bureau of Water.

A total of 105 gallons were treated on November 11/12/13, 2014 for the above referenced facility.

A record of treatment is available upon request. If you have any questions or comments please feel free to contact us at 540-798-5068.

Sincerely,

Daniel Fisher
Project Manager
Crawford Environmental Services

APPENDIX B

Groundwater Sampling Data Sheets

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two North
WELL NO: mw1	SAMPLE ID:
	DATE: 10-10-14

PURGING DATA

DRY

WELL DIAMETER (inches): 2	Total Well Depth (feet): 27	WELL SCREEN INTERVAL DEPTH: 17 feet to 27 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: clouds	SITE LOCATION: TAYlor : Tims Notch
WELL NO: mw-2	SAMPLE ID:
	DATE: 11-16-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 23.03	PURGE PUMP TYPE OR BAILER

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1530			25.14		11.55		[illegible]		11.90		8.57		clear	none
							126							

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

Took Dup-1

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
William Ewing		11-11-17	1530
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: (Y) N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260 B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch	
WELL NO: MW 3	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 29	WELL SCREEN INTERVAL DEPTH: 19 feet to 29 feet	STATIC DEPTH TO WATER (feet): 23.16	PURGE PUMP TYPE OR (BAILER)

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = galions

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1400			25.65		5.61		182		2.79		1.67		Clear	Slight

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-11-14	SAMPLING TIME: 1400
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	826013	13	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Tuba North	
WELL NO: mw 4	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 28	WELL SCREEN INTERVAL DEPTH: 18 feet to 28 feet	STATIC DEPTH TO WATER (feet) 21.76	PURGE PUMP TYPE OR BAILER

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1350			25.48		4.52		151		4.45		302		Clear	No

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-11-14	SAMPLING TIME: 1350
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260 B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch
WELL NO: MW 5AR	SAMPLE ID:
	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 28	WELL SCREEN INTERVAL DEPTH: 18 feet to 28 feet	STATIC DEPTH TO WATER (feet): 22.64	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
915			23.45		6.09		186		.91		2.97		clear	ST

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-13-14	SAMPLING TIME: 915
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40 ML	HCL	N/A	N/A	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch
WELL NO: mw-5	SAMPLE ID:
	DATE: 10-11-12

PURGING DATA

Blocked At 20 Ft

WELL DIAMETER (inches): 2	Total Well Depth (feet): 26	WELL SCREEN INTERVAL DEPTH: 16 feet to 26 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
[illegible]														

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

Dry

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: [illegible]	SAMPLING TIME: [illegible]
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N FILTER SIZE: Filtration Equipment Type:	

DUPLICATE COLLECTED: Y N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME:	Cloud 5	SITE LOCATION:	TAYLOR & Two Notch
WELL NO:	mw 6	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet):	WELL SCREEN INTERVAL	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
2	30	DEPTH: 20 feet to 30 feet	23.98	

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1430			25.03		4.96		108		3.22		7.46		CL	NO

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
William Ewing		11-11-14	1430
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud 5	SITE LOCATION: Taylor & Tuc North	
WELL NO: mw 7	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 24.12	PURGE PUMP TYPE OR ~~BAILER~~

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1426			24.95		3.93		139		5.95		1.50		Clear	No

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-11-14	SAMPLING TIME: 1420
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	D	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Tonopah	
WELL NO: MW 8	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 28	WELL SCREEN INTERVAL DEPTH: 18 feet to 28 feet	STATIC DEPTH TO WATER (feet): 21.43	PURGE PUMP TYPE OR BAILER: (B)

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1300			25.21		4.68		47		4.48		1.14		CL	NO

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Emery	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-11-14	SAMPLING TIME: 1300
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	GG	40mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor: Two Notch	
WELL NO: MW-9	SAMPLE ID:	DATE: 11-11-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 21.69	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
9:40	0	.16	24.67		6.02		314		4.85		21.91		Cl	Strong

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-11-14	SAMPLING TIME: 9:40
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Twelfth
WELL NO: mw-10	SAMPLE ID:
	DATE: 11-11-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 28	WELL SCREEN INTERVAL DEPTH: 18 feet to 28 feet	STATIC DEPTH TO WATER (feet): 18.14	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: **1 WELL VOLUME** = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

Feet of Product

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS:
well Beside it Has aBout 0 1/4 Inch

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Tahoe & Two Notch	
WELL NO: MW-11	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: NA feet to NA feet	STATIC DEPTH TO WATER (feet): 19.38	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1230			22.98		5.37		160		1.27		3.98		CL	NO

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ervig	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-11-15	SAMPLING TIME: 12:30
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Tahoe Vista Tahoe Nat.
WELL NO: MW-12	SAMPLE ID:
	DATE: 11-11-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 24.65	WELL SCREEN INTERVAL DEPTH: NA feet to NA feet	STATIC DEPTH TO WATER (feet): 4.63	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (24.65 feet – 4.63 feet) X .16 gallons/foot = 3 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1110	0		24.51		6.03		288		1.16		88.4		Clear	None
1115	3		25.56		6.17		433		2.31		292		↓	↓
1120	6		25.67		6.16		444		3.74		119			
1125	9		25.68		6.17		446		3.75		182			

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
William Ewing		11-11-14	1125
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	LG	40mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch
WELL NO: MW 13	SAMPLE ID:
	DATE: 11-11-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: NA feet to NA feet	STATIC DEPTH TO WATER (feet): 12.15	PURGE PUMP TYPE OR (BAILER)

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1010	0	.16	25.08		7.19		83		7.93		1.81		CL	Slight

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Emmy	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-11-14	SAMPLING TIME: 1010
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch	
WELL NO: MW-15	SAMPLE ID:	DATE: 11-11-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 25	WELL SCREEN INTERVAL DEPTH: 15 feet to 25 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR (BAILER)

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1025														

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-11-14	SAMPLING TIME: 1025
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS:
No Reading Product 1/4 Inch No Cap Broken well

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch
WELL NO: mw-16	SAMPLE ID:
	DATE: 11-12-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 25	WELL SCREEN INTERVAL DEPTH: 15 feet to 25 feet	STATIC DEPTH TO WATER (feet): 18.98	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
9:25	0	.16	25.87		6.33		293		1.06		.30		Clear	Slight

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Emery	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-12-14	SAMPLING TIME: 925
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40 mL	HCl	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch	
WELL NO: mw-17	SAMPLE ID:	DATE: 11-11-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 22 feet to 30 feet	STATIC DEPTH TO WATER (feet): 23.45	PURGE PUMP TYPE OR (BAILER)

WELL VOLUME PURGE: **1 WELL VOLUME** = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
9:10	0	.37	25.17		5.40		118		3.09		.89		clear	Strong

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Gwilliam Emily	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-12-14	SAMPLING TIME: 910
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS: NO CAP

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch	
WELL NO: MW-18	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 25.09	PURGE PUMP TYPE OR BAILER

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1530			24.73		5.79		349		1.72		218		CAN	STRONG

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
William Emily		11-12-14	1530
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40ml	HCL	NA	NA	8260B	B	

REMARKS: NO CAP on well

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: clouds chevron	SITE LOCATION: Taylor & Two Notch
WELL NO: mw-19	SAMPLE ID:
	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 24.56	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1220			23.19		5.77		176		1.28		24.6		clear	SF

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-13-14	SAMPLING TIME: 1230
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	~~B~~	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two North	
WELL NO: mw-20	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 25	WELL SCREEN INTERVAL DEPTH: 15 feet to 25 feet	STATIC DEPTH TO WATER (feet): 23.28	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
930			22.41		5.94		316		2.79		40		CL	none

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-13-14	SAMPLING TIME: 930
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40 ML	HCL	N/A	N/A	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch
WELL NO: MW - [redacted] 22	SAMPLE ID:
	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 22.68	PURGE PUMP TYPE OR (BAILER)

WELL VOLUME PURGE: **1 WELL VOLUME** = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
900			23.54		5.65		217		1.15		10.3		clear	Mild

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-10-14	SAMPLING TIME: 900
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40 mL	HCL	N/A	N/A	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds Chevron	SITE LOCATION: Taylor & Two Notch
WELL NO: mw-23	SAMPLE ID:
	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 24.98	PURGE PUMP TYPE OR BAILER

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1215			21.82		5.67		203		1.03		108		CL	ST

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-13-14	SAMPLING TIME: 1215
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40 ML	HCL	N/A	N/A	8260 B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch	
WELL NO: MW 25	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 25.6	WELL SCREEN INTERVAL DEPTH: NA feet to NA feet	STATIC DEPTH TO WATER (feet): 21.60	PURGE PUMP TYPE OR BAILER

WELL VOLUME PURGE: **1 WELL VOLUME** = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
845			20.03		6.29		915		.90		2.74		Clear	Strong

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

Dup-3

SAMPLING DATA

SAMPLED BY (PRINT): William Emery	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-13-14	SAMPLING TIME: 845
PUMP OR TUBING DEPTH IN WELL (feet): 8	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: (Y) N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two North
WELL NO: mw 06	SAMPLE ID:
	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: NA feet to NA feet	STATIC DEPTH TO WATER (feet): 22.95	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1410			25.03		4.61		95		3.68		12.7		Clear	No

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-11-14	SAMPLING TIME: 1410
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor : Two Notch
WELL NO: MW - 27	SAMPLE ID:
	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet): 18.85	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
830			23.14		4.77		200		1.57		6.74		Clear	No

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-13-14	SAMPLING TIME: 830
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40ML	HCL	N/A	N/A	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two North
WELL NO: mw 28	SAMPLE ID:
	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet) 19.75	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: **1 WELL VOLUME** = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
815			20.44		4.74		199		1.44		339		clear	none

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-13-14	SAMPLING TIME: 815
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40ML	HCL	N/A	N/A	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch	
WELL NO: mw-29	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet): 14.52	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
800			20.17		5.86		172		1.46		186		Clear	None

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
William Ewing		11-13-14	800
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch	
WELL NO: MW 30	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet): 22.90	PURGE PUMP TYPE OR (BAILER)

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1600			22.92		5.51		152		1.83		6.07		clear	ST

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

Dup. 2

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-12-14	SAMPLING TIME: 1600
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: (Y) N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	None	<2	8260	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch
WELL NO: MW 31	SAMPLE ID:
	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet) 26.36	PURGE PUMP TYPE OR (BAILER)

WELL VOLUME PURGE: **1 WELL VOLUME** = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1300	0		22.02		5.61		181		1.11		2.91		clear	Slight

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
William Ewing		11-12-14	1300
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:
No well seal on well

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch	
WELL NO: MW-32	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet): 23.16	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1515			24.78		5.55		229		1.23		2.11		Clear	ST

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-12-14	SAMPLING TIME: 1515
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Tuolumne
WELL NO: MW 33	SAMPLE ID:
	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 24.65	PURGE PUMP TYPE OR (BAILER)

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1545			24.59		5.43		111		1.26		363		cloudy	STRong

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-12-14	SAMPLING TIME: 1545
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch	
WELL NO: MW 34	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 25.49	PURGE PUMP TYPE OR (BAILER)

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1425	0	[illegible]	24.67		4.88		156		1.57		10.1		Clear	Slight

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-12-14	SAMPLING TIME: 1425
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor and Two Notch
WELL NO: MW-35	SAMPLE ID:
	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 24.66	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1330			24.68		5.29		164		.90		867		Clear	STRONG

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-12-14	SAMPLING TIME: 1330
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor and Two Notch
WELL NO: 36	SAMPLE ID:
	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 24.72	PURGE PUMP TYPE OR (BAILER)

WELL VOLUME PURGE: **1 WELL VOLUME** = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1500			24.14		4.81		134		1.44		17.1		clear	ST

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
William Ewing		11-12-14	1500
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Tus North	
WELL NO: mw 37	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 24.87	PURGE PUMP TYPE OR (BAILER)

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1315			24.66		4.58		146		2.66		.76		Clear	Musty

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-12-14	SAMPLING TIME: 1315
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCl	NA	NA	826013	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Tuthill
WELL NO: mw 38	SAMPLE ID:
DATE: 11-10-14	

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 26.17	PURGE PUMP TYPE OR BAILER

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1240			24.53		4.81		72		6.47		3.14		Clear	None

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-12-14	SAMPLING TIME: 1248
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	GG	40mL	HCL	NA	NA	826013	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch	
WELL NO: mw-39	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 27.36	PURGE PUMP TYPE OR BAILER

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1130			23.07		5.84		117		1.43		.74		clear	mod

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
William Emily		11-12-14	1130
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	826013	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch	
WELL NO: MW-4D	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 27.01	PURGE PUMP TYPE OR BAILER

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1645			21.63		5.84		171		1.58		4.44		Clear	None

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-11-14	SAMPLING TIME: 1645
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40 mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Tuo Watch	
WELL NO: MW-41	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 26.99	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1630			22.67		5.43		160		1.85		10		clear	slight

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Emly	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-11-14	SAMPLING TIME: 1630
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:
No well Seal

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch	
WELL NO: MW 42	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 27.22	PURGE PUMP TYPE OR BAILER

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1150			22.45		4.58		75		5.90		40.9		Clear	No

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Emily	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-12-14	SAMPLING TIME: 1150
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40 mL	HCL	NA	NA	8260 B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch	
WELL NO: mw-43	SAMPLE ID:	DATE: 11-11-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 40	WELL SCREEN INTERVAL DEPTH: 20 feet to 40 feet	STATIC DEPTH TO WATER (feet): 25.61	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
8:00	0		23.83		4.72		165		5.71		2.17		Clear	None

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Billy Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-11-14	SAMPLING TIME: 8:00
PUMP OR TUBING DEPTH IN WELL (feet): NA	TUBING MATERIAL CODE: NA	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40 mL	HCL	NA	NA	8260B	B	

REMARKS: Broken well seal

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch	
WELL NO: mw44	SAMPLE ID:	DATE: 11-11-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 31	WELL SCREEN INTERVAL DEPTH: 16 feet to 31 feet	STATIC DEPTH TO WATER (feet) 24.27	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
8:15			23.90		4.18		126.8		6.47		.83		clear	None

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT) William Emry	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-11-14	SAMPLING TIME: 8:15
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260D	D	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch	
WELL NO: MW-45	SAMPLE ID:	DATE: 11-11-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet): 22.63	PURGE PUMP TYPE OR BAILER: (B)

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
8:30	0		24.37		4.19		162		5.26		0.48		Clear	None

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-11-14	SAMPLING TIME: 8:30
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	1mL	NM	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor : Two Notch	
WELL NO: mw 46	SAMPLE ID:	DATE: 11-11-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 24.95	PURGE PUMP TYPE OR BAILER

WELL VOLUME PURGE: **1 WELL VOLUME** = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
8:45	0		24.75		3.86		[illegible]		6.62		.74		Clear	none
							[illegible]							
							141							

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT) William Ensley	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-12-14	SAMPLING TIME: 845
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor ; Two Notch
WELL NO: mw-48	SAMPLE ID: DATE: 11-11-14

PURGING DATA

Locked Fence

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION:	
WELL NO: MW-49	SAMPLE ID:	DATE:

PURGING DATA

Locked Fence

WELL DIAMETER (inches): 2	Total Well Depth (feet):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: **1 WELL VOLUME** = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N FILTER SIZE: Filtration Equipment Type:	

DUPLICATE COLLECTED: Y N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME:	SITE LOCATION:	
WELL NO: MW-50	SAMPLE ID:	DATE:

PURGING DATA

Locked Fence

WELL DIAMETER (inches):	Total Well Depth (feet):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two North
WELL NO: MW-S1	SAMPLE ID:
	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet) 24.29	PURGE PUMP TYPE OR BAILER

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
12:40			22.66		4.13		109		2.58		2.42		CL	N

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-11-14	SAMPLING TIME: 1240
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: TAYlor & Two Notch Rd
WELL NO: MW-52	SAMPLE ID: DATE: 11-10-14

PURGING DATA

DRY

WELL DIAMETER (inches): 2	Total Well Depth (feet):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch	
WELL NO: mw-S3	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 20	WELL SCREEN INTERVAL DEPTH: 5 feet to 20 feet	STATIC DEPTH TO WATER (feet): 11.02	PURGE PUMP TYPE OR BAILER

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
12:15			25.22		4.52		98		2.72		5.46		CL	NO

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
William Ewing		11-11-14	12:15
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: TAYlor & Tuskeech	
WELL NO: MW 59	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 17	WELL SCREEN INTERVAL DEPTH: 2 feet to 17 feet	STATIC DEPTH TO WATER (feet): 6.69	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1135	0		22.46		6.21		417		4.24		11.4		clear	none

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-11-14	SAMPLING TIME: 1135
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor and Tamarack
WELL NO: mw 62	SAMPLE ID:
	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 24.75	PURGE PUMP TYPE OR BAILER

WELL VOLUME PURGE: **1 WELL VOLUME** = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1600		~~24.01~~	21.01		4.61		183		1.97		2.46		clear	no

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-14-14	SAMPLING TIME: 1600
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40 mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Thornton	
WELL NO: MW-65	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

Not Found

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			

REMARKS:
Construction Rubble on top of FT

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Tuolumne
WELL NO: mw-67	SAMPLE ID:
	DATE: 11-12-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet) 27.28	PURGE PUMP TYPE OR BAILER

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1140			22.23		5.15		103		5.90		1.61		Clear	mod

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
William Ewing		11-12-14	1140
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Tuscola
WELL NO: MW-70	SAMPLE ID:
	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 26.22	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1620			22.00		4.96		119		1.35		18.7		Clear	None

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ervin	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-11-14	SAMPLING TIME: 1620
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCl	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch
WELL NO: ~~PW~~ PW R-1	SAMPLE ID:
	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 4	Total Well Depth (feet): 50	WELL SCREEN INTERVAL DEPTH: 45 feet to 50 feet	STATIC DEPTH TO WATER (feet): 23.92	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
= (50 feet − 23.92 feet) X .66 gallons/foot = 17 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
945	0		21.00		5.88		250		.87		78.1		cl	Stale
1000	4	Dry	At	4	Gal									
1015	8													
1030	12													

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

Dry at 6 Gal

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-12-14	SAMPLING TIME: 1030
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40 ML	HCL	N/A	N/A	8260B	B	

REMARKS:
PW 1 R is a 4" well That is 30 Ft Deep

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME:	Clouds	SITE LOCATION:	Taylor & Tuna Notch
WELL NO:	DW-1	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches):	2	Total Well Depth (feet):	70	WELL SCREEN INTERVAL DEPTH:	65 feet to 70 feet	STATIC DEPTH TO WATER (feet):	45.42	PURGE PUMP TYPE OR BAILER:	

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (70 feet – 45.42 feet) X .16 gallons/foot = 4 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1450	0		23.65		6.23		94		1.18		7.46		clear	No
1500	4		22.58		9.43		113		2.51		—		Cloudy	No
1510	8	DRY												
1520	12													

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

Dry at 6 Gal

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-11-14	SAMPLING TIME: 1520
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: (Y) N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40 mL	HCL	NA	NA	8260B	B	

REMARKS: Dry at 6 Gal

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

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GROUNDWATER SAMPLING LOG

SITE NAME: Cloads	SITE LOCATION: Taylor & Twin Notch	
WELL NO: Dw-2	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 75	WELL SCREEN INTERVAL DEPTH: 70 feet to 75 feet	STATIC DEPTH TO WATER (feet): 44.88	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (75 feet – 44.88 feet) X .16 gallons/foot = 5 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1310	0		23.51		6.78		35		6.47		1.08		CL	NO
1320	5		23.24		7.11		63		5.85		359		CLOUDY	NO
1330	10		23.35		6.52		71		4.84		926		CLOUDY	NO
1340	15		23.93		6.63		74		4.90		—		CLOUDY	NO

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
William Ewing		11-11-14	1340
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two North	
WELL NO: DW-3	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 52	WELL SCREEN INTERVAL DEPTH: 47 feet to 52 feet	STATIC DEPTH TO WATER (feet): 24.42	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
= (52 feet − 24.42 feet) X .16 gallons/foot = 4.5 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1135	0		19.97		5.89		209		1.78		139		Clear	ST
1145	4.5		19.77		5.97		173		1.31		104		Clear	
1155	9		21.65		6.01		170		1.74		59.6		Clear	ST
1200	13.5		20.99		6.03		175		1.98		178		clear	ST

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-13-14	SAMPLING TIME: 1200
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40 ML	HCL	N/A	N/A	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch	
WELL NO: Dw-4	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 110	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): 3.45	PURGE PUMP TYPE OR BAILER: (B)

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
= (110 feet − 3.45 feet) X .16 gallons/foot = 17 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1045	0	0	18.64		6.58		97		1.15		2.99		clear	NO
1105	17		19.29		6.63		146		2.86		5.35		clear	NO
1140	34													

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-13-14	SAMPLING TIME: 1125
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40 ML	HCL	N/A	N/A	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Tuna Notch	
WELL NO: Dw-5	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 70	WELL SCREEN INTERVAL DEPTH: 65 feet to 70 feet	STATIC DEPTH TO WATER (feet): 44.75	PURGE PUMP TYPE OR BAILER: (B)

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (70 feet – 44.75 feet) X .16 gallons/foot = 4 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1340	0		24.99		6.52		123		2.63		11.1		clear	Slight
1350	4		22.66		6.17		158		2.87		—		Tan	Slight
1400	8		DRY											
1410	12													

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ervin	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-12-14	SAMPLING TIME: 1410
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS: DRY well went Dry

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud 7	SITE LOCATION: Taylor & Two Notch	
WELL NO: Dw-6	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 70	WELL SCREEN INTERVAL DEPTH: 65 feet to 70 feet	STATIC DEPTH TO WATER (feet): 46.64	PURGE PUMP TYPE OR (BAILER)

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
= (70 feet − 46.64 feet) X .16 gallons/foot = 4 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1200	0		22.21		6.86		89		4.04		40.9		CC	None
1210	4		DRY											
1220	8													
1230	12													

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
William Ewing		11-12-14	1200
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS: HAD TO WAIT 20 min TO GET ENOUGH TO SAMPLE

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor and Tres Alt
WELL NO: DW-7	SAMPLE ID:
	DATE: 11-11-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 55	WELL SCREEN INTERVAL DEPTH: 50 feet to 55 feet	STATIC DEPTH TO WATER (feet): 24.79	PURGE PUMP TYPE OR BAILER: (P)

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
= (55 feet − 24.79 feet) X 0.16 gallons/foot = 5 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1035	0		23.16		11.69		857		3.84		1.81		cl	Non
1040	5		23.33		11.03		600		5.60		—		Cloudy	↓
1050	10		23.04		10.42		185		8.08		—		cloudy	↓
11:00	15		22.91		10.37		184		7.99		—		Cloud	Non

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-11-14	SAMPLING TIME: 11:00
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch	
WELL NO: DW-5	SAMPLE ID:	DATE: 11-10-14

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 65	WELL SCREEN INTERVAL DEPTH: 60 feet to 65 feet	STATIC DEPTH TO WATER (feet): 24.44	PURGE PUMP TYPE OR (BAILER)

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
= (65 feet − 24.44 feet) X .16 gallons/foot = 6.5 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
11:45	0	~~22.10~~	22.10		6.03		58		1.48		8.64		CL	NO
11:50	6.5		21.37		6.01		44		1.18		12.69		CL	NO
11:55	13		21.83		6.08		49		2.98		53.9		CL	NO
12:00	19.5		21.80		6.05		47		2.96		60.7		CL	NO

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-11-14	SAMPLING TIME: 1200
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:
NO CAP

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two Notch	
WELL NO:	SAMPLE ID: FB1	DATE: 11-11-14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
William Ewing		11-11-14	1645
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	D	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Two North	
WELL NO:	SAMPLE ID: FB-2	DATE: 11-12-14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: **1 WELL VOLUME** = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-12-14	SAMPLING TIME: 1645
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCl	NA	NA	8260B	D	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Taylor & Twin North	
WELL NO:	SAMPLE ID: FB-3	DATE: 11-13-14

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): William Ewing	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 11-13-14	SAMPLING TIME: 1645
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40mL	HCL	NA	NA	8260B	B	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

APPENDIX C

Groundwater Laboratory Analytical Report

CRAWFORD ENVIRONMENTAL SERVICES

ACCESS ANALYTICAL, INC.

ANALYTICAL REPORT

CLIENT

Crawford Environmental Services
15 Church Ave, SW
Roanoke VA 24011

ATTENTION
Dan Fisher

PROJECT ID
Clouds Chevron

LABORATORY REPORT NUMBER
1411D32

DATE
November 25, 2014

Primary Data Review By

Chantelle Kanhai
Project Manager, AES

Secondary Data Review By

Ashley Amick

Project Manager, Access Analytical
aamick@axs-inc.com

PLEASE NOTE:

- **Unless otherwise noted, all analysis on this report performed at Analytical Environmental Services Inc. (AES Inc), 3080 Presidential Drive, Atlanta, GA 30340.**
- **AES is SCDHEC certified laboratory # 98016, NCDENR certified lab # 562, GA certified lab # FL-E87582, NELAP certified laboratory # E87582**
- Local support services for this project are provided by Access Analytical, Inc. Access Analytical is a representative of AES serving client in the SC/NC/GA areas. All questions regarding this report should be directed to your local Access Analytical representative at 803.781.4243 or toll fee at 883.315.4243

Access Analytical - Chain of Custody Record

LAB USE ONLY

Sales Order #_____ PO #_____ Access Quote #_____

Project Work Order # 1411032

Laboratory ID: _____

Company Name: Crawford Enviornmental

Report To: Dan Fisher

Address: 15 Church Ave SW

City: Roanoke State: VA Zip: 24011

Phone: 5403436256 Fax: 5403436259

Email: DFisher@Crawfordenviornmental.com

Project ID: Clouds Chevron

Sampled By: Billy Ewing

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	# of containers collected per analysis	Preservative: (*see codes)	Container Type: (*see codes)	↓ REQUESTED LAB ANALYSIS: ↓ 8260B BTEX + MTBE + TMB + TAME + TBA									
								1	G										
DW 6	11/12/14	1200	G	GW		3	3												
MW 18	11/12/14	1530																	
MW 45	11/11/14	830																	
MW 44	11/11/14	815																	
MW 16	11/12/14	925																	
MW 17	11/12/14	910																	
MW 46	11/12/14	845																	
FB 1	11/11/14	1645																	
FB 2	11/12/14	1645																	
FB 3	11/13/14	1645	↓	↓		↓	↓												

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Irmo, SC 29063

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*Matrix Codes (place corresponding code in matrix column): GW = ground water, WW = waste water, DW = drinking water, S = soil, SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other (specify in comments section)

*Program Area Codes: CWA = Clean Water Act (for wastewaters), SDWA = Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous Wastes (for soils, ground waters and waste samples)

*Container Type: G = Glass, P = Plastic

NOTES / COMMENTS

(if sample is a composite please use space below to note start/finish times & dates)

Turnaround Time:

X Standard

___ RUSH*

*Date Required:_____

(For rush work, results emailed/faxed by end of business day on date required)

Project Location:

X SC

___ NC

___ Other

(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
Mary Davis	[illegible]	11-14-14	0940	___Y ___N	_____(°C)	_____(N/A)
[illegible]	Fedex	11-14-14	1705	___Y ___N	_____(°C)	_____(N/A)
	Joana Pacurar	11/15/14	9:30	___Y ___N	1.9 (°C)	_____(N/A)
				___Y ___N	_____(°C)	_____(N/A)

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Sales Order #: _____ PO #: _____ Access Quote #: _____

Project Work Order #: 1411D32

Laboratory ID: _____

Company Name: Crawford Enviornmental

Report To: Dan Fisher

Address: 15 Church Ave SW

City: Roanoke State: VA Zip: 24011

Phone: 540 343 6256 Fax: 540 343 6259

Email: Dfisher@crawfordenviornmental.com

Project ID: Clouds Chevron

Sampled By: Billy Ewing

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	↓ REQUESTED LAB ANALYSIS: ↓									
							# of containers collected per analysis	8260 BTEX+MTBE TAA+TAME+TBA								
MW 62	11/11/14	1600	G	GW		3	3									
MW 70	11/11/14	1620														
MW 40	11/11/14	1645														
MW 39	11/12/14	1130														
MW 67	11/12/14	1140														
MW 42	11/12/14	1150														
MW 38	11/12/14	1240														
MW 31	11/12/14	1300														
MW 37	11/12/14	1315														
MW 36	11/12/14	1500														

Preservative: (*see codes) 1

Container Type: (*see codes) G

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*Matrix Codes (place corresponding code in matrix column): GW = ground water, WW = waste water, DW = drinking water, S = soil, SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other (specify in comments section)

*Program Area Codes: CWA = Clean Water Act (for wastewaters), SDWA = Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous Wastes (for solls, ground waters and waste samples)

*Container Type: G = Glass, P = Plastic

NOTES / COMMENTS
(if sample is a composite please use space below to note start/finish times & dates)

Turnaround Time:

X Standard
___ RUSH*
*Date Required: _____
(For rush work, results emailed/faxed by end of business day on date required)

Project Location:
X SC
___ NC
___ Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
Mary Davis	Amart	11-14-14	0940	___Y ___N	___(°C)	___(N/A)
Amart	Fedex	11-14-14	1700	___Y ___N	___(°C)	___(N/A)
	Joana Pacurar	11/15/14	9:30	___Y ___N	1.9 (°C)	___(N/A)
				___Y ___N	___(°C)	___(N/A)

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Project Work Order # 1411032

Sales Order # _____ PO # _____ Access Quote # _____ Laboratory ID: _____

Company Name: Crawford Enviornmental
Report To: Dan Fisher
Address: 15 Church Ave SW
City: Roanoke State: VA Zip: 24011
Phone: 5403436256 Fax: 5403436259
Email: Dfisher@crawfordenviornmental.com
Project ID: Clouds Chevron
Sampled By: Billy Ewing

Preservative: (*see codes) 1
Container Type: (*see codes) G

↓ REQUESTED LAB ANALYSIS: ↓ 826013 BTEX+MTBE TAA+TAME+TBA

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	# of containers collected for analysis
MW 30	11/12/14	1600	G	GW		3	3
MW 6	11/11/14	1430					
MW 32	11/12/14	1515					
MW 33	11/12/14	1545					
MW 34	11/12/14	1425					
DW 5	11/12/14	1410					
MW 35	11/12/14	1330					
MW 3	11/11/14	1400					
MW 26	11/11/14	1410					
MW 7	11/11/14	1420					

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*Program Area Codes: CWA = Clean Water Act (for wastewaters), SDWA = Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous Wastes (for soils, ground waters and waste samples)

*Container Type: G = Glass, P = Plastic

NOTES / COMMENTS
(if sample is a composite please use space below to note start/finish times & dates)

Turnaround Time:
X Standard
___ RUSH*
*Date Required: _____
(For rush work, results emailed/faxed by end of business day on date required)

Project Location:
X SC
___ NC
___ Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
Mary Davis	[signature]	11-14-14	0940	___Y ___N	____(°C)	____(N/A)
[signature]	[signature]	11-14-14	1700	___Y ___N	____(°C)	____(N/A)
	[signature]	11/15/14	9:30	___Y ___N	1.9 (°C)	____(N/A)
				___Y ___N	____(°C)	____(N/A)

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Project Work Order # 1411D32

Laboratory ID: _____

Company Name: Crawford Enviornmental

Report To: Dan Fisher

Address: 15 Church Ave SW

City: Roanoke State: VA Zip: 24011

Phone: 5403436256 Fax: 5403436259

Email: DFisher@crawfordenviornmental.com

Project ID: Clouds Chevron

Sampled By: Billy Ewing

Preservative: (*see codes) 1

Container Type: (*see codes) G

↓ REQUESTED LAB ANALYSIS: ↓ 8260B BTEX + MTBE TAA + TAME + TBA

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	# of containers collected for analysis	
MW 4	11/11/14	1350	G	GW		3	3	
MW 8	11/11/14	1300						
DW 2	11/11/14	1340						
MW 28	11/13/14	815						
MW 27	11/13/14	830						
MW 22	11/13/14	900						
MW 5AR	11/13/14	915						
MW 20	11/13/14	9:30						
DW 14	11/13/14	1125						
DW 13	11/13/14	1200	↓	↓		↓	↓	

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*Container Type: G = Glass, P = Plastic

NOTES / COMMENTS
(if sample is a composite please use space below to note start/finish times & dates)

Turnaround Time:
X Standard
___ RUSH*
*Date Required:_____
(For rush work, results emailed/faxed by end of business day on date required)

Project Location:
X SC
___ NC
___ Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
Mary Davis	[illegible]	11-14-14	0940	___Y ___N	_____(°C)	_____(N/A)
[illegible]	[illegible]	11-14-14	1200	___Y ___N	_____(°C)	_____(N/A)
	Joana Pacurar	11/15/14	9:30	___Y ___N	1.9 (°C)	_____(N/A)
				___Y ___N	_____(°C)	_____(N/A)

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Project Work Order # 1411D32

Laboratory ID: _____

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Report To: Dan Fisher

Address: 15 Church Ave SW

City: Roanoke State: VA Zip: 24011

Phone: 5403436256 Fax: 5403436259

Email: Dfisher@crawfordenviornmental.com

Project ID: Clouds Chevron

Sampled By: Billy Ewing

Preservative: (*see codes)

Container Type: (*see codes)

↓ REQUESTED LAB ANALYSIS: ↓ 826013 BETEX + MTN TAH + TAMETBA

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	# of containers collected per analysis
MW 23	11/13/14	1215	G	GW		3	3
MW 19	11/13/14	1230					
MW 9	11/11/14	940					
MW 13	11/11/14	1010					
DW 7	11/11/14	1100					
MW 12	11/11/14	1125					
MW 29	11/13/14	800					
MW 59	11/11/14	1135					
MW 53	11/11/14	1215					
MW 11	11/11/14	1230					

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*Container Type: G = Glass, P = Plastic

NOTES / COMMENTS
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Turnaround Time:

X Standard
___ RUSH*
*Date Required:_____
(For rush work, results emailed/faxed by end of business day on date required)

Project Location:
X SC
___ NC
___ Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
Mary Davis	Amart	11-14-14	0940	___Y ___N	_____(°C)	_____(N/A)
Amart	Fedex	11-14-14	1700	___Y ___N	_____(°C)	_____(N/A)
	Joana Pacheco	11/15/14	9:30	___Y ___N	1.9 (°C)	_____(N/A)
				___Y ___N	_____(°C)	_____(N/A)

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Project Work Order #: 1411D32

Laboratory ID: _____

Company Name: Crawford Enviornmental

Report To: Dan Fisher

Address: 15 Church Ave SW

City: Roanoke State: VA Zip: 24011

Phone: 540 343 6256 Fax: 540 343 6259

Email: DFisher@Crawfordenviornmental.com

Project ID: Clouds Chevron

Sampled By: Billy Ewing

Preservative: (*see codes) i

Container Type: (*see codes) G

REQUESTED LAB ANALYSIS: J

8260B BETEX + MTN TAA + TAME + TBA

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	# of containers collected per analysis
MW 51	11/11/14	1240	G	GW		3	3
MW 43	11/11/14	800					
MW 15	11/11/14	1025					
MW 25	11/13/14	845					
PW R-1	11/12/14	1030					
DW 9	11/11/14	1200					
~~MW 52~~	11/-/14	—					
MW 2	11/11/14	1530					
DW 1	11/11/14	1520					
MW 41	11/11/14	1630	↓	↓		↓	↓

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*Container Type: G = Glass, P = Plastic

NOTES / COMMENTS
(if sample is a composite please use space below to note start/finish times & dates)

Turnaround Time:

X Standard
___ RUSH*
*Date Required: _____
(For rush work, results emailed/faxed by end of business day on date required)

Project Location:
X SC
___ NC
___ Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
Mary Davis	Amat-	11-14-14	0940	___Y ___N	___(°C)	___(N/A)
A Martin	Fedex	11-14-14	1745	___Y ___N	___(°C)	___(N/A)
	Joana Pacurar	11/15/14	9:30	___Y ___N	1.9 (°C)	___(N/A)
				___Y ___N	___(°C)	___(N/A)

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Project Work Order #: 411D32

Laboratory ID: _____

Company Name: Crawford Enviornmental

Report To: Dan Fisher

Address: 15 Church Ave SW

City: Roanoke State: VA Zip: 24011

Phone: 5403436256 Fax: 5403436259

Email: Dfisher@crawfordenviornmental.com

Project ID: Clouds Chevron

Sampled By: Billy Ewing

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*Container Type: G = Glass, P = Plastic

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	# of containers collected per analysis
~~MW 30~~	~~11/12/14~~	~~1600~~	G	GW		3	3
Dup 1	11/11/14	1530					
Dup 2	11/12/14	1600					
Dup 3	11/13/14	845					
Trip Blank	11/ /14						
Trip Blank	11/ /14						
	11/ /14						
	11/ /14						
	11/ /14						
	11/ /14		↓	↓		↓	↓

Preservative (*see codes): 1

Container Type (*see codes): G

↓ REQUESTED LAB ANALYSIS: ↓

8260B BTEX + MTBE TAA + TAME + TBA

NOTES / COMMENTS
(if sample is a composite please use space below to note start/finish times & dates)

Turnaround Time:

X Standard
___ RUSH*
*Date Required: _____
(For rush work, results emailed/faxed by end of business day on date required)

Project Location:
X SC
___ NC
___ Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
Mary Davis	AMart-	11-14-14	0940	___Y ___N	_____(°C)	_____(N/A)
AMart	Fedex	11-14-14	1700	___Y ___N	_____(°C)	_____(N/A)
	Joana Pacurar	11/15/14	9:30	___Y ___N	1.9 (°C)	_____(N/A)
				___Y ___N	_____(°C)	_____(N/A)

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Client: Crawford Environmental Services
Project: Clouds Chevron
Lab ID: 1411D32

Case Narrative

Sample "DW 14" was written as "DW 4" on the sample container. Sample "DW 13" was written as "DW 3" on the sample container. Sample "PW R-1" was written as "PW 1-R" on the sample container.

All samples were matched according the collection date and time and were logged in according to the COC.

Volatile Organic Compounds Analysis by Method 8260B:

Due to sample matrix, samples 1411D32-002A, -006A, -026A, -027A, -028A, -036A, -038A, -040A, -041A, -042A, -053A, and -055A required dilution during preparation and/or analysis resulting in elevated reporting limits.

Sample 1411D32-026A as received did not meet method specified preservation requirements of pH <2. The laboratory proceeded with analysis.

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DW 6
Project Name:	Clouds Chevron	**Collection Date:**	11/12/2014 12:00:00 PM
Lab ID:	1411D32-001	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199515	1	11/20/2014 01:50	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199515	1	11/20/2014 01:50	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199515	1	11/20/2014 01:50	NP
Naphthalene	BRL		0.20	5.0	ug/L	199515	1	11/20/2014 01:50	NP
Toluene	BRL		0.38	1.0	ug/L	199515	1	11/20/2014 01:50	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199515	1	11/20/2014 01:50	NP
Surr: 4-Bromofluorobenzene	95.2		0	70-130	%REC	199515	1	11/20/2014 01:50	NP
Surr: Dibromofluoromethane	99.7		0	70-130	%REC	199515	1	11/20/2014 01:50	NP
Surr: Toluene-d8	94.9		0	70-130	%REC	199515	1	11/20/2014 01:50	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199515	1	11/20/2014 01:50	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199515	1	11/20/2014 01:50	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199515	1	11/20/2014 01:50	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 18
Project Name:	Clouds Chevron	**Collection Date:**	11/12/2014 3:30:00 PM
Lab ID:	1411D32-002	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					**(SW5030B)**				
Benzene	3100		39	100	ug/L	199515	100	11/19/2014 23:47	NP
Ethylbenzene	560		40	100	ug/L	199515	100	11/19/2014 23:47	NP
Methyl tert-butyl ether	510		42	100	ug/L	199515	100	11/19/2014 23:47	NP
Naphthalene	290	J	20	500	ug/L	199515	100	11/19/2014 23:47	NP
Toluene	11000		38	100	ug/L	199515	100	11/19/2014 23:47	NP
Xylenes, Total	8700		83	100	ug/L	199515	100	11/19/2014 23:47	NP
Surr: 4-Bromofluorobenzene	99.3		0	70-130	%REC	199515	100	11/19/2014 23:47	NP
Surr: Dibromofluoromethane	97.9		0	70-130	%REC	199515	100	11/19/2014 23:47	NP
Surr: Toluene-d8	96.7		0	70-130	%REC	199515	100	11/19/2014 23:47	NP
Oxygenates SW8260B					**(SW5030B)**				
tert-Amyl alcohol	12000		950	10000	ug/L	199515	100	11/19/2014 23:47	NP
tert-Amyl methyl ether	BRL		100	1000	ug/L	199515	100	11/19/2014 23:47	NP
tert-Butyl Alcohol	BRL		680	10000	ug/L	199515	100	11/19/2014 23:47	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 45
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 8:30:00 AM
Lab ID:	1411D32-003	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199515	1	11/20/2014 02:15	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199515	1	11/20/2014 02:15	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199515	1	11/20/2014 02:15	NP
Naphthalene	BRL		0.20	5.0	ug/L	199515	1	11/20/2014 02:15	NP
Toluene	BRL		0.38	1.0	ug/L	199515	1	11/20/2014 02:15	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199515	1	11/20/2014 02:15	NP
Surr: 4-Bromofluorobenzene	88.8		0	70-130	%REC	199515	1	11/20/2014 02:15	NP
Surr: Dibromofluoromethane	98		0	70-130	%REC	199515	1	11/20/2014 02:15	NP
Surr: Toluene-d8	94.9		0	70-130	%REC	199515	1	11/20/2014 02:15	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199515	1	11/20/2014 02:15	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199515	1	11/20/2014 02:15	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199515	1	11/20/2014 02:15	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 44
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 8:15:00 AM
Lab ID:	1411D32-004	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199515	1	11/20/2014 02:39	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199515	1	11/20/2014 02:39	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199515	1	11/20/2014 02:39	NP
Naphthalene	BRL		0.20	5.0	ug/L	199515	1	11/20/2014 02:39	NP
Toluene	BRL		0.38	1.0	ug/L	199515	1	11/20/2014 02:39	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199515	1	11/20/2014 02:39	NP
Surr: 4-Bromofluorobenzene	90.3		0	70-130	%REC	199515	1	11/20/2014 02:39	NP
Surr: Dibromofluoromethane	101		0	70-130	%REC	199515	1	11/20/2014 02:39	NP
Surr: Toluene-d8	95.5		0	70-130	%REC	199515	1	11/20/2014 02:39	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199515	1	11/20/2014 02:39	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199515	1	11/20/2014 02:39	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199515	1	11/20/2014 02:39	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 16
Project Name:	Clouds Chevron	**Collection Date:**	11/12/2014 9:25:00 AM
Lab ID:	1411D32-005	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199515	1	11/20/2014 03:04	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199515	1	11/20/2014 03:04	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199515	1	11/20/2014 03:04	NP
Naphthalene	BRL		0.20	5.0	ug/L	199515	1	11/20/2014 03:04	NP
Toluene	BRL		0.38	1.0	ug/L	199515	1	11/20/2014 03:04	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199515	1	11/20/2014 03:04	NP
Surr: 4-Bromofluorobenzene	91.4		0	70-130	%REC	199515	1	11/20/2014 03:04	NP
Surr: Dibromofluoromethane	97.8		0	70-130	%REC	199515	1	11/20/2014 03:04	NP
Surr: Toluene-d8	97.8		0	70-130	%REC	199515	1	11/20/2014 03:04	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199515	1	11/20/2014 03:04	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199515	1	11/20/2014 03:04	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199515	1	11/20/2014 03:04	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 17
Project Name:	Clouds Chevron	**Collection Date:**	11/12/2014 9:10:00 AM
Lab ID:	1411D32-006	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					**(SW5030B)**				
Benzene	32		3.9	10	ug/L	199515	10	11/20/2014 15:40	NP
Ethylbenzene	450		4.0	10	ug/L	199515	10	11/20/2014 15:40	NP
Methyl tert-butyl ether	BRL		4.2	10	ug/L	199515	10	11/20/2014 15:40	NP
Naphthalene	690		2.0	50	ug/L	199515	10	11/20/2014 15:40	NP
Toluene	3000		19	50	ug/L	199515	50	11/20/2014 00:12	NP
Xylenes, Total	8300		41	50	ug/L	199515	50	11/20/2014 00:12	NP
Surr: 4-Bromofluorobenzene	100		0	70-130	%REC	199515	50	11/20/2014 00:12	NP
Surr: 4-Bromofluorobenzene	102		0	70-130	%REC	199515	10	11/20/2014 15:40	NP
Surr: Dibromofluoromethane	100		0	70-130	%REC	199515	50	11/20/2014 00:12	NP
Surr: Dibromofluoromethane	94.2		0	70-130	%REC	199515	10	11/20/2014 15:40	NP
Surr: Toluene-d8	96.4		0	70-130	%REC	199515	50	11/20/2014 00:12	NP
Surr: Toluene-d8	95		0	70-130	%REC	199515	10	11/20/2014 15:40	NP
Oxygenates SW8260B					**(SW5030B)**				
tert-Amyl alcohol	270	J	95	1000	ug/L	199515	10	11/20/2014 15:40	NP
tert-Amyl methyl ether	BRL		10	100	ug/L	199515	10	11/20/2014 15:40	NP
tert-Butyl Alcohol	BRL		68	1000	ug/L	199515	10	11/20/2014 15:40	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 46
Project Name:	Clouds Chevron	**Collection Date:**	11/12/2014 8:45:00 AM
Lab ID:	1411D32-007	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199515	1	11/20/2014 03:29	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199515	1	11/20/2014 03:29	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199515	1	11/20/2014 03:29	NP
Naphthalene	BRL		0.20	5.0	ug/L	199515	1	11/20/2014 03:29	NP
Toluene	BRL		0.38	1.0	ug/L	199515	1	11/20/2014 03:29	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199515	1	11/20/2014 03:29	NP
Surr: 4-Bromofluorobenzene	92.5		0	70-130	%REC	199515	1	11/20/2014 03:29	NP
Surr: Dibromofluoromethane	97.6		0	70-130	%REC	199515	1	11/20/2014 03:29	NP
Surr: Toluene-d8	96.4		0	70-130	%REC	199515	1	11/20/2014 03:29	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199515	1	11/20/2014 03:29	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199515	1	11/20/2014 03:29	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199515	1	11/20/2014 03:29	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	FB 1
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 4:45:00 PM
Lab ID:	1411D32-008	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199515	1	11/19/2014 22:34	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199515	1	11/19/2014 22:34	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199515	1	11/19/2014 22:34	NP
Naphthalene	BRL		0.20	5.0	ug/L	199515	1	11/19/2014 22:34	NP
Toluene	BRL		0.38	1.0	ug/L	199515	1	11/19/2014 22:34	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199515	1	11/19/2014 22:34	NP
Surr: 4-Bromofluorobenzene	91.3		0	70-130	%REC	199515	1	11/19/2014 22:34	NP
Surr: Dibromofluoromethane	101		0	70-130	%REC	199515	1	11/19/2014 22:34	NP
Surr: Toluene-d8	97		0	70-130	%REC	199515	1	11/19/2014 22:34	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199515	1	11/19/2014 22:34	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199515	1	11/19/2014 22:34	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199515	1	11/19/2014 22:34	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	FB 2
Project Name:	Clouds Chevron	**Collection Date:**	11/12/2014 4:45:00 PM
Lab ID:	1411D32-009	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199515	1	11/19/2014 22:58	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199515	1	11/19/2014 22:58	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199515	1	11/19/2014 22:58	NP
Naphthalene	BRL		0.20	5.0	ug/L	199515	1	11/19/2014 22:58	NP
Toluene	BRL		0.38	1.0	ug/L	199515	1	11/19/2014 22:58	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199515	1	11/19/2014 22:58	NP
Surr: 4-Bromofluorobenzene	91		0	70-130	%REC	199515	1	11/19/2014 22:58	NP
Surr: Dibromofluoromethane	101		0	70-130	%REC	199515	1	11/19/2014 22:58	NP
Surr: Toluene-d8	96.8		0	70-130	%REC	199515	1	11/19/2014 22:58	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199515	1	11/19/2014 22:58	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199515	1	11/19/2014 22:58	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199515	1	11/19/2014 22:58	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	FB 3
Project Name:	Clouds Chevron	**Collection Date:**	11/13/2014 4:45:00 PM
Lab ID:	1411D32-010	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199515	1	11/19/2014 23:22	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199515	1	11/19/2014 23:22	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199515	1	11/19/2014 23:22	NP
Naphthalene	BRL		0.20	5.0	ug/L	199515	1	11/19/2014 23:22	NP
Toluene	BRL		0.38	1.0	ug/L	199515	1	11/19/2014 23:22	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199515	1	11/19/2014 23:22	NP
Surr: 4-Bromofluorobenzene	91.6		0	70-130	%REC	199515	1	11/19/2014 23:22	NP
Surr: Dibromofluoromethane	102		0	70-130	%REC	199515	1	11/19/2014 23:22	NP
Surr: Toluene-d8	96.1		0	70-130	%REC	199515	1	11/19/2014 23:22	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199515	1	11/19/2014 23:22	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199515	1	11/19/2014 23:22	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199515	1	11/19/2014 23:22	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 62
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 4:00:00 PM
Lab ID:	1411D32-011	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	51		0.39	1.0	ug/L	199515	1	11/20/2014 03:54	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199515	1	11/20/2014 03:54	NP
Methyl tert-butyl ether	2.6		0.42	1.0	ug/L	199515	1	11/20/2014 03:54	NP
Naphthalene	65		0.20	5.0	ug/L	199515	1	11/20/2014 03:54	NP
Toluene	BRL		0.38	1.0	ug/L	199515	1	11/20/2014 03:54	NP
Xylenes, Total	0.93	J	0.83	1.0	ug/L	199515	1	11/20/2014 03:54	NP
Surr: 4-Bromofluorobenzene	94.1		0	70-130	%REC	199515	1	11/20/2014 03:54	NP
Surr: Dibromofluoromethane	96.7		0	70-130	%REC	199515	1	11/20/2014 03:54	NP
Surr: Toluene-d8	98.8		0	70-130	%REC	199515	1	11/20/2014 03:54	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	730		9.5	100	ug/L	199515	1	11/20/2014 03:54	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199515	1	11/20/2014 03:54	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199515	1	11/20/2014 03:54	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 70
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 4:20:00 PM
Lab ID:	1411D32-012	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199515	1	11/20/2014 04:19	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199515	1	11/20/2014 04:19	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199515	1	11/20/2014 04:19	NP
Naphthalene	1.5	J	0.20	5.0	ug/L	199515	1	11/20/2014 04:19	NP
Toluene	BRL		0.38	1.0	ug/L	199515	1	11/20/2014 04:19	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199515	1	11/20/2014 04:19	NP
Surr: 4-Bromofluorobenzene	90		0	70-130	%REC	199515	1	11/20/2014 04:19	NP
Surr: Dibromofluoromethane	99.5		0	70-130	%REC	199515	1	11/20/2014 04:19	NP
Surr: Toluene-d8	96		0	70-130	%REC	199515	1	11/20/2014 04:19	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199515	1	11/20/2014 04:19	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199515	1	11/20/2014 04:19	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199515	1	11/20/2014 04:19	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 40
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 4:45:00 PM
Lab ID:	1411D32-013	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					**(SW5030B)**				
Benzene	140		0.39	1.0	ug/L	199515	1	11/20/2014 19:22	NP
Ethylbenzene	300		8.1	20	ug/L	199515	20	11/20/2014 01:01	NP
Methyl tert-butyl ether	12		0.42	1.0	ug/L	199515	1	11/20/2014 19:22	NP
Naphthalene	150		4.0	100	ug/L	199515	20	11/20/2014 01:01	NP
Toluene	970		7.5	20	ug/L	199515	20	11/20/2014 01:01	NP
Xylenes, Total	2900		17	20	ug/L	199515	20	11/20/2014 01:01	NP
Surr: 4-Bromofluorobenzene	102		0	70-130	%REC	199515	20	11/20/2014 01:01	NP
Surr: 4-Bromofluorobenzene	104		0	70-130	%REC	199515	1	11/20/2014 19:22	NP
Surr: Dibromofluoromethane	88		0	70-130	%REC	199515	1	11/20/2014 19:22	NP
Surr: Dibromofluoromethane	97.9		0	70-130	%REC	199515	20	11/20/2014 01:01	NP
Surr: Toluene-d8	95.6		0	70-130	%REC	199515	1	11/20/2014 19:22	NP
Surr: Toluene-d8	97.2		0	70-130	%REC	199515	20	11/20/2014 01:01	NP
Oxygenates SW8260B					**(SW5030B)**				
tert-Amyl alcohol	600		9.5	100	ug/L	199515	1	11/20/2014 19:22	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199515	1	11/20/2014 19:22	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199515	1	11/20/2014 19:22	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 39
Project Name:	Clouds Chevron	**Collection Date:**	11/12/2014 11:30:00 AM
Lab ID:	1411D32-014	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	11		0.39	1.0	ug/L	199515	1	11/20/2014 19:47	NP
Ethylbenzene	1000		8.1	20	ug/L	199515	20	11/20/2014 01:26	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199515	1	11/20/2014 19:47	NP
Naphthalene	340		4.0	100	ug/L	199515	20	11/20/2014 01:26	NP
Toluene	1500		7.5	20	ug/L	199515	20	11/20/2014 01:26	NP
Xylenes, Total	3700		17	20	ug/L	199515	20	11/20/2014 01:26	NP
Surr: 4-Bromofluorobenzene	101		0	70-130	%REC	199515	20	11/20/2014 01:26	NP
Surr: 4-Bromofluorobenzene	104		0	70-130	%REC	199515	1	11/20/2014 19:47	NP
Surr: Dibromofluoromethane	89.2		0	70-130	%REC	199515	1	11/20/2014 19:47	NP
Surr: Dibromofluoromethane	94.2		0	70-130	%REC	199515	20	11/20/2014 01:26	NP
Surr: Toluene-d8	95.3		0	70-130	%REC	199515	1	11/20/2014 19:47	NP
Surr: Toluene-d8	96.3		0	70-130	%REC	199515	20	11/20/2014 01:26	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	220		9.5	100	ug/L	199515	1	11/20/2014 19:47	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199515	1	11/20/2014 19:47	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199515	1	11/20/2014 19:47	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 67
Project Name:	Clouds Chevron	**Collection Date:**	11/12/2014 11:40:00 AM
Lab ID:	1411D32-015	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199515	1	11/20/2014 04:43	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199515	1	11/20/2014 04:43	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199515	1	11/20/2014 04:43	NP
Naphthalene	BRL		0.20	5.0	ug/L	199515	1	11/20/2014 04:43	NP
Toluene	BRL		0.38	1.0	ug/L	199515	1	11/20/2014 04:43	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199515	1	11/20/2014 04:43	NP
Surr: 4-Bromofluorobenzene	93.2		0	70-130	%REC	199515	1	11/20/2014 04:43	NP
Surr: Dibromofluoromethane	102		0	70-130	%REC	199515	1	11/20/2014 04:43	NP
Surr: Toluene-d8	96.6		0	70-130	%REC	199515	1	11/20/2014 04:43	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199515	1	11/20/2014 04:43	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199515	1	11/20/2014 04:43	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199515	1	11/20/2014 04:43	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 42
Project Name:	Clouds Chevron	**Collection Date:**	11/12/2014 11:50:00 AM
Lab ID:	1411D32-016	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199515	1	11/20/2014 07:52	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199515	1	11/20/2014 07:52	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199515	1	11/20/2014 07:52	NP
Naphthalene	BRL		0.20	5.0	ug/L	199515	1	11/20/2014 07:52	NP
Toluene	BRL		0.38	1.0	ug/L	199515	1	11/20/2014 07:52	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199515	1	11/20/2014 07:52	NP
Surr: 4-Bromofluorobenzene	93.3		0	70-130	%REC	199515	1	11/20/2014 07:52	NP
Surr: Dibromofluoromethane	100		0	70-130	%REC	199515	1	11/20/2014 07:52	NP
Surr: Toluene-d8	95.7		0	70-130	%REC	199515	1	11/20/2014 07:52	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199515	1	11/20/2014 07:52	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199515	1	11/20/2014 07:52	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199515	1	11/20/2014 07:52	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 38
Project Name:	Clouds Chevron	**Collection Date:**	11/12/2014 12:40:00 PM
Lab ID:	1411D32-017	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199515	1	11/20/2014 08:17	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199515	1	11/20/2014 08:17	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199515	1	11/20/2014 08:17	NP
Naphthalene	BRL		0.20	5.0	ug/L	199515	1	11/20/2014 08:17	NP
Toluene	BRL		0.38	1.0	ug/L	199515	1	11/20/2014 08:17	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199515	1	11/20/2014 08:17	NP
Surr: 4-Bromofluorobenzene	90.4		0	70-130	%REC	199515	1	11/20/2014 08:17	NP
Surr: Dibromofluoromethane	102		0	70-130	%REC	199515	1	11/20/2014 08:17	NP
Surr: Toluene-d8	97.4		0	70-130	%REC	199515	1	11/20/2014 08:17	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199515	1	11/20/2014 08:17	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199515	1	11/20/2014 08:17	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199515	1	11/20/2014 08:17	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 31
Project Name:	Clouds Chevron	**Collection Date:**	11/12/2014 1:00:00 PM
Lab ID:	1411D32-018	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					**(SW5030B)**				
Benzene	30		0.39	1.0	ug/L	199515	1	11/20/2014 18:57	NP
Ethylbenzene	310		20	50	ug/L	199515	50	11/20/2014 00:37	NP
Methyl tert-butyl ether	4.1		0.42	1.0	ug/L	199515	1	11/20/2014 18:57	NP
Naphthalene	160		10	100	ug/L	199515	50	11/20/2014 00:37	NP
Toluene	9.8		0.38	1.0	ug/L	199515	1	11/20/2014 18:57	NP
Xylenes, Total	9.3		0.83	1.0	ug/L	199515	1	11/20/2014 18:57	NP
Surr: 4-Bromofluorobenzene	95.3		0	70-130	%REC	199515	50	11/20/2014 00:37	NP
Surr: 4-Bromofluorobenzene	102		0	70-130	%REC	199515	1	11/20/2014 18:57	NP
Surr: Dibromofluoromethane	101		0	70-130	%REC	199515	50	11/20/2014 00:37	NP
Surr: Dibromofluoromethane	91.7		0	70-130	%REC	199515	1	11/20/2014 18:57	NP
Surr: Toluene-d8	97.9		0	70-130	%REC	199515	50	11/20/2014 00:37	NP
Surr: Toluene-d8	98.5		0	70-130	%REC	199515	1	11/20/2014 18:57	NP
Oxygenates SW8260B					**(SW5030B)**				
tert-Amyl alcohol	460		9.5	100	ug/L	199515	1	11/20/2014 18:57	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199515	1	11/20/2014 18:57	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199515	1	11/20/2014 18:57	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 37
Project Name:	Clouds Chevron	**Collection Date:**	11/12/2014 1:15:00 PM
Lab ID:	1411D32-019	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199515	1	11/20/2014 14:51	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199515	1	11/20/2014 14:51	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199515	1	11/20/2014 14:51	NP
Naphthalene	BRL		0.20	5.0	ug/L	199515	1	11/20/2014 14:51	NP
Toluene	BRL		0.38	1.0	ug/L	199515	1	11/20/2014 14:51	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199515	1	11/20/2014 14:51	NP
Surr: 4-Bromofluorobenzene	92.3		0	70-130	%REC	199515	1	11/20/2014 14:51	NP
Surr: Dibromofluoromethane	99.8		0	70-130	%REC	199515	1	11/20/2014 14:51	NP
Surr: Toluene-d8	95.3		0	70-130	%REC	199515	1	11/20/2014 14:51	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199515	1	11/20/2014 14:51	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199515	1	11/20/2014 14:51	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199515	1	11/20/2014 14:51	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 36
Project Name:	Clouds Chevron	**Collection Date:**	11/12/2014 3:00:00 PM
Lab ID:	1411D32-020	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199515	1	11/20/2014 15:15	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199515	1	11/20/2014 15:15	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199515	1	11/20/2014 15:15	NP
Naphthalene	BRL		0.20	5.0	ug/L	199515	1	11/20/2014 15:15	NP
Toluene	BRL		0.38	1.0	ug/L	199515	1	11/20/2014 15:15	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199515	1	11/20/2014 15:15	NP
Surr: 4-Bromofluorobenzene	91.4		0	70-130	%REC	199515	1	11/20/2014 15:15	NP
Surr: Dibromofluoromethane	99.4		0	70-130	%REC	199515	1	11/20/2014 15:15	NP
Surr: Toluene-d8	97.6		0	70-130	%REC	199515	1	11/20/2014 15:15	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199515	1	11/20/2014 15:15	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199515	1	11/20/2014 15:15	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199515	1	11/20/2014 15:15	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 30
Project Name:	Clouds Chevron	**Collection Date:**	11/12/2014 4:00:00 PM
Lab ID:	1411D32-021	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199525	1	11/21/2014 01:33	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199525	1	11/21/2014 01:33	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199525	1	11/21/2014 01:33	NP
Naphthalene	BRL		0.20	5.0	ug/L	199525	1	11/21/2014 01:33	NP
Toluene	BRL		0.38	1.0	ug/L	199525	1	11/21/2014 01:33	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199525	1	11/21/2014 01:33	NP
Surr: 4-Bromofluorobenzene	95.9		0	70-130	%REC	199525	1	11/21/2014 01:33	NP
Surr: Dibromofluoromethane	95.2		0	70-130	%REC	199525	1	11/21/2014 01:33	NP
Surr: Toluene-d8	93.2		0	70-130	%REC	199525	1	11/21/2014 01:33	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199525	1	11/21/2014 01:33	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199525	1	11/21/2014 01:33	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199525	1	11/21/2014 01:33	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 6
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 2:30:00 PM
Lab ID:	1411D32-022	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199525	1	11/21/2014 01:58	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199525	1	11/21/2014 01:58	NP
Methyl tert-butyl ether	0.80	J	0.42	1.0	ug/L	199525	1	11/21/2014 01:58	NP
Naphthalene	BRL		0.20	5.0	ug/L	199525	1	11/21/2014 01:58	NP
Toluene	BRL		0.38	1.0	ug/L	199525	1	11/21/2014 01:58	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199525	1	11/21/2014 01:58	NP
Surr: 4-Bromofluorobenzene	91.9		0	70-130	%REC	199525	1	11/21/2014 01:58	NP
Surr: Dibromofluoromethane	98.4		0	70-130	%REC	199525	1	11/21/2014 01:58	NP
Surr: Toluene-d8	97.1		0	70-130	%REC	199525	1	11/21/2014 01:58	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199525	1	11/21/2014 01:58	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199525	1	11/21/2014 01:58	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199525	1	11/21/2014 01:58	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 32
Project Name:	Clouds Chevron	**Collection Date:**	11/12/2014 3:15:00 PM
Lab ID:	1411D32-023	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	4.0		0.39	1.0	ug/L	199525	1	11/22/2014 14:40	NP
Ethylbenzene	72		0.40	1.0	ug/L	199525	1	11/22/2014 14:40	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199525	1	11/22/2014 14:40	NP
Naphthalene	45		0.20	5.0	ug/L	199525	1	11/22/2014 14:40	NP
Toluene	13		0.38	1.0	ug/L	199525	1	11/22/2014 14:40	NP
Xylenes, Total	10		0.83	1.0	ug/L	199525	1	11/22/2014 14:40	NP
Surr: 4-Bromofluorobenzene	99.4		0	70-130	%REC	199525	1	11/22/2014 14:40	NP
Surr: Dibromofluoromethane	96.2		0	70-130	%REC	199525	1	11/22/2014 14:40	NP
Surr: Toluene-d8	100		0	70-130	%REC	199525	1	11/22/2014 14:40	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199525	1	11/22/2014 14:40	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199525	1	11/22/2014 14:40	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199525	1	11/22/2014 14:40	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 33
Project Name:	Clouds Chevron	**Collection Date:**	11/12/2014 3:45:00 PM
Lab ID:	1411D32-024	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	130		0.39	1.0	ug/L	199525	1	11/24/2014 14:30	NP
Ethylbenzene	210		8.1	20	ug/L	199525	20	11/20/2014 17:19	NP
Methyl tert-butyl ether	1.2		0.42	1.0	ug/L	199525	1	11/24/2014 14:30	NP
Naphthalene	71		0.20	5.0	ug/L	199525	1	11/24/2014 14:30	NP
Toluene	410		7.5	20	ug/L	199525	20	11/20/2014 17:19	NP
Xylenes, Total	550		17	20	ug/L	199525	20	11/20/2014 17:19	NP
Surr: 4-Bromofluorobenzene	101		0	70-130	%REC	199525	1	11/24/2014 14:30	NP
Surr: 4-Bromofluorobenzene	96.3		0	70-130	%REC	199525	20	11/20/2014 17:19	NP
Surr: Dibromofluoromethane	91		0	70-130	%REC	199525	1	11/24/2014 14:30	NP
Surr: Dibromofluoromethane	96.8		0	70-130	%REC	199525	20	11/20/2014 17:19	NP
Surr: Toluene-d8	97.2		0	70-130	%REC	199525	1	11/24/2014 14:30	NP
Surr: Toluene-d8	94.2		0	70-130	%REC	199525	20	11/20/2014 17:19	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	1000		9.5	100	ug/L	199525	1	11/24/2014 14:30	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199525	1	11/24/2014 14:30	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199525	1	11/24/2014 14:30	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 34
Project Name:	Clouds Chevron	**Collection Date:**	11/12/2014 2:25:00 PM
Lab ID:	1411D32-025	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199525	1	11/21/2014 02:23	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199525	1	11/21/2014 02:23	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199525	1	11/21/2014 02:23	NP
Naphthalene	BRL		0.20	5.0	ug/L	199525	1	11/21/2014 02:23	NP
Toluene	BRL		0.38	1.0	ug/L	199525	1	11/21/2014 02:23	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199525	1	11/21/2014 02:23	NP
Surr: 4-Bromofluorobenzene	93.2		0	70-130	%REC	199525	1	11/21/2014 02:23	NP
Surr: Dibromofluoromethane	97.9		0	70-130	%REC	199525	1	11/21/2014 02:23	NP
Surr: Toluene-d8	95.7		0	70-130	%REC	199525	1	11/21/2014 02:23	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199525	1	11/21/2014 02:23	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199525	1	11/21/2014 02:23	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199525	1	11/21/2014 02:23	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DW 5
Project Name:	Clouds Chevron	**Collection Date:**	11/12/2014 2:10:00 PM
Lab ID:	1411D32-026	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	6700		19	50	ug/L	199525	50	11/21/2014 20:21	NP
Ethylbenzene	240		20	50	ug/L	199525	50	11/21/2014 20:21	NP
Methyl tert-butyl ether	1400		21	50	ug/L	199525	50	11/21/2014 20:21	NP
Naphthalene	190	J	10	250	ug/L	199525	50	11/21/2014 20:21	NP
Toluene	380		19	50	ug/L	199525	50	11/21/2014 20:21	NP
Xylenes, Total	3100		41	50	ug/L	199525	50	11/21/2014 20:21	NP
Surr: 4-Bromofluorobenzene	98.8		0	70-130	%REC	199525	50	11/21/2014 20:21	NP
Surr: Dibromofluoromethane	92.9		0	70-130	%REC	199525	50	11/21/2014 20:21	NP
Surr: Toluene-d8	93.3		0	70-130	%REC	199525	50	11/21/2014 20:21	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	5300		480	5000	ug/L	199525	50	11/21/2014 20:21	NP
tert-Amyl methyl ether	110		1.0	10	ug/L	199525	1	11/21/2014 02:47	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199525	1	11/21/2014 02:47	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 35
Project Name:	Clouds Chevron	**Collection Date:**	11/12/2014 1:30:00 PM
Lab ID:	1411D32-027	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	6000		19	50	ug/L	199525	50	11/20/2014 16:30	NP
Ethylbenzene	2800		20	50	ug/L	199525	50	11/20/2014 16:30	NP
Methyl tert-butyl ether	330		21	50	ug/L	199525	50	11/20/2014 16:30	NP
Naphthalene	700		10	250	ug/L	199525	50	11/20/2014 16:30	NP
Toluene	7200		19	50	ug/L	199525	50	11/20/2014 16:30	NP
Xylenes, Total	7400		41	50	ug/L	199525	50	11/20/2014 16:30	NP
Surr: 4-Bromofluorobenzene	97.1		0	70-130	%REC	199525	50	11/20/2014 16:30	NP
Surr: Dibromofluoromethane	94.2		0	70-130	%REC	199525	50	11/20/2014 16:30	NP
Surr: Toluene-d8	95		0	70-130	%REC	199525	50	11/20/2014 16:30	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	4700	J	480	5000	ug/L	199525	50	11/20/2014 16:30	NP
tert-Amyl methyl ether	76	J	50	500	ug/L	199525	50	11/20/2014 16:30	NP
tert-Butyl Alcohol	BRL		340	5000	ug/L	199525	50	11/20/2014 16:30	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 3
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 2:00:00 PM
Lab ID:	1411D32-028	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					(SW5030B)				
Benzene	4600		19	50	ug/L	199525	50	11/21/2014 12:33	NP
Ethylbenzene	620		20	50	ug/L	199525	50	11/21/2014 12:33	NP
Methyl tert-butyl ether	1300		21	50	ug/L	199525	50	11/21/2014 12:33	NP
Naphthalene	280		10	250	ug/L	199525	50	11/21/2014 12:33	NP
Toluene	11000		38	100	ug/L	199525	100	11/24/2014 12:02	NP
Xylenes, Total	8700		41	50	ug/L	199525	50	11/21/2014 12:33	NP
Surr: 4-Bromofluorobenzene	99.6		0	70-130	%REC	199525	50	11/21/2014 12:33	NP
Surr: 4-Bromofluorobenzene	100		0	70-130	%REC	199525	100	11/24/2014 12:02	NP
Surr: Dibromofluoromethane	94.8		0	70-130	%REC	199525	50	11/21/2014 12:33	NP
Surr: Dibromofluoromethane	95.2		0	70-130	%REC	199525	100	11/24/2014 12:02	NP
Surr: Toluene-d8	95.4		0	70-130	%REC	199525	50	11/21/2014 12:33	NP
Surr: Toluene-d8	92.7		0	70-130	%REC	199525	100	11/24/2014 12:02	NP
Oxygenates SW8260B					(SW5030B)				
tert-Amyl alcohol	BRL		480	5000	ug/L	199525	50	11/21/2014 12:33	NP
tert-Amyl methyl ether	310	J	50	500	ug/L	199525	50	11/21/2014 12:33	NP
tert-Butyl Alcohol	BRL		340	5000	ug/L	199525	50	11/21/2014 12:33	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 26
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 2:10:00 PM
Lab ID:	1411D32-029	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199525	1	11/22/2014 15:05	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199525	1	11/22/2014 15:05	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199525	1	11/22/2014 15:05	NP
Naphthalene	BRL		0.20	5.0	ug/L	199525	1	11/22/2014 15:05	NP
Toluene	BRL		0.38	1.0	ug/L	199525	1	11/22/2014 15:05	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199525	1	11/22/2014 15:05	NP
Surr: 4-Bromofluorobenzene	91.4		0	70-130	%REC	199525	1	11/22/2014 15:05	NP
Surr: Dibromofluoromethane	98.8		0	70-130	%REC	199525	1	11/22/2014 15:05	NP
Surr: Toluene-d8	94.7		0	70-130	%REC	199525	1	11/22/2014 15:05	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199525	1	11/22/2014 15:05	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199525	1	11/22/2014 15:05	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199525	1	11/22/2014 15:05	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 7
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 2:20:00 PM
Lab ID:	1411D32-030	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	0.71	J	0.39	1.0	ug/L	199525	1	11/21/2014 03:36	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199525	1	11/21/2014 03:36	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199525	1	11/21/2014 03:36	NP
Naphthalene	BRL		0.20	5.0	ug/L	199525	1	11/21/2014 03:36	NP
Toluene	BRL		0.38	1.0	ug/L	199525	1	11/21/2014 03:36	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199525	1	11/21/2014 03:36	NP
Surr: 4-Bromofluorobenzene	93		0	70-130	%REC	199525	1	11/21/2014 03:36	NP
Surr: Dibromofluoromethane	96.9		0	70-130	%REC	199525	1	11/21/2014 03:36	NP
Surr: Toluene-d8	94.2		0	70-130	%REC	199525	1	11/21/2014 03:36	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199525	1	11/21/2014 03:36	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199525	1	11/21/2014 03:36	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199525	1	11/21/2014 03:36	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 4
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 1:50:00 PM
Lab ID:	1411D32-031	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199525	1	11/21/2014 04:01	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199525	1	11/21/2014 04:01	NP
Methyl tert-butyl ether	1.6		0.42	1.0	ug/L	199525	1	11/21/2014 04:01	NP
Naphthalene	BRL		0.20	5.0	ug/L	199525	1	11/21/2014 04:01	NP
Toluene	BRL		0.38	1.0	ug/L	199525	1	11/21/2014 04:01	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199525	1	11/21/2014 04:01	NP
Surr: 4-Bromofluorobenzene	93.9		0	70-130	%REC	199525	1	11/21/2014 04:01	NP
Surr: Dibromofluoromethane	96.5		0	70-130	%REC	199525	1	11/21/2014 04:01	NP
Surr: Toluene-d8	95		0	70-130	%REC	199525	1	11/21/2014 04:01	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199525	1	11/21/2014 04:01	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199525	1	11/21/2014 04:01	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199525	1	11/21/2014 04:01	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 8
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 1:00:00 PM
Lab ID:	1411D32-032	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199525	1	11/21/2014 04:26	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199525	1	11/21/2014 04:26	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199525	1	11/21/2014 04:26	NP
Naphthalene	BRL		0.20	5.0	ug/L	199525	1	11/21/2014 04:26	NP
Toluene	BRL		0.38	1.0	ug/L	199525	1	11/21/2014 04:26	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199525	1	11/21/2014 04:26	NP
Surr: 4-Bromofluorobenzene	91.7		0	70-130	%REC	199525	1	11/21/2014 04:26	NP
Surr: Dibromofluoromethane	97.2		0	70-130	%REC	199525	1	11/21/2014 04:26	NP
Surr: Toluene-d8	96.4		0	70-130	%REC	199525	1	11/21/2014 04:26	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199525	1	11/21/2014 04:26	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199525	1	11/21/2014 04:26	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199525	1	11/21/2014 04:26	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DW 2
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 1:40:00 PM
Lab ID:	1411D32-033	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199525	1	11/21/2014 04:50	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199525	1	11/21/2014 04:50	NP
Methyl tert-butyl ether	10.0		0.42	1.0	ug/L	199525	1	11/21/2014 04:50	NP
Naphthalene	BRL		0.20	5.0	ug/L	199525	1	11/21/2014 04:50	NP
Toluene	BRL		0.38	1.0	ug/L	199525	1	11/21/2014 04:50	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199525	1	11/21/2014 04:50	NP
Surr: 4-Bromofluorobenzene	93		0	70-130	%REC	199525	1	11/21/2014 04:50	NP
Surr: Dibromofluoromethane	99.9		0	70-130	%REC	199525	1	11/21/2014 04:50	NP
Surr: Toluene-d8	97.3		0	70-130	%REC	199525	1	11/21/2014 04:50	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199525	1	11/21/2014 04:50	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199525	1	11/21/2014 04:50	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199525	1	11/21/2014 04:50	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 28
Project Name:	Clouds Chevron	**Collection Date:**	11/13/2014 8:15:00 AM
Lab ID:	1411D32-034	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199525	1	11/21/2014 05:15	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199525	1	11/21/2014 05:15	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199525	1	11/21/2014 05:15	NP
Naphthalene	BRL		0.20	5.0	ug/L	199525	1	11/21/2014 05:15	NP
Toluene	BRL		0.38	1.0	ug/L	199525	1	11/21/2014 05:15	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199525	1	11/21/2014 05:15	NP
Surr: 4-Bromofluorobenzene	93.2		0	70-130	%REC	199525	1	11/21/2014 05:15	NP
Surr: Dibromofluoromethane	101		0	70-130	%REC	199525	1	11/21/2014 05:15	NP
Surr: Toluene-d8	96.9		0	70-130	%REC	199525	1	11/21/2014 05:15	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199525	1	11/21/2014 05:15	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199525	1	11/21/2014 05:15	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199525	1	11/21/2014 05:15	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 27
Project Name:	Clouds Chevron	**Collection Date:**	11/13/2014 8:30:00 AM
Lab ID:	1411D32-035	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199525	1	11/21/2014 05:39	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199525	1	11/21/2014 05:39	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199525	1	11/21/2014 05:39	NP
Naphthalene	BRL		0.20	5.0	ug/L	199525	1	11/21/2014 05:39	NP
Toluene	BRL		0.38	1.0	ug/L	199525	1	11/21/2014 05:39	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199525	1	11/21/2014 05:39	NP
Surr: 4-Bromofluorobenzene	94.3		0	70-130	%REC	199525	1	11/21/2014 05:39	NP
Surr: Dibromofluoromethane	99.6		0	70-130	%REC	199525	1	11/21/2014 05:39	NP
Surr: Toluene-d8	96.3		0	70-130	%REC	199525	1	11/21/2014 05:39	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199525	1	11/21/2014 05:39	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199525	1	11/21/2014 05:39	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199525	1	11/21/2014 05:39	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 22
Project Name:	Clouds Chevron	**Collection Date:**	11/13/2014 9:00:00 AM
Lab ID:	1411D32-036	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					**(SW5030B)**				
Benzene	6300		190	500	ug/L	199525	500	11/21/2014 18:18	NP
Ethylbenzene	700		8.1	20	ug/L	199525	20	11/20/2014 17:44	NP
Methyl tert-butyl ether	BRL		8.5	20	ug/L	199525	20	11/20/2014 17:44	NP
Naphthalene	1200		4.0	100	ug/L	199525	20	11/20/2014 17:44	NP
Toluene	23000		190	500	ug/L	199525	500	11/21/2014 18:18	NP
Xylenes, Total	21000		410	500	ug/L	199525	500	11/21/2014 18:18	NP
Surr: 4-Bromofluorobenzene	101		0	70-130	%REC	199525	20	11/20/2014 17:44	NP
Surr: 4-Bromofluorobenzene	101		0	70-130	%REC	199525	500	11/21/2014 18:18	NP
Surr: Dibromofluoromethane	95.2		0	70-130	%REC	199525	500	11/21/2014 18:18	NP
Surr: Dibromofluoromethane	92.9		0	70-130	%REC	199525	20	11/20/2014 17:44	NP
Surr: Toluene-d8	94.7		0	70-130	%REC	199525	500	11/21/2014 18:18	NP
Surr: Toluene-d8	96		0	70-130	%REC	199525	20	11/20/2014 17:44	NP
Oxygenates SW8260B					**(SW5030B)**				
tert-Amyl alcohol	9600		190	2000	ug/L	199525	20	11/20/2014 17:44	NP
tert-Amyl methyl ether	BRL		20	200	ug/L	199525	20	11/20/2014 17:44	NP
tert-Butyl Alcohol	BRL		140	2000	ug/L	199525	20	11/20/2014 17:44	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 5 AR
Project Name:	Clouds Chevron	**Collection Date:**	11/13/2014 9:15:00 AM
Lab ID:	1411D32-037	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					**(SW5030B)**				
Benzene	830		3.9	10	ug/L	199525	10	11/24/2014 11:37	NP
Ethylbenzene	98		0.40	1.0	ug/L	199525	1	11/24/2014 11:12	NP
Methyl tert-butyl ether	13		0.42	1.0	ug/L	199525	1	11/24/2014 11:12	NP
Naphthalene	130		0.20	5.0	ug/L	199525	1	11/24/2014 11:12	NP
Toluene	180		0.38	1.0	ug/L	199525	1	11/24/2014 11:12	NP
Xylenes, Total	670		8.3	10	ug/L	199525	10	11/24/2014 11:37	NP
Surr: 4-Bromofluorobenzene	96.5		0	70-130	%REC	199525	10	11/24/2014 11:37	NP
Surr: 4-Bromofluorobenzene	101		0	70-130	%REC	199525	1	11/24/2014 11:12	NP
Surr: Dibromofluoromethane	93.3		0	70-130	%REC	199525	1	11/24/2014 11:12	NP
Surr: Dibromofluoromethane	98.1		0	70-130	%REC	199525	10	11/24/2014 11:37	NP
Surr: Toluene-d8	94.5		0	70-130	%REC	199525	10	11/24/2014 11:37	NP
Surr: Toluene-d8	98.1		0	70-130	%REC	199525	1	11/24/2014 11:12	NP
Oxygenates SW8260B					**(SW5030B)**				
tert-Amyl alcohol	BRL		9.5	100	ug/L	199525	1	11/24/2014 11:12	NP
tert-Amyl methyl ether	13		1.0	10	ug/L	199525	1	11/24/2014 11:12	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199525	1	11/24/2014 11:12	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 20
Project Name:	Clouds Chevron	**Collection Date:**	11/13/2014 9:30:00 AM
Lab ID:	1411D32-038	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	1400		39	100	ug/L	199525	100	11/21/2014 19:32	NP
Ethylbenzene	500		40	100	ug/L	199525	100	11/21/2014 19:32	NP
Methyl tert-butyl ether	120		42	100	ug/L	199525	100	11/21/2014 19:32	NP
Naphthalene	1100		20	500	ug/L	199525	100	11/21/2014 19:32	NP
Toluene	12000		38	100	ug/L	199525	100	11/21/2014 19:32	NP
Xylenes, Total	14000		83	100	ug/L	199525	100	11/21/2014 19:32	NP
Surr: 4-Bromofluorobenzene	101		0	70-130	%REC	199525	100	11/21/2014 19:32	NP
Surr: Dibromofluoromethane	96.4		0	70-130	%REC	199525	100	11/21/2014 19:32	NP
Surr: Toluene-d8	93.7		0	70-130	%REC	199525	100	11/21/2014 19:32	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		950	10000	ug/L	199525	100	11/20/2014 16:05	NP
tert-Amyl methyl ether	BRL		100	1000	ug/L	199525	100	11/20/2014 16:05	NP
tert-Butyl Alcohol	BRL		680	10000	ug/L	199525	100	11/20/2014 16:05	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DW 14
Project Name:	Clouds Chevron	**Collection Date:**	11/13/2014 11:25:00 AM
Lab ID:	1411D32-039	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					**(SW5030B)**				
Benzene	BRL		0.39	1.0	ug/L	199525	1	11/21/2014 06:03	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199525	1	11/21/2014 06:03	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199525	1	11/21/2014 06:03	NP
Naphthalene	BRL		0.20	5.0	ug/L	199525	1	11/21/2014 06:03	NP
Toluene	1.0		0.38	1.0	ug/L	199525	1	11/21/2014 06:03	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199525	1	11/21/2014 06:03	NP
Surr: 4-Bromofluorobenzene	89.2		0	70-130	%REC	199525	1	11/21/2014 06:03	NP
Surr: Dibromofluoromethane	102		0	70-130	%REC	199525	1	11/21/2014 06:03	NP
Surr: Toluene-d8	98.6		0	70-130	%REC	199525	1	11/21/2014 06:03	NP
Oxygenates SW8260B					**(SW5030B)**				
tert-Amyl alcohol	BRL		9.5	100	ug/L	199525	1	11/21/2014 06:03	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199525	1	11/21/2014 06:03	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199525	1	11/21/2014 06:03	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DW 13
Project Name:	Clouds Chevron	**Collection Date:**	11/13/2014 12:00:00 PM
Lab ID:	1411D32-040	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					**(SW5030B)**				
Benzene	2000		7.7	20	ug/L	199525	20	11/20/2014 18:33	NP
Ethylbenzene	2800		8.1	20	ug/L	199525	20	11/20/2014 18:33	NP
Methyl tert-butyl ether	23		8.5	20	ug/L	199525	20	11/20/2014 18:33	NP
Naphthalene	650		4.0	100	ug/L	199525	20	11/20/2014 18:33	NP
Toluene	20000		190	500	ug/L	199525	500	11/21/2014 18:43	NP
Xylenes, Total	10000		410	500	ug/L	199525	500	11/21/2014 18:43	NP
Surr: 4-Bromofluorobenzene	99		0	70-130	%REC	199525	500	11/21/2014 18:43	NP
Surr: 4-Bromofluorobenzene	97.8		0	70-130	%REC	199525	20	11/20/2014 18:33	NP
Surr: Dibromofluoromethane	96.3		0	70-130	%REC	199525	500	11/21/2014 18:43	NP
Surr: Dibromofluoromethane	91.3		0	70-130	%REC	199525	20	11/20/2014 18:33	NP
Surr: Toluene-d8	95.6		0	70-130	%REC	199525	500	11/21/2014 18:43	NP
Surr: Toluene-d8	94.3		0	70-130	%REC	199525	20	11/20/2014 18:33	NP
Oxygenates SW8260B					**(SW5030B)**				
tert-Amyl alcohol	2700		190	2000	ug/L	199525	20	11/20/2014 18:33	NP
tert-Amyl methyl ether	BRL		20	200	ug/L	199525	20	11/20/2014 18:33	NP
tert-Butyl Alcohol	BRL		140	2000	ug/L	199525	20	11/20/2014 18:33	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 23
Project Name:	Clouds Chevron	**Collection Date:**	11/13/2014 12:15:00 PM
Lab ID:	1411D32-041	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	890		19	50	ug/L	199600	50	11/21/2014 20:46	NP
Ethylbenzene	450		20	50	ug/L	199600	50	11/21/2014 20:46	NP
Methyl tert-butyl ether	BRL		21	50	ug/L	199600	50	11/21/2014 20:46	NP
Naphthalene	1200		10	250	ug/L	199600	50	11/21/2014 20:46	NP
Toluene	3600		19	50	ug/L	199600	50	11/21/2014 20:46	NP
Xylenes, Total	16000		41	50	ug/L	199600	50	11/21/2014 20:46	NP
Surr: 4-Bromofluorobenzene	100		0	70-130	%REC	199600	50	11/21/2014 20:46	NP
Surr: Dibromofluoromethane	94.2		0	70-130	%REC	199600	50	11/21/2014 20:46	NP
Surr: Toluene-d8	95.2		0	70-130	%REC	199600	50	11/21/2014 20:46	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	1500	J	480	5000	ug/L	199600	50	11/21/2014 20:46	NP
tert-Amyl methyl ether	BRL		50	500	ug/L	199600	50	11/21/2014 20:46	NP
tert-Butyl Alcohol	BRL		340	5000	ug/L	199600	50	11/21/2014 20:46	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 19
Project Name:	Clouds Chevron	**Collection Date:**	11/13/2014 12:30:00 PM
Lab ID:	1411D32-042	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	1400		19	50	ug/L	199600	50	11/21/2014 00:19	NP
Ethylbenzene	1600		20	50	ug/L	199600	50	11/21/2014 00:19	NP
Methyl tert-butyl ether	BRL		21	50	ug/L	199600	50	11/21/2014 00:19	NP
Naphthalene	1400		10	250	ug/L	199600	50	11/21/2014 00:19	NP
Toluene	28000		190	500	ug/L	199600	500	11/21/2014 19:07	NP
Xylenes, Total	24000		41	50	ug/L	199600	50	11/21/2014 00:19	NP
Surr: 4-Bromofluorobenzene	96.8		0	70-130	%REC	199600	500	11/21/2014 19:07	NP
Surr: 4-Bromofluorobenzene	98.4		0	70-130	%REC	199600	50	11/21/2014 00:19	NP
Surr: Dibromofluoromethane	91.8		0	70-130	%REC	199600	50	11/21/2014 00:19	NP
Surr: Dibromofluoromethane	97.2		0	70-130	%REC	199600	500	11/21/2014 19:07	NP
Surr: Toluene-d8	93.8		0	70-130	%REC	199600	50	11/21/2014 00:19	NP
Surr: Toluene-d8	94.4		0	70-130	%REC	199600	500	11/21/2014 19:07	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	1300	J	480	5000	ug/L	199600	50	11/21/2014 00:19	NP
tert-Amyl methyl ether	BRL		50	500	ug/L	199600	50	11/21/2014 00:19	NP
tert-Butyl Alcohol	BRL		340	5000	ug/L	199600	50	11/21/2014 00:19	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 9
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 9:40:00 AM
Lab ID:	1411D32-043	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	380		39	100	ug/L	199600	100	11/21/2014 19:57	NP
Ethylbenzene	1900		40	100	ug/L	199600	100	11/21/2014 19:57	NP
Methyl tert-butyl ether	5.0		0.42	1.0	ug/L	199600	1	11/21/2014 06:28	NP
Naphthalene	650		20	500	ug/L	199600	100	11/21/2014 19:57	NP
Toluene	11000		38	100	ug/L	199600	100	11/21/2014 19:57	NP
Xylenes, Total	13000		83	100	ug/L	199600	100	11/21/2014 19:57	NP
Surr: 4-Bromofluorobenzene	99.8		0	70-130	%REC	199600	100	11/21/2014 19:57	NP
Surr: 4-Bromofluorobenzene	108		0	70-130	%REC	199600	1	11/21/2014 06:28	NP
Surr: Dibromofluoromethane	87.8		0	70-130	%REC	199600	1	11/21/2014 06:28	NP
Surr: Dibromofluoromethane	95.3		0	70-130	%REC	199600	100	11/21/2014 19:57	NP
Surr: Toluene-d8	94.4		0	70-130	%REC	199600	100	11/21/2014 19:57	NP
Surr: Toluene-d8	96.9		0	70-130	%REC	199600	1	11/21/2014 06:28	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	1100		9.5	100	ug/L	199600	1	11/21/2014 06:28	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199600	1	11/21/2014 06:28	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199600	1	11/21/2014 06:28	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 13
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 10:10:00 AM
Lab ID:	1411D32-044	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199600	1	11/22/2014 15:30	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199600	1	11/22/2014 15:30	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199600	1	11/22/2014 15:30	NP
Naphthalene	BRL		0.20	5.0	ug/L	199600	1	11/22/2014 15:30	NP
Toluene	BRL		0.38	1.0	ug/L	199600	1	11/22/2014 15:30	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199600	1	11/22/2014 15:30	NP
Surr: 4-Bromofluorobenzene	92.9		0	70-130	%REC	199600	1	11/22/2014 15:30	NP
Surr: Dibromofluoromethane	100		0	70-130	%REC	199600	1	11/22/2014 15:30	NP
Surr: Toluene-d8	97		0	70-130	%REC	199600	1	11/22/2014 15:30	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	26	J	9.5	100	ug/L	199600	1	11/21/2014 06:52	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199600	1	11/21/2014 06:52	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199600	1	11/21/2014 06:52	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DW 7
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 11:00:00 AM
Lab ID:	1411D32-045	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199600	1	11/22/2014 15:54	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199600	1	11/22/2014 15:54	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199600	1	11/22/2014 15:54	NP
Naphthalene	BRL		0.20	5.0	ug/L	199600	1	11/22/2014 15:54	NP
Toluene	BRL		0.38	1.0	ug/L	199600	1	11/22/2014 15:54	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199600	1	11/22/2014 15:54	NP
Surr: 4-Bromofluorobenzene	92.8		0	70-130	%REC	199600	1	11/22/2014 15:54	NP
Surr: Dibromofluoromethane	104		0	70-130	%REC	199600	1	11/22/2014 15:54	NP
Surr: Toluene-d8	97		0	70-130	%REC	199600	1	11/22/2014 15:54	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199600	1	11/21/2014 07:17	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199600	1	11/21/2014 07:17	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199600	1	11/21/2014 07:17	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 12
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 11:25:00 AM
Lab ID:	1411D32-046	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	990		3.9	10	ug/L	199600	10	11/24/2014 12:27	NP
Ethylbenzene	910		4.0	10	ug/L	199600	10	11/24/2014 12:27	NP
Methyl tert-butyl ether	21		0.42	1.0	ug/L	199600	1	11/21/2014 07:42	NP
Naphthalene	180		2.0	50	ug/L	199600	10	11/24/2014 12:27	NP
Toluene	19		0.38	1.0	ug/L	199600	1	11/21/2014 07:42	NP
Xylenes, Total	140		0.83	1.0	ug/L	199600	1	11/21/2014 07:42	NP
Surr: 4-Bromofluorobenzene	99.1		0	70-130	%REC	199600	10	11/24/2014 12:27	NP
Surr: 4-Bromofluorobenzene	101		0	70-130	%REC	199600	1	11/21/2014 07:42	NP
Surr: Dibromofluoromethane	90.8		0	70-130	%REC	199600	1	11/21/2014 07:42	NP
Surr: Dibromofluoromethane	96.1		0	70-130	%REC	199600	10	11/24/2014 12:27	NP
Surr: Toluene-d8	95.2		0	70-130	%REC	199600	10	11/24/2014 12:27	NP
Surr: Toluene-d8	96.7		0	70-130	%REC	199600	1	11/21/2014 07:42	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	3600		9.5	100	ug/L	199600	1	11/21/2014 07:42	NP
tert-Amyl methyl ether	14		1.0	10	ug/L	199600	1	11/21/2014 07:42	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199600	1	11/21/2014 07:42	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 29
Project Name:	Clouds Chevron	**Collection Date:**	11/13/2014 8:00:00 AM
Lab ID:	1411D32-047	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199600	1	11/21/2014 13:22	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199600	1	11/21/2014 13:22	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199600	1	11/21/2014 13:22	NP
Naphthalene	BRL		0.20	5.0	ug/L	199600	1	11/21/2014 13:22	NP
Toluene	BRL		0.38	1.0	ug/L	199600	1	11/21/2014 13:22	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199600	1	11/21/2014 13:22	NP
Surr: 4-Bromofluorobenzene	90.2		0	70-130	%REC	199600	1	11/21/2014 13:22	NP
Surr: Dibromofluoromethane	101		0	70-130	%REC	199600	1	11/21/2014 13:22	NP
Surr: Toluene-d8	95.3		0	70-130	%REC	199600	1	11/21/2014 13:22	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199600	1	11/21/2014 13:22	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199600	1	11/21/2014 13:22	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199600	1	11/21/2014 13:22	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 59
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 11:35:00 AM
Lab ID:	1411D32-048	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	81		0.39	1.0	ug/L	199600	1	11/21/2014 13:47	NP
Ethylbenzene	730		4.0	10	ug/L	199600	10	11/24/2014 12:52	NP
Methyl tert-butyl ether	91		0.42	1.0	ug/L	199600	1	11/21/2014 13:47	NP
Naphthalene	96		0.20	5.0	ug/L	199600	1	11/21/2014 13:47	NP
Toluene	3.6		0.38	1.0	ug/L	199600	1	11/21/2014 13:47	NP
Xylenes, Total	14		0.83	1.0	ug/L	199600	1	11/21/2014 13:47	NP
Surr: 4-Bromofluorobenzene	97.3		0	70-130	%REC	199600	10	11/24/2014 12:52	NP
Surr: 4-Bromofluorobenzene	100		0	70-130	%REC	199600	1	11/21/2014 13:47	NP
Surr: Dibromofluoromethane	93.3		0	70-130	%REC	199600	1	11/21/2014 13:47	NP
Surr: Dibromofluoromethane	97.2		0	70-130	%REC	199600	10	11/24/2014 12:52	NP
Surr: Toluene-d8	95.4		0	70-130	%REC	199600	10	11/24/2014 12:52	NP
Surr: Toluene-d8	97.6		0	70-130	%REC	199600	1	11/21/2014 13:47	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	4500		9.5	100	ug/L	199600	1	11/21/2014 13:47	NP
tert-Amyl methyl ether	27		1.0	10	ug/L	199600	1	11/21/2014 13:47	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199600	1	11/21/2014 13:47	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 53
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 12:15:00 PM
Lab ID:	1411D32-049	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199600	1	11/24/2014 09:59	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199600	1	11/24/2014 09:59	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199600	1	11/24/2014 09:59	NP
Naphthalene	BRL		0.20	5.0	ug/L	199600	1	11/24/2014 09:59	NP
Toluene	BRL		0.38	1.0	ug/L	199600	1	11/24/2014 09:59	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199600	1	11/24/2014 09:59	NP
Surr: 4-Bromofluorobenzene	91.9		0	70-130	%REC	199600	1	11/24/2014 09:59	NP
Surr: Dibromofluoromethane	100		0	70-130	%REC	199600	1	11/24/2014 09:59	NP
Surr: Toluene-d8	98.6		0	70-130	%REC	199600	1	11/24/2014 09:59	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199600	1	11/24/2014 09:59	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199600	1	11/24/2014 09:59	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199600	1	11/24/2014 09:59	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 11
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 12:30:00 PM
Lab ID:	1411D32-050	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	0.53	J	0.39	1.0	ug/L	199600	1	11/21/2014 14:36	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199600	1	11/21/2014 14:36	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199600	1	11/21/2014 14:36	NP
Naphthalene	BRL		0.20	5.0	ug/L	199600	1	11/21/2014 14:36	NP
Toluene	BRL		0.38	1.0	ug/L	199600	1	11/21/2014 14:36	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199600	1	11/21/2014 14:36	NP
Surr: 4-Bromofluorobenzene	92.1		0	70-130	%REC	199600	1	11/21/2014 14:36	NP
Surr: Dibromofluoromethane	97.2		0	70-130	%REC	199600	1	11/21/2014 14:36	NP
Surr: Toluene-d8	97.4		0	70-130	%REC	199600	1	11/21/2014 14:36	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	80	J	9.5	100	ug/L	199600	1	11/21/2014 14:36	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199600	1	11/21/2014 14:36	NP
tert-Butyl Alcohol	58	J	6.8	100	ug/L	199600	1	11/21/2014 14:36	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 51
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 12:40:00 PM
Lab ID:	1411D32-051	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199600	1	11/21/2014 15:01	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199600	1	11/21/2014 15:01	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199600	1	11/21/2014 15:01	NP
Naphthalene	BRL		0.20	5.0	ug/L	199600	1	11/21/2014 15:01	NP
Toluene	BRL		0.38	1.0	ug/L	199600	1	11/21/2014 15:01	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199600	1	11/21/2014 15:01	NP
Surr: 4-Bromofluorobenzene	90.5		0	70-130	%REC	199600	1	11/21/2014 15:01	NP
Surr: Dibromofluoromethane	101		0	70-130	%REC	199600	1	11/21/2014 15:01	NP
Surr: Toluene-d8	96		0	70-130	%REC	199600	1	11/21/2014 15:01	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199600	1	11/21/2014 15:01	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199600	1	11/21/2014 15:01	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199600	1	11/21/2014 15:01	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 43
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 8:00:00 AM
Lab ID:	1411D32-052	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199600	1	11/21/2014 15:25	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199600	1	11/21/2014 15:25	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199600	1	11/21/2014 15:25	NP
Naphthalene	BRL		0.20	5.0	ug/L	199600	1	11/21/2014 15:25	NP
Toluene	BRL		0.38	1.0	ug/L	199600	1	11/21/2014 15:25	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199600	1	11/21/2014 15:25	NP
Surr: 4-Bromofluorobenzene	91.3		0	70-130	%REC	199600	1	11/21/2014 15:25	NP
Surr: Dibromofluoromethane	101		0	70-130	%REC	199600	1	11/21/2014 15:25	NP
Surr: Toluene-d8	95.4		0	70-130	%REC	199600	1	11/21/2014 15:25	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199600	1	11/21/2014 15:25	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199600	1	11/21/2014 15:25	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199600	1	11/21/2014 15:25	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 15
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 10:25:00 AM
Lab ID:	1411D32-053	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	40		3.9	10	ug/L	199600	10	11/24/2014 14:06	NP
Ethylbenzene	1200		4.0	10	ug/L	199600	10	11/24/2014 14:06	NP
Methyl tert-butyl ether	BRL		4.2	10	ug/L	199600	10	11/24/2014 14:06	NP
Naphthalene	1300		2.0	50	ug/L	199600	10	11/24/2014 14:06	NP
Toluene	6300		19	50	ug/L	199600	50	11/21/2014 00:44	NP
Xylenes, Total	16000		41	50	ug/L	199600	50	11/21/2014 00:44	NP
Surr: 4-Bromofluorobenzene	103		0	70-130	%REC	199600	50	11/21/2014 00:44	NP
Surr: 4-Bromofluorobenzene	100		0	70-130	%REC	199600	10	11/24/2014 14:06	NP
Surr: Dibromofluoromethane	93.1		0	70-130	%REC	199600	50	11/21/2014 00:44	NP
Surr: Dibromofluoromethane	91.5		0	70-130	%REC	199600	10	11/24/2014 14:06	NP
Surr: Toluene-d8	94.5		0	70-130	%REC	199600	50	11/21/2014 00:44	NP
Surr: Toluene-d8	95.7		0	70-130	%REC	199600	10	11/24/2014 14:06	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	400	J	95	1000	ug/L	199600	10	11/24/2014 14:06	NP
tert-Amyl methyl ether	BRL		10	100	ug/L	199600	10	11/24/2014 14:06	NP
tert-Butyl Alcohol	BRL		68	1000	ug/L	199600	10	11/24/2014 14:06	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 25
Project Name:	Clouds Chevron	**Collection Date:**	11/13/2014 8:45:00 AM
Lab ID:	1411D32-054	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	38		0.39	1.0	ug/L	199600	1	11/24/2014 14:55	NP
Ethylbenzene	200		20	50	ug/L	199600	50	11/21/2014 01:08	NP
Methyl tert-butyl ether	1.9		0.42	1.0	ug/L	199600	1	11/24/2014 14:55	NP
Naphthalene	490		10	250	ug/L	199600	50	11/21/2014 01:08	NP
Toluene	140		0.38	1.0	ug/L	199600	1	11/24/2014 14:55	NP
Xylenes, Total	2600		41	50	ug/L	199600	50	11/21/2014 01:08	NP
Surr: 4-Bromofluorobenzene	97.6		0	70-130	%REC	199600	50	11/21/2014 01:08	NP
Surr: 4-Bromofluorobenzene	106		0	70-130	%REC	199600	1	11/24/2014 14:55	NP
Surr: Dibromofluoromethane	94.7		0	70-130	%REC	199600	50	11/21/2014 01:08	NP
Surr: Dibromofluoromethane	89.2		0	70-130	%REC	199600	1	11/24/2014 14:55	NP
Surr: Toluene-d8	94.3		0	70-130	%REC	199600	50	11/21/2014 01:08	NP
Surr: Toluene-d8	96		0	70-130	%REC	199600	1	11/24/2014 14:55	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	2800		9.5	100	ug/L	199600	1	11/24/2014 14:55	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199600	1	11/24/2014 14:55	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199600	1	11/24/2014 14:55	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	PW R-1
Project Name:	Clouds Chevron	**Collection Date:**	11/12/2014 10:30:00 AM
Lab ID:	1411D32-055	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	850		19	50	ug/L	199600	50	11/21/2014 21:11	NP
Ethylbenzene	580		20	50	ug/L	199600	50	11/21/2014 21:11	NP
Methyl tert-butyl ether	BRL		21	50	ug/L	199600	50	11/21/2014 21:11	NP
Naphthalene	1300		10	250	ug/L	199600	50	11/21/2014 21:11	NP
Toluene	6900		19	50	ug/L	199600	50	11/21/2014 21:11	NP
Xylenes, Total	18000		41	50	ug/L	199600	50	11/21/2014 21:11	NP
Surr: 4-Bromofluorobenzene	102		0	70-130	%REC	199600	50	11/21/2014 21:11	NP
Surr: Dibromofluoromethane	91.7		0	70-130	%REC	199600	50	11/21/2014 21:11	NP
Surr: Toluene-d8	96.3		0	70-130	%REC	199600	50	11/21/2014 21:11	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		480	5000	ug/L	199600	50	11/21/2014 21:11	NP
tert-Amyl methyl ether	BRL		50	500	ug/L	199600	50	11/21/2014 21:11	NP
tert-Butyl Alcohol	BRL		340	5000	ug/L	199600	50	11/21/2014 21:11	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DW 9
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 12:00:00 PM
Lab ID:	1411D32-056	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199600	1	11/21/2014 15:50	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199600	1	11/21/2014 15:50	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199600	1	11/21/2014 15:50	NP
Naphthalene	BRL		0.20	5.0	ug/L	199600	1	11/21/2014 15:50	NP
Toluene	2.8		0.38	1.0	ug/L	199600	1	11/21/2014 15:50	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199600	1	11/21/2014 15:50	NP
Surr: 4-Bromofluorobenzene	93.3		0	70-130	%REC	199600	1	11/21/2014 15:50	NP
Surr: Dibromofluoromethane	102		0	70-130	%REC	199600	1	11/21/2014 15:50	NP
Surr: Toluene-d8	95.5		0	70-130	%REC	199600	1	11/21/2014 15:50	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199600	1	11/21/2014 15:50	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199600	1	11/21/2014 15:50	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199600	1	11/21/2014 15:50	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 2
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 3:30:00 PM
Lab ID:	1411D32-057	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	140		0.39	1.0	ug/L	199600	1	11/21/2014 16:15	NP
Ethylbenzene	220		4.0	10	ug/L	199600	10	11/24/2014 13:17	NP
Methyl tert-butyl ether	410		4.2	10	ug/L	199600	10	11/24/2014 13:17	NP
Naphthalene	160		2.0	50	ug/L	199600	10	11/24/2014 13:17	NP
Toluene	300		3.8	10	ug/L	199600	10	11/24/2014 13:17	NP
Xylenes, Total	1300		8.3	10	ug/L	199600	10	11/24/2014 13:17	NP
Surr: 4-Bromofluorobenzene	100		0	70-130	%REC	199600	10	11/24/2014 13:17	NP
Surr: 4-Bromofluorobenzene	105		0	70-130	%REC	199600	1	11/21/2014 16:15	NP
Surr: Dibromofluoromethane	94.2		0	70-130	%REC	199600	1	11/21/2014 16:15	NP
Surr: Dibromofluoromethane	95.8		0	70-130	%REC	199600	10	11/24/2014 13:17	NP
Surr: Toluene-d8	95.3		0	70-130	%REC	199600	10	11/24/2014 13:17	NP
Surr: Toluene-d8	98.6		0	70-130	%REC	199600	1	11/21/2014 16:15	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	210		9.5	100	ug/L	199600	1	11/21/2014 16:15	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199600	1	11/21/2014 16:15	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199600	1	11/21/2014 16:15	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DW 1
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 3:20:00 PM
Lab ID:	1411D32-058	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199600	1	11/24/2014 10:23	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199600	1	11/24/2014 10:23	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199600	1	11/24/2014 10:23	NP
Naphthalene	BRL		0.20	5.0	ug/L	199600	1	11/24/2014 10:23	NP
Toluene	BRL		0.38	1.0	ug/L	199600	1	11/24/2014 10:23	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199600	1	11/24/2014 10:23	NP
Surr: 4-Bromofluorobenzene	92.6		0	70-130	%REC	199600	1	11/24/2014 10:23	NP
Surr: Dibromofluoromethane	100		0	70-130	%REC	199600	1	11/24/2014 10:23	NP
Surr: Toluene-d8	95.6		0	70-130	%REC	199600	1	11/24/2014 10:23	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199600	1	11/21/2014 16:39	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199600	1	11/21/2014 16:39	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199600	1	11/21/2014 16:39	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 41
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 4:30:00 PM
Lab ID:	1411D32-059	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199600	1	11/21/2014 17:03	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199600	1	11/21/2014 17:03	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199600	1	11/21/2014 17:03	NP
Naphthalene	BRL		0.20	5.0	ug/L	199600	1	11/21/2014 17:03	NP
Toluene	BRL		0.38	1.0	ug/L	199600	1	11/21/2014 17:03	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199600	1	11/21/2014 17:03	NP
Surr: 4-Bromofluorobenzene	95.2		0	70-130	%REC	199600	1	11/21/2014 17:03	NP
Surr: Dibromofluoromethane	96.5		0	70-130	%REC	199600	1	11/21/2014 17:03	NP
Surr: Toluene-d8	94.7		0	70-130	%REC	199600	1	11/21/2014 17:03	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199600	1	11/21/2014 17:03	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199600	1	11/21/2014 17:03	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199600	1	11/21/2014 17:03	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DUP 1
Project Name:	Clouds Chevron	**Collection Date:**	11/11/2014 3:30:00 PM
Lab ID:	1411D32-060	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					**(SW5030B)**				
Benzene	130		0.39	1.0	ug/L	199600	1	11/21/2014 17:28	NP
Ethylbenzene	200		4.0	10	ug/L	199600	10	11/24/2014 13:41	NP
Methyl tert-butyl ether	400		4.2	10	ug/L	199600	10	11/24/2014 13:41	NP
Naphthalene	150		2.0	50	ug/L	199600	10	11/24/2014 13:41	NP
Toluene	280		3.8	10	ug/L	199600	10	11/24/2014 13:41	NP
Xylenes, Total	1200		8.3	10	ug/L	199600	10	11/24/2014 13:41	NP
Surr: 4-Bromofluorobenzene	98.3		0	70-130	%REC	199600	10	11/24/2014 13:41	NP
Surr: 4-Bromofluorobenzene	103		0	70-130	%REC	199600	1	11/21/2014 17:28	NP
Surr: Dibromofluoromethane	93.3		0	70-130	%REC	199600	1	11/21/2014 17:28	NP
Surr: Dibromofluoromethane	95.3		0	70-130	%REC	199600	10	11/24/2014 13:41	NP
Surr: Toluene-d8	95.5		0	70-130	%REC	199600	10	11/24/2014 13:41	NP
Surr: Toluene-d8	97.9		0	70-130	%REC	199600	1	11/21/2014 17:28	NP
Oxygenates SW8260B					**(SW5030B)**				
tert-Amyl alcohol	200		9.5	100	ug/L	199600	1	11/21/2014 17:28	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199600	1	11/21/2014 17:28	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199600	1	11/21/2014 17:28	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DUP 2
Project Name:	Clouds Chevron	**Collection Date:**	11/12/2014 4:00:00 PM
Lab ID:	1411D32-061	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					**(SW5030B)**				
Benzene	BRL		0.39	1.0	ug/L	199640	1	11/24/2014 10:48	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199640	1	11/24/2014 10:48	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199640	1	11/24/2014 10:48	NP
Naphthalene	BRL		0.20	5.0	ug/L	199640	1	11/24/2014 10:48	NP
Toluene	BRL		0.38	1.0	ug/L	199640	1	11/24/2014 10:48	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199640	1	11/24/2014 10:48	NP
Surr: 4-Bromofluorobenzene	92.3		0	70-130	%REC	199640	1	11/24/2014 10:48	NP
Surr: Dibromofluoromethane	103		0	70-130	%REC	199640	1	11/24/2014 10:48	NP
Surr: Toluene-d8	97.4		0	70-130	%REC	199640	1	11/24/2014 10:48	NP
Oxygenates SW8260B					**(SW5030B)**				
tert-Amyl alcohol	BRL		9.5	100	ug/L	199640	1	11/21/2014 17:53	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199640	1	11/21/2014 17:53	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199640	1	11/21/2014 17:53	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	DUP 3
Project Name:	Clouds Chevron	**Collection Date:**	11/13/2014 8:45:00 AM
Lab ID:	1411D32-062	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					**(SW5030B)**				
Benzene	35		0.39	1.0	ug/L	199640	1	11/24/2014 15:20	NP
Ethylbenzene	220		20	50	ug/L	199640	50	11/21/2014 12:58	NP
Methyl tert-butyl ether	1.8		0.42	1.0	ug/L	199640	1	11/24/2014 15:20	NP
Naphthalene	460		10	250	ug/L	199640	50	11/21/2014 12:58	NP
Toluene	170		0.38	1.0	ug/L	199640	1	11/24/2014 15:20	NP
Xylenes, Total	2900		41	50	ug/L	199640	50	11/21/2014 12:58	NP
Surr: 4-Bromofluorobenzene	98		0	70-130	%REC	199640	50	11/21/2014 12:58	NP
Surr: 4-Bromofluorobenzene	106		0	70-130	%REC	199640	1	11/24/2014 15:20	NP
Surr: Dibromofluoromethane	97.2		0	70-130	%REC	199640	50	11/21/2014 12:58	NP
Surr: Dibromofluoromethane	89.5		0	70-130	%REC	199640	1	11/24/2014 15:20	NP
Surr: Toluene-d8	95.5		0	70-130	%REC	199640	50	11/21/2014 12:58	NP
Surr: Toluene-d8	98		0	70-130	%REC	199640	1	11/24/2014 15:20	NP
Oxygenates SW8260B					**(SW5030B)**				
tert-Amyl alcohol	2800		9.5	100	ug/L	199640	1	11/24/2014 15:20	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199640	1	11/24/2014 15:20	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199640	1	11/24/2014 15:20	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	TRIP BLANK
Project Name:	Clouds Chevron	**Collection Date:**	11/15/2014
Lab ID:	1411D32-063	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199640	1	11/21/2014 11:43	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199640	1	11/21/2014 11:43	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199640	1	11/21/2014 11:43	NP
Naphthalene	BRL		0.20	5.0	ug/L	199640	1	11/21/2014 11:43	NP
Toluene	BRL		0.38	1.0	ug/L	199640	1	11/21/2014 11:43	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199640	1	11/21/2014 11:43	NP
Surr: 4-Bromofluorobenzene	94.4		0	70-130	%REC	199640	1	11/21/2014 11:43	NP
Surr: Dibromofluoromethane	98.5		0	70-130	%REC	199640	1	11/21/2014 11:43	NP
Surr: Toluene-d8	94.8		0	70-130	%REC	199640	1	11/21/2014 11:43	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199640	1	11/21/2014 11:43	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199640	1	11/21/2014 11:43	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199640	1	11/21/2014 11:43	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 25-Nov-14

Client:	Crawford Environmental Services	**Client Sample ID:**	TRIP BLANK II
Project Name:	Clouds Chevron	**Collection Date:**	11/15/2014
Lab ID:	1411D32-064	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.39	1.0	ug/L	199640	1	11/21/2014 12:08	NP
Ethylbenzene	BRL		0.40	1.0	ug/L	199640	1	11/21/2014 12:08	NP
Methyl tert-butyl ether	BRL		0.42	1.0	ug/L	199640	1	11/21/2014 12:08	NP
Naphthalene	BRL		0.20	5.0	ug/L	199640	1	11/21/2014 12:08	NP
Toluene	BRL		0.38	1.0	ug/L	199640	1	11/21/2014 12:08	NP
Xylenes, Total	BRL		0.83	1.0	ug/L	199640	1	11/21/2014 12:08	NP
Surr: 4-Bromofluorobenzene	89.5		0	70-130	%REC	199640	1	11/21/2014 12:08	NP
Surr: Dibromofluoromethane	99.9		0	70-130	%REC	199640	1	11/21/2014 12:08	NP
Surr: Toluene-d8	95.1		0	70-130	%REC	199640	1	11/21/2014 12:08	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		9.5	100	ug/L	199640	1	11/21/2014 12:08	NP
tert-Amyl methyl ether	BRL		1.0	10	ug/L	199640	1	11/21/2014 12:08	NP
tert-Butyl Alcohol	BRL		6.8	100	ug/L	199640	1	11/21/2014 12:08	NP

Qualifiers:

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

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Access Work Order Number 1411D32

Checklist completed by [signature] 11/15/14
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 1.9 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

Analytical Environmental Services, Inc

Date: 28-Nov-14

Client: Crawford Environmental Services
Project Name: Clouds Chevron
Workorder: 1411D32

ANALYTICAL QC SUMMARY REPORT

BatchID: 199515

Sample ID: **MB-199515**	Client ID:				Units: **ug/L**		Prep Date: **11/19/2014**		Run No: **280400**
SampleType: **MBLK**	TestCode: **Volatile Organic Compounds by GC/MS** **SW8260B**				BatchID: **199515**		Analysis Date: **11/19/2014**		Seq No: **5929237**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	BRL	1.0									
Ethylbenzene	BRL	1.0									
Methyl tert-butyl ether	BRL	1.0									
Naphthalene	BRL	5.0									
Toluene	BRL	1.0									
Xylenes, Total	BRL	1.0									
Surr: 4-Bromofluorobenzene	45.18	0	50.00		90.4	70	130				
Surr: Dibromofluoromethane	49.47	0	50.00		98.9	70	130				
Surr: Toluene-d8	47.42	0	50.00		94.8	70	130				

Sample ID: **MB-199515**	Client ID:				Units: **ug/L**		Prep Date: **11/19/2014**		Run No: **280400**
SampleType: **MBLK**	TestCode: **Oxygenates** **SW8260B**				BatchID: **199515**		Analysis Date: **11/19/2014**		Seq No: **5929314**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	BRL	100									
tert-Amyl methyl ether	BRL	10									
tert-Butyl Alcohol	BRL	100									

Sample ID: **LCS-199515**	Client ID:				Units: **ug/L**		Prep Date: **11/19/2014**		Run No: **280400**
SampleType: **LCS**	TestCode: **Volatile Organic Compounds by GC/MS** **SW8260B**				BatchID: **199515**		Analysis Date: **11/19/2014**		Seq No: **5929236**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	49.86	1.0	50.00		99.7	70	130				
Ethylbenzene	52.02	1.0	50.00		104	70	130				
Naphthalene	44.06	5.0	50.00		88.1	70	130				
Toluene	50.55	1.0	50.00		101	70	130				
Xylenes, Total	154.5	1.0	150.0		103	70	130				
Surr: 4-Bromofluorobenzene	48.92	0	50.00		97.8	70	130				

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

Date: 28-Nov-14

Client: Crawford Environmental Services
Project Name: Clouds Chevron
Workorder: 1411D32

ANALYTICAL QC SUMMARY REPORT

BatchID: 199515

Sample ID: **LCS-199515**	Client ID:				Units: **ug/L**		Prep Date: **11/19/2014**		Run No: **280400**
SampleType: **LCS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **199515**		Analysis Date: **11/19/2014**		Seq No: **5929236**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: Dibromofluoromethane	48.70	0	50.00		97.4	70	130				
Surr: Toluene-d8	47.23	0	50.00		94.5	70	130				

Sample ID: **LCS-199515**	Client ID:				Units: **ug/L**		Prep Date: **11/19/2014**		Run No: **280400**
SampleType: **LCS**	TestCode: **Oxygenates SW8260B**				BatchID: **199515**		Analysis Date: **11/19/2014**		Seq No: **5929311**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	1013	100	1000		101	70	130				
tert-Amyl methyl ether	217.6	10	200.0		109	70	130				
tert-Butyl Alcohol	973.0	100	1000		97.3	70	130				

Sample ID: **1411D32-002AMS**	Client ID: **MW 18**				Units: **ug/L**		Prep Date: **11/19/2014**		Run No: **280414**
SampleType: **MS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **199515**		Analysis Date: **11/20/2014**		Seq No: **5930099**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	8629	100	5000	3115	110	70.2	138				
Ethylbenzene	6136	100	5000	558.0	112	71.9	133				
Naphthalene	5000	500	5000	288.0	94.2	54.6	130				
Toluene	16220	100	5000	10530	114	70	139				
Xylenes, Total	25820	100	15000	8710	114	70.7	136				
Surr: 4-Bromofluorobenzene	5114	0	5000		102	70	130				
Surr: Dibromofluoromethane	4977	0	5000		99.5	70	130				
Surr: Toluene-d8	4838	0	5000		96.8	70	130				

Sample ID: **1411D32-002AMS**	Client ID: **MW 18**				Units: **ug/L**		Prep Date: **11/19/2014**		Run No: **280414**
SampleType: **MS**	TestCode: **Oxygenates SW8260B**				BatchID: **199515**		Analysis Date: **11/20/2014**		Seq No: **5932243**

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		

Analytical Environmental Services, Inc

Date: 28-Nov-14

Client: Crawford Environmental Services
Project Name: Clouds Chevron
Workorder: 1411D32

ANALYTICAL QC SUMMARY REPORT

BatchID: 199515

Sample ID: **1411D32-002AMS**	Client ID: **MW 18**				Units: **ug/L**		Prep Date: **11/19/2014**		Run No: **280414**	
SampleType: **MS**	TestCode: **Oxygenates** **SW8260B**				BatchID: **199515**		Analysis Date: **11/20/2014**		Seq No: **5932243**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	125100	10000	100000	11570	114	54.6	145				
tert-Amyl methyl ether	22130	1000	20000		111	71.1	129				
tert-Butyl Alcohol	106100	10000	100000		106	50.3	149				

Sample ID: **1411D32-002AMSD**	Client ID: **MW 18**				Units: **ug/L**		Prep Date: **11/19/2014**		Run No: **280414**	
SampleType: **MSD**	TestCode: **Volatile Organic Compounds by GC/MS** **SW8260B**				BatchID: **199515**		Analysis Date: **11/20/2014**		Seq No: **5930125**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	8483	100	5000	3115	107	70.2	138	8629	1.71	20	
Ethylbenzene	6077	100	5000	558.0	110	71.9	133	6136	0.966	20	
Naphthalene	5342	500	5000	288.0	101	54.6	130	5000	6.61	21.4	
Toluene	15820	100	5000	10530	106	70	139	16220	2.48	20	
Xylenes, Total	25490	100	15000	8710	112	70.7	136	25820	1.28	20	
Surr: 4-Bromofluorobenzene	4987	0	5000		99.7	70	130	5114	0	0	
Surr: Dibromofluoromethane	4918	0	5000		98.4	70	130	4977	0	0	
Surr: Toluene-d8	4840	0	5000		96.8	70	130	4838	0	0	

Sample ID: **1411D32-002AMSD**	Client ID: **MW 18**				Units: **ug/L**		Prep Date: **11/19/2014**		Run No: **280414**	
SampleType: **MSD**	TestCode: **Oxygenates** **SW8260B**				BatchID: **199515**		Analysis Date: **11/20/2014**		Seq No: **5932244**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	129300	10000	100000	11570	118	54.6	145	125100	3.33	23.5	
tert-Amyl methyl ether	21720	1000	20000		109	71.1	129	22130	1.87	20	
tert-Butyl Alcohol	116100	10000	100000		116	50.3	149	106100	9.01	33.5	

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

Date: 28-Nov-14

Client: Crawford Environmental Services
Project Name: Clouds Chevron
Workorder: 1411D32

ANALYTICAL QC SUMMARY REPORT

BatchID: 199525

Sample ID: **MB-199525**	Client ID:			Units: **ug/L**	Prep Date: **11/20/2014**	Run No: **280414**
SampleType: **MBLK**	TestCode: **Volatile Organic Compounds by GC/MS** **SW8260B**			BatchID: **199525**	Analysis Date: **11/20/2014**	Seq No: **5929758**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	BRL	1.0									
Ethylbenzene	BRL	1.0									
Methyl tert-butyl ether	BRL	1.0									
Naphthalene	BRL	5.0									
Toluene	BRL	1.0									
Xylenes, Total	BRL	1.0									
Surr: 4-Bromofluorobenzene	44.80	0	50.00		89.6	70	130				
Surr: Dibromofluoromethane	50.29	0	50.00		101	70	130				
Surr: Toluene-d8	47.24	0	50.00		94.5	70	130				

Sample ID: **MB-199525**	Client ID:			Units: **ug/L**	Prep Date: **11/20/2014**	Run No: **280414**
SampleType: **MBLK**	TestCode: **Oxygenates** **SW8260B**			BatchID: **199525**	Analysis Date: **11/20/2014**	Seq No: **5932242**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	BRL	100									
tert-Amyl methyl ether	BRL	10									
tert-Butyl Alcohol	BRL	100									

Sample ID: **LCS-199525**	Client ID:			Units: **ug/L**	Prep Date: **11/20/2014**	Run No: **280414**
SampleType: **LCS**	TestCode: **Volatile Organic Compounds by GC/MS** **SW8260B**			BatchID: **199525**	Analysis Date: **11/20/2014**	Seq No: **5929756**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	55.41	1.0	50.00		111	70	130				
Ethylbenzene	57.65	1.0	50.00		115	70	130				
Naphthalene	50.46	5.0	50.00		101	70	130				
Toluene	56.83	1.0	50.00		114	70	130				
Xylenes, Total	171.3	1.0	150.0		114	70	130				
Surr: 4-Bromofluorobenzene	49.12	0	50.00		98.2	70	130				

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

Date: 28-Nov-14

Client: Crawford Environmental Services
Project Name: Clouds Chevron
Workorder: 1411D32

ANALYTICAL QC SUMMARY REPORT

BatchID: 199525

Sample ID: **LCS-199525**	Client ID:				Units: **ug/L**		Prep Date: **11/20/2014**		Run No: **280414**	
SampleType: **LCS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **199525**		Analysis Date: **11/20/2014**		Seq No: **5929756**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: Dibromofluoromethane	49.29	0	50.00		98.6	70	130				
Surr: Toluene-d8	46.99	0	50.00		94.0	70	130				

Sample ID: **LCS-199525**	Client ID:				Units: **ug/L**		Prep Date: **11/20/2014**		Run No: **280414**	
SampleType: **LCS**	TestCode: **Oxygenates SW8260B**				BatchID: **199525**		Analysis Date: **11/20/2014**		Seq No: **5932240**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	1228	100	1000		123	70	130				
tert-Amyl methyl ether	226.4	10	200.0		113	70	130				
tert-Butyl Alcohol	1166	100	1000		117	70	130				

Sample ID: **1411D32-038AMS**	Client ID: **MW 20**				Units: **ug/L**		Prep Date: **11/20/2014**		Run No: **280414**	
SampleType: **MS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **199525**		Analysis Date: **11/20/2014**		Seq No: **5932189**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	6653	100	5000	1430	104	70.2	138				
Ethylbenzene	6233	100	5000	494.0	115	71.9	133				
Naphthalene	7960	500	5000	1171	136	54.6	130				S
Toluene	17490	100	5000	12050	109	70	139				
Xylenes, Total	31180	100	15000	13730	116	70.7	136				
Surr: 4-Bromofluorobenzene	5118	0	5000		102	70	130				
Surr: Dibromofluoromethane	4697	0	5000		93.9	70	130				
Surr: Toluene-d8	4771	0	5000		95.4	70	130				

Sample ID: **1411D32-038AMS**	Client ID: **MW 20**				Units: **ug/L**		Prep Date: **11/20/2014**		Run No: **280414**	
SampleType: **MS**	TestCode: **Oxygenates SW8260B**				BatchID: **199525**		Analysis Date: **11/20/2014**		Seq No: **5932259**	
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: Crawford Environmental Services
Project Name: Clouds Chevron
Workorder: 1411D32

ANALYTICAL QC SUMMARY REPORT

BatchID: 199525

Sample ID: **1411D32-038AMS** Client ID: **MW 20** Units: **ug/L** Prep Date: **11/20/2014** Run No: **280414**
SampleType: **MS** TestCode: **Oxygenates SW8260B** BatchID: **199525** Analysis Date: **11/20/2014** Seq No: **5932259**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	121600	10000	100000		122	54.6	145				
tert-Amyl methyl ether	22030	1000	20000		110	71.1	129				
tert-Butyl Alcohol	115900	10000	100000		116	50.3	149				

Sample ID: **1411D32-038AMSD** Client ID: **MW 20** Units: **ug/L** Prep Date: **11/20/2014** Run No: **280414**
SampleType: **MSD** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **199525** Analysis Date: **11/20/2014** Seq No: **5932190**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	6443	100	5000	1430	100	70.2	138	6653	3.21	20	
Ethylbenzene	5989	100	5000	494.0	110	71.9	133	6233	3.99	20	
Naphthalene	6021	500	5000	1171	97.0	54.6	130	7960	27.7	21.4	R
Toluene	16680	100	5000	12050	92.7	70	139	17490	4.69	20	
Xylenes, Total	29880	100	15000	13730	108	70.7	136	31180	4.27	20	
Surr: 4-Bromofluorobenzene	4935	0	5000		98.7	70	130	5118	0	0	
Surr: Dibromofluoromethane	4646	0	5000		92.9	70	130	4697	0	0	
Surr: Toluene-d8	4696	0	5000		93.9	70	130	4771	0	0	

Sample ID: **1411D32-038AMSD** Client ID: **MW 20** Units: **ug/L** Prep Date: **11/20/2014** Run No: **280414**
SampleType: **MSD** TestCode: **Oxygenates SW8260B** BatchID: **199525** Analysis Date: **11/20/2014** Seq No: **5932260**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	119900	10000	100000		120	54.6	145	121600	1.39	23.5	
tert-Amyl methyl ether	21240	1000	20000		106	71.1	129	22030	3.65	20	
tert-Butyl Alcohol	115800	10000	100000		116	50.3	149	115900	0.105	33.5	

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

Date: 28-Nov-14

Client: Crawford Environmental Services
Project Name: Clouds Chevron
Workorder: 1411D32

ANALYTICAL QC SUMMARY REPORT

BatchID: 199600

Sample ID: **MB-199600**	Client ID:				Units: **ug/L**		Prep Date: **11/20/2014**		Run No: **280527**	
SampleType: **MBLK**	TestCode: **Volatile Organic Compounds by GC/MS** **SW8260B**				BatchID: **199600**		Analysis Date: **11/20/2014**		Seq No: **5932801**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	BRL	1.0									
Ethylbenzene	BRL	1.0									
Methyl tert-butyl ether	BRL	1.0									
Naphthalene	BRL	5.0									
Toluene	BRL	1.0									
Xylenes, Total	BRL	1.0									
Surr: 4-Bromofluorobenzene	46.88	0	50.00		93.8	70	130				
Surr: Dibromofluoromethane	47.04	0	50.00		94.1	70	130				
Surr: Toluene-d8	46.47	0	50.00		92.9	70	130				

Sample ID: **MB-199600**	Client ID:				Units: **ug/L**		Prep Date: **11/20/2014**		Run No: **280527**	
SampleType: **MBLK**	TestCode: **Oxygenates** **SW8260B**				BatchID: **199600**		Analysis Date: **11/20/2014**		Seq No: **5933018**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	BRL	100									
tert-Amyl methyl ether	BRL	10									
tert-Butyl Alcohol	BRL	100									

Sample ID: **LCS-199600**	Client ID:				Units: **ug/L**		Prep Date: **11/20/2014**		Run No: **280527**	
SampleType: **LCS**	TestCode: **Volatile Organic Compounds by GC/MS** **SW8260B**				BatchID: **199600**		Analysis Date: **11/20/2014**		Seq No: **5932800**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	46.15	1.0	50.00		92.3	70	130				
Ethylbenzene	49.37	1.0	50.00		98.7	70	130				
Naphthalene	47.77	5.0	50.00		95.5	70	130				
Toluene	47.52	1.0	50.00		95.0	70	130				
Xylenes, Total	147.7	1.0	150.0		98.4	70	130				
Surr: 4-Bromofluorobenzene	50.72	0	50.00		101	70	130				

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

Date: 28-Nov-14

Client: Crawford Environmental Services
Project Name: Clouds Chevron
Workorder: 1411D32

ANALYTICAL QC SUMMARY REPORT

BatchID: 199600

Sample ID: **LCS-199600**	Client ID:				Units: **ug/L**		Prep Date: **11/20/2014**		Run No: **280527**
SampleType: **LCS**	TestCode: **Volatile Organic Compounds by GC/MS** **SW8260B**				BatchID: **199600**		Analysis Date: **11/20/2014**		Seq No: **5932800**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: Dibromofluoromethane	47.43	0	50.00		94.9	70	130				
Surr: Toluene-d8	46.72	0	50.00		93.4	70	130				

Sample ID: **LCS-199600**	Client ID:				Units: **ug/L**		Prep Date: **11/20/2014**		Run No: **280599**
SampleType: **LCS**	TestCode: **Oxygenates** **SW8260B**				BatchID: **199600**		Analysis Date: **11/22/2014**		Seq No: **5934589**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	1034	100	1000		103	70	130				
tert-Amyl methyl ether	207.0	10	200.0		103	70	130				
tert-Butyl Alcohol	1019	100	1000		102	70	130				

Sample ID: **1411D32-041AMS**	Client ID: **MW 23**				Units: **ug/L**		Prep Date: **11/20/2014**		Run No: **280604**
SampleType: **MS**	TestCode: **Volatile Organic Compounds by GC/MS** **SW8260B**				BatchID: **199600**		Analysis Date: **11/24/2014**		Seq No: **5937205**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	26060	500	25000	785.0	101	70.2	138				
Ethylbenzene	26560	500	25000		106	71.9	133				
Naphthalene	22590	2500	25000	820.0	87.1	54.6	130				
Toluene	29230	500	25000	3060	105	70	139				
Xylenes, Total	93220	500	75000	11910	108	70.7	136				
Surr: 4-Bromofluorobenzene	25590	0	25000		102	70	130				
Surr: Dibromofluoromethane	23470	0	25000		93.9	70	130				
Surr: Toluene-d8	23640	0	25000		94.5	70	130				

Sample ID: **1411D32-041AMS**	Client ID: **MW 23**				Units: **ug/L**		Prep Date: **11/20/2014**		Run No: **280604**
SampleType: **MS**	TestCode: **Oxygenates** **SW8260B**				BatchID: **199600**		Analysis Date: **11/24/2014**		Seq No: **5937214**

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		

Analytical Environmental Services, Inc

Date: 28-Nov-14

Client: Crawford Environmental Services
Project Name: Clouds Chevron
Workorder: 1411D32

ANALYTICAL QC SUMMARY REPORT

BatchID: 199600

Sample ID: **1411D32-041AMS**	Client ID: **MW 23**			Units: **ug/L**		Prep Date: **11/20/2014**		Run No: **280604**	
SampleType: **MS**	TestCode: **Oxygenates** **SW8260B**			BatchID: **199600**		Analysis Date: **11/24/2014**		Seq No: **5937214**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	597500	50000	500000		119	54.6	145				
tert-Amyl methyl ether	107600	5000	100000		108	71.1	129				
tert-Butyl Alcohol	584800	50000	500000		117	50.3	149				

Sample ID: **1411D32-041AMSD**	Client ID: **MW 23**			Units: **ug/L**		Prep Date: **11/20/2014**		Run No: **280604**	
SampleType: **MSD**	TestCode: **Volatile Organic Compounds by GC/MS** **SW8260B**			BatchID: **199600**		Analysis Date: **11/24/2014**		Seq No: **5937207**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	25390	500	25000	785.0	98.4	70.2	138	26060	2.59	20	
Ethylbenzene	25900	500	25000		104	71.9	133	26560	2.52	20	
Naphthalene	23920	2500	25000	820.0	92.4	54.6	130	22590	5.72	21.4	
Toluene	28140	500	25000	3060	100	70	139	29230	3.78	20	
Xylenes, Total	90600	500	75000	11910	105	70.7	136	93220	2.86	20	
Surr: 4-Bromofluorobenzene	24430	0	25000		97.7	70	130	25590	0	0	
Surr: Dibromofluoromethane	23350	0	25000		93.4	70	130	23470	0	0	
Surr: Toluene-d8	23470	0	25000		93.9	70	130	23640	0	0	

Sample ID: **1411D32-041AMSD**	Client ID: **MW 23**			Units: **ug/L**		Prep Date: **11/20/2014**		Run No: **280604**	
SampleType: **MSD**	TestCode: **Oxygenates** **SW8260B**			BatchID: **199600**		Analysis Date: **11/24/2014**		Seq No: **5937219**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	638000	50000	500000		128	54.6	145	597500	6.57	23.5	
tert-Amyl methyl ether	104100	5000	100000		104	71.1	129	107600	3.34	20	
tert-Butyl Alcohol	632500	50000	500000		127	50.3	149	584800	7.84	33.5	

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

Date: 28-Nov-14

Client: Crawford Environmental Services
Project Name: Clouds Chevron
Workorder: 1411D32

ANALYTICAL QC SUMMARY REPORT

BatchID: 199640

Sample ID: **MB-199640**	Client ID:				Units: **ug/L**		Prep Date: **11/21/2014**		Run No: **280596**
SampleType: **MBLK**	TestCode: **Volatile Organic Compounds by GC/MS** **SW8260B**				BatchID: **199640**		Analysis Date: **11/21/2014**		Seq No: **5934503**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	BRL	1.0									
Ethylbenzene	BRL	1.0									
Methyl tert-butyl ether	BRL	1.0									
Naphthalene	BRL	5.0									
Toluene	BRL	1.0									
Xylenes, Total	BRL	1.0									
Surr: 4-Bromofluorobenzene	47.47	0	50.00		94.9	70	130				
Surr: Dibromofluoromethane	48.09	0	50.00		96.2	70	130				
Surr: Toluene-d8	46.50	0	50.00		93.0	70	130				

Sample ID: **MB-199640**	Client ID:				Units: **ug/L**		Prep Date: **11/21/2014**		Run No: **280596**
SampleType: **MBLK**	TestCode: **Oxygenates** **SW8260B**				BatchID: **199640**		Analysis Date: **11/21/2014**		Seq No: **5934530**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	BRL	100									
tert-Amyl methyl ether	BRL	10									
tert-Butyl Alcohol	BRL	100									

Sample ID: **LCS-199640**	Client ID:				Units: **ug/L**		Prep Date: **11/21/2014**		Run No: **280596**
SampleType: **LCS**	TestCode: **Volatile Organic Compounds by GC/MS** **SW8260B**				BatchID: **199640**		Analysis Date: **11/21/2014**		Seq No: **5934502**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	51.03	1.0	50.00		102	70	130				
Ethylbenzene	54.26	1.0	50.00		109	70	130				
Naphthalene	44.13	5.0	50.00		88.3	70	130				
Toluene	52.58	1.0	50.00		105	70	130				
Xylenes, Total	161.0	1.0	150.0		107	70	130				
Surr: 4-Bromofluorobenzene	49.86	0	50.00		99.7	70	130				

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

Date: 28-Nov-14

Client: Crawford Environmental Services
Project Name: Clouds Chevron
Workorder: 1411D32

ANALYTICAL QC SUMMARY REPORT

BatchID: 199640

Sample ID: **LCS-199640**	Client ID:				Units: **ug/L**		Prep Date: **11/21/2014**		Run No: **280596**
SampleType: **LCS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **199640**		Analysis Date: **11/21/2014**		Seq No: **5934502**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: Dibromofluoromethane	47.67	0	50.00		95.3	70	130				
Surr: Toluene-d8	47.98	0	50.00		96.0	70	130				

Sample ID: **LCS-199640**	Client ID:				Units: **ug/L**		Prep Date: **11/21/2014**		Run No: **280596**
SampleType: **LCS**	TestCode: **Oxygenates SW8260B**				BatchID: **199640**		Analysis Date: **11/21/2014**		Seq No: **5934529**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	1237	100	1000		124	70	130				
tert-Amyl methyl ether	218.5	10	200.0		109	70	130				
tert-Butyl Alcohol	1182	100	1000		118	70	130				

Sample ID: **1411D32-062AMS**	Client ID: **DUP 3**				Units: **ug/L**		Prep Date: **11/21/2014**		Run No: **280604**
SampleType: **MS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **199640**		Analysis Date: **11/24/2014**		Seq No: **5937226**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	2595	50	2500	39.50	102	70.2	138				
Ethylbenzene	2931	50	2500	224.0	108	71.9	133				
Naphthalene	2684	250	2500	461.0	88.9	54.6	130				
Toluene	2802	50	2500	169.0	105	70	139				
Xylenes, Total	11070	50	7500	2919	109	70.7	136				
Surr: 4-Bromofluorobenzene	2616	0	2500		105	70	130				
Surr: Dibromofluoromethane	2402	0	2500		96.1	70	130				
Surr: Toluene-d8	2405	0	2500		96.2	70	130				

Sample ID: **1411D32-062AMS**	Client ID: **DUP 3**				Units: **ug/L**		Prep Date: **11/21/2014**		Run No: **280604**
SampleType: **MS**	TestCode: **Oxygenates SW8260B**				BatchID: **199640**		Analysis Date: **11/24/2014**		Seq No: **5937250**

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		

Analytical Environmental Services, Inc

Date: 28-Nov-14

Client: Crawford Environmental Services
Project Name: Clouds Chevron
Workorder: 1411D32

ANALYTICAL QC SUMMARY REPORT

BatchID: 199640

Sample ID: **1411D32-062AMS** Client ID: **DUP 3** Units: **ug/L** Prep Date: **11/21/2014** Run No: **280604**
SampleType: **MS** TestCode: **Oxygenates SW8260B** BatchID: **199640** Analysis Date: **11/24/2014** Seq No: **5937250**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	56470	5000	50000		113	54.6	145				
tert-Amyl methyl ether	10770	500	10000		108	71.1	129				
tert-Butyl Alcohol	55980	5000	50000		112	50.3	149				

Sample ID: **1411D32-062AMSD** Client ID: **DUP 3** Units: **ug/L** Prep Date: **11/21/2014** Run No: **280604**
SampleType: **MSD** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **199640** Analysis Date: **11/24/2014** Seq No: **5937227**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	2572	50	2500	39.50	101	70.2	138	2595	0.890	20	
Ethylbenzene	2820	50	2500	224.0	104	71.9	133	2931	3.86	20	
Naphthalene	2635	250	2500	461.0	87.0	54.6	130	2684	1.82	21.4	
Toluene	2756	50	2500	169.0	103	70	139	2802	1.69	20	
Xylenes, Total	10770	50	7500	2919	105	70.7	136	11070	2.73	20	
Surr: 4-Bromofluorobenzene	2460	0	2500		98.4	70	130	2616	0	0	
Surr: Dibromofluoromethane	2422	0	2500		96.9	70	130	2402	0	0	
Surr: Toluene-d8	2410	0	2500		96.4	70	130	2405	0	0	

Sample ID: **1411D32-062AMSD** Client ID: **DUP 3** Units: **ug/L** Prep Date: **11/21/2014** Run No: **280604**
SampleType: **MSD** TestCode: **Oxygenates SW8260B** BatchID: **199640** Analysis Date: **11/24/2014** Seq No: **5937251**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	57830	5000	50000		116	54.6	145	56470	2.37	23.5	
tert-Amyl methyl ether	10910	500	10000		109	71.1	129	10770	1.24	20	
tert-Butyl Alcohol	57030	5000	50000		114	50.3	149	55980	1.85	33.5	

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		

APPENDIX D

Data Verification Checklist

UST Programmatic QAPP Contractor Checklist				
Item #:	Item	Yes	No	N/A
1	Is Facility Name, Permit #, and address provided?	Yes		
2	Is UST Owner/Operator name, address, provided?			n/a
3	Is name, address, & phone number of current property owner provided?	Yes		
4	Is the SCDHEC Certified UST Site Rehabilitation Contractor's name, address, phone number, and certification number provided?	Yes		
5	Is the name, address ,telephone number, and certification number of the well driller that installed the boring/monitoring wells provided?			n/a
6	Is the name, address, telephone number, and certification number of the certified laboratories performing analytical analyses provided	Yes		
7	Has the facility history be summarized?			n/a
8	Has the regional geology and hydrogeology been summarized?			n/a
9	Are the receptor survey results provided as required?			n/a
10	Has the current use of the site and adjacent land been described?	Yes		
11	Has the site specific geology been described?			n/a
12	Has the primary soil type been described?			n/a
13	Have the field screening results been described?			n/a
14	Has a description of the soil sample collection and preservation been detailed?			n/a
15	Has the field screening methodology been detailed?			n/a
16	Has the monitoring well installation and development dates been provided?			n/a
17	Has the method of well development been detailed? (Table 2)			n/a
18	Has the justification been provided for the locations of the monitoring wells?			n/a
19	Have the monitoring wells been labeled in accordance with the UST QAPP guidelines?	Yes		
20	Has the groundwater sampling methodology been detailed?	Yes		
21	Have the groundwater sampling dates and groundwater measurements been provided?	Yes		
22	Has the purging methodology been detailed?	Yes		
23	Has the volume of water purged from each well been provided along with the measurements to verify purging is complete?	Yes		
24	If free-product is present, has the thickness been provided?			n/a
25	Does the report include a brief discussion of the assessment done and the results?			n/a

UST Programmatic QAPP Contractor Checklist				
26	Does the report include a brief discussion of the aquifer evaluation and the results?	Yes		
27	Does the report include a brief discussion of the fate & transport models used?			n/a
28	Are the site-conceptual tables included (Tier 1 risk evaluation)			n/a
29	Have the exposure pathways been analyzed (Tier 2 risk evauluation)			n/a
30	Have the SSTLs for each compound and pathway been calculated? (Tier 2 risk evaluation)	Yes		
31	Have recommendations for further action been provided and explained?			n/a
32	Has the soil analytical data for the site been provided in tabular format? (Table 5)			n/a
33	Has the potentiometric data for the site been provided in tabular format?	Yes		
34	Has the current and historical laboratory data been provided in tabular format	Yes		
35	Have the aquifer characteristics been provided and summarized on the appropriate form?			n/a
36	Have the Site conceptual model tables been included (Tier 1 risk evaluation)			n/a
37	Has the topographic map been provided with all the required elements?	Yes		
38	Has the site base map been provided with all the required elements?	Yes		
39	Have the CoC maps been provided?	Yes		
40	Have the potentiometric maps been provided?	Yes		
41	Have the geologic cross-sections been provided			n/a
42	Have maps showing the predicted migration of the CoCs through time been provided?			n/a
43	Has the site survey been provided and include all necessary elements? (Appendix A)			n/a
44	Have the sampling logs, chain of custody forms and analytical data package been included with all elements? (Appendix B)	Yes		
45	Is the laboratory performing the analyses properly certified? (Appendix B)	Yes		
46	Has the tax map been included with all necessary elements? (Appendix C)			n/a
47	Have the soil/boring field screening logs been provided? (Appendix D)			n/a
48	Have the well completion logs been provided? (Appendix E)			n/a
49	Have the aquifer evaluation forms,data, graphs, equations,etc. been provided? (Appendix F)			n/a
50	Have the disposal manifests been provided? (Appendix G)	Yes		
51	Has a copy of the local zoning regulations been provided? (Appendix H)			n/a

UST Programmatic QAPP Contractor Checklist				
52	Has all fate and transport modeling been provided? (Appendix I)			n/a
53	Have copies of all access agreements obtained by the contractor been provided? (Appendix J)			n/a
54	Has a copy of this form been attached to the final report and are explainations for any missing or incomplete data been provided?	Yes		
Comments:				

D H E C

PROMOTE PROTECT PROSPER

W. Marshall Taylor Jr., Acting Director

Promoting and protecting the health of the public and the environment

MR CHARLES F CRAWFORD III
CRAWFORD ENVIRONMENTAL SERVICES
15 CHURCH AVENUE SW
ROANOKE VA 24011

MAR 30 2015

UST DOCKETING 18 week

Re: **Corrective Action System Evaluation (CASE) Report Review**
UST Permit# 07584, University Mart, 2367 Taylor St., Columbia, SC
Release #1 reported January 30, 1991; CA# 47811
Release #2 reported April 17, 1998; CA# 47812
UST Permit # 07777, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 31, 1991; CA# 47813
UST Permit # 12352, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 30, 1991; CA# 47814
Contract #IFB-5400007095-1/30/2014-EMW; PO# 4600322226
CASE report received February 19, 2015
Richland County

Dear Mr. Crawford:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (Agency) has reviewed the CASE report documenting the corrective action activities and the November 2014 groundwater sampling event. The Agency has noted that the report documents a 65.17% reduction has been achieved to date. The Agency agrees with Crawford's recommendation to install injection wells in proximity to monitoring wells MW-10 and MW-15 and begin surfactant injections.

The next semi-annual CASE report is due on or before May 5, 2015.

On all correspondence regarding this site, please reference UST Permit #07584/ #07777/ #12352. If you have any questions regarding this correspondence, please contact me by telephone at (803) 898-0634, by fax at (803) 898-0673, or by e-mail at utzst@dhec.sc.gov.

Sincerely,

Sonya T. Utz, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

cc: Technical File

D H E C

PROMOTE PROTECT PROSPER

W. Marshall Taylor Jr., Acting Director

Promoting and protecting the health of the public and the environment

SYLVAN FOOD SYSTEMS INC
1245 BOSTON AVE
WEST COLUMBIA SC 29170

MAR 30 2015

Re: **Corrective Action System Evaluation (CASE) Report Review**
UST Permit# 07584, University Mart, 2367 Taylor St., Columbia, SC
Release #1 reported January 30, 1991
Release #2 reported April 17, 1998
UST Permit # 07777, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 31, 1991
UST Permit # 12352, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 30, 1991
CASE report received February 19, 2015
Richland County

To Whom It May Concern:

As you are aware, petroleum products have been identified in the soil and groundwater at the referenced facility. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services has been retained to initiate corrective action of the impacted soil and groundwater using aggressive fluid vapor recovery (AFVR), air sparging and soil vapor extraction, and the injection of surfactants in addition to natural attenuation.

In order to keep you updated, a copy of the Corrective Action System Evaluation (CASE) Report has been sent to you by Crawford Environmental Services. Please contact me if you did not receive the report.

If you have questions concerning this correspondence, please contact me by telephone at (803) 898-0634, by fax at (803) 898-0673, or utzst@dhec.sc.gov.

Sincerely,

Sonya T. Utz, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

cc: Technical File

D H E C

PROMOTE PROTECT PROSPER

W. Marshall Taylor Jr., Acting Director

Promoting and protecting the health of the public and the environment

MS LINDA WARREN
C/O DOUGLAS HARLEY
1527 LYON ST
COLUMBIA SC 29204

MAR 30 2015

Re: **Corrective Action System Evaluation (CASE) Report Review**
UST Permit# 07584, University Mart, 2367 Taylor St., Columbia, SC
Release #1 reported January 30, 1991
Release #2 reported April 17, 1998
UST Permit # 07777, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 31, 1991
UST Permit # 12352, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 30, 1991
CASE report received February 19, 2015
Richland County

Dear Ms. Warren:

As you are aware, petroleum products have been identified in the soil and groundwater at the referenced facility. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services has been retained to initiate corrective action of the impacted soil and groundwater using aggressive fluid vapor recovery (AFVR), air sparging and soil vapor extraction, and the injection of surfactants in addition to natural attenuation.

In order to keep you updated, a copy of the Corrective Action System Evaluation (CASE) Report has been sent to you by Crawford Environmental Services. Please contact me if you did not receive the report.

If you have questions concerning this correspondence, please contact me by telephone at (803) 898-0634, by fax at (803) 898-0673, or utzst@dhec.sc.gov.

Sincerely,

Sonya T. Utz, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

cc: Technical File

D H E C

PROMOTE PROTECT PROSPER

W. Marshall Taylor Jr., Acting Director

Promoting and protecting the health of the public and the environment

GILBERT WALKER
PUBLIC HOUSING AUTHORITY
GONZALES GARDENS
PO BOX 4307
COLUMBIA SC 29240

MAR 30 2015

Re: **Corrective Action System Evaluation (CASE) Report Review**
UST Permit# 07584, University Mart, 2367 Taylor St., Columbia, SC
Release #1 reported January 30, 1991
Release #2 reported April 17, 1998
UST Permit # 07777, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 31, 1991
UST Permit # 12352, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 30, 1991
CASE report received February 19, 2015
Richland County

Dear Mr. Gonzales:

As you are aware, petroleum products have been identified in the soil and groundwater at the referenced facility. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services has been retained to initiate corrective action of the impacted soil and groundwater using aggressive fluid vapor recovery (AFVR), air sparging and soil vapor extraction, and the injection of surfactants in addition to natural attenuation.

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Sincerely,

Sonya T. Utz, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

cc: Technical File

D H E C

PROMOTE PROTECT PROSPER

W. Marshall Taylor Jr., Acting Director

Promoting and protecting the health of the public and the environment

1500 MILLWOOD AVE LLC
1330 DEVONSHIRE DR
COLUMBIA SC 29204

MAR 30 2015

Re: **Corrective Action System Evaluation (CASE) Report Review**
UST Permit# 07584, University Mart, 2367 Taylor St., Columbia, SC
Release #1 reported January 30, 1991
Release #2 reported April 17, 1998
UST Permit # 07777, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 31, 1991
UST Permit # 12352, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 30, 1991
CASE report received February 19, 2015
Richland County

To Whom It May Concern:

As you are aware, petroleum products have been identified in the soil and groundwater at the referenced facility. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services has been retained to initiate corrective action of the impacted soil and groundwater using aggressive fluid vapor recovery (AFVR), air sparging and soil vapor extraction, and the injection of surfactants in addition to natural attenuation.

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Sincerely,

Sonya T. Utz, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

cc: Technical File

D H E C

PROMOTE PROTECT PROSPER

W. Marshall Taylor Jr., Acting Director

Promoting and protecting the health of the public and the environment

JOHN M SUDDETH
1410 N MILLWOOD AVE
COLUMBIA SC 29204

MAR 3 0 2015

Re: **Corrective Action System Evaluation (CASE) Report Review**
UST Permit# 07584, University Mart, 2367 Taylor St., Columbia, SC
Release #1 reported January 30, 1991
Release #2 reported April 17, 1998
UST Permit # 07777, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 31, 1991
UST Permit # 12352, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 30, 1991
CASE report received February 19, 2015
Richland County

Dear Mr. Suddeth:

As you are aware, petroleum products have been identified in the soil and groundwater at the referenced facility. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services has been retained to initiate corrective action of the impacted soil and groundwater using aggressive fluid vapor recovery (AFVR), air sparging and soil vapor extraction, and the injection of surfactants in addition to natural attenuation.

In order to keep you updated, a copy of the Corrective Action System Evaluation (CASE) Report has been sent to you by Crawford Environmental Services. Please contact me if you did not receive the report.

If you have questions concerning this correspondence, please contact me by telephone at (803) 898-0634, by fax at (803) 898-0673, or utzst@dhec.sc.gov.

Sincerely,

Sonya T. Utz

Sonya T. Utz, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

cc: Technical File

D H E C

PROMOTE PROTECT PROSPER

W. Marshall Taylor Jr., Acting Director

Promoting and protecting the health of the public and the environment

FUNG LAU
2300 TAYLOR ST SUITE D
COLUMBIA SC 29204

MAR 30 2015

Re: **Corrective Action System Evaluation (CASE) Report Review**
UST Permit# 07584, University Mart, 2367 Taylor St., Columbia, SC
Release #1 reported January 30, 1991
Release #2 reported April 17, 1998
UST Permit # 07777, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 31, 1991
UST Permit # 12352, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 30, 1991
CASE report received February 19, 2015
Richland County

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In order to keep you updated, a copy of the Corrective Action System Evaluation (CASE) Report has been sent to you by Crawford Environmental Services. Please contact me if you did not receive the report.

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Sincerely,

Sonya T. Utz, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

cc: Technical File

Document Receipt Information

☒ Hard Copy ☒ CD ☐ Email

Date Received 7-1-15

Permit Number

Project Manager Sonya Utz Crawford

Name of Contractor

UST Certification Number

Docket Number

Scanned

CASE Report

CRAWFORD
ENVIRONMENTAL
SERVICES

June 26, 2015

Ms. Sonya Utz
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RE: Corrective Action System Evaluation – May 2015 (Sampling Date)
Handy Pantry #65/University Mart & Cloud's Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina
UST Permit # 07584 / 07777 / 12352

Dear Ms. Utz:

Enclosed please find one copy of the May 2015 Corrective Action System Evaluation (CASE) report prepared by Crawford Environmental Services, Inc. (CES) for the referenced site. Should you have any questions regarding the enclosed material, or if additional information is required, please feel free to contact Charlie Crawford or myself at 540.343.6256.

Best Regards,

Daniel Fisher
Division Manager

cc:

CRAWFORD
ENVIRONMENTAL
SERVICES

Corrective Action System Evaluation Report

Handy Pantry #65/University Mart & Cloud's Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina
UST Permit # 07584 / 07777 / 12352

June 26, 2015
Revision 0

CORRETIVE ACTION SYSTEM EVALUATION REPORT

Handy Pantry #65/University Mart & Cloud's Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina
UST Permit # 07584 / 07777 / 12352

Submitted To:
Ms. Sonya Utz
State of South Carolina
Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Prepared For:
Ms. Sonya Utz
State of South Carolina
Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

June 26, 2015
CES Job Number: 7.0547

Prepared By:
Daniel J. Fisher
Division Manager

Reviewed By:
Charles F. Crawford
President / CEO

Approved By:
B. Thomas Houghton
P.G. #2343

CRAWFORD
ENVIRONMENTAL
SERVICES

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Figure 3 Groundwater Chemicals of Concern
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Appendix A - Purge Water Disposal Manifest
Appendix B – Groundwater Sampling Data Sheets
Appendix C - Laboratory Data Reports, Chain of Custodies and Field Data Information Sheets
Appendix D - Data Verification Checklist

1.0 Facility Information

The subject property is located in a primarily commercial area of Columbia, South Carolina (Figure 1). The subject sites, operating as Handy Pantry #65/University Mart and former Cloud's Chevron, is bordered by light commercial properties in all directions. A site plan depicting pertinent features of the subject property is provided as Figure 2.

1.1 Project Information Summary:

1.2.1 Site Address

Handy Pantry #65 / University Mart / Clouds Chevron
2367 Taylor Street
Columbia, South Carolina

1.2.2 Property Owner Information

Mr. Mahesh Patel
2367 Taylor Street
Columbia, South Carolina

Mr. Andrew Diggins
1600 Block Two Notch Road
Columbia, South Carolina

1.2.3 Contractor Information

Crawford Environmental Services
15 Church Avenue, SW
Roanoke, Virginia 24011
1 (540) 343-6256
Contractor Number: UCC-0388

1.2.4 Laboratory Information

Access Analytical, Inc. (AA)
7478 Carlisle Street
Irmo, SC 29063
1 (803) 781-4243
SC Certification: 32575001

Analytical Environmental Services Inc. (AES)
3785 Presidential Pkwy.
Atlanta, GA 30340
1 (770) 457-8177
SC Certification: 98016003

2.0 Corrective Action Activities

Corrective Action activities at the facility for this phase of work included the following:

-Regular O&M of the Air Sparge / Soil Vapor Extraction Systems.
-Bi-Annual Sampling Event

2.1 Water Sample Collection

A comprehensive groundwater sampling event, including; recording equilibrated static water levels, product thicknesses, and the collection of chemical samples was completed by CES personnel between May 28, and June 2, 2015. CES personnel utilized an electronic water level indicator for water level measurements and an oil/water interface probe for free phase product measurements. Samples for the shallow wells were collected utilizing disposable polyethylene bailers. Shallow wells that exhibited groundwater above the screened bracket were purged of at least three well volumes or purged till dry before sample collection. Deep and intermediate wells exhibiting groundwater above the screened bracket were purged utilizing submersible pumps with dedicated tubing. For sample collection, disposable polyethylene bailers were lowered slowly to the top of the water column (after purging in some cases) allowed to fill one volume, then removed. Disposal records for the 135-gallons of purge water generated are included as Appendix A. Groundwater was then transferred to the appropriate sampling containers and was then placed in coolers, maintaining 4˚C, and delivered to an independent laboratory. Groundwater chemical samples were submitted to Access Analytical, Inc., {SC Certification: 32575001} for analysis.

2.1.1 Groundwater Sampling

Equilibrated static water levels and free-product thicknesses were recorded for monitoring MW-2, MW-3, MW-4, MW-5AR, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-15, MW-17, MW-18, MW-19, MW-20, MW-22, MW-23, MW-25, MW-26, MW-27, MW-28, MW-29, MW-30, MW-31, MW-32, MW-33, MW-34, MW-35, MW-36, MW-37, MW-38, MW-39, MW-40, MW-41, MW-42, MW-43, MW-44, MW-45, MW-46, MW-48, MW-51, MW-53, MW-54, MW-55, MW-56, MW-58, MW-59, MW-62, MW-63, MW-67, MW-70, PWR-1, DW-1, DW-2, DW-3, DW-4, DW-5, DW-6, DW-7 and DW-9 Groundwater sampling data sheets are included as Appendix B.

During the referenced sampling event, CES was unable to access monitoring wells MW-49 and MW-50 due to a locked gate and monitoring wells MW-6, MW-16, MW-47, MW-57, MW-60, MW-61, MW-64, MW-66 and MW-68 were unable to be located. CES also utilized a metal detector to locate the wells, however, the overgrown site conditions did not permit the location of the aforementioned monitoring wells. Monitoring wells MW-2, MW-3, MW-15, MW-20, MW-29, MW-31, MW-62, MW-63 and PW-1R maintained free phase petroleum and were not sampled. Monitoring wells MW-1, MW-5 and MW-52 did not maintain sufficient water columns to collect groundwater samples.

CES sampled the monitoring wells, as part of the May 2015 sampling event, for the following chemical analyses: Benzene/Toluene/Ethylbenzene/Xylenes (BTEX), naphthalene, Methyl Tert-Butyl Ether (MTBE), Tert-Amyl Methyl Ether (TAME), Tert-Butyl Alcohol (TBA), and Tert-Amyl Alcohol (TAA).

During the sampling event CES collected duplicate samples of monitoring wells MW-6, MW-12 and DW-7. Review of the duplicate samples collected from aforementioned monitoring well samples did not yield significant data gaps.

In addition to duplicate samples, CES also collected daily field blank samples at the conclusion of the sample events. The samples were collected at the conclusion of the day to be representative of all samples that were collected during that day.

Table 2 presents the laboratory data for the submitted groundwater samples collected as part of this assessment. The groundwater concentration maps are included as Figure 3. The groundwater elevation map is included as Figure 4.

3.0 Summary

During the corrective action activities performed at the subject property, CES conducted a comprehensive groundwater monitoring event, in an effort to determine the effectiveness of the current corrective action plan. The qualitative and quantitative data collected from recent assessment activities indicates the following regarding current site conditions;

1. Due to the amount of SSTL wells that were not sampled during this phase, SSTL calculations were not performed.

2. Free-phase petroleum was observed at monitoring wells MW-2, MW-3, MW-15, MW-20, MW-29, MW-31, MW-62, MW-63 and PW-1R.

3. Due to anomalies in free product thicknesses observed during this event, CES is scheduled to perform an additional free product gauging event during

the week of June 29, 2015 to confirm current thicknesses. Results of this gauging event will be forwarded to SCDHEC upon completion.

3. CES is currently negotiating with the property owners of Churches Chicken to obtain site access to install injection wells proximal to MW-10 and MW-15. CES estimates that access will be granted in early July and the well installation and first injection can be completed by August 15, 2015.

Tables

Table 1: Summary of Groundwater Elevation Data
Table 2: Summary of Groundwater Analytical Data
Table 3: Site Specific Target Levels Summary

Table 1

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST Permit ID: 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — CES Project Number: 7.0547

Well Construction and Historical Groundwater Elevation Summary

Monitor Well	Well Depth (ft)	Screened Interval		Top of Casing (ft)	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)
MW-1	27	17	27	93.89	4/2/2014	NA	DRY	NA	NA	DRY
					11/4/2014	NA	DRY	NA	NA	DRY
					5/29/2015	NA	DRY	NA	NA	DRY
MW-2	30	20	30	94.70	5/29/2015	22.56	22.57	0.01	72.14	72.13
					11/4/2014	NA	23.03	NA	NA	71.67
					4/2/2014	NA	21.12	NA	NA	73.58
MW-3	29	19	29	94.45	5/29/2015	23.2	23.29	0.09	71.25	71.16
					4/2/2014	NA	21.40	NA	NA	73.05
					11/12/2014	NA	23.16	NA	NA	71.29
MW-4	28	18	28	94.85	5/29/2015	NA	21.52	NA	NA	73.33
					11/11/2014	NA	21.76	NA	NA	73.09
					4/2/2014	NA	21.31	NA	NA	73.54
MW-5	26	16	26	95.26	5/29/2015	NA	DRY	NA	NA	DRY
					11/11/2014	NA	DRY	NA	NA	DRY
					4/2/2014	NA	DRY	NA	NA	DRY
MW-6	30	20	30	94.96	5/29/2015	NA	22.38	NA	NA	72.58
					11/11/2014	NA	23.98	NA	NA	70.98
					4/3/2014	NA	22.61	NA	NA	72.35
MW-7	30	20	30	95.93	5/29/2015	NA	23.48	NA	NA	72.45
					11/11/2014	NA	24.12	NA	NA	71.81
					4/3/2014	NA	23.02	NA	NA	72.91
MW-8	28	18.5	28	94.79	5/29/2015	NA	20.08	NA	NA	74.71
					11/11/2014	NA	21.43	NA	NA	73.36
					4/3/2014	NA	19.95	NA	NA	74.84
MW-9	30	20	30	92.30	5/28/2015	NA	21.19	NA	NA	71.11
					11/11/2014	NA	21.69	NA	NA	70.61
					4/2/2014	NA	20.60	NA	NA	71.70
MW-10	28	18	28	85.98	5/28/2015	NA	16.64	NA	NA	69.34
					11/11/2014	Interface Probe Failure - 1.25-Feet of Product Observed in Bailer				
					4/1/2014	NA	17.69	NA	NA	68.29
MW-11	30	Unknown		88.46	5/29/2015	NA	18.93	NA	NA	69.53
					11/11/2014	NA	19.38	NA	NA	69.08
					4/2/2014	NA	18.61	NA	NA	69.85
MW-12	24.65	Unknown		72.80	5/28/2015	NA	4.38	NA	NA	68.42
					11/11/2014	NA	4.63	NA	NA	68.17
					4/2/2014	NA	4.20	NA	NA	68.60
MW-13	30.1	Unknown		80.44	5/28/2015	NA	11.71	NA	NA	68.73
					11/11/2014	NA	12.15	NA	NA	68.29
					4/1/2014	NA	11.13	NA	NA	69.31
MW-15	25	15	25	86.44	5/29/2015	16.45	16.61	0.16	69.99	69.83
					11/11/2014	Interface Probe Failure - 0.25-Feet of Product Observed in Bailer				
					4/1/2014	16.60	16.00	0.60	69.84	70.88*
MW-16	25	15	25	88.19	5/29/2015	Unable to Locate				
					11/12/2014	NA	18.98	NA	NA	69.21
					4/2/2014	NA	17.54	NA	NA	70.65
MW-17	22	20	30	92.45	5/28/2015	NA	22.70	NA	NA	69.75
					11/12/2014	NA	23.45	NA	NA	69.00
					4/2/2014	NA	22.00	NA	NA	70.45
MW-18	30	20	30	94.81	5/28/2015	NA	24.41	NA	NA	70.40
					11/12/2014	NA	25.08	NA	NA	69.73
					4/2/2014	NA	23.68	NA	NA	71.13
MW-19	30	20	30	93.96	5/28/2015	NA	24.00	NA	NA	69.96
					11/13/2014	NA	24.56	NA	NA	69.40
					4/3/2014	NA	23.33	NA	NA	70.63
MW-20	25	15	25	94.12	5/28/2015	22.67	22.61	0.06	71.45	71.51
					11/13/2014	NA	23.28	NA	NA	70.84
					4/3/2014	NA	21.95	NA	NA	72.17

Table 1

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST Permit ID: 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — CES Project Number: 7.0547

Well Construction and Historical Groundwater Elevation Summary

Monitor Well	Well Depth (ft)	Screened Interval		Top of Casing (ft)	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)
MW-22	30	20	30	94.25	5/28/2015	NA	21.85	NA	NA	72.40
					11/11/2014	NA	22.68	NA	NA	71.57
					4/3/2014	NA	21.11	NA	NA	73.14
MW-23	30	20	30	94.43	5/28/2015	NA	24.25	NA	NA	70.18
					11/13/2014	NA	24.98	NA	NA	69.45
					4/3/2014	NA	23.65	NA	NA	70.78
MW-25	25.6	Unknown		93.09	5/28/2015	NA	20.65	NA	NA	72.44
					11/10/2014	NA	21.60	NA	NA	71.49
					4/1/2014	NA	19.71	NA	NA	73.38
MW-26	30	Unknown		95.96	6/5/2015	NA	22.49	NA	NA	73.47
					11/11/2014	NA	22.95	NA	NA	73.01
					4/3/2014	NA	20.01	NA	NA	75.95
MW-27	30	15	30	91.40	5/28/2015	NA	17.75	NA	NA	73.65
					11/13/2014	NA	18.85	NA	NA	72.55
					4/1/2014	NA	14.65	NA	NA	76.75
MW-28	30	15	30	91.46	5/28/2015	NA	17.97	NA	NA	73.49
					11/13/2014	NA	19.75	NA	NA	71.71
					4/1/2014	NA	15.63	NA	NA	75.83
MW-29	30	15	30	91.09	5/28/2015	17.91	17.92	0.01	73.18	73.17
					11/13/2014	NA	19.92	NA	NA	71.17
					4/1/2014	NA	15.51	NA	NA	75.58
MW-30	30	15	30	92.77	5/28/2015	NA	26.70	NA	NA	66.07
					11/10/2014	NA	22.90	NA	NA	69.87
					4/1/2014	NA	20.50	NA	NA	72.27
MW-31	35	20	35	95.20	5/28/2015	25.61	25.62	0.01	69.59	69.58
					11/12/2014	NA	26.36	NA	NA	68.84
					4/2/2014	NA	24.41	NA	NA	70.79
MW-32	30	15	30	92.87	5/28/2015	NA	22.00	NA	NA	70.87
					11/12/2014	NA	23.16	NA	NA	69.71
					4/2/2014	NA	21.28	NA	NA	71.59
MW-33	35	20	35	93.84	5/28/2015	NA	23.83	NA	NA	70.01
					11/12/2014	NA	24.65	NA	NA	69.19
					4/1/2014	NA	23.18	NA	NA	70.66
MW-34	35	20	35	94.77	5/28/2015	NA	24.72	NA	NA	70.05
					11/12/2014	NA	25.49	NA	NA	69.28
					4/1/2014	NA	24.06	NA	NA	70.71
MW-35	35	20	35	93.71	5/28/2015	NA	23.80	NA	NA	69.91
					11/12/2014	NA	24.66	NA	NA	69.05
					4/1/2014	NA	21.35	NA	NA	72.36
MW-36	35	20	35	93.89	5/28/2015	NA	23.63	NA	NA	70.26
					11/12/2014	NA	24.72	NA	NA	69.17
					4/1/2014	NA	22.84	NA	NA	71.05
MW-37	35	20	35	93.78	5/28/2015	NA	23.98	NA	NA	69.80
					11/12/2014	NA	24.87	NA	NA	68.91
					4/1/2014	NA	22.24	NA	NA	71.54
MW-38	35	20	35	95.53	6/2/2015	NA	25.26	NA	NA	70.27
					11/12/2014	NA	26.17	NA	NA	69.36
					4/1/2014	NA	24.61	NA	NA	70.92
MW-39	35	20	35	96.19	6/2/2015	NA	26.45	NA	NA	69.74
					11/12/2014	NA	27.36	NA	NA	68.83
					4/2/2014	NA	25.59	NA	NA	70.60
MW-40	35	20	35	95.69	6/2/2015	NA	26.12	NA	NA	69.57
					11/12/2014	NA	27.01	NA	NA	68.68
					4/2/2014	NA	25.29	NA	NA	70.40
MW-41	35	20	35	94.85	6/2/2015	NA	25.69	NA	NA	69.16
					11/11/2014	NA	26.99	NA	NA	67.86
					4/1/2014	NA	24.70	NA	NA	70.15
MW-42	35	20	35	95.81	6/2/2015	NA	26.25	NA	NA	69.56
					11/12/2014	NA	27.22	NA	NA	68.59
					4/1/2014	NA	25.35	NA	NA	70.46

Table 1

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST Permit ID: 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — CES Project Number: 7.0547

Well Construction and Historical Groundwater Elevation Summary

Monitor Well	Well Depth (ft)	Screened Interval		Top of Casing (ft)	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)
MW-43	40	20	40	95.15	5/28/2015	NA	24.66	NA	NA	70.49
					11/11/2014	NA	25.61	NA	NA	69.54
					4/2/2014	NA	24.00	NA	NA	71.15
MW-44	31	16	31	94.57	5/28/2015	NA	22.70	NA	NA	71.87
					11/11/2014	NA	24.23	NA	NA	70.34
					4/1/2014	NA	24.42	NA	NA	70.15
MW-45	30	15	30	92.51	5/28/2015	NA	21.75	NA	NA	70.76
					11/11/2014	NA	22.63	NA	NA	69.88
					4/1/2014	NA	21.22	NA	NA	71.29
MW-46	35	20	35	94.50	5/28/2015	NA	24.19	NA	NA	70.31
					11/11/2014	NA	24.95	NA	NA	69.55
					4/1/2014	NA	23.55	NA	NA	70.95
MW-48	30	15	30	89.95	5/29/2015	NA	19.63	NA	NA	70.32
					11/11/2014	Unable to Access - Locked Gate				
					4/2/2014	NA	19.70	NA	NA	70.25
MW-49	30	15	30	88.18	5/29/2015	Unable to Access - Locked Gate				
					11/11/2014					
					4/2/2014					
MW-50	30	15	30	84.09	5/29/2015	Unable to Access - Locked Gate				
					11/11/2014					
					4/2/2014					
MW-51	35	20	35	93.91	5/29/2015	NA	23.72	NA	NA	70.19
					11/11/2014	NA	24.29	NA	NA	69.62
					4/2/2014	NA	21.23	NA	NA	72.68
MW-53	20	5	20	79.60	5/28/2015	NA	10.50	NA	NA	69.10
					11/11/2014	NA	11.02	NA	NA	68.58
					4/3/2014	NA	9.60	NA	NA	70.00
MW-54	20	5	20	77.58	5/28/2015	NA	11.27	NA	NA	66.31
					11/11/2014	Unable to Locate - Overgrown Field				
					4/1/2014	NA	11.31	NA	NA	66.27
MW-55	14	4	14	71.22	5/28/2015	NA	3.83	NA	NA	67.39
					11/11/2014	Unable to Locate - Overgrown Field				
					4/3/2014	NA	2.51	NA	NA	68.71
MW-56	20	5	20	76.39	5/28/2015	NA	8.22	NA	NA	68.17
					11/11/2014	Unable to Locate - Overgrown Field				
					4/3/2014	NA	5.12	NA	NA	71.27
MW-58	19	4	19	76.37	5/29/2015	NA	6.85	NA	NA	69.52
					11/11/2014	Abandoned				
					4/2/2014					
MW-59	17	2	17	68.02	5/28/2015	NA	6.46	NA	NA	61.56
					11/11/2014	NA	6.69	NA	NA	61.33
					4/2/2014	NA	6.05	NA	NA	61.97
MW-60	14	4	14	67.94	5/28/2015	Unable to Locate				
					11/11/2014					
					4/2/2014					
MW-62	35	20	35	94.05	5/28/2015	22.21	23.71	1.5	71.84	70.34
					11/12/2014	NA	24.75	NA	NA	69.30
					4/1/2014	NA	22.32	NA	NA	71.73
MW-63	35	20	35	94.65	5/28/2015	24.04	24.05	0.01	70.61	70.60
					11/12/2015	Unable to Locate				
					4/2/2014	NA	23.07	NA	NA	71.58
MW-65	35	20	35	94.04	5/28/2015	Unable to Locate - Paved over				
					11/11/2014					
					4/2/2014					
MW-67	35	20	35	96.10	6/2/2015	NA	26.29	NA	NA	69.81
					11/12/2014	NA	27.28	NA	NA	68.82
					4/1/2014	NA	24.44	NA	NA	71.66
MW-70	35	20	35	95.49	5/28/2015	NA	25.60	NA	NA	69.89
					11/11/2014	NA	26.22	NA	NA	69.27
					4/2/2014	NA	24.70	NA	NA	70.79

Table 1

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST Permit ID: 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — CES Project Number: 7.0547

Well Construction and Historical Groundwater Elevation Summary

Monitor Well	Well Depth (ft)	Screened Interval		Top of Casing (ft)	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)
MW-5AR	28	18	28	94.18	5/28/2015	NA	20.91	NA	NA	73.27
					11/13/2014	NA	22.64	NA	NA	71.54
					4/1/2014	NA	21.24	NA	NA	72.94
PW-1R	50	45	50	93.75	5/29/2015	23.19	23.20	0.01	70.56	70.55
					11/13/2014	NA	23.92	NA	NA	69.83
					4/3/2014	NA	23.11	NA	NA	70.64
DW-1	70	65	70	94.66	5/29/2015	NA	46.28	NA	NA	48.38
					11/10/2014	NA	45.42	NA	NA	49.24
					4/2/2014	NA	45.00	NA	NA	49.66
DW-2	75	70	75	94.02	11/11/2014	NA	44.88	NA	NA	49.14
					4/2/2014	NA	44.34	NA	NA	49.68
DW-3	52	47	52	93.75	5/28/2015	NA	23.93	NA	NA	69.82
					11/13/2014	NA	24.42	NA	NA	69.33
					4/3/2014	NA	24.40	NA	NA	69.35
DW-4	110	105	110	93.79	5/28/2015	NA	44.51	NA	NA	49.28
					11/13/2014	NA	3.45	NA	NA	90.34
					4/3/2014	NA	44.60	NA	NA	49.19
DW-5	70	65	70	93.74	5/28/2015	NA	44.45	NA	NA	49.29
					11/12/2014	NA	44.75	NA	NA	48.99
					4/1/2014	NA	44.22	NA	NA	49.52
DW-6	70	65	70	95.90	6/2/2015	NA	46.16	NA	NA	49.74
					11/12/2014	NA	46.64	NA	NA	49.26
					4/1/2014	NA	45.86	NA	NA	50.04
DW-7	55	50	55	72.79	5/28/2015	NA	24.32	NA	NA	48.47
					11/11/2014	NA	24.75	NA	NA	48.04
					4/3/2014	NA	24.00	NA	NA	48.79
DW-8	55	50	55	68.63	5/29/2015	NA	5.37	NA	NA	63.26
					11/11/2014	Abandoned				
					4/2/2014					
DW-9	65	60	65	76.47	5/28/2015	NA	24.90	NA	NA	51.57
					11/11/2014	NA	24.44	NA	NA	52.03
					4/2/2014	NA	25.00	NA	NA	51.47

INA = Information not available

* = GW Elevation Corrected for The Presence of Free Product

n/a = not applicable

CRAWFORD ENVIRONMENTAL SERVICES

Table 2

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Groundwater Laboratory Analytical Result Summary

Well ID:	Date:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphthalene	TAA	TAME	TBA
MW-1	4/2/2014	Dry								
	11/11/2014									
	5/29/2015									
MW-2	4/2/2014	170	41	200	960	320	150	230	1	6.8
	11/4/2014	140	300	220	1300	410	160	210	<10	<100
	5/29/2015	0.01-Feet of Free Product								
MW-3	4/2/2014	6900	18000	1200	16000	1800	600	980	560.000	340
	11/12/2014	4600	11000	620	8700	1300	280	<5000	310.000	<5000
	5/29/2015	0.09-Feet of Free Product								
MW-4	4/2/2014	<1	<1	<1	<1	3.5	<5	<100	10.000	<100
	11/11/2014	<1	<1	<1	<1	1.6	<5	<100	<10	<100
	5/29/2015	<1	<1	<1	<1	1.9	<5	<100	<10	<100
MW-5	4/2/2014	Dry								
	11/11/2014									
	5/29/2015									
MW-6	4/3/2014	2.6	<1	2.4	10	2.5	4.2	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	0.8	<5	<100	<10	<100
	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-7	4/3/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	0.71	<1	<1	<1	<1	<5	<100	<10	<100
	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-8	4/3/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-9	4/2/2014	830	7500	1700	14000	50	590	1700	5000	5000
	11/11/2014	380	11000	1900	13000	5	650	1100	<10	<100
	5/28/2015	250	5700	1200	8200	<50	480	<5000	<500	<5000
MW-10	4/1/2014	1800	5700	350	8500	50	690	5000	500.000	5000
	11/11/2014	1.25-Feet of Free Product								
	5/28/2015	66	76	67	860	<1	370	<100	<10	<100
MW-11	4/2/2014	2.3	4.1	11	4.1	<1	4.4	120	<10	<100
	11/11/2014	0.53	<1	<1	<1	<1	<5	80	<10	58
	5/29/2015	0.51	<1	<1	3.8	<1	6.6	50	<10	<100
MW-12	4/2/2014	2.9	0.67	1.6	0.91	18	4.7	630	9.300	<100
	11/11/2014	990	19	910	140	21	180	3600	14.000	<100
	5/28/2015	53	2.7	430	14	22	44	2300	<10	<100
MW-13	4/1/2014	0.62	8.8	4.5	86	<1	31	10	<10	<100
	11/11/2014	<1	<1	<	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-15	4/1/2014	0.60-Feet of Free Product								
	11/11/2014	0.25-Feet of Free Product								
	5/29/2015	0.16-Feet of Free Product								
MW-16	4/2/2014	<1	<1	<1	<1	<1	3.4	<100	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/29/2015	Unable to Locate								
MW-17	4/2/2014	280	5100	450	13000	50	850	2200	500.000	5000
	11/12/2014	32	3000	450	8300	<10	690	270	<100	<1000
	5/28/2015	210	7500	480	12000	<50	830	2200	<500	<5000
MW-18	4/2/2014	1900	7200	630	8300	340	370	4900	70.000	5000
	11/12/2014	3100	11000	560	8700	510	290	12000	<1000	<10000
	5/28/2015	970	2500	180	4100	230	180	3000	33.000	<100
MW-19	4/3/2014	300	1800	490	12000	50	900	610	500.000	5000
	11/13/2014	1400	2800	1600	24000	<50	1400	1300	<50	<5000
	5/28/2015	2100	17000	330	16000	<50	1200	6200	<500	<5000
MW-20	4/3/2014	1800	11000	460	11000	50	960	3100	65.000	5000
	11/13/2014	1400	12000	500	14000	120	1100	<10000	<1000	<10000
	5/29/2015	0.06-Feet of Free Product								
MW-22	4/3/2014	5700	12000	880	23000	50	990	3600	500.000	5000
	11/11/2014	6300	23000	700	21000	<20	1200	9600	<20	<140
	6/5/2015	4800	16000	760	26000	<100	840	<10000	<1000	<10000
MW-23	4/3/2014	4200	16000	880	19000	120	1100	5900	500.000	5000
	11/13/2014	890	3600	450	16000	<50	1200	1500	<50	<340
	5/28/2015	570	1500	89	8300	<50	660	<5000	<500	<5000
MW-25	4/1/2014	5.5	200	320	4400	<1	1300	170	<10	<100
	11/10/2014	38	140	200	2600	1.9	490	2800	<10	<100
	5/28/2015	29	140	190	3000	<1	560	430	<10	<100

Table 2

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Groundwater Laboratory Analytical Result Summary

Well ID:	Date:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphthalene	TAA	TAME	TBA
MW-26	4/3/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	6/2/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-27	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/13/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-28	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/13/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-29	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/13/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/29/2015	0.01-Feet of Free Product								
MW-30	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/10/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-31	4/2/2014	0.9	<1	<1	<1	2.7	<5	59	<10	<100
	11/12/2014	30	9.8	310	9.3	4.1	160	460	<10	<100
	5/29/2015	0.01-Feet of Free Product								
MW-32	4/2/2014	0.94	<1	1.9	2.4	<1	6.6	170	<10	<100
	11/12/2014	4	13	72	10	<1	45	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-33	4/1/2014	560	5200	2500	6900	50	670	4100	500.000	5000
	11/12/2014	130	410	210	550	1.2	71	1000	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	29	<10	<100
MW-34	4/1/2014	<1	<1	<1	<1	<1	<5	39	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	39	<10	<100
	5/28/2015	<1	1.1	<1	<1	<1	<5	<100	<10	<100
MW-35	4/1/2014	3700	4300	2000	6200	160	550	5600	54.000	5000
	11/12/2014	6000	7200	2800	7400	330	700	4700	76.000	<100
	5/28/2015	3300	5100	1500	4700	<50	640	4400	<500	<5000
MW-36	4/1/2014	5.1	<1	38	<1	<1	55	96	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	1.3	<1	2.3	<1	<5	<100	<10	<100
MW-37	4/1/2014	<1	<1	<1	<1	<1	3.7	<100	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-38	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	6/2/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-39	4/2/2014	<1	3.2	2.2	14	<1	3.3	<100	<10	<100
	11/12/2014	11	1500	1000	3700	<1	340	220	<10	<100
	6/2/2015	1.3	160	140	1100	<1	160	<100	<10	<100
MW-40	4/2/2014	5.8	14	2	580	<1	24	<100	<10	<100
	11/12/2014	140	970	300	2900	12	150	600	<10	<100
	6/2/2015	5.2	47	3.9	590	<1	38	<100	<10	<100
MW-41	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	6/2/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-42	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	6/2/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-43	4/2/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-44	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-45	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-46	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-48	4/2/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	Unable to Access - Locked Gate								
	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100

Table 2

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Groundwater Laboratory Analytical Result Summary

Well ID:	Date:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphthalene	TAA	TAME	TBA
MW-49	4/2/2014	Unable to Access - Locked Gate								
	11/11/2014									
	5/29/2015									
MW-50	4/2/2014	Unable to Access - Locked Gate								
	11/11/2014									
	5/29/2015									
MW-51	4/2/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-53	4/3/2014	<1	<1	<1	<1	<1	4.1	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	4.1	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-54	4/1/2014	<1	<1	<1	<1	9.6	<5	<100	6.700	<100
	11/11/2014	Unable to Locate								
	5/28/2015	<1	<1	<1	<1	6.4	<5	140	<10	<100
MW-55	4/3/2014	10	1	3.5	<1	24	3.9	98	6.400	<100
	11/11/2014	Unable to Locate								
	5/28/2015	1000	40	410	260	190	180	1700	15	<100
MW-56	4/3/2014	<1	<1	<1	<1	<1	<5	50	<10	<100
	11/11/2014	Unable to Locate								
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-58	4/2/2014	Abandoned								
	11/11/2014									
	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-59	4/2/2014	28	2.8	300	6.4	130	45	2600	42.000	160
	11/11/2014	81	3.6	730	14	91	96	4500	27.000	<100
	5/28/2015	1400	23	1100	620	89	290	3900	34.000	<100
MW-60	4/2/2014	Unable to Locate								
	11/11/2014									
	5/29/2015									
MW-62	4/1/2014	0.86	<1	<1	<1	3	3.3	260	<10	<100
	11/12/2014	51	<1	<1	0.93	2.6	65	730	<10	<100
	5/29/2015	1.50-Feet of Free Product								
MW-63	4/2/2014	<1	<1	<1	<1	<1	5	120	<10	<100
	11/12/2014	Unable to Locate								
	5/29/2001	0.01-Feet of Free Product								
MW-65	4/2/2014	Unable to Locate - Paved over								
	11/11/2014	Unable to Locate - Paved over								
	5/29/2015	Unable to Locate - Paved over								
MW-67	4/1/2014	<1	<1	<1	<1	<1	5	<100	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	6/2/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-70	4/2/2014	<1	<1	<1	<1	<1	5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	1.5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-5AR	4/1/2014	12000	13000	2400	13000	70	1000	<5000	160.000	<5000
	11/13/2014	830	180	98	670	13	130	<100	13.000	<100
	5/28/2015	2500	1200	280	1300	43	460	650	52.000	<100
PW-1R	4/3/2014	460	3400	320	9200	<50	<250	710	<500	<5000
	11/13/2014	850	6900	580	18000	<50	1300	<5000	<500	<5000
	5/29/2015	0.01-Feet of Free Product								
DW-1	4/2/2014	0.45	1.2	1.7	7.2	<1.0	<5.0	<100	<10	<100
	11/10/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-2	4/2/2014	<1.0	<1.0	<1.0	<1.0	7.1	4.1	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	10	<5	<100	<10	<100
	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-3	4/3/2014	9800	22000	3700	17000	990	780	10000	190.000	<5000
	11/13/2014	2000	20000	2800	10000	23	650	2700	<20	<140
	5/28/2015	310	4000	79	3100	6.5	130	750	<10	<100
DW-4	4/3/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/13/2014	<1	1	<1	<1	<1	<5	<100	<10	<100
	6/2/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-5	4/1/2014	3300	68	37	1000	940	81	4300	83.000	<100
	11/12/2014	6700	380	240	3100	1400	190	5300	110.000	<100
	5/28/2015	6900	660	420	3800	1200	290	6300	<500	<5000

Table 2

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352
Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Groundwater Laboratory Analytical Result Summary

Well ID:	Date:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphthalene	TAA	TAME	TBA
DW-6	4/1/2014	8.5	1.2	1.6	7.2	3	5	<100	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	6/2/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-7	4/3/2014	0.52	0.46	<1.0	1.4	2.6	4.2	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	1.2	<5	<100	<10	<100
DW-8	4/2/2014	Abandoned								
	11/11/2014									
	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-9	4/2/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	2.8	<1	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
SW-1	4/2/2014	180	8.4	30	53	42	6.5	350	9.500	100
	11/12/2014	Unable to Access - Overgrown Brush								
	5/28/2015	230	18	89	160	30	24	590	<10	<100

BDL= Below Detectable Limit
RBSL= Risk Based Screening Levels
NE= Not Established

CRAWFORD ENVIRONMENTAL SERVICES

1,2 DCA = 1,2 Dichloroethane
J = Estimated value detected below reporting limit

Table 3

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352
Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Site Specific Target Level Summary

Well ID:	Item	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphth	TAA	TAME	TBA	Total	
MW-2	Initial	140.0	280.0	56.0	460.0	380.0	54.0	200.0	9.2	140.0	1719.2	Free Product
	SSTL	77.0	280.0	56.0	460.0	380.0	54.0	200.0	9.2	140.0	1656.2	
	Initial > SSTL	63.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	63.0	
	Subsequent	Free Product										
	SSTL	77.0	280.0	56.0	460.0	380.0	54.0	200.0	9.2	140.0	1656.2	
	Subsequent > SSTL											
MW-3	Initial	3000.0	7400.0	260.0	4500.0	3300.0	260.0	2000.0	340.0	1300.0	22360.0	Free Product
	SSTL	111.0	7400.0	260.0	4500.0	1976.0	108.0	2000.0	340.0	1300.0	17995.0	
	Initial > SSTL	2889.0	0.0	0.0	0.0	1324.0	152.0	0.0	0.0	0.0	4365.0	
	Subsequent	Free Product										
	SSTL	111.0	7400.0	260.0	4500.0	1976.0	108.0	2000.0	340.0	1300.0	17995.0	
	Subsequent > SSTL											
MW-5	Initial	50.0	50.0	50.0	30.5	946.0	50.0	1000.0	100.0	1000.0	3276.5	Dry
	SSTL	50.0	50.0	50.0	30.5	946.0	50.0	1000.0	100.0	1000.0	3276.5	
	Initial > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Subsequent											
	SSTL	50.0	50.0	50.0	30.5	946.0	50.0	1000.0	100.0	1000.0	3276.5	
	Subsequent > SSTL	Dry										
MW-9	Initial	4100.0	27000.0	2500.0	19000.0	150.0	960.0	1600.0	2000.0	20000.0	77310.0	
	SSTL	35.0	7134.0	2500.0	19000.0	150.0	68.0	809.0	270.0	15628.0	45594.0	
	Initial > SSTL	4065.0	19866.0	0.0	0.0	0.0	892.0	791.0	1730.0	4372.0	31716.0	
	Subsequent	250	5700	1200	8200	50	480	5000	500	5000	26380.0	
	SSTL	35.0	7134.0	2500.0	19000.0	150.0	68.0	809.0	270.0	15628.0	45594.0	
	Subsequent > SSTL	215.0	0.0	0.0	0.0	0.0	412.0	4191.0	0.0	0.0	4818.0	
MW-10	Initial	740.0	7800.0	2500.0	15000.0	2500.0	950.0	50000.0	5000.0	50000.0	134490.0	
	SSTL	24.0	7800.0	2500.0	15000.0	294.0	53.0	793.0	707.0	11042.0	38213.0	
	Initial > SSTL	716.0	0.0	0.0	0.0	2206.0	897.0	49207.0	4293.0	38958.0	96277.0	
	Subsequent	66	76	67	860	1	370	100	10	100	1650.0	
	SSTL	24.0	7800.0	2500.0	15000.0	294.0	53.0	793.0	707.0	11042.0	38213.0	
	Subsequent > SSTL	42.0	0.0	0.0	0.0	0.0	317.0	0.0	0.0	0.0	359.0	
MW-12	Initial	1.7	5.0	11.0	5.0	5.6	4.7	370.0	1.5	19.0	423.5	
	SSTL	1.7	5.0	11.0	5.0	5.6	4.7	370.0	1.5	19.0	423.5	
	Initial > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	
	Subsequent	53	2.7	430	14	22	44	2300	10.000	100	1.0	
	SSTL	1.7	5.0	11.0	5.0	5.6	4.7	370.0	1.5	19.0	1.0	
	Subsequent > SSTL	51.3	0.0	419.0	9.0	16.4	39.3	1930.0	8.5	81.0	1.0	
MW-15	Initial	Free Product										Free Product
	SSTL	16.0	3198.0	3700.0	21680.0	730.0	45.0	492.0	199.0	5838.0	35898.0	
	Initial > SSTL											
	Subsequent											
	SSTL	16.0	3198.0	3700.0	21680.0	730.0	45.0	492.0	199.0	5838.0	35898.0	
	Subsequent > SSTL										0.0	

Table 3

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352
Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Site Specific Target Level Summary

Well ID:	Item	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphth	TAA	TAME	TBA	Total	
MW-17	Initial	1400.0	26000.0	2500.0	23000.0	1000.0	1000.0	9400.0	2000.0	20000.0	86300.0	
	SSTL	32.0	6631.0	2500.0	21680.0	1000.0	66.0	773.0	263.0	14286.0	47231.0	
	Initial > SSTL	1368.0	19369.0	0.0	1320.0	0.0	934.0	8627.0	1737.0	5714.0	39069.0	
	Subsequent	210	7500	480	12000	50	830	2200	500.000	5000	28770.0	
	SSTL	32.0	6631.0	2500.0	21680.0	1000.0	66.0	773.0	263.0	14286.0	47231.0	
	Subsequent > SSTL	178.0	869.0	0.0	0.0	0.0	764.0	1427.0	237.0	0.0	3475.0	
MW-18	Initial	1900.0	7200.0	630.0	8300.0	340.0	370.0	4900.0	70.0	5000.0	28710.0	
	SSTL	40.0	19326.0	3700.0	21680.0	4260.0	348.0	938.0	4989.0	54462.0	109743.0	
	Initial > SSTL	1860.0	0.0	0.0	0.0	0.0	22.0	3962.0	0.0	0.0	5844.0	
	Subsequent	970	2500	180	4100	230	180	3000	33.000	100	11293.0	
	SSTL	40.0	19326.0	3700.0	21680.0	4260.0	348.0	938.0	4989.0	54462.0	109743.0	
	Subsequent > SSTL	930.0	0.0	0.0	0.0	0.0	0.0	2062.0	0.0	0.0	2992.0	
MW-19	Initial	300.0	1800.0	490.0	12000.0	50.0	900.0	610.0	500.0	5000.0	21650.0	
	SSTL	54.0	11081.0	3700.0	21680.0	16080.0	86.0	1065.0	320.0	26814.0	80880.0	
	Initial > SSTL	246.0	0.0	0.0	0.0	0.0	814.0	0.0	180.0	0.0	1240.0	
	Subsequent	2100	17000	330	16000	50	1200	6200	500.000	5000	48380.0	
	SSTL	54.0	11081.0	3700.0	21680.0	16080.0	86.0	1065.0	320.0	26814.0	80880.0	
	Subsequent > SSTL	2046.0	5919.0	0.0	0.0	0.0	1114.0	5135.0	180.0	0.0	14394.0	
MW-20	Initial	412.0	2930.0	728.0	8820.0	88.7	817.0	2850.0	200.0	2000.0	18845.7	
	SSTL	83.0	2930.0	728.0	8820.0	88.7	108.0	1403.0	200.0	2000.0	16360.7	
	Initial > SSTL	329.0	0.0	0.0	0.0	0.0	709.0	1447.0	0.0	0.0	2485.0	
	Subsequent	Free Product										Free Product
	SSTL	83.0	2930.0	728.0	8820.0	88.7	108.0	1403.0	200.0	2000.0	16360.7	
	Subsequent > SSTL	#VALUE!	-2930.0	0.0	-8820.0	0.0	-108.0	0.0	0.0	0.0	#VALUE!	
MW-22	Initial	3300.0	17000.0	2900.0	20000.0	1000.0	640.0	6200.0	130.0	20000.0	71170.0	
	SSTL	90.0	17000.0	2900.0	20000.0	1000.0	112.0	1469.0	130.0	20000.0	62701.0	
	Initial > SSTL	3210.0	0.0	0.0	0.0	0.0	528.0	4731.0	0.0	0.0	8469.0	
	Subsequent	4800	16000	760	26000	100	840	10000	########	10000	69500.0	
	SSTL	90.0	17000.0	2900.0	20000.0	1000.0	112.0	1469.0	130.0	20000.0	62701.0	
	Subsequent > SSTL	4710.0	0.0	0.0	6000.0	0.0	728.0	8531.0	870.0	0.0	20839.0	
MW-23	Initial	4200.0	16000.0	880.0	19000.0	120.0	1100.0	5900.0	500.0	5000.0	52700.0	
	SSTL	72.0	14880.0	3700.0	21680.0	33368.0	100.0	1279.0	359.0	38475.0	113913.0	
	Initial > SSTL	4128.0	1120.0	0.0	0.0	0.0	1000.0	4621.0	141.0	0.0	11010.0	
	Subsequent	570	1500	89	8300	50	660	5000	500.000	5000	21669.0	
	SSTL	72.0	14880.0	3700.0	21680.0	33368.0	100.0	1279.0	359.0	38475.0	113913.0	
	Subsequent > SSTL	498.0	0.0	0.0	0.0	0.0	560.0	3721.0	141.0	0.0	4920.0	
MW-25	Initial	5000.0	3000.0	1900.0	23000.0	5000.0	5000.0	100000.0	10000.0	100000.0	252900.0	
	SSTL	104.0	3000.0	1900.0	23000.0	5000.0	121.0	1612.0	415.0	60494.0	95646.0	
	Initial > SSTL	4896.0	0.0	0.0	0.0	0.0	4879.0	98388.0	9585.0	39506.0	157254.0	
	Subsequent	29	140	190	3000	1	560	430	10	100	4460.0	
	SSTL	104.0	3000.0	1900.0	23000.0	5000.0	121.0	1612.0	415.0	60494.0	95646.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	439.0	0.0	0.0	0.0	439.0	

Table 3

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352
Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Site Specific Target Level Summary

Well ID:	Item	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphth	TAA	TAME	TBA	Total	
MW-31	Initial	57.0	90.0	520.0	250.0	12.0	210.0	510.0	50.0	500.0	2199.0	Free Product
	SSTL	51.0	90.0	520.0	250.0	12.0	210.0	510.0	50.0	500.0	2193.0	
	Initial > SSTL	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	
	Subsequent	Free Product										
	SSTL	51.0	90.0	520.0	250.0	12.0	210.0	510.0	50.0	500.0	2193.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MW-33	Initial	520.0	7200.0	1500.0	7200.0	500.0	410.0	3200.0	1000.0	10000.0	31530.0	
	SSTL	53.0	7200.0	1500.0	7200.0	500.0	410.0	1136.0	1000.0	10000.0	28999.0	
	Initial > SSTL	467.0	0.0	0.0	0.0	0.0	0.0	2064.0	0.0	0.0	2531.0	
	Subsequent	1	1	1	1	1	5	29	1.000	100	140.0	
	SSTL	53.0	7200.0	1500.0	7200.0	500.0	410.0	1136.0	1000.0	10000.0	28999.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MW-35	Initial	4400.0	2000.0	1700.0	3500.0	300.0	580.0	5300.0	51.0	5000.0	22831.0	
	SSTL	56.0	2000.0	1700.0	3500.0	300.0	542.0	1181.0	51.0	5000.0	14330.0	
	Initial > SSTL	4344.0	0.0	0.0	0.0	0.0	38.0	4119.0	0.0	0.0	8501.0	
	Subsequent	3300	5100	1500	4700	50	640	4400	500.000	5000	25190.0	
	SSTL	56.0	2000.0	1700.0	3500.0	300.0	542.0	1181.0	51.0	5000.0	14330.0	
	Subsequent > SSTL	3244.0	3100.0	0.0	1200.0	0.0	98.0	3219.0	449.0	0.0	11310.0	
MW-37	Initial	240.0	34.0	270.0	240.0	11.0	220.0	850.0	50.0	44.0	1959.0	
	SSTL	90.0	34.0	270.0	240.0	11.0	220.0	850.0	50.0	44.0	1809.0	
	Initial > SSTL	150.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	150.0	
	Subsequent	1	1	1	1	1	5	100	10	100	220.0	
	SSTL	90.0	34.0	270.0	240.0	11.0	220.0	850.0	50.0	44.0	1809.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	56.0	56.0	
MW-39	Initial	13.0	1300.0	460.0	4200.0	250.0	330.0	5000.0	500.0	5000.0	17053.0	
	SSTL	13.0	1300.0	460.0	4200.0	250.0	330.0	1607.0	500.0	5000.0	13660.0	
	Initial > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	3393.0	0.0	0.0	3393.0	
	Subsequent	1.3	160	140	1100	1	160	100	10	100	1772.3	
	SSTL	13.0	1300.0	460.0	4200.0	250.0	330.0	1607.0	500.0	5000.0	13660.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MW-40	Initial	290.0	2900.0	650.0	7100.0	500.0	530.0	10000.0	1000.0	10000.0	32970.0	
	SSTL	113.0	2900.0	650.0	7100.0	500.0	530.0	1876.0	1000.0	10000.0	24669.0	
	Initial > SSTL	177.0	0.0	0.0	0.0	0.0	0.0	8124.0	0.0	0.0	8301.0	
	Subsequent	5.2	47	3.9	590	1	38	100	10	100	895.1	
	SSTL	113.0	2900.0	650.0	7100.0	500.0	530.0	1876.0	1000.0	10000.0	24669.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MW-41	Initial	260.0	1000.0	1100.0	1000.0	1000.0	420.0	20000.0	2000.0	20000.0	46780.0	
	SSTL	257.0	1000.0	1100.0	1000.0	1000.0	420.0	3234.0	2000.0	20000.0	30011.0	
	Initial > SSTL	3.0	0.0	0.0	0.0	0.0	0.0	16766.0	0.0	0.0	16769.0	
	Subsequent	1	1	1	1	1	5	100	10	100	220.0	
	SSTL	257.0	1000.0	1100.0	1000.0	1000.0	420.0	3234.0	2000.0	20000.0	30011.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Table 3

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Site Specific Target Level Summary

Well ID:	Item	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphth	TAA	TAME	TBA	Total	
MW-54	Initial	5.0	5.0	5.0	5.0	5.0	5.0	100.0	10.0	100.0	240.0	
	SSTL	5.0	5.0	5.0	5.0	5.0	5.0	110.0	2.0	14.0	156.0	
	Initial > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	86.0	94.0	
	Subsequent	1	1	1	1	6.4	5	140	10	100	265.4	
	SSTL	5.0	5.0	5.0	5.0	5.0	5.0	110.0	2.0	14.0	156.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	1.4	0.0	30.0	8.0	86.0	125.4	
MW-58	Initial	4.8	25.0	20.0	25.0	93.0	11.0	1800.0	15.0	100.0	2093.8	
	SSTL	4.8	25.0	20.0	25.0	51.0	11.0	279.0	15.0	100.0	530.8	
	Initial > SSTL	0.0	0.0	0.0	0.0	42.0	0.0	1521.0	0.0	0.0	0.0	
	Subsequent	1	1	1	1	1	5	100	10	100	0.0	
	SSTL	4.8	25.0	20.0	25.0	51.0	11.0	279.0	15.0	100.0	530.8	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MW-65	Initial	420.0	398.0	234.0	262.0	16.4	168.0	648.0	50.0	500.0	2696.4	
	SSTL	326.0	398.0	234.0	262.0	16.4	168.0	648.0	50.0	500.0	2602.4	
	Initial > SSTL	94.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Unable to Locate - Paved Over
	Subsequent	Unable to Locate - Paved Over										
	SSTL	326.0	398.0	234.0	262.0	16.4	168.0	648.0	50.0	500.0	2602.4	
	Subsequent > SSTL	Unable to Locate - Paved Over										
MW-5AR	Initial	9200.0	1000.0	1400.0	4400.0	160.0	810.0	1300.0	1000.0	10000.0	29270.0	
	SSTL	83.0	1000.0	1400.0	4400.0	160.0	108.0	1300.0	381.0	10000.0	18832.0	
	Initial > SSTL	9117.0	0.0	0.0	0.0	0.0	702.0	0.0	619.0	0.0	10438.0	
	Subsequent	2500	1200	280	1300	43	460	650	52.000	100	6585.0	
	SSTL	83.0	1000.0	1400.0	4400.0	160.0	108.0	1300.0	381.0	10000.0	18832.0	
	Subsequent > SSTL	2417.0	200.0	0.0	0.0	0.0	352.0	0.0	0.0	0.0	2969.0	
PW-1R	Initial	460.0	3400.0	320.0	9200.0	50.0	250.0	710.0	500.0	5000.0	19890.0	
	SSTL	58.0	11928.0	3700.0	21680.0	290.0	19298.0	1114.0	330.0	29344.0	87742.0	
	Initial > SSTL	402.0	0.0	0.0	0.0	0.0	0.0	0.0	170.0	0.0	572.0	
	Subsequent	Free Product										Free Product
	SSTL	58.0	11928.0	3700.0	21680.0	290.0	19298.0	1114.0	330.0	29344.0	87742.0	
	Subsequent > SSTL											
DW-3	Initial	2600.0	19000.0	2200.0	10000.0	1000.0	620.0	3600.0	2000.0	20000.0	61020.0	
	SSTL	45.0	8470.0	2200.0	10000.0	1000.0	620.0	3600.0	2000.0	20000.0	47935.0	
	Initial > SSTL	2555.0	10530.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13085.0	
	Subsequent	310	4000	79	3100	6.5	130	750	10.000	100	8485.5	
	SSTL	45.0	8470.0	2200.0	10000.0	1000.0	620.0	3600.0	2000.0	20000.0	47935.0	
	Subsequent > SSTL	265.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	265.0	
SW-1	Initial	130.0	2.8	23.0	36.0	17.0	6.5	340.0	2.6	23.0	580.9	
	SSTL	5.0	2.8	23.0	36.0	17.0	6.5	240.0	2.6	23.0	355.9	
	Initial > SSTL	125.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	225.0	
	Subsequent	230	18	89	160	30	24	590	10	100	1251.0	
	SSTL	5.0	2.8	23.0	36.0	17.0	6.5	240.0	2.6	23.0	355.9	
	Subsequent > SSTL	225.0	15.2	66.0	124.0	13.0	17.5	350.0	7.4	77.0	895.1	

SSTL = Site Specific Target Level
RBSL= Risk Based Screening Levels
MtBE= Methyl Tert-Butyl Ether
n/a = not applicable
0.0 - Excluded from Calculations

CRAWFORD ENVIRONMENTAL SERVICES

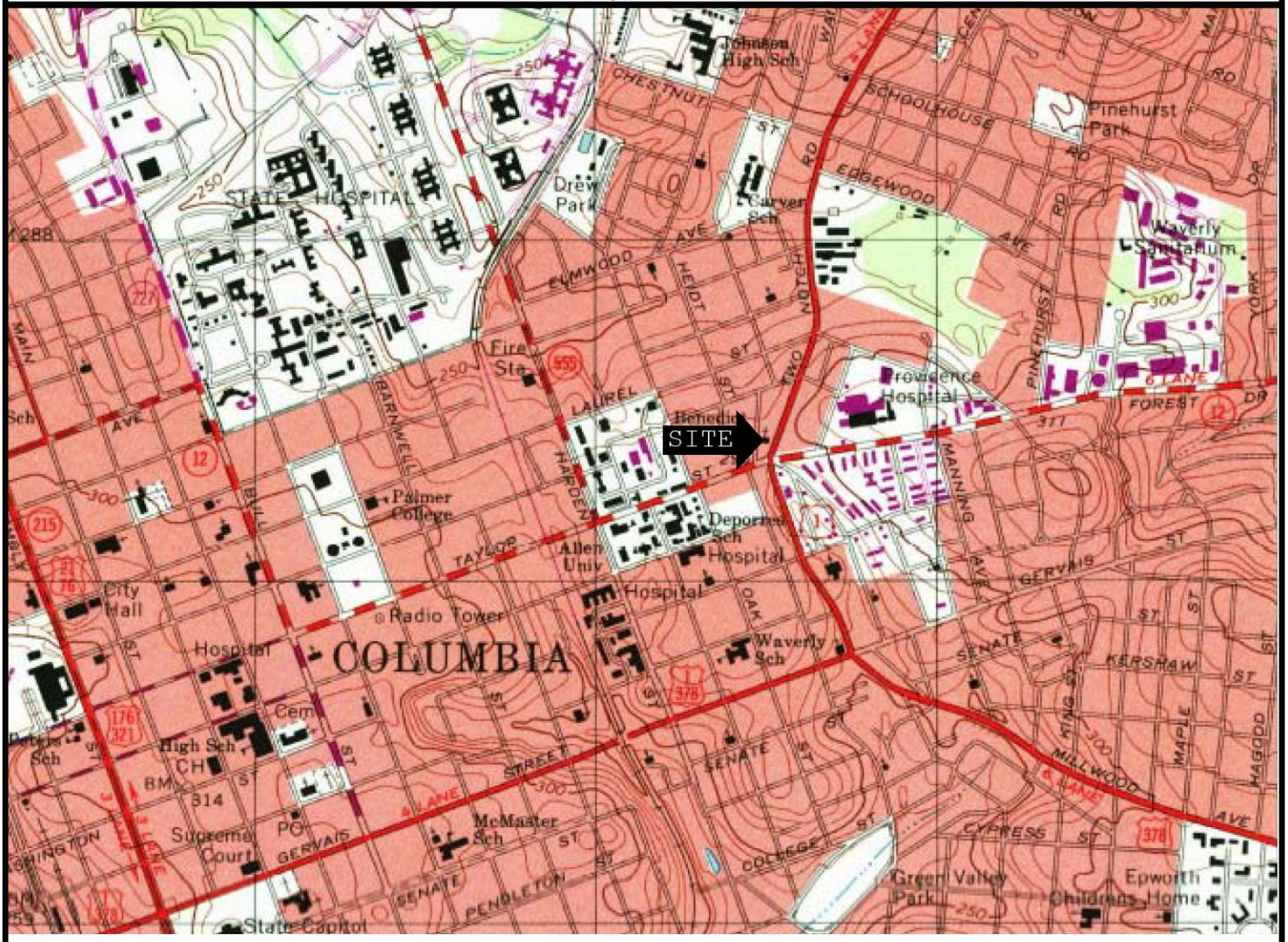
Initial>SSTL	325262.00
Subsequent>SSTL	#VALUE!
COC Reduction	#VALUE!

Figures

Figure 1: Topographic Map
Figure 2: Site Facility Base Map
Figure 3: Groundwater Chemicals of Concern Map
Figure 4: Groundwater Elevation Map

FIGURE 1

Site Location Map
Handy Pantry #65 / University Mart / Clouds Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina



CRAWFORD ENVIRONMENTAL SERVICES

15 Church Avenue, SW
Roanoke Virginia, 24011

540-343-6256 (office) 540-343-6259 (fax)

NORTH COLUMBIA, SOUTH CAROLINA

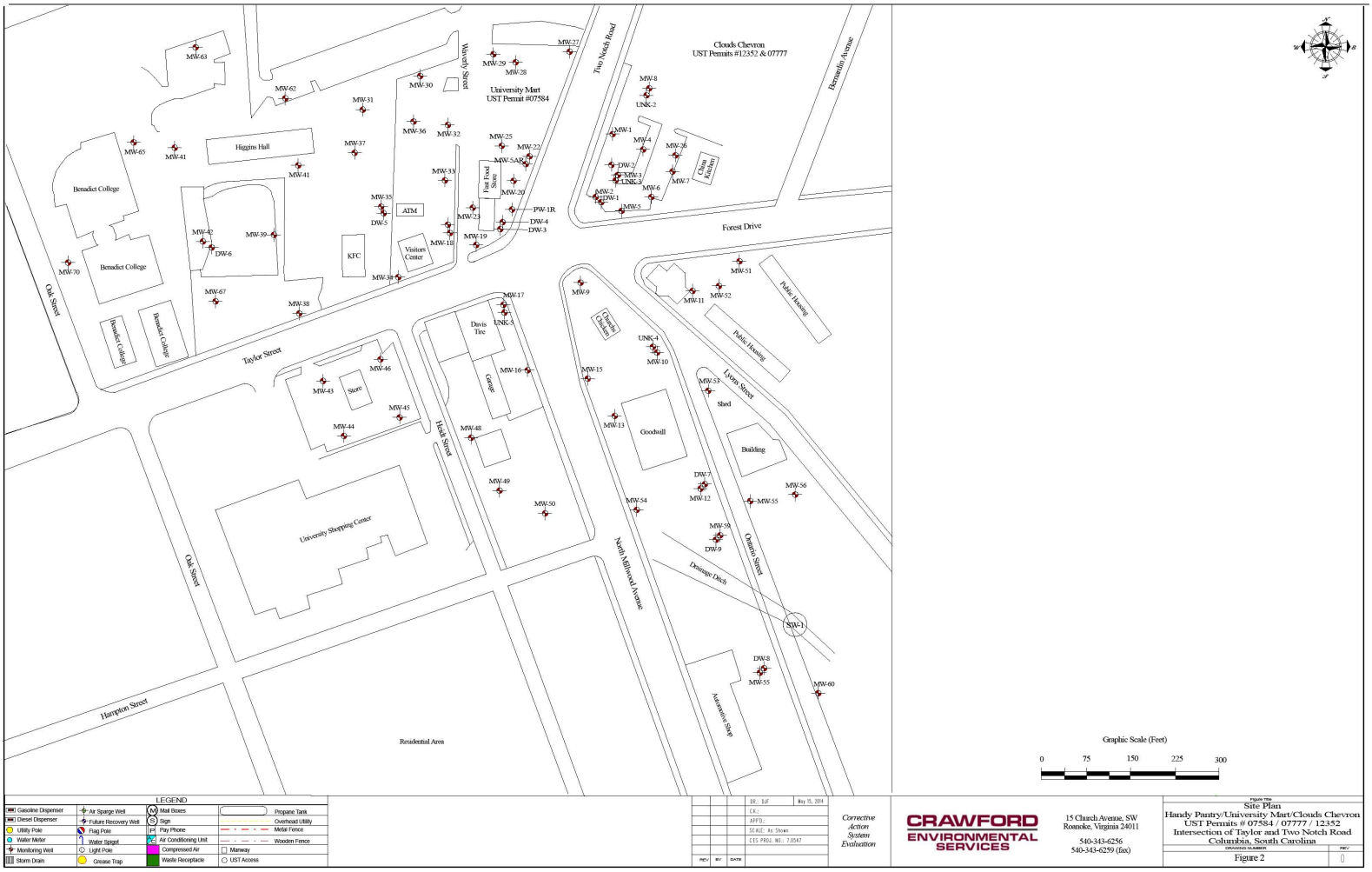
Source: U.S.G.S. Topographic Map of the Columbia North Quadrangle, Virginia, 7.5 Minute Series (1977, revised 1988)
Scale: 1:24,000 Contour Interval: 20 Feet
Vertical Datum: National Geodetic Vertical Datum 1929
Horizontal Datum: North American Datum1927

Project: CASE Report

Client: SCDHEC

CES Job #: 7.0547

Latitude:
034”00’42.72”N
Longitude:
081”01’00.13”W



LEGEND

Gasoline Dispenser	Air Sparge Well	Mail Boxes	Propane Tank
Diesel Dispenser	Future Recovery Well	Sign	Overhead Utility
Utility Pole	Flag Pole	Pay Phone	Metal Fence
Water Meter	Water Spigot	Air Conditioning Unit	Wooden Fence
Monitoring Well	Light Pole	Compressed Air	Manway
Storm Drain	Grease Trap	Waste Receptacle	UST Access

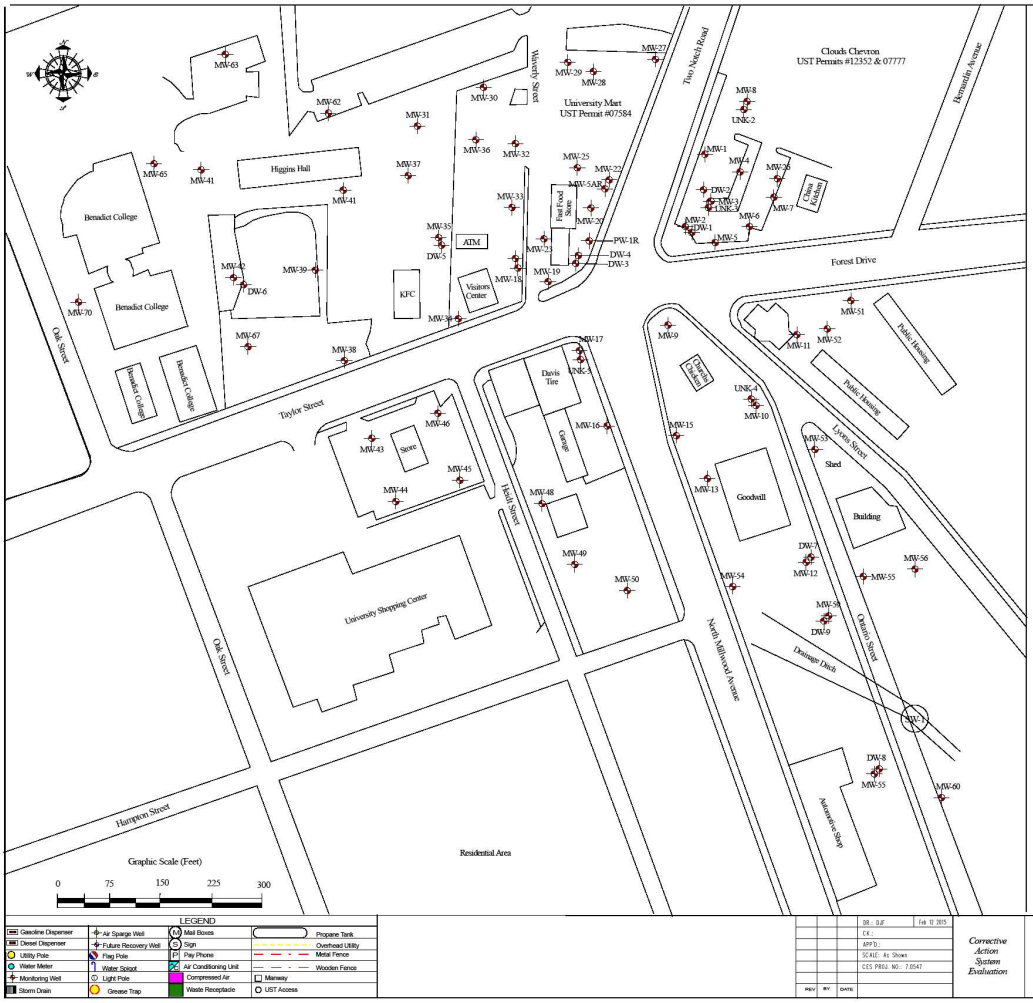
REV.	BY	DATE
	DR.: BJF	May 15, 2014
	CK.:	
	APP'D.:	
	SCALE: As Shown	
	CES PROJ. NO.: 7.0547	

Corrective Action System Evaluation

CRAWFORD ENVIRONMENTAL SERVICES
15 Church Avenue, SW
Roanoke, Virginia 24011
540-343-6256
540-343-6259 (fax)

Figure Title
Site Plan
Handy Pantry/University Mart/Clouds Chevron
UST Permits # 07584 / 07777 / 12352
Intersection of Taylor and Two Notch Road
Columbia, South Carolina

DRAWING NUMBER: Figure 2 | REV: 0



Well ID:	Date:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphthalene	TAA	TAME	TBA
MW-1	5/29/2015	Dry								
MW-2	5/29/2015	0.01-Feet of Free Product								
MW-3	5/29/2015	0.09-Feet of Free Product								
MW-4	5/29/2015	<1	<1	<1	<1	1.9	<5	<100	<10	<100
MW-5	5/29/2015									
MW-6	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-7	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-8	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-9	5/28/2015	250	5700	1200	8200	<50	480	<5000	<500	<5000
MW-10	5/28/2015	66	76	67	860	<1	370	<100	<10	<100
MW-11	5/29/2015	0.51	<1	<1	3.8	<1	6.6	50	<10	<100
MW-12	5/28/2015	53	2.7	430	14	22	44	2300	<10	<100
MW-13	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-15	5/29/2015	0.16-Feet of Free Product								
MW-16	5/29/2015	Unable to Locate								
MW-17	5/28/2015	210	7500	480	12000	<50	830	2200	<500	<5000
MW-18	5/28/2015	970	2500	180	4100	230	180	3000	33.000	<100
MW-19	5/28/2015	2100	17000	330	16000	<50	1200	6200	<500	<5000
MW-20	5/29/2015	0.06-Feet of Free Product								
MW-22	6/5/2015	4800	16000	760	26000	<100	840	<10000	<1000	<10000
MW-23	5/28/2015	570	1500	89	8300	<50	660	<5000	<500	<5000
MW-25	5/28/2015	29	140	190	3000	<1	560	430	<10	<100
MW-26	6/2/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-27	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-28	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-29	5/29/2015	0.01-Feet of Free Product								
MW-30	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-31	5/29/2015	0.01-Feet of Free Product								
MW-32	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-33	5/28/2015	<1	<1	<1	<1	<1	<5	29	<10	<100
MW-34	5/28/2015	<1	1.1	<1	<1	<1	<5	<100	<10	<100
MW-35	5/28/2015	3300	5100	1500	4700	<50	640	4400	<500	<5000
MW-36	5/28/2015	<1	1.3	<1	2.3	<1	<5	<100	<10	<100
MW-37	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-38	6/2/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-39	6/2/2015	1.3	160	140	1100	<1	160	<100	<10	<100
MW-40	6/2/2015	5.2	47	3.9	590	<1	38	<100	<10	<100
MW-41	6/2/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-42	6/2/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-43	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-44	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-45	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-46	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-48	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-49	5/29/2015	Unable to Access - Locked Gate								
MW-50	5/29/2015	Unable to Access - Locked Gate								
MW-51	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-53	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-54	5/28/2015	<1	<1	<1	<1	6.4	<5	140	<10	<100
MW-55	5/28/2015	1000	40	410	260	190	180	1700	15	<100
MW-56	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-58	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-59	5/28/2015	1400	23	1100	620	89	290	3900	34.000	<100
MW-60	5/29/2015	Unable to Locate								
MW-62	5/29/2015	1.50-Feet of Free Product								
MW-63	5/29/2001	0.01-Feet of Free Product								
MW-65	5/29/2015	Unable to Locate - Paved over								
MW-67	6/2/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-70	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-5AR	5/28/2015	2500	1200	280	1300	43	460	650	52.000	<100
PW-1R	5/29/2015	0.01-Feet of Free Product								
DW-1	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-2	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-3	5/28/2015	310	4000	79	3100	6.5	130	750	<10	<100
DW-4	6/2/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-5	5/28/2015	6900	660	420	3800	1200	290	6300	<500	<5000
DW-6	6/2/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-7	5/28/2015	<1	<1	<1	<1	1.2	<5	<100	<10	<100
DW-8	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-9	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
SW-1	5/28/2015	230	18	89	160	30	24	590	<10	<100

LEGEND

Gasoline Dispenser	Air Sparge Well	Mail Boxes	Propane Tank
Diesel Dispenser	Future Recovery Well	Sign	Overhead Utility
Utility Pole	Flag Pole	Pay Phone	Metal Fence
Water Meter	Water Spigot	Air Conditioning Unit	Wooden Fence
Monitoring Well	Light Pole	Compressed Air	Manway
Storm Drain	Grease Trap	Waste Receptacle	UST Access

DR.: BJF Feb 17 2015
CK.:
APP'D.:
SCALE: As Shown
CES PROJ. NO.: 7.0547

REV | BY | DATE

Corrective Action System Evaluation

CRAWFORD ENVIRONMENTAL SERVICES

15 Church Avenue, SW
Roanoke, Virginia 24011
540-343-6256
540-343-6259 (fax)

Figure Title
Concentrations of Concern Map
Handy Pantry/University Mart/Clouds Chevron
UST Permits # 07584 / 07777 / 12352
Intersection of Taylor and Two Notch Road
Columbia, South Carolina

DRAWING NUMBER: Figure 3 | REV: 0

Monitor Well	Top of Casing (ft)	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)
MW-1	93.89	5/29/2015	NA	DRY	NA	NA	DRY
MW-2	94.70	5/29/2015	22.56	22.57	0.01	72.14	72.13
MW-3	94.45	5/29/2015	23.2	23.29	0.09	71.25	71.16
MW-4	94.85	5/29/2015	NA	21.52	NA	NA	73.33
MW-5	95.26	5/29/2015	NA	DRY	NA	NA	DRY
MW-6	94.96	5/29/2015	NA	22.38	NA	NA	72.58
MW-7	95.93	5/29/2015	NA	23.48	NA	NA	72.45
MW-8	94.79	5/29/2015	NA	20.08	NA	NA	74.71
MW-9	92.30	5/28/2015	NA	21.19	NA	NA	71.11
MW-10	85.98	5/28/2015	NA	16.64	NA	NA	69.34
MW-11	88.46	5/29/2015	NA	18.93	NA	NA	69.53
MW-12	72.80	5/28/2015	NA	4.38	NA	NA	68.42
MW-13	80.44	5/28/2015	NA	11.71	NA	NA	68.73
MW-15	86.44	5/29/2015	16.45	16.61	0.16	69.99	69.83
MW-16	88.19	5/29/2015	Unable to Locate				
MW-17	92.45	5/28/2015	NA	22.70	NA	NA	69.75
MW-18	94.81	5/28/2015	NA	24.41	NA	NA	70.40
MW-19	93.96	5/28/2015	NA	24.00	NA	NA	69.96
MW-20	94.12	5/28/2015	22.67	22.61	0.06	71.45	71.51
MW-22	94.25	5/28/2015	NA	21.85	NA	NA	72.40
MW-23	94.43	5/28/2015	NA	24.25	NA	NA	70.18
MW-25	93.09	5/28/2015	NA	20.65	NA	NA	72.44
MW-26	95.96	6/5/2015	NA	22.49	NA	NA	73.47
MW-27	91.40	5/28/2015	NA	17.75	NA	NA	73.65
MW-28	91.46	5/28/2015	NA	17.97	NA	NA	73.49
MW-29	91.09	5/28/2015	17.91	17.92	0.01	73.18	73.17
MW-30	92.77	5/28/2015	NA	26.70	NA	NA	66.07
MW-31	95.20	5/28/2015	25.61	25.62	0.01	69.59	69.58
MW-32	92.87	5/28/2015	NA	22.00	NA	NA	70.87
MW-33	93.84	5/28/2015	NA	23.83	NA	NA	70.01
MW-34	94.77	5/28/2015	NA	24.72	NA	NA	70.05
MW-35	93.71	5/28/2015	NA	23.80	NA	NA	69.91
MW-36	93.89	5/28/2015	NA	23.63	NA	NA	70.26
MW-37	93.78	5/28/2015	NA	23.98	NA	NA	69.80
MW-38	95.53	6/2/2015	NA	25.26	NA	NA	70.27
MW-39	96.19	6/2/2015	NA	26.45	NA	NA	69.74
MW-40	95.69	6/2/2015	NA	26.12	NA	NA	69.57
MW-41	94.85	6/2/2015	NA	25.69	NA	NA	69.16
MW-42	95.81	6/2/2015	NA	26.25	NA	NA	69.56
MW-43	95.15	5/28/2015	NA	24.66	NA	NA	70.49
MW-44	94.57	5/28/2015	NA	22.70	NA	NA	71.87
MW-45	92.51	5/28/2015	NA	21.75	NA	NA	70.76
MW-46	94.50	5/28/2015	NA	24.19	NA	NA	70.31
MW-48	89.95	5/29/2015	NA	19.63	NA	NA	70.32
MW-49	88.18	5/29/2015	Unable to Access - Locked Gate				
MW-50	84.09	5/29/2015	Unable to Access - Locked Gate				
MW-51	93.91	5/28/2015	NA	21.23	NA	NA	72.68
MW-53	79.60	5/28/2015	NA	9.60	NA	NA	70.00
MW-54	77.58	5/28/2015	NA	11.31	NA	NA	66.27
MW-55	71.22	5/28/2015	NA	2.51	NA	NA	68.71
MW-56	76.39	5/29/2015	NA	8.22	NA	NA	68.17
MW-58	76.37	5/28/2015	NA	6.85	NA	NA	69.52
MW-59	68.02	5/28/2015	NA	6.05	NA	NA	61.97
MW-60	67.94	5/28/2015	Unable to Locate				
MW-62	94.05	5/28/2015	NA	22.32	NA	NA	71.73
MW-63	94.65	5/28/2015	NA	23.07	NA	NA	71.58
MW-65	94.04	6/2/2015	Unable to Locate				
MW-67	96.10	5/28/2015	NA	24.44	NA	NA	71.66
MW-70	95.49	5/28/2015	NA	24.70	NA	NA	70.79
MW-5AR	94.18	5/29/2015	NA	21.24	NA	NA	72.94
PW-1R	93.75	5/29/2015	NA	23.11	NA	NA	70.64
DW-1	94.66	5/28/2015	NA	45.00	NA	NA	49.66
DW-2	94.02	5/28/2015	NA	44.34	NA	NA	49.68
DW-3	93.75	5/28/2015	NA	24.40	NA	NA	69.35
DW-4	93.79	5/28/2015	NA	44.60	NA	NA	49.19
DW-5	93.74	6/2/2015	NA	44.22	NA	NA	49.52
DW-6	95.90	5/28/2015	NA	45.86	NA	NA	50.04
DW-7	72.79	5/29/2015	NA	24.32	NA	NA	48.47
DW-8	68.63	5/28/2015	NA	5.37	NA	NA	63.26
DW-9	76.47	5/28/2015	NA	24.9	NA	NA	51.57

LEGEND

Gasoline Dispenser	Air Sparge Well	Mail Boxes	Propane Tank
Diesel Dispenser	Future Recovery Well	Sign	Overhead Utility
Utility Pole	Flag Pole	Pay Phone	Metal Fence
Water Meter	Water Spigot	Air Conditioning Unit	Wooden Fence
Monitoring Well	Light Pole	Compressed Air	Manway
Storm Drain	Grease Trap	Waste Receptacle	UST Access

DR.: BJF May 15, 2014
CK.:
APP'D.:
SCALE: As Shown
CES PROJ. NO.: 7.0547

REV. | BY | DATE

Corrective Action System Evaluation

CRAWFORD ENVIRONMENTAL SERVICES
15 Church Avenue, SW
Roanoke, Virginia 24011
540-343-6256
540-343-6259 (fax)

FIGURE TITLE
Groundwater Elevation Map
Handy Pantry/University Mart/Clouds Chevron
UST Permits # 07584 / 07777 / 12352
Intersection of Taylor and Two Notch Road
Columbia, South Carolina

DRAWING NUMBER: Figure 4 | REV: 0

APPENDIX A

Purge Water Disposal Manifest

Please print or type
(Form designed for use on elite (12-pitch) typewriter.)

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Waste Tracking Number: RM 615-15

5. Generator's Name and Mailing Address: SCDHEC, 2600 Bull St., Columbia, SC
Generator's Phone:

Generator's Site Address (if different than mailing address): (Agent) Petra Tech Env., 2435 E. North St., Ste 1108-202, Greenville, SC 29615

6. Transporter 1 Company Name: Petra Tech Env. LLC | U.S. EPA ID Number

7. Transporter 2 Company Name | U.S. EPA ID Number

8. Designated Facility Name and Site Address: VLS Recovery Services, 305 S. Main St., Mauldin, SC
Facility's Phone: 864-962-9953 | U.S. EPA ID Number: SCD000762468

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON Haz/Non Reg. Well H_2O 16347-profile	1	PVC	250	GAL	
2.						
3.	clouds chevron ~135 gallons					
4.						

13. Special Handling Instructions and Additional Information

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Petra Tech Env. Agent for SCDHEC | Signature: Ryan Mclamarck | Month: 6 | Day: 15 | Year: 2015

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Petra Tech Env. | Signature: Ryan Mclamarck | Month: 6 | Day: 15 | Year: 2015

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) | U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator) | Month | Day | Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Steven [illegible] | Signature | Month: 6 | Day: 15 | Year: 15

GC Labels • Printed in the USA
1-800-997-6966

Reorder Part# MANIFEST-C6NHWC
913-897-6966

TRANSPORTER #2

APPENDIX B

Groundwater Sampling Data Sheets

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-1	SAMPLE ID:	DATE: 5-29-15

PURGING DATA

17.39' 4gal DRY

WELL DIAMETER (inches):	Total Well Depth (feet): 27	WELL SCREEN INTERVAL DEPTH: 17 feet to 27 feet	STATIC DEPTH TO WATER (feet): DRY	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan McCormack	Ryan T McCormack	5-29-15	
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS: Not sampled / Dry

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina
WELL NO: MW-2	SAMPLE ID:

DATE: 5-29-15

FP ✓ DTP 22.56

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 22.57	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

Free product.

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan McCormack	Ryan McCormack	5-29-15	
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: Y N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS:
Not sampled. 0.01' FP

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

check for FP

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-3	SAMPLE ID:	DATE: 5-29-15

FP

DTW DTP = 23.20' TOC

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 29	WELL SCREEN INTERVAL DEPTH: 19 feet to 29 feet	STATIC DEPTH TO WATER (feet): 23.29	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

Free Product

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-29-15	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS:
Not Sampled – 0.09' FP.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME:	Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION:	Columbia, South Carolina
WELL NO:	MW-4	SAMPLE ID:	DATE: 5-29-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 28	WELL SCREEN INTERVAL DEPTH: 18 feet to 28 feet	STATIC DEPTH TO WATER (feet): 21.52'	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
9:00	—	—	20.9	—	7.1	—	341	—	0.98	—	62.1	—	CL	NO

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan McCormack	Ryan McCormack	5-29-15	9:00
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME:	Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION:	Columbia, South Carolina
WELL NO:	Mw-5	SAMPLE ID:	DATE: 5-29-15

PURGING DATA

DRY 20.21 b.Hon tagged

WELL DIAMETER (inches):	Total Well Depth (feet): 26	WELL SCREEN INTERVAL DEPTH: 16 feet to 26 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 5-29-15	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS: Not Sampled - Dry

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-6	SAMPLE ID:	DATE: 5-29-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 22.38	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
10:15	—	—	20.7	—	6.9	—	352	—	10.87	—	37	—	CL	YES

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-29-15	SAMPLING TIME: 10:15
PUMP OR TUBING DEPTH IN WELL (feet): B	TUBING MATERIAL CODE: B	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: (Y) N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME:	Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION:	Columbia, South Carolina
WELL NO:	MW-7	SAMPLE ID:	DATE: 5-29-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 23,48	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
10:30	—	—	20.9	—	7.1	—	280	—	0.97	—	20	—	CL	NO

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan Mclarmack	Ryan McCormack	5-29-15	10:30
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME:	Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION:	Columbia, South Carolina
WELL NO:	MW-8	SAMPLE ID:	DATE: 5-29-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 28	WELL SCREEN INTERVAL DEPTH: 18.5 feet to 28 feet	STATIC DEPTH TO WATER (feet): 20.08	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
11:15	—	—	21.0	—	7.1	—	205	—	0.96	—	16	—	CL	NO

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan McCormack	Ryan McCormack	5-29-15	11:15
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

check for FP No

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-9	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 21.19	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
2:45	—	—	21.2	—	6.8	—	273	—	0.91	—	62	—	CL	Yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan McCormack	Ryan McCormack	5-28-15	2:45
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	13	---
		CG	40 ml	HCL	---	---	8011	13	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

check for FP No

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-10	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 28	WELL SCREEN INTERVAL DEPTH: 18 feet to 28 feet	STATIC DEPTH TO WATER (feet): 16.64	PURGE PUMP TYPE OR BAILER: LFPP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
2:10	1.5	1.5	21.9	—	6.9	—	241	—	0.91	—	892	—	cly	yes
2:15	1.0	2.5	21.6	.3	6.8	.1	236	5	0.92	.01	104	788	sl cly	yes
2:20	1.0	3.5	21.0	.6	6.7	.1	224	12	0.88	.04	26	78	cl	Yes
2:25	1.0	4.5	21.1	.1	6.7	0	224	0	0.85	.02	18	14	cl	yes
2:30	1.0	5.5	21.0	.1	6.7	0	224	0	0.88	.02	9.5	2.5	cl	yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan McCormack	Ryan McCormack	5-28-15	2:30
PUMP OR TUBING DEPTH IN WELL (feet): 26	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
								LFPP	
		CG	40 ml	HCL	---	---	8260B	↓	---
		CG	40 ml	HCL	---	---	8011	↓	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME:	Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION:	Columbia, South Carolina
WELL NO:	MW-11	SAMPLE ID:	DATE: 5-29-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): 18.13	PURGE PUMP TYPE OR BAILER: RFPP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
7:45	1.5	1.5	20.5	—	6.4	—	244	—	1.1	—	652	—	clay	YES
7:55	1.0	2.5	20.6	.1	6.7	.2	221	23	0.82	.28	103	549	silty	YES
8:00	1.0	3.5	20.3	.3	6.6	.1	216	5	0.78	.04	72	31	CL	Yes
8:05	1.0	4.5	20.4	.1	6.7	.1	215	1	0.75	.03	13	59	cl	yes
8:10	0.5	5.0	20.3	.1	6.6	.1	214	1	0.77	.02	11	2	cl	yes
8:15	0.6	5.5	20.3	0	6.6	0	216	2	0.78	.01	9.9	1.1	cl	yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan McCormack	Ryan McCormack	5-29-15	8:15
PUMP OR TUBING DEPTH IN WELL (feet): ~25	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		RFRP	
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME:	Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION:	Columbia, South Carolina
WELL NO:	MW-12	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 24.65	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): 4.38	PURGE PUMP TYPE OR BAILER: RFPP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1:10	2.5	2.5	21.6	–	7.2	–	227	–	0.83	–	492	–	clear	yes
1:15	1.5	4.0	20.9	.7	6.6	.6	219	8	0.71	.12	76	416	Slight	yes
1:20	1.5	5.5	20.8	.1	6.5	.1	214	5	0.69	.02	109	33	Slight	Yes
1:25	1.0	6.5	20.8	0	6.5	0	213	1	0.68	.01	20	89	Clr	yes
1:30	1.0	7.5	20.8	0	6.5	0	214	1	0.69	.01	10	10	Clr	yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan McCormack	Ryan McCormack	5-28-15	1:30
PUMP OR TUBING DEPTH IN WELL (feet): 20	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: (Y) N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	RFPP	---
		CG	40 ml	HCL	---	---	8011	↓	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME:	Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION:	Columbia, South Carolina
WELL NO:	MW-13	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30.10	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): 11.71	PURGE PUMP TYPE OR BAILER: RSP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
2:45	1.5	1.5	21.4	—	8.2	—	390	—	1.12	—	>1000	—	clay	none
2:50	1.0	2.5	21.8	.4	7.6	0.6	318	72	0.49	.13	341	—	clay	none
2:55	1.0	3.5	21.1	.7	7.1	0.5	301	11	0.91	.08	106	235	slclay	n
3:00	1.0	4.5	21.1	0	6.3	0.8	300	1	0.93	.02	163	47	clay	none
3:05	1.0	5.5	21.0	.1	6.3	0	302	2	0.92	.01	75	78	slclay	n
3:10	1.0	6.5	21.1	.1	6.2	0.1	300	2	0.92	0	25	50	cl	n
3:15	1.0	7.5	21.0	.1	6.2	0	300	0	0.93	.01	9.5	15.5	cl	ND

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan McCormack	Ryan O'Kormack	5-28-15	3:15

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
25	PE		

DUPLICATE COLLECTED: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	RSP	---
		CG	40 ml	HCL	---	---	8011	RSP	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

check for FP ✓

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-15 ✓	SAMPLE ID:	DATE: 5-29-15

PURGING DATA

DTP = 16.45'

WELL DIAMETER (inches):	Total Well Depth (feet): 25	WELL SCREEN INTERVAL DEPTH: 15 feet to 25 feet	STATIC DEPTH TO WATER (feet): 16.61	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan McCormack	Ryan McCormack	5-29-15	
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS: Not sampled - 0.16' FP.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

CNL

check for FP

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-16	SAMPLE ID:	DATE:

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 25	WELL SCREEN INTERVAL DEPTH: 15 feet to 25 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

check for FP

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-17	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 22.7	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
700	–	–	19.9	–	6.6	–	184	–	.96	–	31.6	–	cl	Yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Daniel Burch	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 5-28-15	SAMPLING TIME: 700
PUMP OR TUBING DEPTH IN WELL (feet): B	TUBING MATERIAL CODE: B	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

check for FP

GROUNDWATER SAMPLING LOG

SITE NAME:	Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION:	Columbia, South Carolina
WELL NO:	MW-18	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 24.41	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
10:45	—	—	21.3	—	6.7	—	222	—	0.83	—	6.7	—	CL	Yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan McCormack	Ryan McCormack	5-28-15	10:45
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	13	---
		CG	40 ml	HCL	---	---	8011	↓	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

check for F.P.

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-19	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 24.00	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1200	—	—	21.2	—	6.9	—	168	—	0.97	—	16.1	—	CL	Yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan McCormack	Ryan McCormack	5-28-15	1200
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
								B	
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

FP

GROUNDWATER SAMPLING LOG

Check for FP

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-20	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

DTP 22.61' BTOC

WELL DIAMETER (inches):	Total Well Depth (feet): 25	WELL SCREEN INTERVAL DEPTH: 15 feet to 25 feet	STATIC DEPTH TO WATER (feet): 22.61	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
			.25 ind. free product											

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan McCormack	Ryan McCormack	5-28-15	
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS: Not sampled 0.02' FP

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-21	SAMPLE ID:	DATE: 5-29-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 25	WELL SCREEN INTERVAL DEPTH: 15 feet to 25 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

Destroyed circa 2005

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 5-29-15	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS: Destroyed in 2005

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

check for F.P.

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-22	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 21.85	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
9:15	–	–	20.6	–	6.8	–	234	–	0.93	–	13.1	–	–	Yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME: 915
PUMP OR TUBING DEPTH IN WELL (feet): –	TUBING MATERIAL CODE: –	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011		---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

Check for F.P.

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-23	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet): 24.25	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (30 feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1215	—	—	20.8	—	6.9	—	273	—	0.79	—	13.4	—	CL	Yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-16	SAMPLING TIME: 12:15
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011		---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina
WELL NO: MW-24	SAMPLE ID:
DATE:	

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 20 feet to 30 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: Y N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS: Not Located.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

Check for FP

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-25	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 25.6	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): 20.65	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
9:00	—	—	20.7	—	6.8	—	196	—	0.87	—	8.1	—	CL	Yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan McCormack	Ryan McCormack	5-28-15	9:00
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		B	
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-26	SAMPLE ID:	DATE: 6/3/15

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): 22.49	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1315	—	—	26.8	—	5.12	—	1012	—	0.16	—	7.08	—	Cl	Slight

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT) Thomas Vargo	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 6/3/15	SAMPLING TIME: 1315
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011		---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-27	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet): 17.75	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
8:30	—	—	20.2	—	7.0	—	200	—	0.42	—	21	—	CL	NO

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME: 8:30
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		B	
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-28	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet): 17.97	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
8:45	—	—	20.2	—	7.2	—	184	—	0.90	—	13.4	—	CL	Yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME: 8:45
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		B	
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

FP

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-29	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

DTP 17.91

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet): 17.92	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

Free Product

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS: Not Sampled 0.01' FP.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-30	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet): 26.7	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
10:00	—	—	20.8	—	7.2	—	199	—	0.84	—	21.4	—	CL	NO

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME: 10:00
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: T	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-31	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

DTP 25.61' BTOC

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 25.62	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

Free Product

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME: 1200
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-32	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet): 22.00	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
9:45	—	—	21.1	—	6.8	—	188	—	0.89	—	6.8	—	CL	Yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan McCormack	Ryan McCormack	5-28-15	9:45
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
								B	
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-33	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 23.83	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: **1 WELL VOLUME** = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
13:30	—	—	21.1	—	7.1	—	232	—	0.91	—	16	—	CL	Yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME: 10:30
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	↓	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-34	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 24.72	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
11:00	—	—	20.3	—	6.7	—	241	—	0.94	—	26	—	CL	Yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME: 11:00
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		B	
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

check for F.P.

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-35	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 23.8	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
11:15	—	—	20.2	—	7.0	—	302	—	0.76	—	7.8	—	CL	Yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME: 11:15
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-36	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 23.63	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
10:15	—	—	20.8	—	6.9	—	250	—	0.90	—	12.4	—	CL	Yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME: 10:15
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	"	---
								"	
								"	

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; T = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-37	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 23.98	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
11:45	—	—	20.4	—	7.0	—	218	—	0.73	—	16.9	—	CL	Yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME: 11:45
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	13	---
		CG	40 ml	HCL	---	---	8011	13	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-38	SAMPLE ID:	DATE: 6/2/15

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 25.26	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1245	—	—	25.1	—	6.0	—	91	—	0.4	—	8.8	—	CL	N

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Thomas Vaughan	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 6/2/15	SAMPLING TIME: 1245
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-39	SAMPLE ID:	DATE: 6.2.15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 26.45	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet − feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1150	—	—	24.6	—	6.14	—	95.6	—	1.06	—	39	—	slight	strong

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 6.2.15	SAMPLING TIME: 12:50
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: Y N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-40	SAMPLE ID:	DATE: 6.2.15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 26.12	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1230	—	—	25.7	—	6.88	—	152.3	—	0.92	=	12.0	—	clr	Strong

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 6.2.15	SAMPLING TIME: 1230
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	3	---
		CG	40 ml	HCL	---	---	8011	3	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-4	SAMPLE ID:	DATE: 6/2/15

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 25.69	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1215	—	—	23.7	—	6.1	—	89	—	0.8	—	2.7	—	Cl	N

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Thomas Vaughan	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 6/2/15	SAMPLING TIME: 1215
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: Y N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	↓	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-42	SAMPLE ID:	DATE: 6/2/15

PURGING DATA

WELL DIAMETER (inches): 2	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 26.23	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1145	—	—	26.4	—	5.9	—	78	—	0.7	—	6.7	—	CL	N

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Thomas Vaughan	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 6/2/15	SAMPLING TIME: 1145
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	↓	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-43	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 40	WELL SCREEN INTERVAL DEPTH: 20 feet to 40 feet	STATIC DEPTH TO WATER (feet): 24.66	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
7:30	—	—	20.1	—	6.6	—	198	—	0.95	—	264	—	CL	NO

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME: 7:30
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-44	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 31	WELL SCREEN INTERVAL DEPTH: 16 feet to 31 feet	STATIC DEPTH TO WATER (feet): 22.7	PURGE PUMP TYPE OR BAILER: ←

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
7:20	—	—	20.2	—	6.8	—	247	—	0.87	—	13.	—	CL	Yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME: 7:20
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B.	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-45	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet): 21.75	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
7:10	—	—	20.0	—	6.8	—	205	—	0.92	—	38	—	CL	yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan McCormack	Ryan McCormack	5-28-15	710
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-46	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 24.17	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
7:40	—	—	20.0	—	6.7	—	219	—	0.96	—	15	—	CL	NO

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME: 7:40
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-47	SAMPLE ID:	DATE:

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS: Not Located.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-48	SAMPLE ID:	DATE: 5-29-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet): 9.63	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
11:00	—	—	21.0	—	7.2	—	173	—	.99	—	8.1	—	CL	NO
													-	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-29-15	SAMPLING TIME: 11:00
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	13	---
		CG	40 ml	HCL	---	---	8011	13	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina
WELL NO: MW-49	SAMPLE ID:
	DATE:

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS: Not sampled. Gate Locked. Could not contact Property owner.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; T = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-50	SAMPLE ID:	DATE:

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 30	WELL SCREEN INTERVAL DEPTH: 15 feet to 30 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: Y N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS: Not Sampled - Gate Locked

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-51	SAMPLE ID:	DATE: 5-29-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 23.72	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
8:00	—	—	21.6	—	7.0	—	168	—	0.99	—	13.4	—	CL	Yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-29-15	SAMPLING TIME: 8:00
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-52	SAMPLE ID:	DATE: 5-27-15

PURGING DATA

20.75' = tagged depth

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): dry	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

Dry

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-27-15	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS: Not Sampled Dry

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-53	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 20	WELL SCREEN INTERVAL DEPTH: 5 feet to 20 feet	STATIC DEPTH TO WATER (feet): 10.5	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
3:30	—	—	21.9	—	7.2	—	242	—	0.92	—	26	—	CL	NO

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME: 3:30
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-54	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 20	WELL SCREEN INTERVAL DEPTH: 5 feet to 20 feet	STATIC DEPTH TO WATER (feet): 11.27	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
3:00	—	—	21.2	—	7.4	—	321	—	0.89	—	26	—	CL	N/O

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan Mclamarck	Ryan McClamarck	5-28-15	3:00
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-55	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 14	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 3.03	PURGE PUMP TYPE OR BAILER: RFPP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
3:15	1.5	1.5	21.9	—	7.9	—	271	—	1.24	—	862	—	clr	yes
3:20	1.0	2.5	21.9	0	7.6	0.3	256	15	0.76	.46	392	470	clr	yes
3:25	1.0	3.5	21.7	0.2	7.2	0.4	217	39	0.88	.14	346	46	clr	yes
3:30	1.0	4.5	21.7	0	7.1	0.1	218	1	0.99	.11	99	247	clr	yes
3:25	1.0	5.5	21.7	0	7.1	0	216	2	0.97	.02	51.4	47.6	clr	yes
3:40	1.0	6.5	21.8	0.1	7.2	0.1	213	3	0.98	.01	16.2	35.2	clr	yes
3:45	1.0	7.5	21.7	0.1	7.2	0	217	4	0.99	.01	8.8	7.4	clr	yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME: 3:45
PUMP OR TUBING DEPTH IN WELL (feet): 12	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH		RFPP	
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-56	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 20	WELL SCREEN INTERVAL DEPTH: 5 feet to 20 feet	STATIC DEPTH TO WATER (feet): 8.22	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
4:00	—	—	22.1	—	7.0	—	315	—	0.91	—	16	—	CL	NO

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME: 4:00
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-57	SAMPLE ID:	DATE:

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 14	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N FILTER SIZE: Filtration Equipment Type:	

DUPLICATE COLLECTED: Y N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS: Not Located.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-58	SAMPLE ID:	DATE: 5-29-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 19	WELL SCREEN INTERVAL DEPTH: 4 feet to 19 feet	STATIC DEPTH TO WATER (feet): 6.85	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
11:15	—	—	20.7	—	6.9	—	250	—	0.79	—	28	—	CL	Yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-29-15	SAMPLING TIME: 11:15
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
								B	
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-59	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 17	WELL SCREEN INTERVAL DEPTH: 2 feet to 17 feet	STATIC DEPTH TO WATER (feet): 6.46	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
2:00	—	—	21.0	—	7.0	—	195	—	9.92	—	36	—	CL	YES

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME: 2:00
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: (Y) N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-60	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 14	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
			Could Not Locate											

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS: Not Located

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-61	SAMPLE ID:	DATE:

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS: Not Located

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

FP

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-62	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

22.21 DTP.

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 23.71	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

Free Product 1½ ft.

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS: Not Sampled. 1.5' FP

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

Free product 1/8 in.

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-63	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

DTP 24.04' BTOC.

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 24.05	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
0:00														

Free Product

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME: 8:00
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS: Free-Product 0.01'

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-64	SAMPLE ID:	DATE:

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
									-					

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS: Not Located

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

ABAND.

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-65	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
			ABAND.											

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE D CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-66	SAMPLE ID:	DATE:

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS: Not Located

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-67	SAMPLE ID:	DATE: 6.2.15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 26.29	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR
1130	—	—	21.7	—	7.2	—	186	—	1.26	—	35	—	clr	odor

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

6.2.15

SAMPLED BY (PRINT): Cameron Warlick	SAMPLER(S) SIGNATURE(S): C. M. Wa	SAMPLING DATE: 6/2/15	SAMPLING TIME: 11:30
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	13	---
		CG	40 ml	HCL	---	---	8011	13	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-68	SAMPLE ID:	DATE:

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (35 feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16, **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS: Not Located.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-69	SAMPLE ID:	DATE:

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS: Abandoned.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-70	SAMPLE ID:	DATE:

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 35	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 25.6	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
7:50	—	—	20.3	—	7.1	—	312	—	0.84	—	62	—	CL	YES

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan McCormack	Ryan McCormack	5-28-15	7:50
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	13	---
		CG	40 ml	HCL	---	---	8011	15	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: MW-5aR	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 28	WELL SCREEN INTERVAL DEPTH: 18 feet to 28 feet	STATIC DEPTH TO WATER (feet): 20.71	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
9:30	—	—	20.8	>	7.0	—	215	=	0.95	>	80	–	clr	Yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME: 9:30
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

check for FP

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: RW-1R	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches): 4	Total Well Depth (feet): 29	WELL SCREEN INTERVAL DEPTH: 9 feet to 29 feet	STATIC DEPTH TO WATER (feet): 24.31	PURGE PUMP TYPE OR BAILER: —

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1100	—	—	21.1	—	7.0	—	337	—	0.91	—	16	—	CL	Yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME: 1100
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

Check for FP

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina
WELL NO: AW-1R	SAMPLE ID:
	DATE:

PURGING DATA

23.14' ~~DTP~~ BTOC

WELL DIAMETER (inches):	Total Well Depth (feet): 50	WELL SCREEN INTERVAL DEPTH: 45 feet to 50 feet	STATIC DEPTH TO WATER (feet): 23.20	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURB IDITY (NTU)	Δ	COLOR	ODOR

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS: Not Sampled - Sheen/0.01' FP

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: DW-1	SAMPLE ID:	DATE: 5-29-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 70	WELL SCREEN INTERVAL DEPTH: 65 feet to 70 feet	STATIC DEPTH TO WATER (feet): 46.78	PURGE PUMP TYPE OR BAILER: ESP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
9:00	5.0	5.0	21.5	—	7.8	—	195	—	1.25	—	21	—	clr	ND
9:05	2.5	7.5	21.2	0.3	7.8	0	199	4	1.01	.24	106	85	slmy	ND
9:10	2.0	9.5	20.9	0.3	7.9	0.1	196	3	1.00	.01	399	293	cldy	ND
9:15	2.0	11.5	20.8	0.1	7.3	0.6	184	12	0.99	.01	265	134	cldy	ND
9:20	2.0	13.5	20.8	0	6.9	0.4	182	2	0.94	0	86	179	cldy	ND
9:25	2.5	16.0	20.9	0.1	6.9	0	185	3	0.97	.02	12.8	73.2	clr	ND
9:30	1.5	18.5	20.8	0.1	6.8	0.1	180	5	0.98	.01	6.5	6.3	clr	ND

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-29-15	SAMPLING TIME: 9:30
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: DW-3	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 52	WELL SCREEN INTERVAL DEPTH: 47 feet to 52 feet	STATIC DEPTH TO WATER (feet): 23.93	PURGE PUMP TYPE OR BAILER: ESP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
12:05	5.0	5.0	21.4	—	7.5	—	333	—	1.55	—	HIGH	—	clay	yes
12:10	4.0	9.0	21.6	.3	7.2	.3	326	7	1.21	.34	599	—	clay	yes
12:15	3.0	12.0	21.0	.6	6.8	.4	310	16	0.90	.31	296	303	clay	yes
12:20	3.5	15.5	20.9	.1	6.4	.1	315	5	0.98	.02	77	219	slclay	yes
12:25	2.5	18.0	20.8	.1	6.1	0	311	4	0.95	.03	52	25	slclay	yes
12:30	3.0	21.0	20.6	.2	6.8	.1	310	1	0.99	.04	10	42	clay	yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan Mccormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME: 12:30
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
								B	
		CG	40 ml	HCL	---	---	8260B	1	---
		CG	40 ml	HCL	---	---	8011	↓	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: DW-4	SAMPLE ID:	DATE: -15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 110	WELL SCREEN INTERVAL DEPTH: 105 feet to 110 feet	STATIC DEPTH TO WATER (feet): 44.51	PURGE PUMP TYPE OR BAILER: ESP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1255	5.0	5.0	24.6	—	8.9	—	346	—	1.44	—	1000	—	clay	Strong
1300	4.0	9.0	24.7	0.1	8.6	0.3	192	154	1.88	.11	888	—	clay	
1305	3.0	12.0	24.7	0	8.4	0.2	106	86	1.72	.16	721	167	clay	
1310	4.0	16.0	24.7	0	8.1	0.3	112	6	1.64	.08	606	115	clay	
1315	3.5	19.5	24.6	0.1	7.4	0.2	95	17	1.66	.02	421	185	clay	
1320	3.5	23.0	24.6	0	7.2	0.7	104	9	1.24	.42	208	213	clay	
1325	2.5	25.5	24.8	0.2	7.1	0.1	101	3	0.99	.25	126	82	silty	
1330	2.5	28.0	24.9	0.1	6.9	0.2	99	2	0.86	.13	91	35	silty	
1335	2.0	30.0	25.2	0.3	6.8	0.1	96	3	0.84	.02	52	39	silty	
1340	2.0	32.0	25.6	0.4	6.8	0	95	1	0.85	.01	21.6	30.4	clay	
1345	2.5	34.5	25.3	0.3	6.7	0.1	94	1	0.82	.03	9.1	12.5	Cl	Slight

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Thomas Vann	JV		1345

PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	13	---
		CG	40 ml	HCL	---	---	8011	13	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: DW-5	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 70	WELL SCREEN INTERVAL DEPTH: 65 feet to 70 feet	STATIC DEPTH TO WATER (feet): 44.45	PURGE PUMP TYPE OR BAILER: SM

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1100	5.0	5.0	21.8	–	7.8	–	389	–	1.21	–	>321	–	Gry	YES
1105	3.0	8.0	21.6	0.2	7.6	0.2	382	7	1.26	.05	500	221	Gry	YES
1110	3.0	11.0	20.9	0.7	7.4	0.2	364	18	0.99	.27	262	238	Gry	YES
1115	2.5	13.5	20.8	0.1	7.2	0.2	324	40	0.91	.08	129	133	Gry	YES
1120	2.5	16.0	22.6	0	6.9	0.3	318	6	0.90	.01	104	25	Clay	YES
1125	2.5	18.5	20.8	0	6.9	0	321	3	0.90	0	1.5	89	Cly	YES
1130	2.5	21.0	20.8	0	6.9	0	329	8	0.91	.01	6.2	8.8	Cl	YES

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormack	SAMPLER(S) SIGNATURE(S): Ryan McCormack	SAMPLING DATE: 5-28-15	SAMPLING TIME: 1130
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	↓	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME:	Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION:	Columbia, South Carolina
WELL NO:	DW-6	SAMPLE ID:	DATE: 6.2.15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 70	WELL SCREEN INTERVAL DEPTH: 65 feet to 70 feet	STATIC DEPTH TO WATER (feet): 46.16	PURGE PUMP TYPE OR BAILER: GST

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = 5 gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1135	5.0	5.0	27.1	–	7.4	–	175.6	–	1.92	–	404	–	Cloudy	none
1140	4.0	9.0	29.2	2.1	7.7	0.3	177.8	2.2	1.01	.91	129	275	Slcldy	
1145	4.0	13.0	27.5	1.7	7.5	0.2	160.8	17	1.03	.02	65	64	Slcldy	
1150	3.5	16.5	24.2	3.3	6.7	0.6	160.1	.7	1.04	.01	21	44	Clr	
1155	3.5	20.0	24.1	.1	6.7	0	159.7	.4	1.05	.01	13.4	7.6	Clr	
1200	3.0	23.0	24.0	.1	6.8	0.1	159.6	.1	1.04	.01	8.6	4.8	Clr	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Cameron Warlick	Cam Warl	6.2.15	12:00
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME:	Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION:	Columbia, South Carolina
WELL NO:	DW-7	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 55	WELL SCREEN INTERVAL DEPTH: 50 feet to 55 feet	STATIC DEPTH TO WATER (feet): 24.32	PURGE PUMP TYPE OR BAILER: ESP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1:20	5.5	5.5	22.4	—	7.5	—	187	—	1.21	—	606	—	Cly	Yes
1:25	3.0	8.5	21.9	.5	7.2	.3	183	4	0.99	.22	521	85	Cly	Yes
1:30	2.5	11.0	21.6	.3	6.9	.3	179	4	0.92	.07	344	177	Cly	Yes
1:35	2.0	13.0	21.2	.6	6.7	.2	170	9	0.88	.04	92	252	SCL	Yes
1:40	2.5	15.5	21.1	.1	6.7	0	169	1	0.86	.02	15	77	Cr	Yes
1:45	2.5	18.0	21.1	0	6.6	.1	165	4	0.87	.01	6.4	8.6	Clr	Yes

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan McCormack	Ryan McCormack	5-28-15	1:45
PUMP OR TUBING DEPTH IN WELL (feet): —	TUBING MATERIAL CODE: —	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: (Y) N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: DW-8	SAMPLE ID:	DATE: 5-29-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 55	WELL SCREEN INTERVAL DEPTH: 50 feet to 55 feet	STATIC DEPTH TO WATER (feet): 5.37	PURGE PUMP TYPE OR BAILER: ESP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1055	5.0	5.0	21.4	—	7.2	—	346	—	1.26	—	611	—	Cly	YS
1100	2.5	7.5	21.9	.5	7.1	.1	341	5	1.12	.14	482	129	Cly	YS
1105	2.5	10.0	21.6	.3	6.9	.2	309	12	0.99	.13	346	136	Cly	YS
1110	3.0	13.0	20.9	.7	6.9	0	302	7	0.93	.06	211	135	Cly	YS
1115	3.0	16.0	20.9	0	6.8	.1	299	3	0.92	.01	92	114	Cly	
1120	3.0	19.0	20.9	0	6.8	0	295	4	0.93	.01	50	42	Cly	
1125	3.0	22.0	21.8	.1	6.7	.1	294	1	0.91	.02	19	31	Cly	√
1130	3.0	25.0	21.8	0	6.7	0	296	2	0.94	.03	69	121	Cly	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan McCormack	Ryan McCormack	5-29-15	1130

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:

DUPLICATE COLLECTED: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	B	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: DW-9	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet): 65	WELL SCREEN INTERVAL DEPTH: 60 feet to 65 feet	STATIC DEPTH TO WATER (feet): 24.9	PURGE PUMP TYPE OR BAILER: ESP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1:45	5.0	5.0	21.9	–	7.6	–	352	–	1.00	–	621	–	Cldy	none
1:50	4.0	9.0	21.8	.1	7.4	.2	326	26	1.01	.01	319	302	Cldy	
1:55	3.0	12.0	21.6	.2	7.4	0	309	17	0.99	.01	152	167	Slcly	
2:00	3.0	15.0	21.2	.4	7.2	.2	306	3	0.94	.05	106	46	Slcly	;
2:05	3.0	18.0	21.1	.1	6.9	.3	304	2	0.94	0	92	14	Slcly	
2:10	2.5	20.5	21.1	0	6.9	0	304	0	0.95	.01	76	16	Clr	
2:15	2.5	22.5	21.1	0	6.9	0	301	3	0.94	.01	80	4	Clr	0

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan McCormack	Ryan McCormack	5-28-15	2:15

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
—	—		

DUPLICATE COLLECTED: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B	B	---
		CG	40 ml	HCL	---	---	8011	↓	---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Columbia, SC	
WELL NO: UNK 03	SAMPLE ID:	DATE: 5-29-15

PURGING DATA

DTP 19.01

WELL DIAMETER (inches):	Total Well Depth (feet):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): 19.09	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) x WELL CAPACITY
= (feet – feet) x gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	±	pH (SU)	±	COND. (uS)	±	DO (mg/L)	±	TURBIDITY (NTU)	±	COLOR	ODOR

Free product 0.08'

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT):	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE: 5-29-15	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40 ml	HCL			8260B		
	3	CG	40 ml	HCL			8011		
	1	PE	250 ml	HNO3			6010		

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ± 10 NTU or ± 10%

Free Prod.

GROUNDWATER SAMPLING LOG

SITE NAME: Clonds	SITE LOCATION: Columbia, SC	
WELL NO: UNK-4	SAMPLE ID:	DATE: 5-29-15

PURGING DATA

WELL DIAMETER (inches)	Total Well Depth (feet):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet)	PURGE PUMP TYPE OR BAILER

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	%	pH (SU)	%	COND (uS)	%	DO (mg/L)	%	TURBIDITY (NTU)	%	COLOR	ODOR

Free Prod. Oil ✓

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT): Ryan McCormick	SAMPLER(S) SIGNATURE(S): Ryan McCormick	SAMPLING DATE: 5-29-15	SAMPLING TIME
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40 ml	HCL			8260B		
	3	CG	40 ml	HCL			8011		
	1	PE	250 ml	HNO3			6010		

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Clouds	SITE LOCATION: Colombia SC
WELL NO: UNK5	SAMPLE ID:
	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) x WELL CAPACITY
= (feet – feet) x gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP (°C)	±	pH (SU)	±	COND (uS)	±	DO (mg/L)	±	TURBIDITY (NTU)	±	COLOR	ODOR

Free product - .8 inch

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02, 1" = 0.04, 1.25" = 0.06, 2" = 0.16, 3" = 0.37, 4" = 0.65, 5" = 1.02, 6" = 1.47, 12" = 5.88

SAMPLING DATA

SAMPLED BY (PRINT):	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y N			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
	3	CG	40 ml	HCL			8260B		
	3	CG	40 ml	HCL			8011		
	1	PE	250 ml	HNO3			6010		

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ± 10 NTU or ± 10%

GROUNDWATER SAMPLING LOG

SITE NAME: Cloud's Chevron / University Mart / Handy Pantry	SITE LOCATION: Columbia, South Carolina	
WELL NO: SW-1	SAMPLE ID:	DATE: 5-28-15

PURGING DATA

WELL DIAMETER (inches):	Total Well Depth (feet):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER: B

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
= (feet – feet) X gallons/foot = gallons

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	TEMP. (°C)	Δ	pH (su)	Δ	COND. (µS)	Δ	DO (mg/L)	Δ	TURBIDITY (NTU)	Δ	COLOR	ODOR
1:15	—	—	23.4	—	7.9	—	415	—	1.32	—	102	—	CL	No

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

SAMPLING DATA

SAMPLED BY (PRINT)	SAMPLER(S) SIGNATURE(S):	SAMPLING DATE:	SAMPLING TIME:
Ryan McCormack	Ryan McCormack	5-28-15	1:15
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE:
DUPLICATE COLLECTED: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (ml/min)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
		CG	40 ml	HCL	---	---	8260B		---
		CG	40 ml	HCL	---	---	8011		---

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

STABILIZATION CRITERIA

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** ± 0.2 mg/L or ± 10% **Turbidity:** ≤ 10 NTU or ± 10%

APPENDIX C

Groundwater Laboratory Analytical Report

CRAWFORD
ENVIRONMENTAL
SERVICES

ACCESS ANALYTICAL, INC.

ANALYTICAL REPORT

CLIENT

Crawford Environmental Services
15 Church Ave, SW
Roanoke VA 24011

ATTENTION
Dan Fisher

PROJECT ID
Clouds

LABORATORY REPORT NUMBER
1506305

DATE
June 15, 2015

Primary Data Review By

Chantelle Kanhai
Project Manager, AES

Secondary Data Review By

Ashley Amick

Project Manager, Access Analytical
aamick@axs-inc.com

PLEASE NOTE:

- **Unless otherwise noted, all analysis on this report performed at Analytical Environmental Services Inc. (AES Inc), 3080 Presidential Drive, Atlanta, GA 30340.**
- **AES is SCDHEC certified laboratory # 98016, NCDENR certified lab # 562, GA certified lab # FL-E87582, NELAP certified laboratory # E87582**
- Local support services for this project are provided by Access Analytical, Inc. Access Analytical is a representative of AES serving client in the SC/NC/GA areas. All questions regarding this report should be directed to your local Access Analytical representative at 803.781.4243 or toll fee at 883.315.4243

LAB USE ONLY

Access Analytical - Chain of Custody Record

Project Work Order # 1506205

Sales Order # _____ PO # _____ Access Quote # _____ Laboratory ID: _____

Company Name: Crawford Env.

Report To: Crawford Env Dan fisher

Address: 15 church AVE.

City: Roanoke State: VA Zip: 24011

Phone: (540) 798-5068 Fax: (540) 343-6259

Email: Dfisher@crawfordenvironmental.com

Project ID: Clouds

Sampled By: Petra-Tech

Preservative: (*see codes)

Container Type: (*see codes)

REQUESTED LAB ANALYSIS: 1

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	# of containers collected per analysis	BTEX, MTBE, Naphthalene TBA 8260, TAME
MW 28	5/28/15	8:45	G	GW		3	3	3
MW 27	5/28/15	8:30	G	GW		3	3	3
Dup D	5/29/15	10:20	G	GW		3	3	3
DW 7	5/28/15	1:45	G	GW		3	3	3
MW 54	5/28/15	3:00	G	GW		3	3	3
MW 53	5/28/15	3:30	G	GW		3	3	3
MW 70	5/28/15	2:50	G	GW		3	3	3
MW 17	5/28/15	7:00	G	GW		3	3	3
MW 8	5/29/15	11:15	G	GW		3	3	3
DW 2	5/29/15	10:00	G	GW		3	3	3

ACCESS ANALYTICAL, INC.
7478 Carlisle Street
Irmo, SC 29063
Phone: (803) 781-4243
Fax: 781-4303
www.axs-inc.com

*Preservative Codes (place corresponding # in block above analysis field): 0 = None, 1 = HCL, 2 = HNO_3, 3 = H_2SO_4, 4 = NaOH, 5 = $Na_2S_2O_3$, 6 = Method 5035 set w/ $NaHSO_4$ & CH_3OH, 7 = NaOH/ZnOAC, 8 = H_3PO_4

*Matrix Codes (place corresponding code in matrix column): GW = ground water, WW = waste water, DW = drinking water, S = soil, SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other (specify in comments section)

*Program Area Codes: CWA = Clean Water Act (for wastewaters), SDWA = Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous Wastes (for soils, ground waters and waste samples)

*Container Type: G = Glass, P = Plastic

NOTES / COMMENTS
(if sample is a composite please use space below to note start/finish times & dates)

Cooler 1

Turnaround Time:

___ Standard
___ RUSH*
*Date Required: _____
(For rush work, results emailed/faxed by end of business day on date required)

Project Location:
✓ SC
___ NC
___ Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
[signature]	[signature]	6/2/15	16:00	___Y ___N	___(°C)	___(N/A)
[signature]	[signature]	6/2/15	17:00	___Y ___N	___(°C)	___(N/A)
	[signature]	6/3/15	10:45AM	___Y ___N	3.5, 3.3 (°C)	___(N/A)
				___Y ___N	___(°C)	___(N/A)

Pg 1 of 1

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LAB USE ONLY

Access Analytical - Chain of Custody Record

Project Work Order # 1506305

Sales Order # _____ PO # _____ Access Quote # _____ Laboratory ID: _____

Company Name: Crawford Env.

Report To: Dan Fisher

Address: 15 church AVE

City: Roanoke State: VA Zip: 24011

Phone: (504) 798-5068 Fax: (540) 343-6259

Email: DFisher@crawfordenvironmental.com

Project ID: Clouds

Sampled By: Petra-Tech Env

Preservative: (*see codes)

Container Type: (*see codes)

↓ REQUESTED LAB ANALYSIS: ↓ BTEX, MTBE, Naphthalene, TBA 8260, TAME

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	# of containers rec'd	# of containers used for analysis
DW 9	5/28/15	2:15	G	GW		3		3
DW 1	5/29/15	9:30	G	GW		3		3
MW 19	5/28/15	12:00	G	GW		3		3
MW 34	5/28/15	11:00	G	GW		3		3
MW 35	5/28/15	11:15	G	GW		3		3
MW 30	5/28/15	10:00	G	GW		3		3
MW 9	5/28/15	2:45	G	GW		3		3
RW-1R	5/28/15	1:00	G	GW		3		3
MW 48	5/29/15	11:00	G	GW		3		3
MW 33	5/28/15	10:30	G	GW		3		3

ACCESS ANALYTICAL, INC.
7478 Carlisle Street
Irmo, SC 29063
Phone: (803) 781-4243
Fax: 781-4303
www.axs-inc.com

***Preservative Codes** *(place corresponding # in block above analysis field):* 0 = None, 1 = HCL, 2 = HNO_3, 3 = H_2SO_4, 4 = NaOH, 5 = $Na_2S_2O_3$, 6 = Method 5035 set w/ $NaHSO_4$ & CH_3OH, 7 = NaOH/ZnOAC, 8 = H_3PO_4

***Matrix Codes** *(place corresponding code in matrix column):* GW = ground water, WW = waste water, DW = drinking water, S = soil, SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other *(specify in comments section)*

***Program Area Codes:** CWA = Clean Water Act (for wastewaters), SDWA = Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous Wastes (for soils, ground waters and waste samples)

***Container Type:** G = Glass, P = Plastic

NOTES / COMMENTS

(if sample is a composite please use space below to note start/finish times & dates)

Cooler 1

Turnaround Time:

___ Standard
___ RUSH*
*Date Required: _____
(For rush work, results emailed/faxed by end of business day on date required)

Project Location:
✓ SC
___ NC
___ Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
[signature]	[signature]	6-2-15	1600	___Y ___N	____(°C)	____(N/A)
[signature]	[signature]	6-2-15	1702	___Y ___N	____(°C)	____(N/A)
[signature]		6/3/15	10:45AM	___Y ___N	3.5, 3.3 (°C)	____(N/A)
				___Y ___N	Page 3 of 32	____(N/A)

Pg 2 of 2

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Pink Copy - Client Copy

LAB USE ONLY

Access Analytical - Chain of Custody Record

Project Work Order # 1506305

Sales Order # _____ PO # _____ Access Quote # _____ Laboratory ID: _____

Company Name: Crawford Env. | Preservative: (*see codes) | Container Type: (*see codes)

Report To: Dan Fisher

Address: 15 Church Ave.

City: Roanoke State: VA Zip: 24011

Phone: (504) 798-5068 Fax: (540) 343-6259

Email: DFisher@crawfordenvironmental.com

Project ID: Clouds

Sampled By: Petra-Tech Env.

ACCESS ANALYTICAL, INC.
7478 Carlisle Street
Irmo, SC 29063
Phone: (803) 781-4243
Fax: 781-4303
www.axs-inc.com

*Preservative Codes (place corresponding # in block above analysis field): 0 = None, 1 = HCL, 2 = HNO_3, 3 = H_2SO_4, 4 = NaOH, 5 = $Na_2S_2O_3$, 6 = Method 5035 set w/ $NaHSO_4$ & CH_3OH, 7 = NaOH/ZnOAC, 8 = H_3PO_4

*Matrix Codes (place corresponding code in matrix column): GW = ground water, WW = waste water, DW = drinking water, S = soil, SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other (specify in comments section)

*Program Area Codes: CWA = Clean Water Act (for wastewaters), SDWA = Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous Wastes (for soils, ground waters and waste samples)

*Container Type: G = Glass, P = Plastic

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	# of containers collected / per analysis	↓ REQUESTED LAB ANALYSIS: ↓ BTEX, MTBE, Naphthalene, TBA 8260, TAME
MW-5aR	5/28/15	9:30	G	GW		3	3	3
MW 4	5/29/15	9:00	G	GW		3	3	3
MW 11	5/29/15	8:15	G	GW		3	3	3
MW 6	5/29/15	10:15	G	GW		3	3	3
DW 8	5/29/15	11:30	G	GW		3	3	3
Dup A	5/28/15	1:50	G	GW		3	3	3
MW 12	5/28/15	1:30	G	GW		3	3	3
MW 37	5/28/15	11:45	G	GW		3	3	3
MW 18	5/28/15	10:45	G	GW		3	3	3
MW 32	5/28/15	9:45	G	GW		3	3	3

NOTES / COMMENTS
(if sample is a composite please use space below to note start/finish times & dates)

Cooler 1

Turnaround Time:
___ Standard
___ RUSH*
*Date Required: _____
(For rush work, results emailed/faxed by end of business day on date required)

Project Location:
✓ SC
___ NC
___ Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
C. M. Wm	AM	6/2/15	1600	___Y ___N	___(°C)	___(N/A)
AM	Fedex	6/2/15	1700	___Y ___N	___(°C)	___(N/A)
		6/3/15	10:45AM	___Y ___N	3.5, 3.3 (°C)	___(N/A)
				___Y ___N	___(°C)	___(N/A)

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Sales Order #: _____ PO #: _____ Access Quote #: _____

Project Work Order #: 1506305

Laboratory ID: _____

Company Name: Crawford Env.

Report To: Dan Fisher

Address: 15 Church Ave.

City: Roanoke State: VA Zip: 24011

Phone: (504) 798-5068 Fax: (540) 343-6259

Email: Dfisher@crawfordenvironmental.com

Project ID: Clouds

Sampled By: Petra-Tech

Preservative: (*see codes)

Container Type: (*see codes)

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	# of containers collected	1 REQUESTED LAB ANALYSIS: 1 BTEX, MTBE, Naphthalene, 1,2-DCA, DIPE, TBA 8260	EDB 8260	TAME, ETBE												
MW 10	5/28/15	2:30	G	GW		3	3	3	3													Cooler 1
SW 1	5/28/15	1115	G			3																
MW 23	5/28/15	12:15	G	GW		3																
MW 46	5/28/15	7:40	G	GW		3																
MW 25	5/28/15	9:00	G	GW		3																
MW 43	5/28/15	7:30	G	GW		3																
MW 44	5/28/15	7:20	G	GW		3																
MW 22	5/28/15	9:15	G	GW		3																
MW 45	5/28/15	7:10	G	GW		3																

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*Preservative Codes (place corresponding # in block above analysis field): 0 = None, 1 = HCL, 2 = HNO_3, 3 = H_2SO_4, 4 = NaOH, 5 = $Na_2S_2O_3$, 6 = Method 5035 set w/ $NaHSO_4$ & CH_3OH, 7 = NaOH/ZnOAC, 8 = H_3PO_4

*Matrix Codes (place corresponding code in matrix column): GW = ground water, WW = waste water, DW = drinking water, S = soil, SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other (specify in comments section)

*Program Area Codes: CWA = Clean Water Act (for wastewaters), SDWA = Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous Wastes (for soils, ground waters and waste samples)

*Container Type: G = Glass, P = Plastic

NOTES / COMMENTS

(if sample is a composite please use space below to note start/finish times & dates)

Turnaround Time:

___ Standard
___ RUSH*
*Date Required: _____
(For rush work, results emailed/faxed by end of business day on date required)

Project Location:

✓ SC
___ NC
___ Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
[signature]	AM	6/2/15	1610	___Y ___N	_____(°C)	_____(N/A)
AM	6/2/15 FedEx		1740	___Y ___N	_____(°C)	_____(N/A)
[signature]	[signature]	6/3/15	10:45AM	___Y ___N	3.5, 3.3 (°C)	_____(N/A)
				___Y ___N	Page 5 of 82 (°C)	_____(N/A)

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LAB USE ONLY

Sales Order #: _____ PO #: _____ Access Quote #: _____

Project Work Order #: 1501030S

Laboratory ID: _____

Company Name: Crawford Env

Report To: Dan Fisher

Address: 15 church AVE.

City: Roanke State: VA Zip: 24011

Phone: (504) 798-5068 Fax: (540) 343-6259

Email: Dfisher@crawfordenvironmental.com

Project ID: Clouds

Sampled By: Petra-Tech Env

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	# of containers collected	# per analysis	REQUESTED LAB ANALYSIS: BTEX, MTBE, Naphalene, TBA, 8260, TAME	Preservative: (*see codes)	Container Type: (*see codes)
MW 7	5/29/15	10:30	G	GW		3	3	3			
MW 51	5/29/15	8:30	G	GW		3	3	3			
MW 58	5/29/15	11:15	G	GW		3	3	3			
MW 59	5/28/15	2:00	G	GW		3	3	3			
Dup C	5/28/15	2:05	G	GW		3	3	3			
MW 56	5/28/15	4:00	G	GW		3	3	3			
MW 55	5/28/15	3:45	G	GW		3	3	3			
MW 13	5/28/15	3:15	G	GW		3	3	3			
DW 3	5/28/15	12:30	G	GW		3	3	3			
Dup B	5/28/15	1:35	G	GW		3	3	3			

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***Preservative Codes** *(place corresponding # in block above analysis field)*: 0 = None, 1 = HCL, 2 = HNO_3, 3 = H_2SO_4, 4 = NaOH, 5 = $Na_2S_2O_3$, 6 = Method 5035 set w/ $NaHSO_4$ & CH_3OH, 7 = NaOH/ZnOAC, 8 = H_3PO_4

***Matrix Codes** *(place corresponding code in matrix column)*: **GW** = ground water, **WW** = waste water, **DW** = drinking water, **S** = soil, **SL** = sludge, **A** = air, **IW** = industrial waste, **WO** = waste oil, **OT** = other *(specify in comments section)*

***Program Area Codes:** **CWA** = Clean Water Act (for wastewaters), **SDWA** = Safe Drinking Water Act (for drinking waters), **SHW** = Solid and Hazardous Wastes (for soils, ground waters and waste samples)

***Container Type:** G = Glass, P = Plastic

NOTES / COMMENTS

(if sample is a composite please use space below to note start/finish times & dates)

Cooler 1

Turnaround Time:

___ Standard
___ RUSH*
*Date Required: _____
(For rush work, results emailed/faxed by end of business day on date required)

Project Location:
✓ SC
___ NC
___ Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
[signature]	[signature]	6-2-15	1600	___Y ___N	_____(°C)	_____(N/A)
[signature]	[signature]	6-3-15	1705	___Y ___N	_____(°C)	_____(N/A)
[signature]	[signature]	6/3/15	10:45AM	___Y ___N	3.5, 3.3 (°C)	_____(N/A)
				___Y ___N	_____(°C)	_____(N/A)

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Project Work Order # 1506305

Sales Order # _____ PO # _____ Access Quote # _____ Laboratory ID: _____

Company Name: Crawford Env.
Report To: Dan Fisher
Address: 15 Church Ave.
City: Roanoke State: Va Zip: 24011
Phone: 504-748-5068 Fax: 540-343-6759
Email: Dfisher@crawfordenv.onmicrosoft.com
Project ID: Clouds
Sampled By: Petra Tech

Preservative: (*see codes)
Container Type: (*see codes)

1 REQUESTED LAB ANALYSIS: BTEX, MTBE, Naphthalene TPH #340, TAME

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	# of containers collected	# of containers collected per analysis
DW 4	6.2.15	13:45	G	GW		3		3
MW67	6.2.15	11:30	G	GW		3		3
MW26	6.2.15	13:15	G	GW		3		3
MW 38	6.2.15	12:45	G	GW		3		3
DW 6	6.2.15	12:00	G	GW		3		3
MW 42	6.2.15	11:45	G	GW		3		3
MW 41	6.2.15	12:15	G	GW		3		3
MW 40	6.2.15	12:30	G	GW		3		3
MW 39	6.2.15	12:50	G	GW		3		3
Trip Blank								

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*Preservative Codes (place corresponding # in block above analysis field): 0 = None, 1 = HCL, 2 = HNO_3, 3 = H_2SO_4, 4 = NaOH, 5 = $Na_2S_2O_3$, 6 = Method 5035 set w/ $NaHSO_4$ & CH_3OH, 7 = NaOH/ZnOAC, 8 = H_3PO_4

*Matrix Codes (place corresponding code in matrix column): GW = ground water, WW = waste water, DW = drinking water, S = soil, SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other (specify in comments section)

*Program Area Codes: CWA = Clean Water Act (for wastewaters), SDWA = Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous Wastes (for soils, ground waters and waste samples)

*Container Type: G = Glass, P = Plastic

NOTES / COMMENTS
(if sample is a composite please use space below to note start/finish times & dates)

Turnaround Time:
___ Standard
___ RUSH*
*Date Required: _____
(For rush work, results emailed/faxed by end of business day on date required)

Project Location:
✓ SC
___ NC
___ Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
M. W	dM	6/2/15	1600	___Y ___N	_____(°C)	_____(N/A)
dM	Judd	6/2/15	1700	___Y ___N	_____(°C)	_____(N/A)
		6/3/15	10:45AM	___Y ___N	3.5/3.3 (°C)	_____(N/A)
				___Y ___N	Page 7 of 92 (°C)	_____(N/A)

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1506305

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Project Work Order #: _____

Laboratory ID: _____

Company Name: Crawford Env.

Report To: Dan Fisher

Address: 15 Church Ave

City: Roanoke State: VA Zip: 24011

Phone: 504-748-5068 Fax: 540-343-6239

Email: Dfisher@crawfordenvironmental

Project ID: Cloudy

Sampled By: Petra Tech

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	Preservative: (*see codes)	Container Type: (*see codes)	REQUESTED LAB ANALYSIS: BTEX + MTBE (8021)	BTEX + MTBE + TMB (8021)	EDB (504)
dam FB EDB	5-28-15	10:37				1					1
dam FB EDB	5-29-15	12:42				1					1
dam FB EDB	6-2-15	11:50				1					1
FB BTEX	5-28-15	10:37				2			1		
FB BTEX	5-29-15	12:42				2			1		
FB BTEX	6-2-15	11:50				2			1		

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*Preservative Codes (place corresponding # in block above analysis field): 0 = None, 1 = HCL, 2 = HNO_3, 3 = H_2SO_4, 4 = NaOH, 5 = $Na_2S_2O_3$, 6 = Method 5035 set w/ $NaHSO_4$ & CH3OH, 7 = NaOH/ZnOAC, 8 = H_3PO_4

*Matrix Codes (place corresponding code in matrix column): GW = ground water, WW = waste water, DW = drinking water, S = soil, SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other (specify in comments section)

*Program Area Codes: CWA = Clean Water Act (for wastewaters), SDWA = Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous Wastes (for soils, ground waters and waste samples)

*Container Type: G = Glass, P = Plastic

NOTES / COMMENTS

(If sample is a composite please see space below to note start/finish times & dates)

Turnaround Time:

___ Standard
___ RUSH*
*Date Required: _____
(For rush work, results emailed/faxed by end of business day on date required)

Project Location:
___ SC
___ NC
___ Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
C. M. Wm	CAH	6/2/15	1600	___Y ___N	___(°C)	___(N/A)
CAH	Fedex	6/2/15	1700	___Y ___N	___(°C)	___(N/A)
	Revised COC Received on 6/3/15 vlg			___Y ___N	___(°C)	___(N/A)
		emacc		___Y ___N	___(°C)	___(N/A)

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150605 6/6/15 MS

LAB USE ONLY

Sales Order #: _____ PO #: _____ Access Quote #: _____

Project Work Order #: ~~500883~~

Laboratory ID: _____

Company Name: Crawford Env.

Report To: Don Fisher

Address: 15 Church Ave.

City: Roanoke State: VA Zip: 24011

Phone: 504-748-5068 Fax: 540-343-6259

Email: Dfisher@crawfordenvironmental.com

Project ID: Clouds

Sampled By: Petra-Tech

Sample ID/Description	Date Collected:	Time Collected:	Type: (grab or composite)	Matrix: (see codes)	Program Area (see codes)	TOTAL # of containers	Preservative: (*see codes)	Container Type: (*see codes)	↓ REQUESTED LAB ANALYSIS: ↓ BTEX MTBE, Naph, TAA, TAME, TBA via 8260	NOTES / COMMENTS (if sample is a composite please use space below to note start/finish times & dates)
MW 22	6/5/15	1140	G	GW		6		G	6	
Field blank	6/5/15	1145	G			6			6	

# of containers collected / # of containers collected per analysis

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*Preservative Codes (place corresponding # in block above analysis field): 0 = None, 1 = HCL, 2 = HNO_3, 3 = H_2SO_4, 4 = NaOH, 5 = $Na_2S_2O_3$, 6 = Method 5035 set w/ $NaHSO_4$ & CH_3OH, 7 = NaOH/ZnOAC, 8 = H_3PO_4

*Matrix Codes (place corresponding code in matrix column): GW = ground water, WW = waste water, DW = drinking water, S = soil, SL = sludge, A = air, IW = industrial waste, WO = waste oil, OT = other (specify in comments section)

*Program Area Codes: CWA = Clean Water Act (for wastewaters), SDWA = Safe Drinking Water Act (for drinking waters), SHW = Solid and Hazardous Wastes (for soils, ground waters and waste samples)

*Container Type: G = Glass, P = Plastic

Turnaround Time:

___ Standard
___ RUSH*
*Date Required: _____
(For rush work, results emailed/faxed by end of business day on date required)

Project Location:

~~X~~SC
___NC
___Other
(specify) _____

Relinquished By:	Received By:	Date (mm-dd-yy)	Time (24HR)	Samples Rec'd on Ice	Sample Temp. Upon Receipt (°C):	
	Ahet	6/5/15	1230	___Y ___N	_____(°C)	_____(N/A)
AM	Reeves	6/5/15	1700	___Y ___N	_____(°C)	_____(N/A)
Cataya Reeves	6/6/15 9a Fed Ex			___Y ___N	3.4 (°C)	_____(N/A)
				___Y ___N	Page 9 of 92 (°C)	_____(N/A)

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Client: Crawford Environmental Services
Project: Clouds
Lab ID: 1506305

Case Narrative

Sample Receiving Nonconformance:

Sample "MW 22" collected 5/28/2015 9:15am was listed on the Chain of Custody (COC) but was not present with samples received 6/3/2015.

Samples "DW 5", "MW 36" and 3 extra Field Blanks were received but were not listed on the COC. Per Angela Martin on 6/4/2015 via email, samples "DW-5" and "MW-36" were analyzed for VOCs and Oxygenates and the extra Field Blanks were placed on hold.

Sample "MW 22" along with sample "Field Blank" were received at the laboratory on 6/8/2015 and were analyzed at the request of the client.

At the client's request, the three samples labeled as "FB EDB" were not analyzed. Page 7 of 7 of the COC was revised and re-submitted via email 6/3/2015. The revised COC was included in the report.

At the client's request, all samples were analyzed for BTEX, MTBE, Naphthalene, tert-Amyl alcohol, tert-Amyl methyl ether, and tert-Butyl alcohol.

Volatile Organic Compounds Analysis by Method 8260B:

Due to sample matrix, samples 1506305-008A, -013A, -015A, -017A, -033A, -038A, and -063 A required dilution during preparation and/or analysis resulting in elevated reporting limits.

Toluene values for the QC samples 1506305-038AMS/MSD are "E" qualified indicating estimated values over linear calibration range due to the level of target analyte present in the unspiked sample.

Toluene values for the QC samples 1506305-013AMS/MSD are "E" qualified indicating estimated values over linear calibration range due to the level of target analyte present in the unspiked sample.

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 28
Project Name:	Clouds	**Collection Date:**	5/28/2015 8:45:00 AM
Lab ID:	1506305-001	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208405	1	06/05/2015 00:31	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208405	1	06/05/2015 00:31	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208405	1	06/05/2015 00:31	NP
Naphthalene	BRL		0.44	5.0	ug/L	208405	1	06/05/2015 00:31	NP
Toluene	BRL		0.24	1.0	ug/L	208405	1	06/05/2015 00:31	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208405	1	06/05/2015 00:31	NP
Surr: 4-Bromofluorobenzene	92.4		0	70-130	%REC	208405	1	06/05/2015 00:31	NP
Surr: Dibromofluoromethane	91.6		0	70-130	%REC	208405	1	06/05/2015 00:31	NP
Surr: Toluene-d8	90.7		0	70-130	%REC	208405	1	06/05/2015 00:31	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208405	1	06/05/2015 00:31	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208405	1	06/05/2015 00:31	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208405	1	06/05/2015 00:31	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 27
Project Name:	Clouds	**Collection Date:**	5/28/2015 8:30:00 AM
Lab ID:	1506305-002	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208405	1	06/05/2015 00:58	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208405	1	06/05/2015 00:58	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208405	1	06/05/2015 00:58	NP
Naphthalene	BRL		0.44	5.0	ug/L	208405	1	06/05/2015 00:58	NP
Toluene	BRL		0.24	1.0	ug/L	208405	1	06/05/2015 00:58	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208405	1	06/05/2015 00:58	NP
Surr: 4-Bromofluorobenzene	91.2		0	70-130	%REC	208405	1	06/05/2015 00:58	NP
Surr: Dibromofluoromethane	91.7		0	70-130	%REC	208405	1	06/05/2015 00:58	NP
Surr: Toluene-d8	89.7		0	70-130	%REC	208405	1	06/05/2015 00:58	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208405	1	06/05/2015 00:58	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208405	1	06/05/2015 00:58	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208405	1	06/05/2015 00:58	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	DUP D
Project Name:	Clouds	**Collection Date:**	5/29/2015 10:20:00 AM
Lab ID:	1506305-003	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208405	1	06/05/2015 01:24	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208405	1	06/05/2015 01:24	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208405	1	06/05/2015 01:24	NP
Naphthalene	BRL		0.44	5.0	ug/L	208405	1	06/05/2015 01:24	NP
Toluene	BRL		0.24	1.0	ug/L	208405	1	06/05/2015 01:24	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208405	1	06/05/2015 01:24	NP
Surr: 4-Bromofluorobenzene	86.6		0	70-130	%REC	208405	1	06/05/2015 01:24	NP
Surr: Dibromofluoromethane	91.9		0	70-130	%REC	208405	1	06/05/2015 01:24	NP
Surr: Toluene-d8	90.7		0	70-130	%REC	208405	1	06/05/2015 01:24	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208405	1	06/05/2015 01:24	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208405	1	06/05/2015 01:24	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208405	1	06/05/2015 01:24	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	DW 7
Project Name:	Clouds	**Collection Date:**	5/28/2015 1:45:00 PM
Lab ID:	1506305-004	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208405	1	06/05/2015 01:51	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208405	1	06/05/2015 01:51	NP
Methyl tert-butyl ether	1.2		0.39	1.0	ug/L	208405	1	06/05/2015 01:51	NP
Naphthalene	BRL		0.44	5.0	ug/L	208405	1	06/05/2015 01:51	NP
Toluene	BRL		0.24	1.0	ug/L	208405	1	06/05/2015 01:51	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208405	1	06/05/2015 01:51	NP
Surr: 4-Bromofluorobenzene	88		0	70-130	%REC	208405	1	06/05/2015 01:51	NP
Surr: Dibromofluoromethane	96.6		0	70-130	%REC	208405	1	06/05/2015 01:51	NP
Surr: Toluene-d8	92.4		0	70-130	%REC	208405	1	06/05/2015 01:51	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208405	1	06/05/2015 01:51	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208405	1	06/05/2015 01:51	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208405	1	06/05/2015 01:51	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 54
Project Name:	Clouds	**Collection Date:**	5/28/2015 3:00:00 PM
Lab ID:	1506305-005	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208405	1	06/05/2015 02:18	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208405	1	06/05/2015 02:18	NP
Methyl tert-butyl ether	6.4		0.39	1.0	ug/L	208405	1	06/05/2015 02:18	NP
Naphthalene	BRL		0.44	5.0	ug/L	208405	1	06/05/2015 02:18	NP
Toluene	0.36	J	0.24	1.0	ug/L	208405	1	06/05/2015 02:18	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208405	1	06/05/2015 02:18	NP
Surr: 4-Bromofluorobenzene	86		0	70-130	%REC	208405	1	06/05/2015 02:18	NP
Surr: Dibromofluoromethane	92.6		0	70-130	%REC	208405	1	06/05/2015 02:18	NP
Surr: Toluene-d8	89.1		0	70-130	%REC	208405	1	06/05/2015 02:18	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	140		29	100	ug/L	208405	1	06/05/2015 02:18	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208405	1	06/05/2015 02:18	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208405	1	06/05/2015 02:18	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 53
Project Name:	Clouds	**Collection Date:**	5/28/2015 3:30:00 PM
Lab ID:	1506305-006	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208405	1	06/05/2015 02:44	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208405	1	06/05/2015 02:44	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208405	1	06/05/2015 02:44	NP
Naphthalene	BRL		0.44	5.0	ug/L	208405	1	06/05/2015 02:44	NP
Toluene	BRL		0.24	1.0	ug/L	208405	1	06/05/2015 02:44	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208405	1	06/05/2015 02:44	NP
Surr: 4-Bromofluorobenzene	84.7		0	70-130	%REC	208405	1	06/05/2015 02:44	NP
Surr: Dibromofluoromethane	97.8		0	70-130	%REC	208405	1	06/05/2015 02:44	NP
Surr: Toluene-d8	92.3		0	70-130	%REC	208405	1	06/05/2015 02:44	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208405	1	06/05/2015 02:44	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208405	1	06/05/2015 02:44	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208405	1	06/05/2015 02:44	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 70
Project Name:	Clouds	**Collection Date:**	5/28/2015 2:50:00 PM
Lab ID:	1506305-007	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208405	1	06/05/2015 03:11	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208405	1	06/05/2015 03:11	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208405	1	06/05/2015 03:11	NP
Naphthalene	BRL		0.44	5.0	ug/L	208405	1	06/05/2015 03:11	NP
Toluene	BRL		0.24	1.0	ug/L	208405	1	06/05/2015 03:11	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208405	1	06/05/2015 03:11	NP
Surr: 4-Bromofluorobenzene	83.8		0	70-130	%REC	208405	1	06/05/2015 03:11	NP
Surr: Dibromofluoromethane	97.9		0	70-130	%REC	208405	1	06/05/2015 03:11	NP
Surr: Toluene-d8	91.9		0	70-130	%REC	208405	1	06/05/2015 03:11	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208405	1	06/05/2015 03:11	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208405	1	06/05/2015 03:11	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208405	1	06/05/2015 03:11	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 17
Project Name:	Clouds	**Collection Date:**	5/28/2015 7:00:00 AM
Lab ID:	1506305-008	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	210		15	50	ug/L	208405	50	06/04/2015 21:25	NP
Ethylbenzene	480		14	50	ug/L	208405	50	06/04/2015 21:25	NP
Methyl tert-butyl ether	BRL		20	50	ug/L	208405	50	06/04/2015 21:25	NP
Naphthalene	830		22	250	ug/L	208405	50	06/04/2015 21:25	NP
Toluene	7500		12	50	ug/L	208405	50	06/04/2015 21:25	NP
Xylenes, Total	12000		47	50	ug/L	208405	50	06/04/2015 21:25	NP
Surr: 4-Bromofluorobenzene	94.4		0	70-130	%REC	208405	50	06/04/2015 21:25	NP
Surr: Dibromofluoromethane	88.6		0	70-130	%REC	208405	50	06/04/2015 21:25	NP
Surr: Toluene-d8	90.4		0	70-130	%REC	208405	50	06/04/2015 21:25	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	2200	J	1400	5000	ug/L	208405	50	06/04/2015 21:25	NP
tert-Amyl methyl ether	BRL		130	500	ug/L	208405	50	06/04/2015 21:25	NP
tert-Butyl Alcohol	BRL		1400	5000	ug/L	208405	50	06/04/2015 21:25	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 8
Project Name:	Clouds	**Collection Date:**	5/29/2015 11:15:00 AM
Lab ID:	1506305-009	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208405	1	06/05/2015 03:37	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208405	1	06/05/2015 03:37	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208405	1	06/05/2015 03:37	NP
Naphthalene	BRL		0.44	5.0	ug/L	208405	1	06/05/2015 03:37	NP
Toluene	BRL		0.24	1.0	ug/L	208405	1	06/05/2015 03:37	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208405	1	06/05/2015 03:37	NP
Surr: 4-Bromofluorobenzene	82.2		0	70-130	%REC	208405	1	06/05/2015 03:37	NP
Surr: Dibromofluoromethane	100		0	70-130	%REC	208405	1	06/05/2015 03:37	NP
Surr: Toluene-d8	94.5		0	70-130	%REC	208405	1	06/05/2015 03:37	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208405	1	06/05/2015 03:37	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208405	1	06/05/2015 03:37	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208405	1	06/05/2015 03:37	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	DW 2
Project Name:	Clouds	**Collection Date:**	5/29/2015 10:00:00 AM
Lab ID:	1506305-010	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208405	1	06/05/2015 04:04	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208405	1	06/05/2015 04:04	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208405	1	06/05/2015 04:04	NP
Naphthalene	BRL		0.44	5.0	ug/L	208405	1	06/05/2015 04:04	NP
Toluene	BRL		0.24	1.0	ug/L	208405	1	06/05/2015 04:04	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208405	1	06/05/2015 04:04	NP
Surr: 4-Bromofluorobenzene	80.9		0	70-130	%REC	208405	1	06/05/2015 04:04	NP
Surr: Dibromofluoromethane	103		0	70-130	%REC	208405	1	06/05/2015 04:04	NP
Surr: Toluene-d8	95.5		0	70-130	%REC	208405	1	06/05/2015 04:04	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208405	1	06/05/2015 04:04	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208405	1	06/05/2015 04:04	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208405	1	06/05/2015 04:04	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	DW 9
Project Name:	Clouds	**Collection Date:**	5/28/2015 2:15:00 PM
Lab ID:	1506305-011	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208405	1	06/05/2015 04:30	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208405	1	06/05/2015 04:30	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208405	1	06/05/2015 04:30	NP
Naphthalene	BRL		0.44	5.0	ug/L	208405	1	06/05/2015 04:30	NP
Toluene	BRL		0.24	1.0	ug/L	208405	1	06/05/2015 04:30	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208405	1	06/05/2015 04:30	NP
Surr: 4-Bromofluorobenzene	82.9		0	70-130	%REC	208405	1	06/05/2015 04:30	NP
Surr: Dibromofluoromethane	105		0	70-130	%REC	208405	1	06/05/2015 04:30	NP
Surr: Toluene-d8	96.1		0	70-130	%REC	208405	1	06/05/2015 04:30	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208405	1	06/05/2015 04:30	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208405	1	06/05/2015 04:30	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208405	1	06/05/2015 04:30	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	DW 1
Project Name:	Clouds	**Collection Date:**	5/29/2015 9:30:00 AM
Lab ID:	1506305-012	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208405	1	06/05/2015 04:57	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208405	1	06/05/2015 04:57	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208405	1	06/05/2015 04:57	NP
Naphthalene	BRL		0.44	5.0	ug/L	208405	1	06/05/2015 04:57	NP
Toluene	BRL		0.24	1.0	ug/L	208405	1	06/05/2015 04:57	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208405	1	06/05/2015 04:57	NP
Surr: 4-Bromofluorobenzene	85.2		0	70-130	%REC	208405	1	06/05/2015 04:57	NP
Surr: Dibromofluoromethane	103		0	70-130	%REC	208405	1	06/05/2015 04:57	NP
Surr: Toluene-d8	93.9		0	70-130	%REC	208405	1	06/05/2015 04:57	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208405	1	06/05/2015 04:57	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208405	1	06/05/2015 04:57	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208405	1	06/05/2015 04:57	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 19
Project Name:	Clouds	**Collection Date:**	5/28/2015 12:00:00 PM
Lab ID:	1506305-013	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	2100		15	50	ug/L	208405	50	06/04/2015 21:52	NP
Ethylbenzene	330		14	50	ug/L	208405	50	06/04/2015 21:52	NP
Methyl tert-butyl ether	BRL		20	50	ug/L	208405	50	06/04/2015 21:52	NP
Naphthalene	1200		22	250	ug/L	208405	50	06/04/2015 21:52	NP
Toluene	17000		120	500	ug/L	208405	500	06/09/2015 13:47	NP
Xylenes, Total	16000		47	50	ug/L	208405	50	06/04/2015 21:52	NP
Surr: 4-Bromofluorobenzene	88.6		0	70-130	%REC	208405	500	06/09/2015 13:47	NP
Surr: 4-Bromofluorobenzene	92.4		0	70-130	%REC	208405	50	06/04/2015 21:52	NP
Surr: Dibromofluoromethane	88.2		0	70-130	%REC	208405	500	06/09/2015 13:47	NP
Surr: Dibromofluoromethane	88.3		0	70-130	%REC	208405	50	06/04/2015 21:52	NP
Surr: Toluene-d8	84.3		0	70-130	%REC	208405	500	06/09/2015 13:47	NP
Surr: Toluene-d8	91.8		0	70-130	%REC	208405	50	06/04/2015 21:52	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	6200		1400	5000	ug/L	208405	50	06/04/2015 21:52	NP
tert-Amyl methyl ether	BRL		130	500	ug/L	208405	50	06/04/2015 21:52	NP
tert-Butyl Alcohol	BRL		1400	5000	ug/L	208405	50	06/04/2015 21:52	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 34
Project Name:	Clouds	**Collection Date:**	5/28/2015 11:00:00 AM
Lab ID:	1506305-014	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208405	1	06/05/2015 05:23	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208405	1	06/05/2015 05:23	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208405	1	06/05/2015 05:23	NP
Naphthalene	BRL		0.44	5.0	ug/L	208405	1	06/05/2015 05:23	NP
Toluene	1.1		0.24	1.0	ug/L	208405	1	06/05/2015 05:23	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208405	1	06/05/2015 05:23	NP
Surr: 4-Bromofluorobenzene	84		0	70-130	%REC	208405	1	06/05/2015 05:23	NP
Surr: Dibromofluoromethane	104		0	70-130	%REC	208405	1	06/05/2015 05:23	NP
Surr: Toluene-d8	94.8		0	70-130	%REC	208405	1	06/05/2015 05:23	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208405	1	06/05/2015 05:23	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208405	1	06/05/2015 05:23	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208405	1	06/05/2015 05:23	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 35
Project Name:	Clouds	**Collection Date:**	5/28/2015 11:15:00 AM
Lab ID:	1506305-015	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	3300		15	50	ug/L	208405	50	06/04/2015 23:11	NP
Ethylbenzene	1500		14	50	ug/L	208405	50	06/04/2015 23:11	NP
Methyl tert-butyl ether	BRL		20	50	ug/L	208405	50	06/04/2015 23:11	NP
Naphthalene	640		22	250	ug/L	208405	50	06/04/2015 23:11	NP
Toluene	5100		12	50	ug/L	208405	50	06/04/2015 23:11	NP
Xylenes, Total	4700		47	50	ug/L	208405	50	06/04/2015 23:11	NP
Surr: 4-Bromofluorobenzene	93.7		0	70-130	%REC	208405	50	06/04/2015 23:11	NP
Surr: Dibromofluoromethane	88.7		0	70-130	%REC	208405	50	06/04/2015 23:11	NP
Surr: Toluene-d8	88.9		0	70-130	%REC	208405	50	06/04/2015 23:11	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	4400	J	1400	5000	ug/L	208405	50	06/04/2015 23:11	NP
tert-Amyl methyl ether	BRL		130	500	ug/L	208405	50	06/04/2015 23:11	NP
tert-Butyl Alcohol	BRL		1400	5000	ug/L	208405	50	06/04/2015 23:11	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 30
Project Name:	Clouds	**Collection Date:**	5/28/2015 10:00:00 AM
Lab ID:	1506305-016	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208405	1	06/05/2015 05:50	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208405	1	06/05/2015 05:50	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208405	1	06/05/2015 05:50	NP
Naphthalene	BRL		0.44	5.0	ug/L	208405	1	06/05/2015 05:50	NP
Toluene	BRL		0.24	1.0	ug/L	208405	1	06/05/2015 05:50	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208405	1	06/05/2015 05:50	NP
Surr: 4-Bromofluorobenzene	81.8		0	70-130	%REC	208405	1	06/05/2015 05:50	NP
Surr: Dibromofluoromethane	108		0	70-130	%REC	208405	1	06/05/2015 05:50	NP
Surr: Toluene-d8	96.2		0	70-130	%REC	208405	1	06/05/2015 05:50	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208405	1	06/05/2015 05:50	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208405	1	06/05/2015 05:50	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208405	1	06/05/2015 05:50	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 9
Project Name:	Clouds	**Collection Date:**	5/28/2015 2:45:00 PM
Lab ID:	1506305-017	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					**(SW5030B)**				
Benzene	250		15	50	ug/L	208405	50	06/04/2015 23:38	NP
Ethylbenzene	1200		14	50	ug/L	208405	50	06/04/2015 23:38	NP
Methyl tert-butyl ether	BRL		20	50	ug/L	208405	50	06/04/2015 23:38	NP
Naphthalene	480		22	250	ug/L	208405	50	06/04/2015 23:38	NP
Toluene	5700		12	50	ug/L	208405	50	06/04/2015 23:38	NP
Xylenes, Total	8200		47	50	ug/L	208405	50	06/04/2015 23:38	NP
Surr: 4-Bromofluorobenzene	92.2		0	70-130	%REC	208405	50	06/04/2015 23:38	NP
Surr: Dibromofluoromethane	88.1		0	70-130	%REC	208405	50	06/04/2015 23:38	NP
Surr: Toluene-d8	90.5		0	70-130	%REC	208405	50	06/04/2015 23:38	NP
Oxygenates SW8260B					**(SW5030B)**				
tert-Amyl alcohol	BRL		1400	5000	ug/L	208405	50	06/04/2015 23:38	NP
tert-Amyl methyl ether	BRL		130	500	ug/L	208405	50	06/04/2015 23:38	NP
tert-Butyl Alcohol	BRL		1400	5000	ug/L	208405	50	06/04/2015 23:38	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	RW-1R
Project Name:	Clouds	**Collection Date:**	5/28/2015 1:00:00 PM
Lab ID:	1506305-018	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	520		15	50	ug/L	208405	50	06/05/2015 00:04	NP
Ethylbenzene	250		14	50	ug/L	208405	50	06/05/2015 00:04	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208405	1	06/10/2015 04:28	NP
Naphthalene	370		22	250	ug/L	208405	50	06/05/2015 00:04	NP
Toluene	3400		12	50	ug/L	208405	50	06/05/2015 00:04	NP
Xylenes, Total	7500		47	50	ug/L	208405	50	06/05/2015 00:04	NP
Surr: 4-Bromofluorobenzene	92.4		0	70-130	%REC	208405	50	06/05/2015 00:04	NP
Surr: 4-Bromofluorobenzene	109		0	70-130	%REC	208405	1	06/10/2015 04:28	NP
Surr: Dibromofluoromethane	88.2		0	70-130	%REC	208405	50	06/05/2015 00:04	NP
Surr: Dibromofluoromethane	79.6		0	70-130	%REC	208405	1	06/10/2015 04:28	NP
Surr: Toluene-d8	90.2		0	70-130	%REC	208405	50	06/05/2015 00:04	NP
Surr: Toluene-d8	83.1		0	70-130	%REC	208405	1	06/10/2015 04:28	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	1600		29	100	ug/L	208405	1	06/10/2015 04:28	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208405	1	06/10/2015 04:28	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208405	1	06/10/2015 04:28	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 48
Project Name:	Clouds	**Collection Date:**	5/29/2015 11:00:00 AM
Lab ID:	1506305-019	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208405	1	06/05/2015 06:16	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208405	1	06/05/2015 06:16	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208405	1	06/05/2015 06:16	NP
Naphthalene	BRL		0.44	5.0	ug/L	208405	1	06/05/2015 06:16	NP
Toluene	BRL		0.24	1.0	ug/L	208405	1	06/05/2015 06:16	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208405	1	06/05/2015 06:16	NP
Surr: 4-Bromofluorobenzene	82.5		0	70-130	%REC	208405	1	06/05/2015 06:16	NP
Surr: Dibromofluoromethane	107		0	70-130	%REC	208405	1	06/05/2015 06:16	NP
Surr: Toluene-d8	98.6		0	70-130	%REC	208405	1	06/05/2015 06:16	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208405	1	06/05/2015 06:16	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208405	1	06/05/2015 06:16	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208405	1	06/05/2015 06:16	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 33
Project Name:	Clouds	**Collection Date:**	5/28/2015 10:30:00 AM
Lab ID:	1506305-020	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208405	1	06/05/2015 06:43	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208405	1	06/05/2015 06:43	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208405	1	06/05/2015 06:43	NP
Naphthalene	BRL		0.44	5.0	ug/L	208405	1	06/05/2015 06:43	NP
Toluene	BRL		0.24	1.0	ug/L	208405	1	06/05/2015 06:43	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208405	1	06/05/2015 06:43	NP
Surr: 4-Bromofluorobenzene	79.8		0	70-130	%REC	208405	1	06/05/2015 06:43	NP
Surr: Dibromofluoromethane	102		0	70-130	%REC	208405	1	06/05/2015 06:43	NP
Surr: Toluene-d8	95.1		0	70-130	%REC	208405	1	06/05/2015 06:43	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	29	J	29	100	ug/L	208405	1	06/05/2015 06:43	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208405	1	06/05/2015 06:43	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208405	1	06/05/2015 06:43	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW-5aR
Project Name:	Clouds	**Collection Date:**	5/28/2015 9:30:00 AM
Lab ID:	1506305-021	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	2500		15	50	ug/L	208475	50	06/05/2015 11:16	NP
Ethylbenzene	280		2.9	10	ug/L	208475	10	06/09/2015 14:41	NP
Methyl tert-butyl ether	43		0.39	1.0	ug/L	208475	1	06/10/2015 04:55	NP
Naphthalene	460		4.4	50	ug/L	208475	10	06/09/2015 14:41	NP
Toluene	1200		12	50	ug/L	208475	50	06/05/2015 11:16	NP
Xylenes, Total	1300		47	50	ug/L	208475	50	06/05/2015 11:16	NP
Surr: 4-Bromofluorobenzene	89.5		0	70-130	%REC	208475	50	06/05/2015 11:16	NP
Surr: 4-Bromofluorobenzene	92		0	70-130	%REC	208475	10	06/09/2015 14:41	NP
Surr: 4-Bromofluorobenzene	106		0	70-130	%REC	208475	1	06/10/2015 04:55	NP
Surr: Dibromofluoromethane	96.3		0	70-130	%REC	208475	50	06/05/2015 11:16	NP
Surr: Dibromofluoromethane	81.7		0	70-130	%REC	208475	1	06/10/2015 04:55	NP
Surr: Dibromofluoromethane	86.3		0	70-130	%REC	208475	10	06/09/2015 14:41	NP
Surr: Toluene-d8	92.7		0	70-130	%REC	208475	50	06/05/2015 11:16	NP
Surr: Toluene-d8	85.2		0	70-130	%REC	208475	10	06/09/2015 14:41	NP
Surr: Toluene-d8	86.3		0	70-130	%REC	208475	1	06/10/2015 04:55	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	650		29	100	ug/L	208475	1	06/10/2015 04:55	NP
tert-Amyl methyl ether	52		2.5	10	ug/L	208475	1	06/10/2015 04:55	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208475	1	06/10/2015 04:55	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 4
Project Name:	Clouds	**Collection Date:**	5/29/2015 9:00:00 AM
Lab ID:	1506305-022	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208475	1	06/05/2015 17:58	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208475	1	06/05/2015 17:58	NP
Methyl tert-butyl ether	1.9		0.39	1.0	ug/L	208475	1	06/05/2015 17:58	NP
Naphthalene	1.6	J	0.44	5.0	ug/L	208475	1	06/05/2015 17:58	NP
Toluene	BRL		0.24	1.0	ug/L	208475	1	06/05/2015 17:58	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208475	1	06/05/2015 17:58	NP
Surr: 4-Bromofluorobenzene	87.1		0	70-130	%REC	208475	1	06/05/2015 17:58	NP
Surr: Dibromofluoromethane	92.1		0	70-130	%REC	208475	1	06/05/2015 17:58	NP
Surr: Toluene-d8	93		0	70-130	%REC	208475	1	06/05/2015 17:58	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208475	1	06/05/2015 17:58	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208475	1	06/05/2015 17:58	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208475	1	06/05/2015 17:58	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 11
Project Name:	Clouds	**Collection Date:**	5/29/2015 8:15:00 AM
Lab ID:	1506305-023	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	0.51	J	0.30	1.0	ug/L	208475	1	06/05/2015 18:25	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208475	1	06/05/2015 18:25	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208475	1	06/05/2015 18:25	NP
Naphthalene	6.6		0.44	5.0	ug/L	208475	1	06/05/2015 18:25	NP
Toluene	BRL		0.24	1.0	ug/L	208475	1	06/05/2015 18:25	NP
Xylenes, Total	3.8		0.93	1.0	ug/L	208475	1	06/05/2015 18:25	NP
Surr: 4-Bromofluorobenzene	88.1		0	70-130	%REC	208475	1	06/05/2015 18:25	NP
Surr: Dibromofluoromethane	98.6		0	70-130	%REC	208475	1	06/05/2015 18:25	NP
Surr: Toluene-d8	95		0	70-130	%REC	208475	1	06/05/2015 18:25	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	50	J	29	100	ug/L	208475	1	06/05/2015 18:25	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208475	1	06/05/2015 18:25	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208475	1	06/05/2015 18:25	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 6
Project Name:	Clouds	**Collection Date:**	5/29/2015 10:15:00 AM
Lab ID:	1506305-024	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208475	1	06/05/2015 18:51	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208475	1	06/05/2015 18:51	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208475	1	06/05/2015 18:51	NP
Naphthalene	BRL		0.44	5.0	ug/L	208475	1	06/05/2015 18:51	NP
Toluene	BRL		0.24	1.0	ug/L	208475	1	06/05/2015 18:51	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208475	1	06/05/2015 18:51	NP
Surr: 4-Bromofluorobenzene	84.8		0	70-130	%REC	208475	1	06/05/2015 18:51	NP
Surr: Dibromofluoromethane	96.2		0	70-130	%REC	208475	1	06/05/2015 18:51	NP
Surr: Toluene-d8	94.3		0	70-130	%REC	208475	1	06/05/2015 18:51	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208475	1	06/05/2015 18:51	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208475	1	06/05/2015 18:51	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208475	1	06/05/2015 18:51	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	DW 8
Project Name:	Clouds	**Collection Date:**	5/29/2015 11:30:00 AM
Lab ID:	1506305-025	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208475	1	06/05/2015 19:18	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208475	1	06/05/2015 19:18	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208475	1	06/05/2015 19:18	NP
Naphthalene	BRL		0.44	5.0	ug/L	208475	1	06/05/2015 19:18	NP
Toluene	BRL		0.24	1.0	ug/L	208475	1	06/05/2015 19:18	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208475	1	06/05/2015 19:18	NP
Surr: 4-Bromofluorobenzene	84.3		0	70-130	%REC	208475	1	06/05/2015 19:18	NP
Surr: Dibromofluoromethane	98		0	70-130	%REC	208475	1	06/05/2015 19:18	NP
Surr: Toluene-d8	93.8		0	70-130	%REC	208475	1	06/05/2015 19:18	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208475	1	06/05/2015 19:18	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208475	1	06/05/2015 19:18	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208475	1	06/05/2015 19:18	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	DUP A
Project Name:	Clouds	**Collection Date:**	5/28/2015 1:50:00 PM
Lab ID:	1506305-026	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208475	1	06/05/2015 19:45	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208475	1	06/05/2015 19:45	NP
Methyl tert-butyl ether	1.2		0.39	1.0	ug/L	208475	1	06/05/2015 19:45	NP
Naphthalene	BRL		0.44	5.0	ug/L	208475	1	06/05/2015 19:45	NP
Toluene	BRL		0.24	1.0	ug/L	208475	1	06/05/2015 19:45	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208475	1	06/05/2015 19:45	NP
Surr: 4-Bromofluorobenzene	81.1		0	70-130	%REC	208475	1	06/05/2015 19:45	NP
Surr: Dibromofluoromethane	102		0	70-130	%REC	208475	1	06/05/2015 19:45	NP
Surr: Toluene-d8	93.2		0	70-130	%REC	208475	1	06/05/2015 19:45	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208475	1	06/05/2015 19:45	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208475	1	06/05/2015 19:45	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208475	1	06/05/2015 19:45	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 12
Project Name:	Clouds	**Collection Date:**	5/28/2015 1:30:00 PM
Lab ID:	1506305-027	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	53		0.30	1.0	ug/L	208475	1	06/09/2015 04:05	NP
Ethylbenzene	430		2.9	10	ug/L	208475	10	06/05/2015 16:38	NP
Methyl tert-butyl ether	22		0.39	1.0	ug/L	208475	1	06/09/2015 04:05	NP
Naphthalene	44		0.44	5.0	ug/L	208475	1	06/09/2015 04:05	NP
Toluene	2.7		0.24	1.0	ug/L	208475	1	06/09/2015 04:05	NP
Xylenes, Total	14		0.93	1.0	ug/L	208475	1	06/09/2015 04:05	NP
Surr: 4-Bromofluorobenzene	86.4		0	70-130	%REC	208475	10	06/05/2015 16:38	NP
Surr: 4-Bromofluorobenzene	90.4		0	70-130	%REC	208475	1	06/09/2015 04:05	NP
Surr: Dibromofluoromethane	84.9		0	70-130	%REC	208475	1	06/09/2015 04:05	NP
Surr: Dibromofluoromethane	89.6		0	70-130	%REC	208475	10	06/05/2015 16:38	NP
Surr: Toluene-d8	88.2		0	70-130	%REC	208475	1	06/09/2015 04:05	NP
Surr: Toluene-d8	93.2		0	70-130	%REC	208475	10	06/05/2015 16:38	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	2300		29	100	ug/L	208475	1	06/09/2015 04:05	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208475	1	06/09/2015 04:05	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208475	1	06/09/2015 04:05	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 37
Project Name:	Clouds	**Collection Date:**	5/28/2015 11:45:00 AM
Lab ID:	1506305-028	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208475	1	06/05/2015 20:11	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208475	1	06/05/2015 20:11	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208475	1	06/05/2015 20:11	NP
Naphthalene	BRL		0.44	5.0	ug/L	208475	1	06/05/2015 20:11	NP
Toluene	BRL		0.24	1.0	ug/L	208475	1	06/05/2015 20:11	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208475	1	06/05/2015 20:11	NP
Surr: 4-Bromofluorobenzene	81.2		0	70-130	%REC	208475	1	06/05/2015 20:11	NP
Surr: Dibromofluoromethane	96.8		0	70-130	%REC	208475	1	06/05/2015 20:11	NP
Surr: Toluene-d8	93.5		0	70-130	%REC	208475	1	06/05/2015 20:11	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208475	1	06/05/2015 20:11	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208475	1	06/05/2015 20:11	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208475	1	06/05/2015 20:11	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 18
Project Name:	Clouds	**Collection Date:**	5/28/2015 10:45:00 AM
Lab ID:	1506305-029	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					**(SW5030B)**				
Benzene	970		3.0	10	ug/L	208475	10	06/05/2015 17:04	NP
Ethylbenzene	180		2.9	10	ug/L	208475	10	06/05/2015 17:04	NP
Methyl tert-butyl ether	230		3.9	10	ug/L	208475	10	06/05/2015 17:04	NP
Naphthalene	180		4.4	50	ug/L	208475	10	06/05/2015 17:04	NP
Toluene	2500		12	50	ug/L	208475	50	06/09/2015 14:15	NP
Xylenes, Total	4100		9.3	10	ug/L	208475	10	06/05/2015 17:04	NP
Surr: 4-Bromofluorobenzene	90.2		0	70-130	%REC	208475	50	06/09/2015 14:15	NP
Surr: 4-Bromofluorobenzene	93.1		0	70-130	%REC	208475	10	06/05/2015 17:04	NP
Surr: Dibromofluoromethane	89.4		0	70-130	%REC	208475	50	06/09/2015 14:15	NP
Surr: Dibromofluoromethane	90.4		0	70-130	%REC	208475	10	06/05/2015 17:04	NP
Surr: Toluene-d8	86.7		0	70-130	%REC	208475	50	06/09/2015 14:15	NP
Surr: Toluene-d8	94.9		0	70-130	%REC	208475	10	06/05/2015 17:04	NP
Oxygenates SW8260B					**(SW5030B)**				
tert-Amyl alcohol	3000		29	100	ug/L	208475	1	06/10/2015 04:02	NP
tert-Amyl methyl ether	33		2.5	10	ug/L	208475	1	06/10/2015 04:02	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208475	1	06/10/2015 04:02	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 32
Project Name:	Clouds	**Collection Date:**	5/28/2015 9:45:00 AM
Lab ID:	1506305-030	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208475	1	06/08/2015 14:45	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208475	1	06/08/2015 14:45	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208475	1	06/08/2015 14:45	NP
Naphthalene	BRL		0.44	5.0	ug/L	208475	1	06/08/2015 14:45	NP
Toluene	BRL		0.24	1.0	ug/L	208475	1	06/08/2015 14:45	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208475	1	06/08/2015 14:45	NP
Surr: 4-Bromofluorobenzene	76		0	70-130	%REC	208475	1	06/08/2015 14:45	NP
Surr: Dibromofluoromethane	96.1		0	70-130	%REC	208475	1	06/08/2015 14:45	NP
Surr: Toluene-d8	90.5		0	70-130	%REC	208475	1	06/08/2015 14:45	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208475	1	06/08/2015 14:45	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208475	1	06/08/2015 14:45	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208475	1	06/08/2015 14:45	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 10
Project Name:	Clouds	**Collection Date:**	5/28/2015 2:30:00 PM
Lab ID:	1506305-031	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	66		0.30	1.0	ug/L	208475	1	06/09/2015 04:31	NP
Ethylbenzene	67		0.29	1.0	ug/L	208475	1	06/09/2015 04:31	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208475	1	06/09/2015 04:31	NP
Naphthalene	370		4.4	50	ug/L	208475	10	06/09/2015 13:21	NP
Toluene	76		0.24	1.0	ug/L	208475	1	06/09/2015 04:31	NP
Xylenes, Total	860		9.3	10	ug/L	208475	10	06/09/2015 13:21	NP
Surr: 4-Bromofluorobenzene	88.6		0	70-130	%REC	208475	10	06/09/2015 13:21	NP
Surr: 4-Bromofluorobenzene	93.1		0	70-130	%REC	208475	1	06/09/2015 04:31	NP
Surr: Dibromofluoromethane	83.5		0	70-130	%REC	208475	1	06/09/2015 04:31	NP
Surr: Dibromofluoromethane	86.5		0	70-130	%REC	208475	10	06/09/2015 13:21	NP
Surr: Toluene-d8	84.9		0	70-130	%REC	208475	10	06/09/2015 13:21	NP
Surr: Toluene-d8	88.4		0	70-130	%REC	208475	1	06/09/2015 04:31	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	45	J	29	100	ug/L	208475	1	06/09/2015 04:31	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208475	1	06/09/2015 04:31	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208475	1	06/09/2015 04:31	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	SW 1
Project Name:	Clouds	**Collection Date:**	5/28/2015 1:15:00 PM
Lab ID:	1506305-032	**Matrix:**	Aqueous

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	230		3.0	10	ug/L	208475	10	06/09/2015 15:08	NP
Ethylbenzene	89		0.29	1.0	ug/L	208475	1	06/08/2015 15:11	NP
Methyl tert-butyl ether	30		0.39	1.0	ug/L	208475	1	06/08/2015 15:11	NP
Naphthalene	24		0.44	5.0	ug/L	208475	1	06/08/2015 15:11	NP
Toluene	18		0.24	1.0	ug/L	208475	1	06/08/2015 15:11	NP
Xylenes, Total	160		0.93	1.0	ug/L	208475	1	06/08/2015 15:11	NP
Surr: 4-Bromofluorobenzene	82.1		0	70-130	%REC	208475	1	06/08/2015 15:11	NP
Surr: 4-Bromofluorobenzene	89.4		0	70-130	%REC	208475	10	06/09/2015 15:08	NP
Surr: Dibromofluoromethane	87.1		0	70-130	%REC	208475	10	06/09/2015 15:08	NP
Surr: Dibromofluoromethane	92.4		0	70-130	%REC	208475	1	06/08/2015 15:11	NP
Surr: Toluene-d8	84		0	70-130	%REC	208475	10	06/09/2015 15:08	NP
Surr: Toluene-d8	89.7		0	70-130	%REC	208475	1	06/08/2015 15:11	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	590		29	100	ug/L	208475	1	06/08/2015 15:11	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208475	1	06/08/2015 15:11	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208475	1	06/08/2015 15:11	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 23
Project Name:	Clouds	**Collection Date:**	5/28/2015 12:15:00 PM
Lab ID:	1506305-033	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					**(SW5030B)**				
Benzene	570		15	50	ug/L	208475	50	06/05/2015 15:44	NP
Ethylbenzene	89		14	50	ug/L	208475	50	06/05/2015 15:44	NP
Methyl tert-butyl ether	BRL		20	50	ug/L	208475	50	06/05/2015 15:44	NP
Naphthalene	660		22	250	ug/L	208475	50	06/05/2015 15:44	NP
Toluene	1500		12	50	ug/L	208475	50	06/05/2015 15:44	NP
Xylenes, Total	8300		47	50	ug/L	208475	50	06/05/2015 15:44	NP
Surr: 4-Bromofluorobenzene	90.2		0	70-130	%REC	208475	50	06/05/2015 15:44	NP
Surr: Dibromofluoromethane	98.3		0	70-130	%REC	208475	50	06/05/2015 15:44	NP
Surr: Toluene-d8	95.4		0	70-130	%REC	208475	50	06/05/2015 15:44	NP
Oxygenates SW8260B					**(SW5030B)**				
tert-Amyl alcohol	BRL		1400	5000	ug/L	208475	50	06/05/2015 15:44	NP
tert-Amyl methyl ether	BRL		130	500	ug/L	208475	50	06/05/2015 15:44	NP
tert-Butyl Alcohol	BRL		1400	5000	ug/L	208475	50	06/05/2015 15:44	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 46
Project Name:	Clouds	**Collection Date:**	5/28/2015 7:40:00 AM
Lab ID:	1506305-034	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208475	1	06/08/2015 15:38	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208475	1	06/08/2015 15:38	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208475	1	06/08/2015 15:38	NP
Naphthalene	1.0	J	0.44	5.0	ug/L	208475	1	06/08/2015 15:38	NP
Toluene	BRL		0.24	1.0	ug/L	208475	1	06/08/2015 15:38	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208475	1	06/08/2015 15:38	NP
Surr: 4-Bromofluorobenzene	75.1		0	70-130	%REC	208475	1	06/08/2015 15:38	NP
Surr: Dibromofluoromethane	97.5		0	70-130	%REC	208475	1	06/08/2015 15:38	NP
Surr: Toluene-d8	91.7		0	70-130	%REC	208475	1	06/08/2015 15:38	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208475	1	06/08/2015 15:38	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208475	1	06/08/2015 15:38	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208475	1	06/08/2015 15:38	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 25
Project Name:	Clouds	**Collection Date:**	5/28/2015 9:00:00 AM
Lab ID:	1506305-035	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	29		0.30	1.0	ug/L	208475	1	06/09/2015 04:58	NP
Ethylbenzene	190		0.29	1.0	ug/L	208475	1	06/09/2015 04:58	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208475	1	06/09/2015 04:58	NP
Naphthalene	560		4.4	50	ug/L	208475	10	06/05/2015 17:31	NP
Toluene	140		0.24	1.0	ug/L	208475	1	06/09/2015 04:58	NP
Xylenes, Total	3000		9.3	10	ug/L	208475	10	06/05/2015 17:31	NP
Surr: 4-Bromofluorobenzene	92.4		0	70-130	%REC	208475	10	06/05/2015 17:31	NP
Surr: 4-Bromofluorobenzene	97.8		0	70-130	%REC	208475	1	06/09/2015 04:58	NP
Surr: Dibromofluoromethane	81.9		0	70-130	%REC	208475	1	06/09/2015 04:58	NP
Surr: Dibromofluoromethane	89		0	70-130	%REC	208475	10	06/05/2015 17:31	NP
Surr: Toluene-d8	84.9		0	70-130	%REC	208475	1	06/09/2015 04:58	NP
Surr: Toluene-d8	92.3		0	70-130	%REC	208475	10	06/05/2015 17:31	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	430		29	100	ug/L	208475	1	06/09/2015 04:58	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208475	1	06/09/2015 04:58	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208475	1	06/09/2015 04:58	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 43
Project Name:	Clouds	**Collection Date:**	5/28/2015 7:30:00 AM
Lab ID:	1506305-036	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208475	1	06/08/2015 16:05	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208475	1	06/08/2015 16:05	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208475	1	06/08/2015 16:05	NP
Naphthalene	BRL		0.44	5.0	ug/L	208475	1	06/08/2015 16:05	NP
Toluene	BRL		0.24	1.0	ug/L	208475	1	06/08/2015 16:05	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208475	1	06/08/2015 16:05	NP
Surr: 4-Bromofluorobenzene	73.3		0	70-130	%REC	208475	1	06/08/2015 16:05	NP
Surr: Dibromofluoromethane	95.8		0	70-130	%REC	208475	1	06/08/2015 16:05	NP
Surr: Toluene-d8	89.1		0	70-130	%REC	208475	1	06/08/2015 16:05	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208475	1	06/08/2015 16:05	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208475	1	06/08/2015 16:05	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208475	1	06/08/2015 16:05	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 44
Project Name:	Clouds	**Collection Date:**	5/28/2015 7:20:00 AM
Lab ID:	1506305-037	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208475	1	06/08/2015 16:31	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208475	1	06/08/2015 16:31	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208475	1	06/08/2015 16:31	NP
Naphthalene	BRL		0.44	5.0	ug/L	208475	1	06/08/2015 16:31	NP
Toluene	BRL		0.24	1.0	ug/L	208475	1	06/08/2015 16:31	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208475	1	06/08/2015 16:31	NP
Surr: 4-Bromofluorobenzene	76.7		0	70-130	%REC	208475	1	06/08/2015 16:31	NP
Surr: Dibromofluoromethane	97.4		0	70-130	%REC	208475	1	06/08/2015 16:31	NP
Surr: Toluene-d8	89.2		0	70-130	%REC	208475	1	06/08/2015 16:31	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208475	1	06/08/2015 16:31	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208475	1	06/08/2015 16:31	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208475	1	06/08/2015 16:31	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 22
Project Name:	Clouds	**Collection Date:**	6/5/2015 11:40:00 AM
Lab ID:	1506305-038	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					**(SW5030B)**				
Benzene	4800		30	100	ug/L	208594	100	06/10/2015 01:22	NP
Ethylbenzene	760		29	100	ug/L	208594	100	06/10/2015 01:22	NP
Methyl tert-butyl ether	BRL		39	100	ug/L	208594	100	06/10/2015 01:22	NP
Naphthalene	840		44	500	ug/L	208594	100	06/10/2015 01:22	NP
Toluene	16000		24	100	ug/L	208594	100	06/10/2015 01:22	NP
Xylenes, Total	26000		93	100	ug/L	208594	100	06/10/2015 01:22	NP
Surr: 4-Bromofluorobenzene	89.7		0	70-130	%REC	208594	100	06/10/2015 01:22	NP
Surr: Dibromofluoromethane	98.6		0	70-130	%REC	208594	100	06/10/2015 01:22	NP
Surr: Toluene-d8	89.3		0	70-130	%REC	208594	100	06/10/2015 01:22	NP
Oxygenates SW8260B					**(SW5030B)**				
tert-Amyl alcohol	BRL		2900	10000	ug/L	208594	100	06/10/2015 01:22	NP
tert-Amyl methyl ether	BRL		250	1000	ug/L	208594	100	06/10/2015 01:22	NP
tert-Butyl Alcohol	BRL		2800	10000	ug/L	208594	100	06/10/2015 01:22	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 45
Project Name:	Clouds	**Collection Date:**	5/28/2015 7:10:00 AM
Lab ID:	1506305-039	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208475	1	06/08/2015 16:58	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208475	1	06/08/2015 16:58	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208475	1	06/08/2015 16:58	NP
Naphthalene	BRL		0.44	5.0	ug/L	208475	1	06/08/2015 16:58	NP
Toluene	BRL		0.24	1.0	ug/L	208475	1	06/08/2015 16:58	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208475	1	06/08/2015 16:58	NP
Surr: 4-Bromofluorobenzene	73.6		0	70-130	%REC	208475	1	06/08/2015 16:58	NP
Surr: Dibromofluoromethane	99.1		0	70-130	%REC	208475	1	06/08/2015 16:58	NP
Surr: Toluene-d8	91.1		0	70-130	%REC	208475	1	06/08/2015 16:58	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208475	1	06/08/2015 16:58	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208475	1	06/08/2015 16:58	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208475	1	06/08/2015 16:58	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 7
Project Name:	Clouds	**Collection Date:**	5/29/2015 10:30:00 AM
Lab ID:	1506305-040	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208475	1	06/08/2015 17:25	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208475	1	06/08/2015 17:25	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208475	1	06/08/2015 17:25	NP
Naphthalene	BRL		0.44	5.0	ug/L	208475	1	06/08/2015 17:25	NP
Toluene	BRL		0.24	1.0	ug/L	208475	1	06/08/2015 17:25	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208475	1	06/08/2015 17:25	NP
Surr: 4-Bromofluorobenzene	73.5		0	70-130	%REC	208475	1	06/08/2015 17:25	NP
Surr: Dibromofluoromethane	102		0	70-130	%REC	208475	1	06/08/2015 17:25	NP
Surr: Toluene-d8	92.1		0	70-130	%REC	208475	1	06/08/2015 17:25	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208475	1	06/08/2015 17:25	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208475	1	06/08/2015 17:25	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208475	1	06/08/2015 17:25	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 51
Project Name:	Clouds	**Collection Date:**	5/29/2015 8:30:00 AM
Lab ID:	1506305-041	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208475	1	06/08/2015 17:52	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208475	1	06/08/2015 17:52	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208475	1	06/08/2015 17:52	NP
Naphthalene	BRL		0.44	5.0	ug/L	208475	1	06/08/2015 17:52	NP
Toluene	BRL		0.24	1.0	ug/L	208475	1	06/08/2015 17:52	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208475	1	06/08/2015 17:52	NP
Surr: 4-Bromofluorobenzene	70.4		0	70-130	%REC	208475	1	06/08/2015 17:52	NP
Surr: Dibromofluoromethane	103		0	70-130	%REC	208475	1	06/08/2015 17:52	NP
Surr: Toluene-d8	89.7		0	70-130	%REC	208475	1	06/08/2015 17:52	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208475	1	06/08/2015 17:52	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208475	1	06/08/2015 17:52	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208475	1	06/08/2015 17:52	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 58
Project Name:	Clouds	**Collection Date:**	5/29/2015 11:15:00 AM
Lab ID:	1506305-042	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208476	1	06/09/2015 17:49	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208476	1	06/09/2015 17:49	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208476	1	06/09/2015 17:49	NP
Naphthalene	BRL		0.44	5.0	ug/L	208476	1	06/09/2015 17:49	NP
Toluene	BRL		0.24	1.0	ug/L	208476	1	06/09/2015 17:49	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208476	1	06/09/2015 17:49	NP
Surr: 4-Bromofluorobenzene	85.7		0	70-130	%REC	208476	1	06/09/2015 17:49	NP
Surr: Dibromofluoromethane	93.5		0	70-130	%REC	208476	1	06/09/2015 17:49	NP
Surr: Toluene-d8	87.2		0	70-130	%REC	208476	1	06/09/2015 17:49	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208476	1	06/09/2015 17:49	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208476	1	06/09/2015 17:49	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208476	1	06/09/2015 17:49	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 59
Project Name:	Clouds	**Collection Date:**	5/28/2015 2:00:00 PM
Lab ID:	1506305-043	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					**(SW5030B)**				
Benzene	1400		15	50	ug/L	208476	50	06/08/2015 12:04	NP
Ethylbenzene	1100		14	50	ug/L	208476	50	06/08/2015 12:04	NP
Methyl tert-butyl ether	89		0.39	1.0	ug/L	208476	1	06/09/2015 05:24	NP
Naphthalene	290		4.4	50	ug/L	208476	10	06/09/2015 15:35	NP
Toluene	23		0.24	1.0	ug/L	208476	1	06/09/2015 05:24	NP
Xylenes, Total	620		9.3	10	ug/L	208476	10	06/09/2015 15:35	NP
Surr: 4-Bromofluorobenzene	78.5		0	70-130	%REC	208476	50	06/08/2015 12:04	NP
Surr: 4-Bromofluorobenzene	93.5		0	70-130	%REC	208476	10	06/09/2015 15:35	NP
Surr: 4-Bromofluorobenzene	101		0	70-130	%REC	208476	1	06/09/2015 05:24	NP
Surr: Dibromofluoromethane	95.1		0	70-130	%REC	208476	50	06/08/2015 12:04	NP
Surr: Dibromofluoromethane	81.2		0	70-130	%REC	208476	1	06/09/2015 05:24	NP
Surr: Dibromofluoromethane	88.2		0	70-130	%REC	208476	10	06/09/2015 15:35	NP
Surr: Toluene-d8	90.2		0	70-130	%REC	208476	50	06/08/2015 12:04	NP
Surr: Toluene-d8	83.8		0	70-130	%REC	208476	1	06/09/2015 05:24	NP
Surr: Toluene-d8	86.7		0	70-130	%REC	208476	10	06/09/2015 15:35	NP
Oxygenates SW8260B					**(SW5030B)**				
tert-Amyl alcohol	3900		29	100	ug/L	208476	1	06/09/2015 05:24	NP
tert-Amyl methyl ether	34		2.5	10	ug/L	208476	1	06/09/2015 05:24	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208476	1	06/09/2015 05:24	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	DUP C
Project Name:	Clouds	**Collection Date:**	5/28/2015 2:05:00 PM
Lab ID:	1506305-044	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	1400		15	50	ug/L	208476	50	06/08/2015 12:31	NP
Ethylbenzene	1100		14	50	ug/L	208476	50	06/08/2015 12:31	NP
Methyl tert-butyl ether	88		0.39	1.0	ug/L	208476	1	06/09/2015 05:51	NP
Naphthalene	300		4.4	50	ug/L	208476	10	06/09/2015 16:02	NP
Toluene	23		0.24	1.0	ug/L	208476	1	06/09/2015 05:51	NP
Xylenes, Total	600		9.3	10	ug/L	208476	10	06/09/2015 16:02	NP
Surr: 4-Bromofluorobenzene	79.7		0	70-130	%REC	208476	50	06/08/2015 12:31	NP
Surr: 4-Bromofluorobenzene	91.8		0	70-130	%REC	208476	10	06/09/2015 16:02	NP
Surr: 4-Bromofluorobenzene	100		0	70-130	%REC	208476	1	06/09/2015 05:51	NP
Surr: Dibromofluoromethane	95.5		0	70-130	%REC	208476	50	06/08/2015 12:31	NP
Surr: Dibromofluoromethane	81.4		0	70-130	%REC	208476	1	06/09/2015 05:51	NP
Surr: Dibromofluoromethane	86.7		0	70-130	%REC	208476	10	06/09/2015 16:02	NP
Surr: Toluene-d8	91.5		0	70-130	%REC	208476	50	06/08/2015 12:31	NP
Surr: Toluene-d8	85		0	70-130	%REC	208476	1	06/09/2015 05:51	NP
Surr: Toluene-d8	84.7		0	70-130	%REC	208476	10	06/09/2015 16:02	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	4200		29	100	ug/L	208476	1	06/09/2015 05:51	NP
tert-Amyl methyl ether	22		2.5	10	ug/L	208476	1	06/09/2015 05:51	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208476	1	06/09/2015 05:51	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 56
Project Name:	Clouds	**Collection Date:**	5/28/2015 4:00:00 PM
Lab ID:	1506305-045	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208476	1	06/09/2015 18:16	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208476	1	06/09/2015 18:16	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208476	1	06/09/2015 18:16	NP
Naphthalene	BRL		0.44	5.0	ug/L	208476	1	06/09/2015 18:16	NP
Toluene	BRL		0.24	1.0	ug/L	208476	1	06/09/2015 18:16	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208476	1	06/09/2015 18:16	NP
Surr: 4-Bromofluorobenzene	82.1		0	70-130	%REC	208476	1	06/09/2015 18:16	NP
Surr: Dibromofluoromethane	93.8		0	70-130	%REC	208476	1	06/09/2015 18:16	NP
Surr: Toluene-d8	85.4		0	70-130	%REC	208476	1	06/09/2015 18:16	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208476	1	06/09/2015 18:16	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208476	1	06/09/2015 18:16	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208476	1	06/09/2015 18:16	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 55
Project Name:	Clouds	**Collection Date:**	5/28/2015 3:45:00 PM
Lab ID:	1506305-046	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	1000		15	50	ug/L	208476	50	06/08/2015 12:57	NP
Ethylbenzene	410		14	50	ug/L	208476	50	06/08/2015 12:57	NP
Methyl tert-butyl ether	190		0.39	1.0	ug/L	208476	1	06/09/2015 06:18	NP
Naphthalene	180		4.4	50	ug/L	208476	10	06/09/2015 16:29	NP
Toluene	40		0.24	1.0	ug/L	208476	1	06/09/2015 06:18	NP
Xylenes, Total	260		0.93	1.0	ug/L	208476	1	06/09/2015 06:18	NP
Surr: 4-Bromofluorobenzene	78.4		0	70-130	%REC	208476	50	06/08/2015 12:57	NP
Surr: 4-Bromofluorobenzene	91.5		0	70-130	%REC	208476	10	06/09/2015 16:29	NP
Surr: 4-Bromofluorobenzene	97		0	70-130	%REC	208476	1	06/09/2015 06:18	NP
Surr: Dibromofluoromethane	94		0	70-130	%REC	208476	50	06/08/2015 12:57	NP
Surr: Dibromofluoromethane	82.6		0	70-130	%REC	208476	1	06/09/2015 06:18	NP
Surr: Dibromofluoromethane	83.1		0	70-130	%REC	208476	10	06/09/2015 16:29	NP
Surr: Toluene-d8	89.5		0	70-130	%REC	208476	50	06/08/2015 12:57	NP
Surr: Toluene-d8	84.8		0	70-130	%REC	208476	1	06/09/2015 06:18	NP
Surr: Toluene-d8	85.7		0	70-130	%REC	208476	10	06/09/2015 16:29	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	1700		29	100	ug/L	208476	1	06/09/2015 06:18	NP
tert-Amyl methyl ether	15		2.5	10	ug/L	208476	1	06/09/2015 06:18	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208476	1	06/09/2015 06:18	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 13
Project Name:	Clouds	**Collection Date:**	5/28/2015 3:15:00 PM
Lab ID:	1506305-047	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208476	1	06/09/2015 18:42	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208476	1	06/09/2015 18:42	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208476	1	06/09/2015 18:42	NP
Naphthalene	BRL		0.44	5.0	ug/L	208476	1	06/09/2015 18:42	NP
Toluene	BRL		0.24	1.0	ug/L	208476	1	06/09/2015 18:42	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208476	1	06/09/2015 18:42	NP
Surr: 4-Bromofluorobenzene	80.5		0	70-130	%REC	208476	1	06/09/2015 18:42	NP
Surr: Dibromofluoromethane	92		0	70-130	%REC	208476	1	06/09/2015 18:42	NP
Surr: Toluene-d8	85.9		0	70-130	%REC	208476	1	06/09/2015 18:42	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208476	1	06/09/2015 18:42	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208476	1	06/09/2015 18:42	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208476	1	06/09/2015 18:42	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	DW 3
Project Name:	Clouds	**Collection Date:**	5/28/2015 12:30:00 PM
Lab ID:	1506305-048	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B					**(SW5030B)**				
Benzene	310		3.0	10	ug/L	208476	10	06/09/2015 16:56	NP
Ethylbenzene	79		0.29	1.0	ug/L	208476	1	06/09/2015 02:45	NP
Methyl tert-butyl ether	6.5		0.39	1.0	ug/L	208476	1	06/09/2015 02:45	NP
Naphthalene	130		4.4	50	ug/L	208476	10	06/09/2015 16:56	NP
Toluene	4000		12	50	ug/L	208476	50	06/09/2015 17:23	NP
Xylenes, Total	3100		9.3	10	ug/L	208476	10	06/09/2015 16:56	NP
Surr: 4-Bromofluorobenzene	88.8		0	70-130	%REC	208476	50	06/09/2015 17:23	NP
Surr: 4-Bromofluorobenzene	86.5		0	70-130	%REC	208476	1	06/09/2015 02:45	NP
Surr: 4-Bromofluorobenzene	91.2		0	70-130	%REC	208476	10	06/09/2015 16:56	NP
Surr: Dibromofluoromethane	88		0	70-130	%REC	208476	50	06/09/2015 17:23	NP
Surr: Dibromofluoromethane	86.1		0	70-130	%REC	208476	10	06/09/2015 16:56	NP
Surr: Dibromofluoromethane	91.7		0	70-130	%REC	208476	1	06/09/2015 02:45	NP
Surr: Toluene-d8	85		0	70-130	%REC	208476	50	06/09/2015 17:23	NP
Surr: Toluene-d8	83.6		0	70-130	%REC	208476	10	06/09/2015 16:56	NP
Surr: Toluene-d8	85.7		0	70-130	%REC	208476	1	06/09/2015 02:45	NP
Oxygenates SW8260B					**(SW5030B)**				
tert-Amyl alcohol	750		29	100	ug/L	208476	1	06/09/2015 02:45	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208476	1	06/09/2015 02:45	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208476	1	06/09/2015 02:45	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	DUP B
Project Name:	Clouds	**Collection Date:**	5/28/2015 1:35:00 PM
Lab ID:	1506305-049	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	41		0.30	1.0	ug/L	208476	1	06/09/2015 06:44	NP
Ethylbenzene	440		5.8	20	ug/L	208476	20	06/08/2015 13:24	NP
Methyl tert-butyl ether	20		0.39	1.0	ug/L	208476	1	06/09/2015 06:44	NP
Naphthalene	49		0.44	5.0	ug/L	208476	1	06/09/2015 06:44	NP
Toluene	2.0		0.24	1.0	ug/L	208476	1	06/09/2015 06:44	NP
Xylenes, Total	13		0.93	1.0	ug/L	208476	1	06/09/2015 06:44	NP
Surr: 4-Bromofluorobenzene	95.3		0	70-130	%REC	208476	1	06/09/2015 06:44	NP
Surr: 4-Bromofluorobenzene	78.9		0	70-130	%REC	208476	20	06/08/2015 13:24	NP
Surr: Dibromofluoromethane	86.9		0	70-130	%REC	208476	1	06/09/2015 06:44	NP
Surr: Dibromofluoromethane	93.3		0	70-130	%REC	208476	20	06/08/2015 13:24	NP
Surr: Toluene-d8	86.9		0	70-130	%REC	208476	1	06/09/2015 06:44	NP
Surr: Toluene-d8	90.4		0	70-130	%REC	208476	20	06/08/2015 13:24	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	1900		29	100	ug/L	208476	1	06/09/2015 06:44	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208476	1	06/09/2015 06:44	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208476	1	06/09/2015 06:44	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	DW 4
Project Name:	Clouds	**Collection Date:**	6/2/2015 1:45:00 PM
Lab ID:	1506305-050	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208476	1	06/08/2015 19:39	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208476	1	06/08/2015 19:39	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208476	1	06/08/2015 19:39	NP
Naphthalene	BRL		0.44	5.0	ug/L	208476	1	06/08/2015 19:39	NP
Toluene	BRL		0.24	1.0	ug/L	208476	1	06/08/2015 19:39	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208476	1	06/08/2015 19:39	NP
Surr: 4-Bromofluorobenzene	75.9		0	70-130	%REC	208476	1	06/08/2015 19:39	NP
Surr: Dibromofluoromethane	105		0	70-130	%REC	208476	1	06/08/2015 19:39	NP
Surr: Toluene-d8	91.4		0	70-130	%REC	208476	1	06/08/2015 19:39	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208476	1	06/08/2015 19:39	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208476	1	06/08/2015 19:39	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208476	1	06/08/2015 19:39	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 67
Project Name:	Clouds	**Collection Date:**	6/2/2015 11:30:00 AM
Lab ID:	1506305-051	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208476	1	06/09/2015 00:05	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208476	1	06/09/2015 00:05	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208476	1	06/09/2015 00:05	NP
Naphthalene	BRL		0.44	5.0	ug/L	208476	1	06/09/2015 00:05	NP
Toluene	BRL		0.24	1.0	ug/L	208476	1	06/09/2015 00:05	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208476	1	06/09/2015 00:05	NP
Surr: 4-Bromofluorobenzene	76.2		0	70-130	%REC	208476	1	06/09/2015 00:05	NP
Surr: Dibromofluoromethane	106		0	70-130	%REC	208476	1	06/09/2015 00:05	NP
Surr: Toluene-d8	90		0	70-130	%REC	208476	1	06/09/2015 00:05	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208476	1	06/09/2015 00:05	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208476	1	06/09/2015 00:05	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208476	1	06/09/2015 00:05	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 26
Project Name:	Clouds	**Collection Date:**	6/2/2015 1:15:00 PM
Lab ID:	1506305-052	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208476	1	06/09/2015 00:31	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208476	1	06/09/2015 00:31	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208476	1	06/09/2015 00:31	NP
Naphthalene	BRL		0.44	5.0	ug/L	208476	1	06/09/2015 00:31	NP
Toluene	BRL		0.24	1.0	ug/L	208476	1	06/09/2015 00:31	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208476	1	06/09/2015 00:31	NP
Surr: 4-Bromofluorobenzene	74.9		0	70-130	%REC	208476	1	06/09/2015 00:31	NP
Surr: Dibromofluoromethane	108		0	70-130	%REC	208476	1	06/09/2015 00:31	NP
Surr: Toluene-d8	90.4		0	70-130	%REC	208476	1	06/09/2015 00:31	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208476	1	06/09/2015 00:31	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208476	1	06/09/2015 00:31	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208476	1	06/09/2015 00:31	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 38
Project Name:	Clouds	**Collection Date:**	6/2/2015 12:45:00 PM
Lab ID:	1506305-053	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208476	1	06/09/2015 00:58	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208476	1	06/09/2015 00:58	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208476	1	06/09/2015 00:58	NP
Naphthalene	BRL		0.44	5.0	ug/L	208476	1	06/09/2015 00:58	NP
Toluene	BRL		0.24	1.0	ug/L	208476	1	06/09/2015 00:58	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208476	1	06/09/2015 00:58	NP
Surr: 4-Bromofluorobenzene	76.6		0	70-130	%REC	208476	1	06/09/2015 00:58	NP
Surr: Dibromofluoromethane	108		0	70-130	%REC	208476	1	06/09/2015 00:58	NP
Surr: Toluene-d8	91.6		0	70-130	%REC	208476	1	06/09/2015 00:58	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208476	1	06/09/2015 00:58	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208476	1	06/09/2015 00:58	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208476	1	06/09/2015 00:58	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	DW 6
Project Name:	Clouds	**Collection Date:**	6/2/2015 12:00:00 PM
Lab ID:	1506305-054	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208476	1	06/09/2015 01:25	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208476	1	06/09/2015 01:25	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208476	1	06/09/2015 01:25	NP
Naphthalene	BRL		0.44	5.0	ug/L	208476	1	06/09/2015 01:25	NP
Toluene	BRL		0.24	1.0	ug/L	208476	1	06/09/2015 01:25	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208476	1	06/09/2015 01:25	NP
Surr: 4-Bromofluorobenzene	75.5		0	70-130	%REC	208476	1	06/09/2015 01:25	NP
Surr: Dibromofluoromethane	105		0	70-130	%REC	208476	1	06/09/2015 01:25	NP
Surr: Toluene-d8	91.7		0	70-130	%REC	208476	1	06/09/2015 01:25	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208476	1	06/09/2015 01:25	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208476	1	06/09/2015 01:25	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208476	1	06/09/2015 01:25	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 42
Project Name:	Clouds	**Collection Date:**	6/2/2015 11:45:00 AM
Lab ID:	1506305-055	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208476	1	06/09/2015 01:52	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208476	1	06/09/2015 01:52	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208476	1	06/09/2015 01:52	NP
Naphthalene	BRL		0.44	5.0	ug/L	208476	1	06/09/2015 01:52	NP
Toluene	BRL		0.24	1.0	ug/L	208476	1	06/09/2015 01:52	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208476	1	06/09/2015 01:52	NP
Surr: 4-Bromofluorobenzene	76		0	70-130	%REC	208476	1	06/09/2015 01:52	NP
Surr: Dibromofluoromethane	104		0	70-130	%REC	208476	1	06/09/2015 01:52	NP
Surr: Toluene-d8	91.4		0	70-130	%REC	208476	1	06/09/2015 01:52	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208476	1	06/09/2015 01:52	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208476	1	06/09/2015 01:52	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208476	1	06/09/2015 01:52	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 41
Project Name:	Clouds	**Collection Date:**	6/2/2015 12:15:00 PM
Lab ID:	1506305-056	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208476	1	06/09/2015 02:18	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208476	1	06/09/2015 02:18	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208476	1	06/09/2015 02:18	NP
Naphthalene	BRL		0.44	5.0	ug/L	208476	1	06/09/2015 02:18	NP
Toluene	BRL		0.24	1.0	ug/L	208476	1	06/09/2015 02:18	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208476	1	06/09/2015 02:18	NP
Surr: 4-Bromofluorobenzene	76.9		0	70-130	%REC	208476	1	06/09/2015 02:18	NP
Surr: Dibromofluoromethane	107		0	70-130	%REC	208476	1	06/09/2015 02:18	NP
Surr: Toluene-d8	89.3		0	70-130	%REC	208476	1	06/09/2015 02:18	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208476	1	06/09/2015 02:18	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208476	1	06/09/2015 02:18	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208476	1	06/09/2015 02:18	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 40
Project Name:	Clouds	**Collection Date:**	6/2/2015 12:30:00 PM
Lab ID:	1506305-057	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	5.2		0.30	1.0	ug/L	208476	1	06/09/2015 07:11	NP
Ethylbenzene	3.9		0.29	1.0	ug/L	208476	1	06/09/2015 07:11	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208476	1	06/09/2015 07:11	NP
Naphthalene	38		0.44	5.0	ug/L	208476	1	06/09/2015 07:11	NP
Toluene	47		0.24	1.0	ug/L	208476	1	06/09/2015 07:11	NP
Xylenes, Total	590		9.3	10	ug/L	208476	10	06/08/2015 13:51	NP
Surr: 4-Bromofluorobenzene	82.6		0	70-130	%REC	208476	10	06/08/2015 13:51	NP
Surr: 4-Bromofluorobenzene	94		0	70-130	%REC	208476	1	06/09/2015 07:11	NP
Surr: Dibromofluoromethane	84.5		0	70-130	%REC	208476	1	06/09/2015 07:11	NP
Surr: Dibromofluoromethane	91.2		0	70-130	%REC	208476	10	06/08/2015 13:51	NP
Surr: Toluene-d8	86.3		0	70-130	%REC	208476	1	06/09/2015 07:11	NP
Surr: Toluene-d8	89.9		0	70-130	%REC	208476	10	06/08/2015 13:51	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	40	J	29	100	ug/L	208476	1	06/09/2015 07:11	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208476	1	06/09/2015 07:11	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208476	1	06/09/2015 07:11	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 39
Project Name:	Clouds	**Collection Date:**	6/2/2015 12:50:00 PM
Lab ID:	1506305-058	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	1.3		0.30	1.0	ug/L	208476	1	06/09/2015 07:38	NP
Ethylbenzene	140		0.29	1.0	ug/L	208476	1	06/09/2015 07:38	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208476	1	06/09/2015 07:38	NP
Naphthalene	160		0.44	5.0	ug/L	208476	1	06/09/2015 07:38	NP
Toluene	160		0.24	1.0	ug/L	208476	1	06/09/2015 07:38	NP
Xylenes, Total	1100		9.3	10	ug/L	208476	10	06/08/2015 14:18	NP
Surr: 4-Bromofluorobenzene	82.4		0	70-130	%REC	208476	10	06/08/2015 14:18	NP
Surr: 4-Bromofluorobenzene	93		0	70-130	%REC	208476	1	06/09/2015 07:38	NP
Surr: Dibromofluoromethane	80.9		0	70-130	%REC	208476	1	06/09/2015 07:38	NP
Surr: Dibromofluoromethane	92.3		0	70-130	%REC	208476	10	06/08/2015 14:18	NP
Surr: Toluene-d8	83.6		0	70-130	%REC	208476	1	06/09/2015 07:38	NP
Surr: Toluene-d8	89.8		0	70-130	%REC	208476	10	06/08/2015 14:18	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208476	1	06/09/2015 07:38	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208476	1	06/09/2015 07:38	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208476	1	06/09/2015 07:38	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	TRIP BLANK
Project Name:	Clouds	**Collection Date:**	6/3/2015
Lab ID:	1506305-059	**Matrix:**	Aqueous

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208476	1	06/08/2015 22:45	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208476	1	06/08/2015 22:45	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208476	1	06/08/2015 22:45	NP
Naphthalene	BRL		0.44	5.0	ug/L	208476	1	06/08/2015 22:45	NP
Toluene	BRL		0.24	1.0	ug/L	208476	1	06/08/2015 22:45	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208476	1	06/08/2015 22:45	NP
Surr: 4-Bromofluorobenzene	75.1		0	70-130	%REC	208476	1	06/08/2015 22:45	NP
Surr: Dibromofluoromethane	104		0	70-130	%REC	208476	1	06/08/2015 22:45	NP
Surr: Toluene-d8	90.7		0	70-130	%REC	208476	1	06/08/2015 22:45	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208476	1	06/08/2015 22:45	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208476	1	06/08/2015 22:45	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208476	1	06/08/2015 22:45	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	FB BTEX
Project Name:	Clouds	**Collection Date:**	5/28/2015 12:37:00 PM
Lab ID:	1506305-060	**Matrix:**	Aqueous

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208476	1	06/08/2015 23:11	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208476	1	06/08/2015 23:11	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208476	1	06/08/2015 23:11	NP
Naphthalene	BRL		0.44	5.0	ug/L	208476	1	06/08/2015 23:11	NP
Toluene	BRL		0.24	1.0	ug/L	208476	1	06/08/2015 23:11	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208476	1	06/08/2015 23:11	NP
Surr: 4-Bromofluorobenzene	76.2		0	70-130	%REC	208476	1	06/08/2015 23:11	NP
Surr: Dibromofluoromethane	104		0	70-130	%REC	208476	1	06/08/2015 23:11	NP
Surr: Toluene-d8	90.7		0	70-130	%REC	208476	1	06/08/2015 23:11	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208476	1	06/08/2015 23:11	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208476	1	06/08/2015 23:11	NP
tert-Butyl Alcohol	38	J	28	100	ug/L	208476	1	06/08/2015 23:11	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	FB BTEX
Project Name:	Clouds	**Collection Date:**	5/29/2015 1:42:00 PM
Lab ID:	1506305-061	**Matrix:**	Aqueous

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208476	1	06/08/2015 23:38	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208476	1	06/08/2015 23:38	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208476	1	06/08/2015 23:38	NP
Naphthalene	BRL		0.44	5.0	ug/L	208476	1	06/08/2015 23:38	NP
Toluene	BRL		0.24	1.0	ug/L	208476	1	06/08/2015 23:38	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208476	1	06/08/2015 23:38	NP
Surr: 4-Bromofluorobenzene	76.2		0	70-130	%REC	208476	1	06/08/2015 23:38	NP
Surr: Dibromofluoromethane	103		0	70-130	%REC	208476	1	06/08/2015 23:38	NP
Surr: Toluene-d8	89.9		0	70-130	%REC	208476	1	06/08/2015 23:38	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208476	1	06/08/2015 23:38	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208476	1	06/08/2015 23:38	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208476	1	06/08/2015 23:38	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	FB BTEX
Project Name:	Clouds	**Collection Date:**	6/2/2015 11:50:00 AM
Lab ID:	1506305-062	**Matrix:**	Aqueous

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208383	1	06/04/2015 16:05	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208383	1	06/04/2015 16:05	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208383	1	06/04/2015 16:05	NP
Naphthalene	BRL		0.44	5.0	ug/L	208383	1	06/04/2015 16:05	NP
Toluene	BRL		0.24	1.0	ug/L	208383	1	06/04/2015 16:05	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208383	1	06/04/2015 16:05	NP
Surr: 4-Bromofluorobenzene	90.3		0	70-130	%REC	208383	1	06/04/2015 16:05	NP
Surr: Dibromofluoromethane	89.4		0	70-130	%REC	208383	1	06/04/2015 16:05	NP
Surr: Toluene-d8	89.4		0	70-130	%REC	208383	1	06/04/2015 16:05	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208383	1	06/04/2015 16:05	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208383	1	06/04/2015 16:05	NP
tert-Butyl Alcohol	43	J	28	100	ug/L	208383	1	06/04/2015 16:05	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	DW 5
Project Name:	Clouds	**Collection Date:**	5/28/2015 11:30:00 AM
Lab ID:	1506305-063	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	6900		15	50	ug/L	208383	50	06/04/2015 17:26	NP
Ethylbenzene	420		14	50	ug/L	208383	50	06/04/2015 17:26	NP
Methyl tert-butyl ether	1200		20	50	ug/L	208383	50	06/04/2015 17:26	NP
Naphthalene	290		22	250	ug/L	208383	50	06/04/2015 17:26	NP
Toluene	660		12	50	ug/L	208383	50	06/04/2015 17:26	NP
Xylenes, Total	3800		47	50	ug/L	208383	50	06/04/2015 17:26	NP
Surr: 4-Bromofluorobenzene	92.6		0	70-130	%REC	208383	50	06/04/2015 17:26	NP
Surr: Dibromofluoromethane	86.4		0	70-130	%REC	208383	50	06/04/2015 17:26	NP
Surr: Toluene-d8	89.5		0	70-130	%REC	208383	50	06/04/2015 17:26	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	6300		1400	5000	ug/L	208383	50	06/04/2015 17:26	NP
tert-Amyl methyl ether	BRL		130	500	ug/L	208383	50	06/04/2015 17:26	NP
tert-Butyl Alcohol	BRL		1400	5000	ug/L	208383	50	06/04/2015 17:26	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	MW 36
Project Name:	Clouds	**Collection Date:**	5/28/2015 10:15:00 AM
Lab ID:	1506305-065	**Matrix:**	Groundwater

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	0.79	J	0.30	1.0	ug/L	208383	1	06/04/2015 18:19	NP
Ethylbenzene	0.99	J	0.29	1.0	ug/L	208383	1	06/04/2015 18:19	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208383	1	06/04/2015 18:19	NP
Naphthalene	2.9	J	0.44	5.0	ug/L	208383	1	06/04/2015 18:19	NP
Toluene	1.3		0.24	1.0	ug/L	208383	1	06/04/2015 18:19	NP
Xylenes, Total	2.3		0.93	1.0	ug/L	208383	1	06/04/2015 18:19	NP
Surr: 4-Bromofluorobenzene	93.1		0	70-130	%REC	208383	1	06/04/2015 18:19	NP
Surr: Dibromofluoromethane	89.7		0	70-130	%REC	208383	1	06/04/2015 18:19	NP
Surr: Toluene-d8	92.4		0	70-130	%REC	208383	1	06/04/2015 18:19	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	49	J	29	100	ug/L	208383	1	06/04/2015 18:19	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208383	1	06/04/2015 18:19	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208383	1	06/04/2015 18:19	NP

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 15-Jun-15

Client:	Crawford Environmental Services	**Client Sample ID:**	FIELD BLANK
Project Name:	Clouds	**Collection Date:**	6/5/2015
Lab ID:	1506305-072	**Matrix:**	Aqueous

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS SW8260B (SW5030B)									
Benzene	BRL		0.30	1.0	ug/L	208594	1	06/09/2015 21:49	NP
Ethylbenzene	BRL		0.29	1.0	ug/L	208594	1	06/09/2015 21:49	NP
Methyl tert-butyl ether	BRL		0.39	1.0	ug/L	208594	1	06/09/2015 21:49	NP
Naphthalene	BRL		0.44	5.0	ug/L	208594	1	06/09/2015 21:49	NP
Toluene	BRL		0.24	1.0	ug/L	208594	1	06/09/2015 21:49	NP
Xylenes, Total	BRL		0.93	1.0	ug/L	208594	1	06/09/2015 21:49	NP
Surr: 4-Bromofluorobenzene	79		0	70-130	%REC	208594	1	06/09/2015 21:49	NP
Surr: Dibromofluoromethane	95.5		0	70-130	%REC	208594	1	06/09/2015 21:49	NP
Surr: Toluene-d8	86.8		0	70-130	%REC	208594	1	06/09/2015 21:49	NP
Oxygenates SW8260B (SW5030B)									
tert-Amyl alcohol	BRL		29	100	ug/L	208594	1	06/09/2015 21:49	NP
tert-Amyl methyl ether	BRL		2.5	10	ug/L	208594	1	06/09/2015 21:49	NP
tert-Butyl Alcohol	BRL		28	100	ug/L	208594	1	06/09/2015 21:49	NP

Qualifiers:

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

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Accuo Work Order Number 1506305

Checklist completed by _____ 6/3/15
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? (0°≤6°C)* Yes ✓ No __

Cooler #1 3.5° Cooler #2 3.3° 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.

\\Aes_server\l\Sample Receipt\My Documents\COCs and pH Adjustment Sheet\Sample_Cooler_Recipt_Checklist_Rev1.rtf

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Accesl Work Order Number 1506305

Checklist completed by [signature] 6/6/15
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? (0°≤6°C)*	Yes ✓	No __	

Cooler #1 3.8° 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.

\\Aes_server\I\Sample Receipt\My Documents\COCs and pH Adjustment Sheet\Sample_Cooler_Recipt_Checklist_Rev1.rtf

Analytical Environmental Services, Inc

Date: 15-Jun-15

Client: Crawford Environmental Services
Project Name: Clouds
Workorder: 1506305

ANALYTICAL QC SUMMARY REPORT

BatchID: 208383

Sample ID: **MB-208383**	Client ID:			Units: **ug/L**	Prep Date: **06/04/2015**	Run No: **293172**
SampleType: **MBLK**	TestCode: **Volatile Organic Compounds by GC/MS** **SW8260B**			BatchID: **208383**	Analysis Date: **06/04/2015**	Seq No: **6245065**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	BRL	1.0									
Ethylbenzene	BRL	1.0									
Methyl tert-butyl ether	BRL	1.0									
Naphthalene	0.5300	5.0									J
Toluene	BRL	1.0									
Xylenes, Total	BRL	1.0									
Surr: 4-Bromofluorobenzene	43.02	0	50.00		86.0	70	130				
Surr: Dibromofluoromethane	46.40	0	50.00		92.8	70	130				
Surr: Toluene-d8	45.95	0	50.00		91.9	70	130				

Sample ID: **MB-208383**	Client ID:			Units: **ug/L**	Prep Date: **06/04/2015**	Run No: **293172**
SampleType: **MBLK**	TestCode: **Oxygenates** **SW8260B**			BatchID: **208383**	Analysis Date: **06/04/2015**	Seq No: **6245176**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	BRL	100									
tert-Amyl methyl ether	BRL	10									
tert-Butyl Alcohol	BRL	100									

Sample ID: **LCS-208383**	Client ID:			Units: **ug/L**	Prep Date: **06/04/2015**	Run No: **293172**
SampleType: **LCS**	TestCode: **Volatile Organic Compounds by GC/MS** **SW8260B**			BatchID: **208383**	Analysis Date: **06/04/2015**	Seq No: **6245064**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	49.62	1.0	50.00		99.2	70	130				
Ethylbenzene	49.89	1.0	50.00		99.8	70	130				
Naphthalene	45.41	5.0	50.00	0.5300	89.8	70	130				
Toluene	47.83	1.0	50.00		95.7	70	130				
Xylenes, Total	146.1	1.0	150.0		97.4	70	130				
Surr: 4-Bromofluorobenzene	47.19	0	50.00		94.4	70	130				

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

Date: 15-Jun-15

Client: Crawford Environmental Services
Project Name: Clouds
Workorder: 1506305

ANALYTICAL QC SUMMARY REPORT

BatchID: 208383

Sample ID: **LCS-208383**	Client ID:				Units: **ug/L**		Prep Date: **06/04/2015**		Run No: **293172**	
SampleType: **LCS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **208383**		Analysis Date: **06/04/2015**		Seq No: **6245064**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: Dibromofluoromethane	46.74	0	50.00		93.5	70	130				
Surr: Toluene-d8	44.56	0	50.00		89.1	70	130				

Sample ID: **LCS-208383**	Client ID:				Units: **ug/L**		Prep Date: **06/04/2015**		Run No: **293172**	
SampleType: **LCS**	TestCode: **Oxygenates SW8260B**				BatchID: **208383**		Analysis Date: **06/04/2015**		Seq No: **6245175**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	1058	100	1000		106	70	130				
tert-Amyl methyl ether	194.8	10	200.0		97.4	70	130				
tert-Butyl Alcohol	1007	100	1000		101	70	130				

Sample ID: **1506305-063AMS**	Client ID: **DW 5**				Units: **ug/L**		Prep Date: **06/04/2015**		Run No: **293172**	
SampleType: **MS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **208383**		Analysis Date: **06/04/2015**		Seq No: **6245067**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	8610	50	2500	6880	69.2	70	135				S
Ethylbenzene	2839	50	2500	421.5	96.7	73.7	135				
Naphthalene	2740	250	2500	292.5	97.9	53.1	128				
Toluene	2897	50	2500	656.0	89.6	70.5	137				
Xylenes, Total	10700	50	7500	3833	91.5	71.2	135				
Surr: 4-Bromofluorobenzene	2381	0	2500		95.2	70	130				
Surr: Dibromofluoromethane	2246	0	2500		89.8	70	130				
Surr: Toluene-d8	2246	0	2500		89.8	70	130				

Sample ID: **1506305-063AMS**	Client ID: **DW 5**				Units: **ug/L**		Prep Date: **06/04/2015**		Run No: **293172**	
SampleType: **MS**	TestCode: **Oxygenates SW8260B**				BatchID: **208383**		Analysis Date: **06/04/2015**		Seq No: **6245178**	
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		

Analytical Environmental Services, Inc

Date: 15-Jun-15

Client: Crawford Environmental Services
Project Name: Clouds
Workorder: 1506305

ANALYTICAL QC SUMMARY REPORT

BatchID: 208383

Sample ID: **1506305-063AMS** Client ID: **DW 5** Units: **ug/L** Prep Date: **06/04/2015** Run No: **293172**
SampleType: **MS** TestCode: **Oxygenates SW8260B** BatchID: **208383** Analysis Date: **06/04/2015** Seq No: **6245178**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	45760	5000	50000	6307	78.9	66.5	145				
tert-Amyl methyl ether	10010	500	10000		100	70.1	127				
tert-Butyl Alcohol	50500	5000	50000		101	70	149				

Sample ID: **1506305-063AMSD** Client ID: **DW 5** Units: **ug/L** Prep Date: **06/04/2015** Run No: **293172**
SampleType: **MSD** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **208383** Analysis Date: **06/04/2015** Seq No: **6245068**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	9151	50	2500	6880	90.9	70	135	8610	6.09	20	
Ethylbenzene	3038	50	2500	421.5	105	73.7	135	2839	6.79	20	
Naphthalene	3056	250	2500	292.5	111	53.1	128	2740	10.9	36.7	
Toluene	3054	50	2500	656.0	95.9	70.5	137	2897	5.26	20	
Xylenes, Total	11350	50	7500	3833	100	71.2	135	10700	5.89	20	
Surr: 4-Bromofluorobenzene	2393	0	2500		95.7	70	130	2381	0	0	
Surr: Dibromofluoromethane	2234	0	2500		89.4	70	130	2246	0	0	
Surr: Toluene-d8	2248	0	2500		89.9	70	130	2246	0	0	

Sample ID: **1506305-063AMSD** Client ID: **DW 5** Units: **ug/L** Prep Date: **06/04/2015** Run No: **293172**
SampleType: **MSD** TestCode: **Oxygenates SW8260B** BatchID: **208383** Analysis Date: **06/04/2015** Seq No: **6245179**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	61270	5000	50000	6307	110	66.5	145	45760	29.0	24.8	R
tert-Amyl methyl ether	10810	500	10000		108	70.1	127	10010	7.70	20	
tert-Butyl Alcohol	57210	5000	50000		114	70	149	50500	12.5	29.4	

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: Crawford Environmental Services
Project Name: Clouds
Workorder: 1506305

ANALYTICAL QC SUMMARY REPORT

BatchID: 208405

Sample ID: **MB-208405** Client ID: Units: **ug/L** Prep Date: **06/04/2015** Run No: **293215**
SampleType: **MBLK** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **208405** Analysis Date: **06/04/2015** Seq No: **6245215**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	BRL	1.0									
Ethylbenzene	BRL	1.0									
Methyl tert-butyl ether	BRL	1.0									
Naphthalene	0.7400	5.0									J
Toluene	BRL	1.0									
Xylenes, Total	BRL	1.0									
Surr: 4-Bromofluorobenzene	44.13	0	50.00		88.3	70	130				
Surr: Dibromofluoromethane	45.25	0	50.00		90.5	70	130				
Surr: Toluene-d8	44.71	0	50.00		89.4	70	130				

Sample ID: **MB-208405** Client ID: Units: **ug/L** Prep Date: **06/04/2015** Run No: **293215**
SampleType: **MBLK** TestCode: **Oxygenates SW8260B** BatchID: **208405** Analysis Date: **06/04/2015** Seq No: **6245339**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	BRL	100									
tert-Amyl methyl ether	BRL	10									
tert-Butyl Alcohol	BRL	100									

Sample ID: **LCS-208405** Client ID: Units: **ug/L** Prep Date: **06/04/2015** Run No: **293228**
SampleType: **LCS** TestCode: **Volatile Organic Compounds by GC/MS SW8260B** BatchID: **208405** Analysis Date: **06/05/2015** Seq No: **6246831**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	48.68	1.0	50.00		97.4	70	130				
Ethylbenzene	49.34	1.0	50.00		98.7	70	130				
Naphthalene	54.14	5.0	50.00	0.7400	107	70	130				
Toluene	46.97	1.0	50.00		93.9	70	130				
Xylenes, Total	144.7	1.0	150.0		96.5	70	130				
Surr: 4-Bromofluorobenzene	47.43	0	50.00		94.9	70	130				

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

Date: 15-Jun-15

Client: Crawford Environmental Services
Project Name: Clouds
Workorder: 1506305

ANALYTICAL QC SUMMARY REPORT

BatchID: 208405

Sample ID: **LCS-208405**	Client ID:				Units: **ug/L**		Prep Date: **06/04/2015**		Run No: **293228**	
SampleType: **LCS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **208405**		Analysis Date: **06/05/2015**		Seq No: **6246831**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: Dibromofluoromethane	47.62	0	50.00		95.2	70	130				
Surr: Toluene-d8	44.88	0	50.00		89.8	70	130				

Sample ID: **LCS-208405**	Client ID:				Units: **ug/L**		Prep Date: **06/04/2015**		Run No: **293228**	
SampleType: **LCS**	TestCode: **Oxygenates SW8260B**				BatchID: **208405**		Analysis Date: **06/05/2015**		Seq No: **6248624**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	838.9	100	1000		83.9	70	130				
tert-Amyl methyl ether	227.2	10	200.0		114	70	130				
tert-Butyl Alcohol	776.9	100	1000		77.7	70	130				

Sample ID: **1506305-013AMS**	Client ID: **MW 19**				Units: **ug/L**		Prep Date: **06/04/2015**		Run No: **293215**	
SampleType: **MS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **208405**		Analysis Date: **06/04/2015**		Seq No: **6245218**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	4559	50	2500	2136	96.9	70	135				
Ethylbenzene	2996	50	2500	330.5	107	73.7	135				
Naphthalene	4050	250	2500	1214	113	53.1	128				
Toluene	18240	50	2500	16150	83.7	70.5	137				E
Xylenes, Total	24100	50	7500	16260	104	71.2	135				
Surr: 4-Bromofluorobenzene	2428	0	2500		97.1	70	130				
Surr: Dibromofluoromethane	2228	0	2500		89.1	70	130				
Surr: Toluene-d8	2247	0	2500		89.9	70	130				

Sample ID: **1506305-013AMS**	Client ID: **MW 19**				Units: **ug/L**		Prep Date: **06/04/2015**		Run No: **293215**	
SampleType: **MS**	TestCode: **Oxygenates SW8260B**				BatchID: **208405**		Analysis Date: **06/04/2015**		Seq No: **6245342**	
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		

Analytical Environmental Services, Inc

Date: 15-Jun-15

Client: Crawford Environmental Services
Project Name: Clouds
Workorder: 1506305

ANALYTICAL QC SUMMARY REPORT

BatchID: 208405

Sample ID: **1506305-013AMS**	Client ID: **MW 19**				Units: **ug/L**		Prep Date: **06/04/2015**		Run No: **293215**	
SampleType: **MS**	TestCode: **Oxygenates** **SW8260B**				BatchID: **208405**		Analysis Date: **06/04/2015**		Seq No: **6245342**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	63050	5000	50000	6184	114	66.5	145				
tert-Amyl methyl ether	10810	500	10000		108	70.1	127				
tert-Butyl Alcohol	54460	5000	50000		109	70	149				

Sample ID: **1506305-013AMSD**	Client ID: **MW 19**				Units: **ug/L**		Prep Date: **06/04/2015**		Run No: **293215**	
SampleType: **MSD**	TestCode: **Volatile Organic Compounds by GC/MS** **SW8260B**				BatchID: **208405**		Analysis Date: **06/04/2015**		Seq No: **6245220**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	4560	50	2500	2136	97.0	70	135	4559	0.033	20	
Ethylbenzene	2946	50	2500	330.5	105	73.7	135	2996	1.67	20	
Naphthalene	4116	250	2500	1214	116	53.1	128	4050	1.63	36.7	
Toluene	17950	50	2500	16150	72.2	70.5	137	18240	1.60	20	E
Xylenes, Total	23720	50	7500	16260	99.3	71.2	135	24100	1.59	20	
Surr: 4-Bromofluorobenzene	2419	0	2500		96.8	70	130	2428	0	0	
Surr: Dibromofluoromethane	2264	0	2500		90.5	70	130	2228	0	0	
Surr: Toluene-d8	2256	0	2500		90.2	70	130	2247	0	0	

Sample ID: **1506305-013AMSD**	Client ID: **MW 19**				Units: **ug/L**		Prep Date: **06/04/2015**		Run No: **293215**	
SampleType: **MSD**	TestCode: **Oxygenates** **SW8260B**				BatchID: **208405**		Analysis Date: **06/04/2015**		Seq No: **6245343**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	57550	5000	50000	6184	103	66.5	145	63050	9.12	24.8	
tert-Amyl methyl ether	10110	500	10000		101	70.1	127	10810	6.72	20	
tert-Butyl Alcohol	50680	5000	50000		101	70	149	54460	7.18	29.4	

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

Date: 15-Jun-15

Client: Crawford Environmental Services
Project Name: Clouds
Workorder: 1506305

ANALYTICAL QC SUMMARY REPORT

BatchID: 208475

Sample ID: **MB-208475**	Client ID:			Units: **ug/L**	Prep Date: **06/05/2015**	Run No: **293228**
SampleType: **MBLK**	TestCode: **Volatile Organic Compounds by GC/MS** **SW8260B**			BatchID: **208475**	Analysis Date: **06/05/2015**	Seq No: **6248399**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	BRL	1.0									
Ethylbenzene	BRL	1.0									
Methyl tert-butyl ether	BRL	1.0									
Naphthalene	BRL	5.0									
Toluene	BRL	1.0									
Xylenes, Total	BRL	1.0									
Surr: 4-Bromofluorobenzene	40.41	0	50.00		80.8	70	130				
Surr: Dibromofluoromethane	46.17	0	50.00		92.3	70	130				
Surr: Toluene-d8	45.27	0	50.00		90.5	70	130				

Sample ID: **MB-208475**	Client ID:			Units: **ug/L**	Prep Date: **06/05/2015**	Run No: **293228**
SampleType: **MBLK**	TestCode: **Oxygenates** **SW8260B**			BatchID: **208475**	Analysis Date: **06/05/2015**	Seq No: **6248626**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	BRL	100									
tert-Amyl methyl ether	BRL	10									
tert-Butyl Alcohol	BRL	100									

Sample ID: **LCS-208475**	Client ID:			Units: **ug/L**	Prep Date: **06/05/2015**	Run No: **293228**
SampleType: **LCS**	TestCode: **Volatile Organic Compounds by GC/MS** **SW8260B**			BatchID: **208475**	Analysis Date: **06/05/2015**	Seq No: **6248398**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	50.21	1.0	50.00		100	70	130				
Ethylbenzene	49.56	1.0	50.00		99.1	70	130				
Naphthalene	50.96	5.0	50.00		102	70	130				
Toluene	48.49	1.0	50.00		97.0	70	130				
Xylenes, Total	146.0	1.0	150.0		97.3	70	130				
Surr: 4-Bromofluorobenzene	46.75	0	50.00		93.5	70	130				

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

Date: 15-Jun-15

Client: Crawford Environmental Services
Project Name: Clouds
Workorder: 1506305

ANALYTICAL QC SUMMARY REPORT

BatchID: 208475

Sample ID: **LCS-208475**	Client ID:				Units: **ug/L**		Prep Date: **06/05/2015**		Run No: **293228**	
SampleType: **LCS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **208475**		Analysis Date: **06/05/2015**		Seq No: **6248398**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: Dibromofluoromethane	47.10	0	50.00		94.2	70	130				
Surr: Toluene-d8	45.75	0	50.00		91.5	70	130				

Sample ID: **LCS-208475**	Client ID:				Units: **ug/L**		Prep Date: **06/05/2015**		Run No: **293228**	
SampleType: **LCS**	TestCode: **Oxygenates SW8260B**				BatchID: **208475**		Analysis Date: **06/05/2015**		Seq No: **6248625**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	853.9	100	1000		85.4	70	130				
tert-Amyl methyl ether	212.8	10	200.0		106	70	130				
tert-Butyl Alcohol	794.4	100	1000		79.4	70	130				

Sample ID: **1506305-021AMS**	Client ID: **MW-5aR**				Units: **ug/L**		Prep Date: **06/05/2015**		Run No: **293228**	
SampleType: **MS**	TestCode: **Oxygenates SW8260B**				BatchID: **208475**		Analysis Date: **06/05/2015**		Seq No: **6248628**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	46740	5000	50000		93.5	66.5	145				
tert-Amyl methyl ether	12010	500	10000		120	70.1	127				
tert-Butyl Alcohol	37170	5000	50000		74.3	70	149				

Sample ID: **1506305-021AMS**	Client ID: **MW-5aR**				Units: **ug/L**		Prep Date: **06/05/2015**		Run No: **293583**	
SampleType: **MS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **208475**		Analysis Date: **06/10/2015**		Seq No: **6255204**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	4821	50	2500	2492	93.2	70	135				
Ethylbenzene	2969	50	2500	211.0	110	73.7	135				
Naphthalene	3557	250	2500	219.0	134	53.1	128				S
Toluene	3560	50	2500	1152	96.3	70.5	137				
Xylenes, Total	9435	50	7500	1304	108	71.2	135				

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

Date: 15-Jun-15

Client: Crawford Environmental Services
Project Name: Clouds
Workorder: 1506305

ANALYTICAL QC SUMMARY REPORT

BatchID: 208475

Sample ID: **1506305-021AMS**	Client ID: **MW-5aR**			Units: **ug/L**		Prep Date: **06/05/2015**		Run No: **293583**	
SampleType: **MS**	TestCode: **Volatile Organic Compounds by GC/MS**	**SW8260B**		BatchID: **208475**		Analysis Date: **06/10/2015**		Seq No: **6255204**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: 4-Bromofluorobenzene	2372	0	2500		94.9	70	130				
Surr: Dibromofluoromethane	2258	0	2500		90.3	70	130				
Surr: Toluene-d8	2155	0	2500		86.2	70	130				

Sample ID: **1506305-021AMSD**	Client ID: **MW-5aR**			Units: **ug/L**		Prep Date: **06/05/2015**		Run No: **293228**	
SampleType: **MSD**	TestCode: **Oxygenates**	**SW8260B**		BatchID: **208475**		Analysis Date: **06/05/2015**		Seq No: **6248629**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	43370	5000	50000		86.7	66.5	145	46740	7.48	24.8	
tert-Amyl methyl ether	10060	500	10000		101	70.1	127	12010	17.7	20	
tert-Butyl Alcohol	39770	5000	50000		79.5	70	149	37170	6.74	29.4	

Sample ID: **1506305-021AMSD**	Client ID: **MW-5aR**			Units: **ug/L**		Prep Date: **06/05/2015**		Run No: **293583**	
SampleType: **MSD**	TestCode: **Volatile Organic Compounds by GC/MS**	**SW8260B**		BatchID: **208475**		Analysis Date: **06/10/2015**		Seq No: **6255206**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	4959	50	2500	2492	98.7	70	135	4821	2.82	20	
Ethylbenzene	3228	50	2500	211.0	121	73.7	135	2969	8.37	20	
Naphthalene	3710	250	2500	219.0	140	53.1	128	3557	4.20	36.7	S
Toluene	3756	50	2500	1152	104	70.5	137	3560	5.33	20	
Xylenes, Total	10360	50	7500	1304	121	71.2	135	9435	9.38	20	
Surr: 4-Bromofluorobenzene	2424	0	2500		96.9	70	130	2372	0	0	
Surr: Dibromofluoromethane	2372	0	2500		94.9	70	130	2258	0	0	
Surr: Toluene-d8	2135	0	2500		85.4	70	130	2155	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		

Analytical Environmental Services, Inc

Date: 15-Jun-15

Client: Crawford Environmental Services
Project Name: Clouds
Workorder: 1506305

ANALYTICAL QC SUMMARY REPORT

BatchID: 208476

Sample ID: **MB-208476**	Client ID:			Units: **ug/L**	Prep Date: **06/08/2015**	Run No: **293446**
SampleType: **MBLK**	TestCode: **Volatile Organic Compounds by GC/MS** **SW8260B**			BatchID: **208476**	Analysis Date: **06/08/2015**	Seq No: **6251068**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	BRL	1.0									
Ethylbenzene	BRL	1.0									
Methyl tert-butyl ether	BRL	1.0									
Naphthalene	1.690	5.0									J
Toluene	BRL	1.0									
Xylenes, Total	BRL	1.0									
Surr: 4-Bromofluorobenzene	40.33	0	50.00		80.7	70	130				
Surr: Dibromofluoromethane	47.73	0	50.00		95.5	70	130				
Surr: Toluene-d8	44.74	0	50.00		89.5	70	130				

Sample ID: **MB-208476**	Client ID:			Units: **ug/L**	Prep Date: **06/08/2015**	Run No: **293446**
SampleType: **MBLK**	TestCode: **Oxygenates** **SW8260B**			BatchID: **208476**	Analysis Date: **06/08/2015**	Seq No: **6251170**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	BRL	100									
tert-Amyl methyl ether	BRL	10									
tert-Butyl Alcohol	BRL	100									

Sample ID: **LCS-208476**	Client ID:			Units: **ug/L**	Prep Date: **06/08/2015**	Run No: **293446**
SampleType: **LCS**	TestCode: **Volatile Organic Compounds by GC/MS** **SW8260B**			BatchID: **208476**	Analysis Date: **06/08/2015**	Seq No: **6251064**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	53.63	1.0	50.00		107	70	130				
Ethylbenzene	54.21	1.0	50.00		108	70	130				
Naphthalene	55.23	5.0	50.00	1.690	107	70	130				
Toluene	52.97	1.0	50.00		106	70	130				
Xylenes, Total	160.6	1.0	150.0		107	70	130				
Surr: 4-Bromofluorobenzene	44.57	0	50.00		89.1	70	130				

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

Date: 15-Jun-15

Client: Crawford Environmental Services
Project Name: Clouds
Workorder: 1506305

ANALYTICAL QC SUMMARY REPORT

BatchID: 208476

Sample ID: **LCS-208476**	Client ID:				Units: **ug/L**		Prep Date: **06/08/2015**		Run No: **293446**
SampleType: **LCS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **208476**		Analysis Date: **06/08/2015**		Seq No: **6251064**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: Dibromofluoromethane	47.27	0	50.00		94.5	70	130				
Surr: Toluene-d8	44.19	0	50.00		88.4	70	130				

Sample ID: **LCS-208476**	Client ID:				Units: **ug/L**		Prep Date: **06/08/2015**		Run No: **293446**
SampleType: **LCS**	TestCode: **Oxygenates SW8260B**				BatchID: **208476**		Analysis Date: **06/08/2015**		Seq No: **6251169**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	991.6	100	1000		99.2	70	130				
tert-Amyl methyl ether	182.9	10	200.0		91.4	70	130				
tert-Butyl Alcohol	866.5	100	1000		86.6	70	130				

Sample ID: **1506305-043AMS**	Client ID: **MW 59**				Units: **ug/L**		Prep Date: **06/08/2015**		Run No: **293583**
SampleType: **MS**	TestCode: **Oxygenates SW8260B**				BatchID: **208476**		Analysis Date: **06/10/2015**		Seq No: **6255242**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	46410	5000	50000	4177	84.5	66.5	145				
tert-Amyl methyl ether	9872	500	10000		98.7	70.1	127				
tert-Butyl Alcohol	39480	5000	50000		79.0	70	149				

Sample ID: **1506305-050AMS**	Client ID: **DW 4**				Units: **ug/L**		Prep Date: **06/08/2015**		Run No: **293690**
SampleType: **MS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **208476**		Analysis Date: **06/11/2015**		Seq No: **6257223**

Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	59.19	1.0	50.00		118	70	135				
Ethylbenzene	62.07	1.0	50.00		124	73.7	135				
Naphthalene	42.22	5.0	50.00		84.4	53.1	128				
Toluene	57.64	1.0	50.00		115	70.5	137				
Xylenes, Total	163.0	1.0	150.0		109	71.2	135				

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

Date: 15-Jun-15

Client: Crawford Environmental Services
Project Name: Clouds
Workorder: 1506305

ANALYTICAL QC SUMMARY REPORT

BatchID: 208476

Sample ID: **1506305-050AMS**	Client ID: **DW 4**				Units: **ug/L**		Prep Date: **06/08/2015**		Run No: **293690**	
SampleType: **MS**	TestCode: **Volatile Organic Compounds by GC/MS** **SW8260B**				BatchID: **208476**		Analysis Date: **06/11/2015**		Seq No: **6257223**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: 4-Bromofluorobenzene	49.56	0	50.00		99.1	70	130				
Surr: Dibromofluoromethane	49.28	0	50.00		98.6	70	130				
Surr: Toluene-d8	49.39	0	50.00		98.8	70	130				

Sample ID: **1506305-043AMSD**	Client ID: **MW 59**				Units: **ug/L**		Prep Date: **06/08/2015**		Run No: **293583**	
SampleType: **MSD**	TestCode: **Oxygenates** **SW8260B**				BatchID: **208476**		Analysis Date: **06/10/2015**		Seq No: **6255243**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	47280	5000	50000	4177	86.2	66.5	145	46410	1.86	24.8	
tert-Amyl methyl ether	9976	500	10000		99.8	70.1	127	9872	1.04	20	
tert-Butyl Alcohol	40010	5000	50000		80.0	70	149	39480	1.32	29.4	

Sample ID: **1506305-050AMSD**	Client ID: **DW 4**				Units: **ug/L**		Prep Date: **06/08/2015**		Run No: **293690**	
SampleType: **MSD**	TestCode: **Volatile Organic Compounds by GC/MS** **SW8260B**				BatchID: **208476**		Analysis Date: **06/11/2015**		Seq No: **6257228**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	56.48	1.0	50.00		113	70	135	59.19	4.69	20	
Ethylbenzene	59.85	1.0	50.00		120	73.7	135	62.07	3.64	20	
Naphthalene	41.23	5.0	50.00		82.5	53.1	128	42.22	2.37	36.7	
Toluene	54.54	1.0	50.00		109	70.5	137	57.64	5.53	20	
Xylenes, Total	157.4	1.0	150.0		105	71.2	135	163.0	3.50	20	
Surr: 4-Bromofluorobenzene	53.31	0	50.00		107	70	130	49.56	0	0	
Surr: Dibromofluoromethane	48.78	0	50.00		97.6	70	130	49.28	0	0	
Surr: Toluene-d8	48.41	0	50.00		96.8	70	130	49.39	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		

Analytical Environmental Services, Inc

Date: 15-Jun-15

Client: Crawford Environmental Services
Project Name: Clouds
Workorder: 1506305

ANALYTICAL QC SUMMARY REPORT

BatchID: 208594

Sample ID: **MB-208594**	Client ID:			Units: **ug/L**		Prep Date: **06/09/2015**		Run No: **293527**	
SampleType: **MBLK**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**			BatchID: **208594**		Analysis Date: **06/09/2015**		Seq No: **6253190**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	BRL	1.0									
Ethylbenzene	BRL	1.0									
Methyl tert-butyl ether	BRL	1.0									
Naphthalene	2.190	5.0									J
Toluene	BRL	1.0									
Xylenes, Total	BRL	1.0									
Surr: 4-Bromofluorobenzene	40.41	0	50.00		80.8	70	130				
Surr: Dibromofluoromethane	46.82	0	50.00		93.6	70	130				
Surr: Toluene-d8	44.00	0	50.00		88.0	70	130				

Sample ID: **MB-208594**	Client ID:			Units: **ug/L**		Prep Date: **06/09/2015**		Run No: **293527**	
SampleType: **MBLK**	TestCode: **Oxygenates SW8260B**			BatchID: **208594**		Analysis Date: **06/09/2015**		Seq No: **6253375**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	BRL	100									
tert-Amyl methyl ether	BRL	10									
tert-Butyl Alcohol	BRL	100									

Sample ID: **LCS-208594**	Client ID:			Units: **ug/L**		Prep Date: **06/09/2015**		Run No: **293527**	
SampleType: **LCS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**			BatchID: **208594**		Analysis Date: **06/09/2015**		Seq No: **6253188**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	49.71	1.0	50.00		99.4	70	130				
Ethylbenzene	55.29	1.0	50.00		111	70	130				
Naphthalene	57.00	5.0	50.00	2.190	110	70	130				
Toluene	48.60	1.0	50.00		97.2	70	130				
Xylenes, Total	158.9	1.0	150.0		106	70	130				
Surr: 4-Bromofluorobenzene	45.85	0	50.00		91.7	70	130				

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

Date: 15-Jun-15

Client: Crawford Environmental Services
Project Name: Clouds
Workorder: 1506305

ANALYTICAL QC SUMMARY REPORT

BatchID: 208594

Sample ID: **LCS-208594**	Client ID:				Units: **ug/L**		Prep Date: **06/09/2015**		Run No: **293527**	
SampleType: **LCS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **208594**		Analysis Date: **06/09/2015**		Seq No: **6253188**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: Dibromofluoromethane	45.25	0	50.00		90.5	70	130				
Surr: Toluene-d8	42.34	0	50.00		84.7	70	130				

Sample ID: **LCS-208594**	Client ID:				Units: **ug/L**		Prep Date: **06/09/2015**		Run No: **293527**	
SampleType: **LCS**	TestCode: **Oxygenates SW8260B**				BatchID: **208594**		Analysis Date: **06/09/2015**		Seq No: **6253374**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	786.7	100	1000		78.7	70	130				
tert-Amyl methyl ether	156.4	10	200.0		78.2	70	130				
tert-Butyl Alcohol	712.9	100	1000		71.3	70	130				

Sample ID: **1506305-038AMS**	Client ID: **MW 22**				Units: **ug/L**		Prep Date: **06/09/2015**		Run No: **293527**	
SampleType: **MS**	TestCode: **Oxygenates SW8260B**				BatchID: **208594**		Analysis Date: **06/10/2015**		Seq No: **6253399**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	86110	10000	100000		86.1	66.5	145				
tert-Amyl methyl ether	16420	1000	20000		82.1	70.1	127				
tert-Butyl Alcohol	76430	10000	100000		76.4	70	149				

Sample ID: **1506305-038AMS**	Client ID: **MW 22**				Units: **ug/L**		Prep Date: **06/09/2015**		Run No: **293647**	
SampleType: **MS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **208594**		Analysis Date: **06/11/2015**		Seq No: **6257379**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	9554	100	5000	4784	95.4	70	135				
Ethylbenzene	6200	100	5000	760.0	109	73.7	135				
Naphthalene	6893	500	5000	839.0	121	53.1	128				
Toluene	20910	100	5000	16090	96.4	70.5	137				E
Xylenes, Total	42290	100	15000	26000	109	71.2	135				

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

Date: 15-Jun-15

Client: Crawford Environmental Services
Project Name: Clouds
Workorder: 1506305

ANALYTICAL QC SUMMARY REPORT

BatchID: 208594

Sample ID: **1506305-038AMS**	Client ID: **MW 22**				Units: **ug/L**		Prep Date: **06/09/2015**		Run No: **293647**	
SampleType: **MS**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **208594**		Analysis Date: **06/11/2015**		Seq No: **6257379**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: 4-Bromofluorobenzene	4683	0	5000		93.7	70	130				
Surr: Dibromofluoromethane	4977	0	5000		99.5	70	130				
Surr: Toluene-d8	4644	0	5000		92.9	70	130				

Sample ID: **1506305-038AMSD**	Client ID: **MW 22**				Units: **ug/L**		Prep Date: **06/09/2015**		Run No: **293527**	
SampleType: **MSD**	TestCode: **Oxygenates SW8260B**				BatchID: **208594**		Analysis Date: **06/10/2015**		Seq No: **6253413**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
tert-Amyl alcohol	77590	10000	100000		77.6	66.5	145	86110	10.4	24.8	
tert-Amyl methyl ether	15510	1000	20000		77.6	70.1	127	16420	5.67	20	
tert-Butyl Alcohol	72410	10000	100000		72.4	70	149	76430	5.41	29.4	

Sample ID: **1506305-038AMSD**	Client ID: **MW 22**				Units: **ug/L**		Prep Date: **06/09/2015**		Run No: **293647**	
SampleType: **MSD**	TestCode: **Volatile Organic Compounds by GC/MS SW8260B**				BatchID: **208594**		Analysis Date: **06/11/2015**		Seq No: **6257381**	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzene	10180	100	5000	4784	108	70	135	9554	6.35	20	
Ethylbenzene	6847	100	5000	760.0	122	73.7	135	6200	9.92	20	
Naphthalene	7630	500	5000	839.0	136	53.1	128	6893	10.1	36.7	S
Toluene	22080	100	5000	16090	120	70.5	137	20910	5.44	20	E
Xylenes, Total	44870	100	15000	26000	126	71.2	135	42290	5.93	20	
Surr: 4-Bromofluorobenzene	4751	0	5000		95.0	70	130	4683	0	0	
Surr: Dibromofluoromethane	4877	0	5000		97.5	70	130	4977	0	0	
Surr: Toluene-d8	4538	0	5000		90.8	70	130	4644	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		

APPENDIX D

Data Verification Checklist

UST Programmatic QAPP Contractor Checklist				
Item #:	Item	Yes	No	N/A
1	Is Facility Name, Permit #, and address provided?	Yes		
2	Is UST Owner/Operator name, address, provided?			n/a
3	Is name, address, & phone number of current property owner provided?	Yes		
4	Is the SCDHEC Certified UST Site Rehabilitation Contractor's name, address, phone number, and certification number provided?	Yes		
5	Is the name, address ,telephone number, and certification number of the well driller that installed the boring/monitoring wells provided?			n/a
6	Is the name, address, telephone number, and certification number of the certified laboratories performing analytical analyses provided	Yes		
7	Has the facility history be summarized?			n/a
8	Has the regional geology and hydrogeology been summarized?			n/a
9	Are the receptor survey results provided as required?			n/a
10	Has the current use of the site and adjacent land been described?	Yes		
11	Has the site specific geology been described?			n/a
12	Has the primary soil type been described?			n/a
13	Have the field screening results been described?			n/a
14	Has a description of the soil sample collection and preservation been detailed?			n/a
15	Has the field screening methodology been detailed?			n/a
16	Has the monitoring well installation and development dates been provided?			n/a
17	Has the method of well development been detailed? (Table 2)			n/a
18	Has the justification been provided for the locations of the monitoring wells?			n/a
19	Have the monitoring wells been labeled in accordance with the UST QAPP guidelines?	Yes		
20	Has the groundwater sampling methodology been detailed?	Yes		
21	Have the groundwater sampling dates and groundwater measurements been provided?	Yes		
22	Has the purging methodology been detailed?	Yes		
23	Has the volume of water purged from each well been provided along with the measurements to verify purging is complete?	Yes		
24	If free-product is present, has the thickness been provided?			n/a
25	Does the report include a brief discussion of the assessment done and the results?			n/a

UST Programmatic QAPP Contractor Checklist				
26	Does the report include a brief discussion of the aquifer evaluation and the results?	Yes		
27	Does the report include a brief discussion of the fate & transport models used?			n/a
28	Are the site-conceptual tables included (Tier 1 risk evaluation)			n/a
29	Have the exposure pathways been analyzed (Tier 2 risk evauluation)			n/a
30	Have the SSTLs for each compound and pathway been calculated? (Tier 2 risk evaluation)	Yes		
31	Have recommendations for further action been provided and explained?			n/a
32	Has the soil analytical data for the site been provided in tabular format? (Table 5)			n/a
33	Has the potentiometric data for the site been provided in tabular format?	Yes		
34	Has the current and historical laboratory data been provided in tabular format	Yes		
35	Have the aquifer characteristics been provided and summarized on the appropriate form?			n/a
36	Have the Site conceptual model tables been included (Tier 1 risk evaluation)			n/a
37	Has the topographic map been provided with all the required elements?	Yes		
38	Has the site base map been provided with all the required elements?	Yes		
39	Have the CoC maps been provided?	Yes		
40	Have the potentiometric maps been provided?	Yes		
41	Have the geologic cross-sections been provided			n/a
42	Have maps showing the predicted migration of the CoCs through time been provided?			n/a
43	Has the site survey been provided and include all necessary elements? (Appendix A)			n/a
44	Have the sampling logs, chain of custody forms and analytical data package been included with all elements? (Appendix B)	Yes		
45	Is the laboratory performing the analyses properly certified? (Appendix B)	Yes		
46	Has the tax map been included with all necessary elements? (Appendix C)			n/a
47	Have the soil/boring field screening logs been provided? (Appendix D)			n/a
48	Have the well completion logs been provided? (Appendix E)			n/a
49	Have the aquifer evaluation forms,data, graphs, equations,etc. been provided? (Appendix F)			n/a
50	Have the disposal manifests been provided? (Appendix G)	Yes		
51	Has a copy of the local zoning regulations been provided? (Appendix H)			n/a

UST Programmatic QAPP Contractor Checklist				
52	Has all fate and transport modeling been provided? (Appendix I)			n/a
53	Have copies of all access agreements obtained by the contractor been provided? (Appendix J)			n/a
54	Has a copy of this form been attached to the final report and are explainations for any missing or incomplete data been provided?	Yes		
Comments:				

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Monitoring Well Gauging

Site Information Handy Pantry 651 University Mart

Date: 8-7-15	Site ID #: 07584 # 07777 # 12352	Site Name: Cloud's Chevron
County: Richland	Project Manager: Sutz	Field Personnel: S. Utz J. Bryant

Well Gauging Information

Well ID:	Total Well Depth (ft.)	Screened Interval (ft.)	Depth to Free Product (ft.)	Depth to Ground water (ft.)	Free Product Thickness (ft.)	Confirmed with Bailer?	Photos Taken ?	Well Pad OK?	Bolts in Well Cover?	Water in Well Vault?
MW-62				20.75					N	
MW-10				16.64						
MW-63				2.59					N	
MW-31				~~22.80~~ 24.76					N	
MW-29				18.99					N	
MW-20				23.04	SHEEN					
PW-1R				23.75						
MW-2				22.83						
MW-3				22.61						
MW-15			17.75	17.84	0.09'					

Notes: 10 BAILERS
29 CAP OFF
31 CAP OFF
PW-1R OBJECT IN WELL/CASING BENT
15 NO CAP - CASING MESSED UP

Signature: S Utz

UST DOCKETING

DHEC 0424 (10/2012)

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

~~Benedict College~~
~~Dr. David Swinton, president~~
~~Groundskeeper~~

JOHN TUCKER (803)705 4846
NOTIFIED

D H E C

PROMOTE PROTECT PROSPER

Catherine E. Heigel, Director

Promoting and protecting the health of the public and the environment

MR CHARLES F CRAWFORD III
CRAWFORD ENVIRONMENTAL SERVICES
15 CHURCH AVENUE SW
ROANOKE VA 24011

AUG 24 2015

UST 189 DOCKETING

Re: **Corrective Action System Evaluation (CASE) Report Review**
UST Permit# 07584, University Mart, 2367 Taylor St., Columbia, SC
Release #1 reported January 30, 1991; CA# 47811
Release #2 reported April 17, 1998; CA# 47812
UST Permit # 07777, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 31, 1991; CA# 47813
UST Permit # 12352, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 30, 1991; CA# 47814
Contract #IFB-5400007095-1/30/2014-EMW; PO# 4600322226
CASE report received July 1, 2015
Richland County

Dear Mr. Crawford:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (Agency) has reviewed the CASE report documenting the corrective action activities and the May/June 2015 groundwater sampling event. The findings have been noted.

The next semi-annual CASE report is due on or before December 5, 2015.

On all correspondence regarding this site, please reference UST Permit #07584/ #07777/ #12352. If you have any questions regarding this correspondence, please contact me by telephone at (803) 898-0634, by fax at (803) 898-0673, or by e-mail at utzst@dhec.sc.gov.

Sincerely,

Sonya T. Utz, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

cc: Technical File

D H E C

PROMOTE PROTECT PROSPER

Catherine F. Heigel, Director

Promoting and protecting the health of the public and the environment

SYLVAN FOOD SYSTEMS INC
1245 BOSTON AVE
WEST COLUMBIA SC 29170

AUG 24 2015

Re: **Corrective Action System Evaluation (CASE) Report Review**
UST Permit# 07584, University Mart, 2367 Taylor St., Columbia, SC
Release #1 reported January 30, 1991
Release #2 reported April 17, 1998
UST Permit # 07777, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 31, 1991
UST Permit # 12352, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 30, 1991
CASE report received July 1, 2015
Richland County

To Whom It May Concern:

As you are aware, petroleum products have been identified in the soil and groundwater at the referenced facility. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services has been retained to initiate corrective action of the impacted soil and groundwater using aggressive fluid vapor recovery (AFVR), air sparging and soil vapor extraction, and the injection of surfactants in addition to natural attenuation.

In order to keep you updated, a copy of the Corrective Action System Evaluation (CASE) Report has been sent to you by Crawford Environmental Services. Please contact me if you did not receive the report.

If you have questions concerning this correspondence, please contact me by telephone at (803) 898-0634, by fax at (803) 898-0673, or utzst@dhec.sc.gov.

Sincerely,

Sonya T. Utz, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

cc: Technical File

D H E C
PROMOTE PROTECT PROSPER
Catherine E. Heigel, Director
Promoting and protecting the health of the public and the environment

MS LINDA WARREN
C/O DOUGLAS HARLEY
1527 LYON ST
COLUMBIA SC 29204

AUG 2 4 2015

Re: **Corrective Action System Evaluation (CASE) Report Review**
UST Permit# 07584, University Mart, 2367 Taylor St., Columbia, SC
Release #1 reported January 30, 1991
Release #2 reported April 17, 1998
UST Permit # 07777, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 31, 1991
UST Permit # 12352, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 30, 1991
CASE report received July 1, 2015
Richland County

Dear Ms. Warren:

As you are aware, petroleum products have been identified in the soil and groundwater at the referenced facility. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services has been retained to initiate corrective action of the impacted soil and groundwater using aggressive fluid vapor recovery (AFVR), air sparging and soil vapor extraction, and the injection of surfactants in addition to natural attenuation.

In order to keep you updated, a copy of the Corrective Action System Evaluation (CASE) Report has been sent to you by Crawford Environmental Services. Please contact me if you did not receive the report.

If you have questions concerning this correspondence, please contact me by telephone at (803) 898-0634, by fax at (803) 898-0673, or utzst@dhec.sc.gov.

Sincerely,

Sonya T. Utz, Hydrogeologist
Corrective Action Section
UST Management ~~Division~~
Bureau of Land and Waste Management

cc: Technical File

D H E C
PROMOTE PROTECT PROSPER
Catherine E. Heigel, Director
Promoting and protecting the health of the public and the environment

GILBERT WALKER
PUBLIC HOUSING AUTHORITY
GONZALES GARDENS
PO BOX 4307
COLUMBIA SC 29240

AUG 2 4 2015

Re: **Corrective Action System Evaluation (CASE) Report Review**
UST Permit# 07584, University Mart, 2367 Taylor St., Columbia, SC
Release #1 reported January 30, 1991
Release #2 reported April 17, 1998
UST Permit # 07777, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 31, 1991
UST Permit # 12352, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 30, 1991
CASE report received July 1, 2015
Richland County

Dear Mr. Gonzales:

As you are aware, petroleum products have been identified in the soil and groundwater at the referenced facility. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services has been retained to initiate corrective action of the impacted soil and groundwater using aggressive fluid vapor recovery (AFVR), air sparging and soil vapor extraction, and the injection of surfactants in addition to natural attenuation.

In order to keep you updated, a copy of the Corrective Action System Evaluation (CASE) Report has been sent to you by Crawford Environmental Services. Please contact me if you did not receive the report.

If you have questions concerning this correspondence, please contact me by telephone at (803) 898-0634, by fax at (803) 898-0673, or utzst@dhec.sc.gov.

Sincerely,

Sonya T. Utz, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

cc: Technical File

D H E C

PROMOTE PROTECT PROSPER

Catherine F. Heigel, Director

Promoting and protecting the health of the public and the environment

1500 MILLWOOD AVE LLC
1330 DEVONSHIRE DR
COLUMBIA SC 29204

AUG 2 4 2015

Re: **Corrective Action System Evaluation (CASE) Report Review**
UST Permit# 07584, University Mart, 2367 Taylor St., Columbia, SC
Release #1 reported January 30, 1991
Release #2 reported April 17, 1998
UST Permit # 07777, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 31, 1991
UST Permit # 12352, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 30, 1991
CASE report received July 1, 2015
Richland County

To Whom It May Concern:

As you are aware, petroleum products have been identified in the soil and groundwater at the referenced facility. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services has been retained to initiate corrective action of the impacted soil and groundwater using aggressive fluid vapor recovery (AFVR), air sparging and soil vapor extraction, and the injection of surfactants in addition to natural attenuation.

In order to keep you updated, a copy of the Corrective Action System Evaluation (CASE) Report has been sent to you by Crawford Environmental Services. Please contact me if you did not receive the report.

If you have questions concerning this correspondence, please contact me by telephone at (803) 898-0634, by fax at (803) 898-0673, or utzst@dhec.sc.gov.

Sincerely,

Sonya T. Utz, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

cc: Technical File

D H E C
PROMOTE PROTECT PROSPER
Catherine F. Heigel, Director
Promoting and protecting the health of the public and the environment

JOHN M SUDDETH
1410 N MILLWOOD AVE
COLUMBIA SC 29204

AUG 2 4 2015

Re: **Corrective Action System Evaluation (CASE) Report Review**
UST Permit# 07584, University Mart, 2367 Taylor St., Columbia, SC
Release #1 reported January 30, 1991
Release #2 reported April 17, 1998
UST Permit # 07777, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 31, 1991
UST Permit # 12352, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 30, 1991
CASE report received July 1, 2015
Richland County

Dear Mr. Suddeth:

As you are aware, petroleum products have been identified in the soil and groundwater at the referenced facility. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services has been retained to initiate corrective action of the impacted soil and groundwater using aggressive fluid vapor recovery (AFVR), air sparging and soil vapor extraction, and the injection of surfactants in addition to natural attenuation.

In order to keep you updated, a copy of the Corrective Action System Evaluation (CASE) Report has been sent to you by Crawford Environmental Services. Please contact me if you did not receive the report.

If you have questions concerning this correspondence, please contact me by telephone at (803) 898-0634, by fax at (803) 898-0673, or utzst@dhec.sc.gov.

Sincerely,

Sonya T. Utz, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

cc: Technical File

D H E C
PROMOTE PROTECT PROSPER
Catherine F. Heigel, Director
Promoting and protecting the health of the public and the environment

FUNG LAU
2300 TAYLOR ST SUITE D
COLUMBIA SC 29204

Re: **Corrective Action System Evaluation (CASE) Report Review**
UST Permit# 07584, University Mart, 2367 Taylor St., Columbia, SC
Release #1 reported January 30, 1991
Release #2 reported April 17, 1998
UST Permit # 07777, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 31, 1991
UST Permit # 12352, Clouds Chevron, 1600 Two Notch Rd., Columbia, SC
Release reported December 30, 1991
CASE report received July 1, 2015
Richland County

Dear Fung Lau:

As you are aware, petroleum products have been identified in the soil and groundwater at the referenced facility. To prevent the release from becoming an unacceptable risk, Crawford Environmental Services has been retained to initiate corrective action of the impacted soil and groundwater using aggressive fluid vapor recovery (AFVR), air sparging and soil vapor extraction, and the injection of surfactants in addition to natural attenuation.

In order to keep you updated, a copy of the Corrective Action System Evaluation (CASE) Report has been sent to you by Crawford Environmental Services. Please contact me if you did not receive the report.

If you have questions concerning this correspondence, please contact me by telephone at (803) 898-0634, by fax at (803) 898-0673, or utzst@dhec.sc.gov.

Sincerely,

Sonya T. Utz, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

cc: Technical File

Document Receipt Information

☒ Hard Copy ☒ CD ☐ Email

Date Received 12-16-2015

Permit Number 07584/07777/12352

Project Manager Joel Padgett

Name of Contractor Crawford Environmental

UST Certification Number

Docket Number 07584 - 256 tech
07777 - 190 tech
12352 - 125 tech

Scanned

CASE - November 2015 (Sampling Data)

CRAWFORD
ENVIRONMENTAL
SERVICES

December 13, 2015

Ms. Sonya Utz
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RE: Corrective Action System Evaluation – November 2015 (Sampling Date)
Handy Pantry #65/University Mart & Cloud's Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina
UST Permit # 07584 / 07777 / 12352

Dear Ms. Utz:

Enclosed please find one copy of the November 2015 Corrective Action System Evaluation (CASE) report prepared by Crawford Environmental Services, Inc. (CES) for the referenced site. Should you have any questions regarding the enclosed material, or if additional information is required, please feel free to contact Charlie Crawford or myself at 540.343.6256.

Best Regards,

Daniel Fisher
Division Manager

cc:

CRAWFORD
ENVIRONMENTAL
SERVICES

Corrective Action System Evaluation Report

Handy Pantry #65/University Mart & Cloud's Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina
UST Permit # 07584 / 07777 / 12352
December 13, 2015
Revision 0

CORRETIVE ACTION SYSTEM EVALUATION REPORT

Handy Pantry #65/University Mart & Cloud's Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina
UST Permit # 07584 / 07777 / 12352

Submitted To:
Ms. Sonya Utz
State of South Carolina
Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Prepared For:
Ms. Sonya Utz
State of South Carolina
Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

December 13, 2015
CES Job Number: 7.0547

Prepared By:	**Reviewed By:**	**Approved By:**
Daniel J. Fisher	Charles F. Crawford	B. Thomas Houghton
Division Manager	President / CEO	P.G. #2343

CRAWFORD ENVIRONMENTAL SERVICES

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Table 2: Groundwater Laboratory Analytical Result Summary
Table 3: Site Specific Target Level Summary

Figures
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Figure 2: Site Facility Base Map
Figure 3: Groundwater Chemicals of Concern
Figure 4: Groundwater Elevation Map

Appendix A - Purge Water Disposal Manifest
Appendix B - Groundwater Sampling Data Sheets
Appendix C - Laboratory Data Reports, Chain of Custodies and Field Data Information Sheets
Appendix D - Data Verification Checklist

1.0 Facility Information

The subject property is located in a primarily commercial area of Columbia, South Carolina (Figure 1). The subject sites, operating as Handy Pantry #65/University Mart and former Cloud's Chevron, is bordered by light commercial properties in all directions. A site plan depicting pertinent features of the subject property is provided as Figure 2.

1.1 Project Information Summary:

1.2.1 Site Address

Handy Pantry #65 / University Mart / Clouds Chevron
2367 Taylor Street
Columbia, South Carolina

1.2.2 Property Owner Information

Mr. Mahesh Patel
2367 Taylor Street
Columbia, South Carolina

Mr. Andrew Diggins
1600 Block Two Notch Road
Columbia, South Carolina

1.2.3 Contractor Information

Crawford Environmental Services
15 Church Avenue, SW
Roanoke, Virginia 24011
1 (540) 343-6256
Contractor Number: UCC-0388

1.2.4 Laboratory Information

Access Analytical, Inc. (AA)
7478 Carlisle Street
Irmo, SC 29063
1 (803) 781-4243
SC Certification: 32575001

Analytical Environmental Services Inc. (AES)
3785 Presidential Pkwy.
Atlanta, GA 30340
1 (770) 457-8177
SC Certification: 98016003

2.0 Corrective Action Activities

Corrective Action activities at the facility for this phase of work included the following:

-Regular O&M of the Air Sparge / Soil Vapor Extraction Systems.
-Monitoring Well Maintenance
-Bi-Annual Sampling Event

2.1 Water Sample Collection

A comprehensive groundwater sampling event, including; recording equilibrated static water levels, product thicknesses, and the collection of chemical samples was completed by CES personnel between November 3 and 4, 2015. CES personnel utilized an electronic water level indicator for water level measurements and an oil/water interface probe for free phase product measurements. Samples for the shallow wells were collected utilizing disposable polyethylene bailers. Shallow wells that exhibited groundwater above the screened bracket were purged of at least three well volumes or purged till dry before sample collection. Deep and intermediate wells exhibiting groundwater above the screened bracket were purged utilizing submersible pumps with dedicated tubing. For sample collection, disposable polyethylene bailers were lowered slowly to the top of the water column (after purging in some cases) allowed to fill one volume, then removed. Disposal records for the 208-gallons of purge water generated are included as Appendix A. Groundwater was then transferred to the appropriate sampling containers and was then placed in coolers, maintaining 4˚C, and delivered to an independent laboratory. Groundwater chemical samples were submitted to Access Analytical, Inc., {SC Certification: 32575001} for analysis.

2.1.1 Groundwater Sampling

Equilibrated static water levels and free-product thicknesses were recorded for monitoring MW-2, MW-3, MW-4, MW-5AR, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-15, MW-17, MW-18, MW-19, MW-20, MW-22, MW-23, MW-25, MW-26, MW-27, MW-28, MW-29, MW-30, MW-31, MW-32, MW-33, MW-34, MW-35, MW-36, MW-37, MW-38, MW-39, MW-40, MW-41, MW-42, MW-43, MW-44, MW-45, MW-46, MW-51, MW-53, MW-54, MW-55, MW-56, MW-58, MW-59, MW-62, MW-63, MW-67, MW-70, PWR-1, DW-1, DW-2, DW-3, DW-4, DW-5, DW-6, DW-7, DW-8 and DW-9 Groundwater sampling data sheets are included as Appendix B.

During the referenced sampling event, CES was unable to access monitoring wells MW-48, MW-49 and MW-50 due to a locked gate and monitoring wells MW-57, MW-60, MW-61, MW-64, MW-66 and MW-68 were unable to be located. CES also utilized a metal detector to locate the wells, however, the overgrown site conditions did not permit the location of the aforementioned monitoring wells. Monitoring wells MW-15 and MW-62 maintained free phase petroleum and were not sampled. Monitoring wells MW-1, MW-5 and MW-52 did not maintain sufficient water columns to collect groundwater samples.

CES sampled the monitoring wells, as part of the November 2015 sampling event, for the following chemical analyses:
Benzene/Toluene/Ethylbenzene/Xylenes (BTEX), naphthalene, Methyl Tert-Butyl Ether (MTBE), Tert-Amyl Methyl Ether (TAME), Tert-Butyl Alcohol (TBA), and Tert-Amyl Alcohol (TAA).

During the sampling event CES collected duplicate samples of monitoring wells MW-55 and PW-1R. Review of the duplicate samples collected from aforementioned monitoring well samples did not yield significant data gaps.

In addition to duplicate samples, CES also collected daily field blank samples at the conclusion of the sample events. The samples were collected at the conclusion of the day to be representative of all samples that were collected during that day. Sealed trip blank samples were also stored with samples during each day of the sample event.

Table 2 presents the laboratory data for the submitted groundwater samples collected as part of this assessment. The groundwater concentration maps are included as Figure 3. The groundwater elevation map is included as Figure 4.

3.0 Summary

During the corrective action activities performed at the subject property, CES conducted a comprehensive groundwater monitoring event, in an effort to determine the effectiveness of the current corrective action plan. The qualitative and quantitative data collected from recent assessment activities indicates the following regarding current site conditions;

1. Groundwater from monitoring wells MW-3, MW-9, MW-12, MW-17, MW-18, MW-19, MW-20, MW-22, MW-25, MW-33, MW-35, MW-37, MW-54, MW-5AR, PW-1R and DW-3 exhibited hydrocarbon constituent concentrations above the SSTLs for the chemicals of concern.

2. CES calculated a concentration of concern reduction of 35.64 percent during this phase of work.

3. Free-phase petroleum was observed at monitoring wells MW-15 and MW-62. CES is mobilizing to the subject site on December 16, 2015 to confirm the presence of free product at MW-62. If free product is not detected, a sample will be collected and the results will be presented in a letter report.

4. In accordance with SCDHEC directives, CES mobilized to the subject site on November 30, 2015 to complete well repairs. CES installed expansion type well caps at monitoring wells MW-15, MW-29 and MW-30. Inspection of PW-1R revealed a bent casing and re-installation will be required. CES also inspected all wells at the site to ensure they were secured with bolts. Due to the age of many of the wells, a minimum of 9 monitoring well surface completions require replacement.

5. Based on the results of the previous sampling events, CES is scheduled to install injection wells proximal to MW-10 and MW-15 to perform limited surfactant injection / extraction events. CES is in continuing negotiations with the property owners of Churches Chicken to obtain access to install injection wells. CES estimates that access will be granted in by January 2016 and the well installation and first injection can be completed by March 15, 2016.

Tables

Table 1: Summary of Groundwater Elevation Data
Table 2: Summary of Groundwater Analytical Data
Table 3: Site Specific Target Levels Summary

Table 1

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST Permit ID: 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — CES Project Number: 7.0547

Well Construction and Historical Groundwater Elevation Summary

Monitor Well	Well Depth (ft)	Screened Interval		Top of Casing (ft)	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)
MW-1	27	17	27	93.89	11/3/2015	NA	DRY	NA	NA	DRY
					5/29/2015	NA	DRY	NA	NA	DRY
					11/11/2014	NA	DRY	NA	NA	DRY
					4/2/2014	NA	DRY	NA	NA	DRY
MW-2	30	20	30	94.70	11/3/2015	NA	20.32	NA	NA	74.38
					5/29/2015	22.56	22.57	0.01	72.14	72.13
					11/4/2014	NA	23.03	NA	NA	71.67
					4/2/2014	NA	21.12	NA	NA	73.58
MW-3	29	19	29	94.45	11/3/2015	NA	23.29	NA	NA	71.16
					5/29/2015	23.2	23.29	0.09	71.25	71.16
					4/2/2014	NA	21.40	NA	NA	73.05
					11/12/2014	NA	23.16	NA	NA	71.29
MW-4	28	18	28	94.85	11/3/2015	NA	20.35	NA	NA	74.50
					5/29/2015	NA	21.52	NA	NA	73.33
					11/11/2014	NA	21.76	NA	NA	73.09
					4/2/2014	NA	21.31	NA	NA	73.54
MW-5	26	16	26	95.26	11/3/2015	NA	DRY	NA	NA	DRY
					5/29/2015	NA	DRY	NA	NA	DRY
					11/11/2014	NA	DRY	NA	NA	DRY
					4/2/2014	NA	DRY	NA	NA	DRY
MW-6	30	20	30	94.96	11/3/2015	NA	21.21	NA	NA	73.75
					5/29/2015	NA	22.38	NA	NA	72.58
					11/11/2014	NA	23.98	NA	NA	70.98
					4/3/2014	NA	22.61	NA	NA	72.35
MW-7	30	20	30	95.93	11/3/2015	NA	21.79	NA	NA	74.14
					5/29/2015	NA	23.48	NA	NA	72.45
					11/11/2014	NA	24.12	NA	NA	71.81
					4/3/2014	NA	23.02	NA	NA	72.91
MW-8	28	18.5	28	94.79	11/3/2015	NA	19.19	NA	NA	75.60
					5/29/2015	NA	20.08	NA	NA	74.71
					11/11/2014	NA	21.43	NA	NA	73.36
					4/3/2014	NA	19.95	NA	NA	74.84
MW-9	30	20	30	92.30	11/3/2015	NA	20.04	NA	NA	72.26
					5/28/2015	NA	21.19	NA	NA	71.11
					11/11/2014	NA	21.69	NA	NA	70.61
					4/2/2014	NA	20.60	NA	NA	71.70
MW-10	28	18	28	85.98	11/3/2015	NA	14.58	NA	NA	71.40
					5/28/2015	NA	16.64	NA	NA	69.34
					11/11/2014	Interface Probe Failure - 1.25-Feet of Product Observed in Bailer				
					4/1/2014	NA	17.69	NA	NA	68.29
MW-11	30	Unknown		88.46	11/3/2015	NA	17.16	NA	NA	71.30
					5/29/2015	NA	18.93	NA	NA	69.53
					11/11/2014	NA	19.38	NA	NA	69.08
					4/2/2014	NA	18.61	NA	NA	69.85
MW-12	24.65	Unknown		72.80	11/3/2015	NA	3.15	NA	NA	69.65
					5/28/2015	NA	4.38	NA	NA	68.42
					11/11/2014	NA	4.63	NA	NA	68.17
					4/2/2014	NA	4.20	NA	NA	68.60
MW-13	30.1	Unknown		80.44	11/3/2015	NA	9.82	NA	NA	70.62
					5/28/2015	NA	11.71	NA	NA	68.73
					11/11/2014	NA	12.15	NA	NA	68.29
					4/1/2014	NA	11.13	NA	NA	69.31
MW-15	25	15	25	86.44	11/3/2015	14.51	14.64	0.13	71.93	71.80
					5/29/2015	16.45	16.61	0.16	69.99	69.83
					11/11/2014	Interface Probe Failure - 0.25-Feet of Product Observed in Bailer				
					4/1/2014	16.60	16.00	0.60	69.84	70.88*
MW-16	25	15	25	88.19	11/3/2015	NA	16.29	NA	NA	70.15
					5/29/2015	Unable to Locate				
					11/12/2014	NA	18.98	NA	NA	69.21
					4/2/2014	NA	17.54	NA	NA	70.65

Table 1

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST Permit ID: 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — CES Project Number: 7.0547

Well Construction and Historical Groundwater Elevation Summary

Monitor Well	Well Depth (ft)	Screened Interval		Top of Casing (ft)	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)
MW-17	22	20	30	92.45	11/3/2015	NA	20.47	NA	NA	71.98
					5/28/2015	NA	22.70	NA	NA	69.75
					11/12/2014	NA	23.45	NA	NA	69.00
					4/2/2014	NA	22.00	NA	NA	70.45
MW-18	30	20	30	94.81	11/3/2015	NA	22.28	NA	NA	72.53
					5/28/2015	NA	24.41	NA	NA	70.40
					11/12/2014	NA	25.08	NA	NA	69.73
					4/2/2014	NA	23.68	NA	NA	71.13
MW-19	30	20	30	93.96	11/3/2015	NA	21.81	NA	NA	72.15
					5/28/2015	NA	24.00	NA	NA	69.96
					11/13/2014	NA	24.56	NA	NA	69.40
					4/3/2014	NA	23.33	NA	NA	70.63
MW-20	25	15	25	94.12	11/3/2015	NA	20.18	NA	NA	73.94
					5/28/2015	22.67	22.61	0.06	-22.67	71.51
					11/13/2014	NA	23.28	NA	NA	70.84
					4/3/2014	NA	21.95	NA	NA	72.17
MW-22	30	20	30	94.25	11/3/2015	NA	19.01	NA	NA	75.24
					5/28/2015	NA	21.85	NA	NA	72.40
					11/11/2014	NA	22.68	NA	NA	71.57
					4/3/2014	NA	21.11	NA	NA	73.14
MW-23	30	20	30	94.43	11/3/2015	NA	21.95	NA	NA	72.48
					5/28/2015	NA	24.25	NA	NA	70.18
					11/13/2014	NA	24.98	NA	NA	69.45
					4/3/2014	NA	23.65	NA	NA	70.78
MW-25	25.6	Unknown		93.09	11/3/2015	NA	17.73	NA	NA	75.36
					5/28/2015	NA	20.65	NA	NA	72.44
					11/10/2014	NA	21.60	NA	NA	71.49
					4/1/2014	NA	19.71	NA	NA	73.38
MW-26	30	Unknown		95.96	11/3/2015	NA	21.06	NA	NA	74.90
					6/5/2015	NA	22.49	NA	NA	73.47
					11/11/2014	NA	22.95	NA	NA	73.01
					4/3/2014	NA	20.01	NA	NA	75.95
MW-27	30	15	30	91.40	11/3/2015	NA	11.21	NA	NA	80.19
					5/28/2015	NA	17.75	NA	NA	73.65
					11/13/2014	NA	18.85	NA	NA	72.55
					4/1/2014	NA	14.65	NA	NA	76.75
MW-28	30	15	30	91.46	11/3/2015	NA	13.08	NA	NA	78.38
					5/28/2015	NA	17.97	NA	NA	73.49
					11/13/2014	NA	19.75	NA	NA	71.71
					4/1/2014	NA	15.63	NA	NA	75.83
MW-29	30	15	30	91.09	11/3/2015	NA	13.19	NA	NA	77.90
					5/28/2015	17.91	17.92	0.01	73.18	73.17
					11/13/2014	NA	19.92	NA	NA	71.17
					4/1/2014	NA	15.51	NA	NA	75.58
MW-30	30	15	30	92.77	11/3/2015	NA	17.43	NA	NA	75.34
					5/28/2015	NA	26.70	NA	NA	66.07
					11/10/2014	NA	22.90	NA	NA	69.87
					4/1/2014	NA	20.50	NA	NA	72.27
MW-31	35	20	35	95.20	11/3/2015	NA	22.53	NA	NA	72.67
					5/28/2015	25.61	25.62	0.01	69.59	69.58
					11/12/2014	NA	26.36	NA	NA	68.84
					4/2/2014	NA	24.41	NA	NA	70.79
MW-32	30	15	30	92.87	11/3/2015	NA	19.12	NA	NA	73.75
					5/28/2015	NA	22.00	NA	NA	70.87
					11/12/2014	NA	23.16	NA	NA	69.71
					4/2/2014	NA	21.28	NA	NA	71.59
MW-33	35	20	35	93.84	11/3/2015	NA	21.48	NA	NA	72.36
					5/28/2015	NA	23.83	NA	NA	70.01
					11/12/2014	NA	24.65	NA	NA	69.19
					4/1/2014	NA	23.18	NA	NA	70.66

Table 1

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST Permit ID: 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — CES Project Number: 7.0547

Well Construction and Historical Groundwater Elevation Summary

Monitor Well	Well Depth (ft)	Screened Interval		Top of Casing (ft)	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)
MW-34	35	20	35	94.77	11/3/2015	NA	21.52	NA	NA	73.25
					5/28/2015	NA	24.72	NA	NA	70.05
					11/12/2014	NA	25.49	NA	NA	69.28
					4/1/2014	NA	24.06	NA	NA	70.71
MW-35	35	20	35	93.71	11/3/2015	NA	21.37	NA	NA	72.34
					5/28/2015	NA	23.80	NA	NA	69.91
					11/12/2014	NA	24.66	NA	NA	69.05
					4/1/2014	NA	21.35	NA	NA	72.36
MW-36	35	20	35	93.89	11/3/2015	NA	21.36	NA	NA	72.53
					5/28/2015	NA	23.63	NA	NA	70.26
					11/12/2014	NA	24.72	NA	NA	69.17
					4/1/2014	NA	22.84	NA	NA	71.05
MW-37	35	20	35	93.78	11/3/2015	NA	21.36	NA	NA	72.42
					5/28/2015	NA	23.98	NA	NA	69.80
					11/12/2014	NA	24.87	NA	NA	68.91
					4/1/2014	NA	22.24	NA	NA	71.54
MW-38	35	20	35	95.53	11/3/2015	NA	22.89	NA	NA	72.64
					6/2/2015	NA	25.26	NA	NA	70.27
					11/12/2014	NA	26.17	NA	NA	69.36
					4/1/2014	NA	24.61	NA	NA	70.92
MW-39	35	20	35	96.19	11/3/2015	NA	23.79	NA	NA	72.40
					6/2/2015	NA	26.45	NA	NA	69.74
					11/12/2014	NA	27.36	NA	NA	68.83
					4/2/2014	NA	25.59	NA	NA	70.60
MW-40	35	20	35	95.69	11/3/2015	NA	23.43	NA	NA	72.26
					6/2/2015	NA	26.12	NA	NA	69.57
					11/12/2014	NA	27.01	NA	NA	68.68
					4/2/2014	NA	25.29	NA	NA	70.40
MW-41	35	20	35	94.85	11/3/2015	NA	22.77	NA	NA	72.08
					6/2/2015	NA	25.69	NA	NA	69.16
					11/11/2014	NA	26.99	NA	NA	67.86
					4/1/2014	NA	24.70	NA	NA	70.15
MW-42	35	20	35	95.81	11/3/2015	NA	23.46	NA	NA	72.35
					6/2/2015	NA	26.25	NA	NA	69.56
					11/12/2014	NA	27.22	NA	NA	68.59
					4/1/2014	NA	25.35	NA	NA	70.46
MW-43	40	20	40	95.15	11/3/2015	NA	22.21	NA	NA	72.94
					5/28/2015	NA	24.66	NA	NA	70.49
					11/11/2014	NA	25.61	NA	NA	69.54
					4/2/2014	NA	24.00	NA	NA	71.15
MW-44	31	16	31	94.57	11/3/2015	NA	20.33	NA	NA	74.24
					5/28/2015	NA	22.70	NA	NA	71.87
					11/11/2014	NA	24.23	NA	NA	70.34
					4/1/2014	NA	24.42	NA	NA	70.15
MW-45	30	15	30	92.51	11/3/2015	NA	19.45	NA	NA	73.06
					5/28/2015	NA	21.75	NA	NA	70.76
					11/11/2014	NA	22.63	NA	NA	69.88
					4/1/2014	NA	21.22	NA	NA	71.29
MW-46	35	20	35	94.50	11/3/2015	NA	21.84	NA	NA	72.66
					5/28/2015	NA	24.19	NA	NA	70.31
					11/11/2014	NA	24.95	NA	NA	69.55
					4/1/2014	NA	23.55	NA	NA	70.95
MW-48	30	15	30	89.95	11/3/2015	Unable to Access - Locked Gate				
					5/29/2015	NA	19.63	NA	NA	70.32
					11/11/2014	Unable to Access - Locked Gate				
					4/2/2014	NA	19.70	NA	NA	70.25
MW-49	30	15	30	88.18	11/3/2015	Unable to Access - Locked Gate				
					5/29/2015					
					11/11/2014					
					4/2/2014					

Table 1

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST Permit ID: 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — CES Project Number: 7.0547

Well Construction and Historical Groundwater Elevation Summary

Monitor Well	Well Depth (ft)	Screened Interval		Top of Casing (ft)	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)
MW-50	30	15	30	84.09	11/3/2015	Unable to Access - Locked Gate				
					5/29/2015					
					11/11/2014					
					4/2/2014					
MW-51	35	20	35	93.91	11/3/2015	NA	21.87	NA	NA	72.04
					5/29/2015	NA	23.72	NA	NA	70.19
					11/11/2014	NA	24.29	NA	NA	69.62
					4/2/2014	NA	21.23	NA	NA	72.68
MW-53	20	5	20	79.60	11/3/2015	NA	8.49	NA	NA	71.11
					5/28/2015	NA	10.50	NA	NA	69.10
					11/11/2014	NA	11.02	NA	NA	68.58
					4/3/2014	NA	9.60	NA	NA	70.00
MW-54	20	5	20	77.58	11/3/2015	NA	9.83	NA	NA	67.75
					5/28/2015	NA	11.27	NA	NA	66.31
					11/11/2014	Unable to Locate - Overgrown Field				
					4/1/2014	NA	11.31	NA	NA	66.27
MW-55	14	4	14	71.22	11/3/2015	NA	1.19	NA	NA	70.03
					5/28/2015	NA	3.83	NA	NA	67.39
					11/11/2014	Unable to Locate - Overgrown Field				
					4/3/2014	NA	2.51	NA	NA	68.71
MW-56	20	5	20	76.39	11/3/2015	NA	6.4	NA	NA	69.99
					5/28/2015	NA	8.22	NA	NA	68.17
					11/11/2014	Unable to Locate - Overgrown Field				
					4/3/2014	NA	5.12	NA	NA	71.27
MW-58	19	4	19	76.37	11/3/2015	NA	4.52	NA	NA	71.85
					5/29/2015	NA	6.85	NA	NA	69.52
					11/11/2014	Abandoned				
					4/2/2014					
MW-59	17	2	17	68.02	11/3/2015	NA	5.04	NA	NA	62.98
					5/28/2015	NA	6.46	NA	NA	61.56
					11/11/2014	NA	6.69	NA	NA	61.33
					4/2/2014	NA	6.05	NA	NA	61.97
MW-60	14	4	14	67.94	11/3/2015	Unable to Locate				
					5/28/2015					
					11/11/2014					
					4/2/2014					
MW-62	35	20	35	94.05	11/3/2015	22.15	22.67	0.52	71.90	71.38
					5/28/2015	22.21	23.71	1.5	71.84	70.34
					11/12/2014	NA	24.75	NA	NA	69.30
					4/1/2014	NA	22.32	NA	NA	71.73
MW-63	35	20	35	94.65	11/3/2015	NA	24.05	NA	NA	70.60
					5/28/2015	24.04	24.05	0.01	70.61	70.60
					11/12/2015	Unable to Locate				
					4/2/2014	NA	23.07	NA	NA	71.58
MW-65	35	20	35	94.04	11/3/2015	Unable to Locate - Paved over				
					5/28/2015					
					11/11/2014					
					4/2/2014					
MW-67	35	20	35	96.10	11/3/2015	NA	23.52	NA	NA	72.58
					6/2/2015	NA	26.29	NA	NA	69.81
					11/12/2014	NA	27.28	NA	NA	68.82
					4/1/2014	NA	24.44	NA	NA	71.66
MW-70	35	20	35	95.49	11/3/2015	NA	22.89	NA	NA	72.60
					5/28/2015	NA	25.60	NA	NA	69.89
					11/11/2014	NA	26.22	NA	NA	69.27
					4/2/2014	NA	24.70	NA	NA	70.79
MW-5AR	28	18	28	94.18	11/3/2015	NA	16.39	NA	NA	77.79
					5/28/2015	NA	20.91	NA	NA	73.27
					11/13/2014	NA	22.64	NA	NA	71.54
					4/1/2014	NA	21.24	NA	NA	72.94

Table 1

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST Permit ID: 07584 / 07777 / 12352
Address: 2367 Taylor Street Columbia, South Carolina — CES Project Number: 7.0547

Well Construction and Historical Groundwater Elevation Summary

Monitor Well	Well Depth (ft)	Screened Interval		Top of Casing (ft)	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)
PW-1R	50	45	50	93.75	11/3/2015	NA	21.43	NA	NA	72.32
					5/29/2015	23.19	23.20	0.01	70.56	70.55
					11/13/2014	NA	23.92	NA	NA	69.83
					4/3/2014	NA	23.11	NA	NA	70.64
DW-1	70	65	70	94.66	11/3/2015	NA	46.28	NA	NA	48.38
					5/29/2015	NA	46.28	NA	NA	48.38
					11/10/2014	NA	45.42	NA	NA	49.24
					4/2/2014	NA	45.00	NA	NA	49.66
DW-2	75	70	75	94.02	11/3/2015	NA	43.07	NA	NA	50.95
					11/11/2014	NA	44.88	NA	NA	49.14
					4/2/2014	NA	44.34	NA	NA	49.68
DW-3	52	47	52	93.75	11/3/2015	NA	21.29	NA	NA	72.46
					5/28/2015	NA	23.93	NA	NA	69.82
					11/13/2014	NA	24.42	NA	NA	69.33
					4/3/2014	NA	24.40	NA	NA	69.35
DW-4	110	105	110	93.79	11/3/2015	NA	43.34	NA	NA	50.45
					5/28/2015	NA	44.51	NA	NA	49.28
					11/13/2014	NA	3.45	NA	NA	90.34
					4/3/2014	NA	44.60	NA	NA	49.19
DW-5	70	65	70	93.74	11/3/2015	NA	42.89	NA	NA	50.85
					5/28/2015	NA	44.45	NA	NA	49.29
					11/12/2014	NA	44.75	NA	NA	48.99
					4/1/2014	NA	44.22	NA	NA	49.52
DW-6	70	65	70	95.90	11/3/2015	NA	44.59	NA	NA	51.31
					6/2/2015	NA	46.16	NA	NA	49.74
					11/12/2014	NA	46.64	NA	NA	49.26
					4/1/2014	NA	45.86	NA	NA	50.04
DW-7	55	50	55	72.79	11/3/2015	NA	22.97	NA	NA	49.82
					5/28/2015	NA	24.32	NA	NA	48.47
					11/11/2014	NA	24.75	NA	NA	48.04
					4/3/2014	NA	24.00	NA	NA	48.79
DW-8	55	50	55	68.63	11/3/2015	NA	19.43	NA	NA	49.20
					5/29/2015	NA	5.37	NA	NA	63.26
					11/11/2014	Abandoned				
					4/2/2014					
DW-9	65	60	65	76.47	11/3/2015	NA	23.62	NA	NA	52.85
					5/28/2015	NA	24.90	NA	NA	51.57
					11/11/2014	NA	24.44	NA	NA	52.03
					4/2/2014	NA	25.00	NA	NA	51.47

INA = Information not available

* = GW Elevation Corrected for The Presence of Free Product

n/a = not applicable

CRAWFORD ENVIRONMENTAL SERVICES

Table 2

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron | UST | 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina | Crawford Project No. | 7.0547

Groundwater Laboratory Analytical Result Summary

Well ID:	Date:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphthalene	TAA	TAME	TBA
MW-1	4/2/2014	Dry								
	11/11/2014									
	5/29/2015									
	11/3/2015									
MW-2	4/2/2014	170	41	200	960	320	150	230	1	6.8
	11/4/2014	140	300	220	1300	410	160	210	<10	<100
	5/29/2015	0.01-Feet of Free Product								
	11/4/2015	0.61	0.48	1.4	5.5	<1	2.6	<100	<10	<100
MW-3	4/2/2014	6900	18000	1200	16000	1800	600	980	560.000	340
	11/12/2014	4600	11000	620	8700	1300	280	<5000	310.000	<5000
	5/29/2015	0.09-Feet of Free Product								
	11/4/2015	3000	8700	600	7200	720	360	<2000	140	<2000
MW-4	4/2/2014	<1	<1	<1	<1	3.5	<5	<100	10.000	<100
	11/11/2014	<1	<1	<1	<1	1.6	<5	<100	<10	<100
	5/29/2015	<1	<1	<1	<1	1.9	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	1.9	<5	<100	<10	<100
MW-5	4/2/2014	Dry								
	11/11/2014									
	5/29/2015									
	11/3/2015									
MW-6	4/3/2014	2.6	<1	2.4	10	2.5	4.2	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	0.8	<5	<100	<10	<100
	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-7	4/3/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	0.71	<1	<1	<1	<1	<5	<100	<10	<100
	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-8	4/3/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-9	4/2/2014	830	7500	1700	14000	50	590	1700	5000	5000
	11/11/2014	380	11000	1900	13000	5	650	1100	<10	<100
	5/28/2015	250	5700	1200	8200	<50	480	<5000	<500	<5000
	11/4/2015	520	6200	1100	8600	<50	470	3000	<500	<5000
MW-10	4/1/2014	1800	5700	350	8500	50	690	5000	500.000	5000
	11/11/2014	1.25-Feet of Free Product								
	5/28/2015	66	76	67	860	<1	370	<100	<10	<100
	11/4/2015	10	18	4.5	120	<1	46	<100	<10	<100
MW-11	4/2/2014	2.3	4.1	11	4.1	<1	4.4	120	<10	<100
	11/11/2014	0.53	<1	<1	<1	<1	<5	80	<10	58
	5/29/2015	0.51	<1	<1	3.8	<1	6.6	50	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-12	4/2/2014	2.9	0.67	1.6	0.91	18	4.7	630	9.300	<100
	11/11/2014	990	19	910	140	21	180	3600	14.000	<100
	5/28/2015	53	2.7	430	14	22	44	2300	<10	<100
	11/4/2015	110	2	53	25	<1	10	1800	8.200	<100
MW-13	4/1/2014	0.62	8.8	4.5	86	<1	31	10	<10	<100
	11/11/2014	<1	<1	<	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<1	<100	<10	<100
MW-15	4/1/2014	0.60-Feet of Free Product								
	11/11/2014	0.25-Feet of Free Product								
	5/29/2015	0.16-Feet of Free Product								
	11/3/2015	0.14-Feet of Free Product								
MW-16	4/2/2014	<1	<1	<1	<1	<1	3.4	<100	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/29/2015	Unable to Locate								
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100

Table 2

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Groundwater Laboratory Analytical Result Summary

Well ID:	Date:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphthalene	TAA	TAME	TBA
MW-17	4/2/2014	280	5100	450	13000	50	850	2200	500.000	5000
	11/12/2014	32	3000	450	8300	<10	690	270	<100	<1000
	5/28/2015	210	7500	480	12000	<50	830	2200	<500	<5000
	11/4/2015	280	10000	660	13000	<100	720	<10000	<1000	<10000
MW-18	4/2/2014	1900	7200	630	8300	340	370	4900	70.000	5000
	11/12/2014	3100	11000	560	8700	510	290	12000	<1000	<10000
	5/28/2015	970	2500	180	4100	230	180	3000	33.000	<100
	11/3/2015	990	5800	600	8900	93	260	<10000	<1000	<10000
MW-19	4/3/2014	300	1800	490	12000	50	900	610	500.000	5000
	11/13/2014	1400	2800	1600	24000	<50	1400	1300	<50	<5000
	5/28/2015	2100	17000	330	16000	<50	1200	6200	<500	<5000
	11/3/2015	2900	19000	720	17000	<100	1100	5400	<1000	<10000
MW-20	4/3/2014	1800	11000	460	11000	50	960	3100	65.000	5000
	11/13/2014	1400	12000	500	14000	120	1100	<10000	<1000	<10000
	5/29/2015	0.06-Feet of Free Product								
	11/3/2015	930	11000	1000	17000	<50	1400	<5000	<500	<5000
MW-22	4/3/2014	5700	12000	880	23000	50	990	3600	500.000	5000
	11/11/2014	6300	23000	700	21000	<20	1200	9600	<20	<140
	6/5/2015	4800	16000	760	26000	<100	840	<10000	<1000	<10000
	11/3/2015	6400	20000	740	24000	<100	1000	3900	<1000	<10000
MW-23	4/3/2014	4200	16000	880	19000	120	1100	5900	500.000	5000
	11/13/2014	890	3600	450	16000	<50	1200	1500	<50	<340
	5/28/2015	570	1500	89	8300	<50	660	<5000	<500	<5000
	11/3/2015	2.9	8.5	1.5	190	<1	52	<100	<10	<100
MW-25	4/1/2014	5.5	200	320	4400	<1	1300	170	<10	<100
	11/10/2014	38	140	200	2600	1.9	490	2800	<10	<100
	5/28/2015	29	140	190	3000	<1	560	430	<10	<100
	11/3/2015	14	150	200	2600	<1	340	390	<10	<100
MW-26	4/3/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	6/2/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-27	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/13/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/3/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-28	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/13/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/3/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-29	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/13/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/29/2015	0.01-Feet of Free Product								
	11/3/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-30	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/10/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/3/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-31	4/2/2014	0.9	<1	<1	<1	2.7	<5	59	<10	<100
	11/12/2014	30	9.8	310	9.3	4.1	160	460	<10	<100
	5/29/2015	0.01-Feet of Free Product								
	11/3/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-32	4/2/2014	0.94	<1	1.9	2.4	<1	6.6	170	<10	<100
	11/12/2014	4	13	72	10	<1	45	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/3/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-33	4/1/2014	560	5200	2500	6900	50	670	4100	500.000	5000
	11/12/2014	130	410	210	550	1.2	71	1000	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	29	<10	<100
	11/3/2015	240	7500	1600	11000	<50	430	<5000	<500	<5000
MW-34	4/1/2014	<1	<1	<1	<1	<1	<5	39	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	39	<10	<100
	5/28/2015	<1	1.1	<1	<1	<1	<5	<100	<10	<100
	11/3/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100

Table 2

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron | UST | 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina | Crawford Project No. | 7.0547

Groundwater Laboratory Analytical Result Summary

Well ID:	Date:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphthalene	TAA	TAME	TBA
MW-35	4/1/2014	3700	4300	2000	6200	160	550	5600	54.000	5000
	11/12/2014	6000	7200	2800	7400	330	700	4700	76.000	<100
	5/28/2015	3300	5100	1500	4700	<50	640	4400	<500	<5000
	11/3/2015	1900	2200	1100	3300	84	530	2300	28.000	<100
MW-36	4/1/2014	5.1	<1	38	<1	<1	55	96	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	1.3	<1	2.3	<1	<5	<100	<10	<100
	11/3/2015	0.74	<1	1.6	<1	<1	16	<100	<10	<100
MW-37	4/1/2014	<1	<1	<1	<1	<1	3.7	<100	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/3/2015	3.5	<1	<1	5.4	<1	5.5	77	<10	<100
MW-38	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	6/2/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/3/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-39	4/2/2014	<1	3.2	2.2	14	<1	3.3	<100	<10	<100
	11/12/2014	11	1500	1000	3700	<1	340	220	<10	<100
	6/2/2015	1.3	160	140	1100	<1	160	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-40	4/2/2014	5.8	14	2	580	<1	24	<100	<10	<100
	11/12/2014	140	970	300	2900	12	150	600	<10	<100
	6/2/2015	5.2	47	3.9	590	<1	38	<100	<10	<100
	11/4/2015	0.51	<1	<1	<1	<1	<5	<100	<10	<100
MW-41	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	6/2/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-42	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	6/2/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-43	4/2/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-44	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-45	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-46	4/1/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-48	4/2/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	Unable to Access - Locked Gate								
	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/3/2015	Unable to Access - Locked Gate								
MW-49	4/2/2014	Unable to Access - Locked Gate								
	11/11/2014									
	5/29/2015									
	11/3/2015									
MW-50	4/2/2014	Unable to Access - Locked Gate								
	11/11/2014									
	5/29/2015									
	11/3/2015									
MW-51	4/2/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100

Table 2

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Groundwater Laboratory Analytical Result Summary

Well ID:	Date:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphthalene	TAA	TAME	TBA
MW-53	4/3/2014	<1	<1	<1	<1	<1	4.1	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	4.1	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-54	4/1/2014	<1	<1	<1	<1	9.6	<5	<100	6.700	<100
	11/11/2014	Unable to Locate								
	5/28/2015	<1	<1	<1	<1	6.4	<5	140	<10	<100
	11/4/2015	<1	<1	<1	<1	1.5	<5	<100	<10	<100
MW-55	4/3/2014	10	1	3.5	<1	24	3.9	98	6.400	<100
	11/11/2014	Unable to Locate								
	5/28/2015	1000	40	410	260	190	180	1700	15	<100
	11/4/2015	640	64	200	230	160	120	1200	11	56
MW-56	4/3/2014	<1	<1	<1	<1	<1	<5	50	<10	<100
	11/11/2014	Unable to Locate								
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-58	4/2/2014	Abandoned								
	11/11/2014									
	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-59	4/2/2014	28	2.8	300	6.4	130	45	2600	42.000	160
	11/11/2014	81	3.6	730	14	91	96	4500	27.000	<100
	5/28/2015	1400	23	1100	620	89	290	3900	34.000	<100
	11/4/2015	1300	48	440	850	58	250	2800	19.000	<100
MW-60	4/2/2014	Unable to Locate								
	11/11/2014									
	5/29/2015									
	11/3/2015									
MW-62	4/1/2014	0.86	<1	<1	<1	3	3.3	260	<10	<100
	11/12/2014	51	<1	<1	0.93	2.6	65	730	<10	<100
	5/29/2015	1.50-Feet of Free Product								
	11/3/2015	0.52-Feet of Free Product								
MW-63	4/2/2014	<1	<1	<1	<1	<1	5	120	<10	<100
	11/12/2014	Unable to Locate								
	5/29/2001	0.01-Feet of Free Product								
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-65	4/2/2014	Unable to Locate - Paved over								
	11/11/2014									
	5/29/2015									
	11/3/2015									
MW-67	4/1/2014	<1	<1	<1	<1	<1	5	<100	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	6/2/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-70	4/2/2014	<1	<1	<1	<1	<1	5	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	1.5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-5AR	4/1/2014	12000	13000	2400	13000	70	1000	<5000	160.000	<5000
	11/13/2014	830	180	98	670	13	130	<100	13.000	<100
	5/28/2015	2500	1200	280	1300	43	460	650	52.000	<100
	11/3/2015	5200	10000	810	5300	<100	580	<10000	<1000	<10000
PW-1R	4/3/2014	460	3400	320	9200	<50	<250	710	<500	<5000
	11/13/2014	850	6900	580	18000	<50	1300	<5000	<500	<5000
	5/29/2015	0.01-Feet of Free Product								
	11/3/2015	830	20000	1200	14000	<500	600	<50000	<5000	<50000
DW-1	4/2/2014	0.45	1.2	1.7	7.2	<1.0	<5.0	<100	<10	<100
	11/10/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-2	4/2/2014	<1.0	<1.0	<1.0	<1.0	7.1	4.1	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	10	<5	<100	<10	<100
	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	8.7	<5	<100	<10	<100

Table 2

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Groundwater Laboratory Analytical Result Summary

Well ID:	Date:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphthalene	TAA	TAME	TBA
DW-3	4/3/2014	9800	22000	3700	17000	990	780	10000	190.000	<5000
	11/13/2014	2000	20000	2800	10000	23	650	2700	<20	<140
	5/28/2015	310	4000	79	3100	6.5	130	750	<10	<100
	11/3/2015	4300	16000	2300	11000	230	800	2600	50.000	<2000
DW-4	4/3/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/13/2014	<1	1	<1	<1	<1	<5	<100	<10	<100
	6/2/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/3/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-5	4/1/2014	3300	68	37	1000	940	81	4300	83.000	<100
	11/12/2014	6700	380	240	3100	1400	190	5300	110.000	<100
	5/28/2015	6900	660	420	3800	1200	290	6300	<500	<5000
	11/4/2015	5900	490	200	1800	1100	170	4800	89.000	<100
DW-6	4/1/2014	8.5	1.2	1.6	7.2	3	5	<100	<10	<100
	11/12/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	6/2/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-7	4/3/2014	0.52	0.46	<1.0	1.4	2.6	4.2	<100	<10	<100
	11/11/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	1.2	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-8	4/2/2014	Abandoned								
	11/11/2014									
	5/29/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-9	4/2/2014	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/11/2014	<1	2.8	<1	<1	<1	<5	<100	<10	<100
	5/28/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
SW-1	4/2/2014	180	8.4	30	53	42	6.5	350	9.500	100
	11/12/2014	Unable to Access - Overgrown Brush								
	5/28/2015	230	18	89	160	30	24	590	<10	<100
	11/4/2015	<1	<1	<1	<1	<1	<5	44	<10	<100

BDL= Below Detectable Limit

RBSL= Risk Based Screening Levels

NE= Not Established

1,2 DCA = 1,2 Dichloroethane

J = Estimated value detected below reporting limit

CRAWFORD ENVIRONMENTAL SERVICES

Table 3

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352
Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Site Specific Target Level Summary

Well ID:	Item	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphth	TAA	TAME	TBA	Total	
MW-2	Initial	140.0	280.0	56.0	460.0	380.0	54.0	200.0	9.2	140.0	1719.2	
	SSTL	77.0	280.0	56.0	460.0	380.0	54.0	200.0	9.2	140.0	1656.2	
	Initial > SSTL	63.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	63.0	
	Subsequent	0.61	0.48	1.40	5.5	1.0	2.6	100.0	10.0	100.0	221.6	
	SSTL	77.0	280.0	56.0	460.0	380.0	54.0	200.0	9.2	140.0	1656.2	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MW-3	Initial	3000.0	7400.0	260.0	4500.0	3300.0	260.0	2000.0	340.0	1300.0	22360.0	
	SSTL	111.0	7400.0	260.0	4500.0	1976.0	108.0	2000.0	340.0	1300.0	17995.0	
	Initial > SSTL	2889.0	0.0	0.0	0.0	1324.0	152.0	0.0	0.0	0.0	4365.0	
	Subsequent	3000.0	8700.0	600.0	7200.0	720.0	360.0	2000.0	140.0	2000.0		
	SSTL	111.0	7400.0	260.0	4500.0	1976.0	108.0	2000.0	340.0	1300.0	17995.0	
	Subsequent > SSTL	2889.0	1300.0	340.0	2700.0	0.0	252.0	0.0	0.0	700.0	8181.0	
MW-5	Initial	50.0	50.0	50.0	30.5	946.0	50.0	1000.0	100.0	1000.0	3276.5	
	SSTL	50.0	50.0	50.0	30.5	946.0	50.0	1000.0	100.0	1000.0	3276.5	
	Initial > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Subsequent											Dry
	SSTL	50.0	50.0	50.0	30.5	946.0	50.0	1000.0	100.0	1000.0	3276.5	
	Subsequent > SSTL					Dry						
MW-9	Initial	4100.0	27000.0	2500.0	19000.0	150.0	960.0	1600.0	2000.0	20000.0	77310.0	
	SSTL	35.0	7134.0	2500.0	19000.0	150.0	68.0	809.0	270.0	15628.0	45594.0	
	Initial > SSTL	4065.0	19866.0	0.0	0.0	0.0	892.0	791.0	1730.0	4372.0	31716.0	
	Subsequent	520	6200	1100	8600	50	470	3000	500	5000	25440.0	
	SSTL	35.0	7134.0	2500.0	19000.0	150.0	68.0	809.0	270.0	15628.0	45594.0	
	Subsequent > SSTL	485.0	0.0	0.0	0.0	0.0	402.0	2191.0	0.0	0.0	3078.0	
MW-10	Initial	740.0	7800.0	2500.0	15000.0	2500.0	950.0	50000.0	5000.0	50000.0	134490.0	
	SSTL	24.0	7800.0	2500.0	15000.0	294.0	53.0	793.0	707.0	11042.0	38213.0	
	Initial > SSTL	716.0	0.0	0.0	0.0	2206.0	897.0	49207.0	4293.0	38958.0	96277.0	
	Subsequent	10	18	4.5	120	1	46	100	10	100		
	SSTL	24.0	7800.0	2500.0	15000.0	294.0	53.0	793.0	707.0	11042.0	38213.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MW-12	Initial	1.7	5.0	11.0	5.0	5.6	4.7	370.0	1.5	19.0	423.5	
	SSTL	1.7	5.0	11.0	5.0	5.6	4.7	370.0	1.5	19.0	423.5	
	Initial > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	
	Subsequent	110	2	53	25	1	10	1800	8.200	100	1.0	
	SSTL	1.7	5.0	11.0	5.0	5.6	4.7	370.0	1.5	19.0	423.5	
	Subsequent > SSTL	108.3	0.0	42.0	20.0	0.0	5.3	1430.0	6.7	81.0	1693.3	
MW-15	Initial					Free Product						
	SSTL	16.0	3198.0	3700.0	21680.0	730.0	45.0	492.0	199.0	5838.0	35898.0	
	Initial > SSTL											Free Product
	Subsequent											
	SSTL	16.0	3198.0	3700.0	21680.0	730.0	45.0	492.0	199.0	5838.0	35898.0	
	Subsequent > SSTL										0.0	

Table 3

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352
Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Site Specific Target Level Summary

Well ID:	Item	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphth	TAA	TAME	TBA	Total	
MW-17	Initial	1400.0	26000.0	2500.0	23000.0	1000.0	1000.0	9400.0	2000.0	20000.0	86300.0	
	SSTL	32.0	6631.0	2500.0	21680.0	1000.0	66.0	773.0	263.0	14286.0	47231.0	
	Initial > SSTL	1368.0	19369.0	0.0	1320.0	0.0	934.0	8627.0	1737.0	5714.0	39069.0	
	Subsequent	280	10000	660	13000	100	720	10000	1000.0	10000	45760.0	
	SSTL	32.0	6631.0	2500.0	21680.0	1000.0	66.0	773.0	263.0	14286.0	47231.0	
	Subsequent > SSTL	248.0	3369.0	0.0	0.0	0.0	654.0	9227.0	737.0	0.0	14235.0	
MW-18	Initial	1900.0	7200.0	630.0	8300.0	340.0	370.0	4900.0	70.0	5000.0	28710.0	
	SSTL	40.0	19326.0	3700.0	21680.0	4260.0	348.0	938.0	4989.0	54462.0	109743.0	
	Initial > SSTL	1860.0	0.0	0.0	0.0	0.0	22.0	3962.0	0.0	0.0	5844.0	
	Subsequent	990	5800	600	8900	93	260	10000	1000.00	10000	37643.0	
	SSTL	40.0	19326.0	3700.0	21680.0	4260.0	348.0	938.0	4989.0	54462.0	109743.0	
	Subsequent > SSTL	950.0	0.0	0.0	0.0	0.0	0.0	9062.0	0.0	0.0	10012.0	
MW-19	Initial	300.0	1800.0	490.0	12000.0	50.0	900.0	610.0	500.0	5000.0	21650.0	
	SSTL	54.0	11081.0	3700.0	21680.0	16080.0	86.0	1065.0	320.0	26814.0	80880.0	
	Initial > SSTL	246.0	0.0	0.0	0.0	0.0	814.0	0.0	180.0	0.0	1240.0	
	Subsequent	2900	19000	720	17000	100	1100	5400	1000.00	10000	57220.0	
	SSTL	54.0	11081.0	3700.0	21680.0	16080.0	86.0	1065.0	320.0	26814.0	80880.0	
	Subsequent > SSTL	2846.0	7919.0	0.0	0.0	0.0	1014.0	4335.0	680.0	0.0	16794.0	
MW-20	Initial	412.0	2930.0	728.0	8820.0	88.7	817.0	2850.0	200.0	2000.0	18845.7	
	SSTL	83.0	2930.0	728.0	8820.0	88.7	108.0	1403.0	200.0	2000.0	16360.7	
	Initial > SSTL	329.0	0.0	0.0	0.0	0.0	709.0	1447.0	0.0	0.0	2485.0	
	Subsequent	930.0	11000.0	1000.0	17000.0	50.0	1400.0	5000.0	500.0	5000.0	41880.0	
	SSTL	83.0	2930.0	728.0	8820.0	88.7	108.0	1403.0	200.0	2000.0	16360.7	
	Subsequent > SSTL	847.0	8070.0	272.0	8180.0	0.0	1292.0	3597.0	300.0	3000.0	25558.0	
MW-22	Initial	3300.0	17000.0	2900.0	20000.0	1000.0	640.0	6200.0	130.0	20000.0	71170.0	
	SSTL	90.0	17000.0	2900.0	20000.0	1000.0	112.0	1469.0	130.0	20000.0	62701.0	
	Initial > SSTL	3210.0	0.0	0.0	0.0	0.0	528.0	4731.0	0.0	0.0	8469.0	
	Subsequent	6400	20000	740	24000	100	1000	3900	1000.00	10000	67140.0	
	SSTL	90.0	17000.0	2900.0	20000.0	1000.0	112.0	1469.0	130.0	20000.0	62701.0	
	Subsequent > SSTL	6310.0	3000.0	0.0	4000.0	0.0	888.0	2431.0	870.0	0.0	17499.0	
MW-23	Initial	4200.0	16000.0	880.0	19000.0	120.0	1100.0	5900.0	500.0	5000.0	52700.0	
	SSTL	72.0	14880.0	3700.0	21680.0	33368.0	100.0	1279.0	359.0	38475.0	113913.0	
	Initial > SSTL	4128.0	1120.0	0.0	0.0	0.0	1000.0	4621.0	141.0	0.0	11010.0	
	Subsequent	2.9	8.5	1.5	190	1	52	100	10.000	100	465.9	
	SSTL	72.0	14880.0	3700.0	21680.0	33368.0	100.0	1279.0	359.0	38475.0	113913.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MW-25	Initial	5000.0	3000.0	1900.0	23000.0	5000.0	5000.0	100000.0	10000.0	100000.0	252900.0	
	SSTL	104.0	3000.0	1900.0	23000.0	5000.0	121.0	1612.0	415.0	60494.0	95646.0	
	Initial > SSTL	4896.0	0.0	0.0	0.0	0.0	4879.0	98388.0	9585.0	39506.0	157254.0	
	Subsequent	14	150	200	2600	1	340	390	10	100	3805.0	
	SSTL	104.0	3000.0	1900.0	23000.0	5000.0	121.0	1612.0	415.0	60494.0	95646.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	219.0	0.0	0.0	0.0	219.0	

Facility Name:	Handy Pantry #65 / University Mart & Clouds Chevron	UST	07584 / 07777 / 12352
Address:	2367 Taylor Street Columbia, South Carolina	Crawford Project No.	7.0547

Site Specific Target Level Summary

Well ID:	Item	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphth	TAA	TAME	TBA	Total	
MW-31	Initial	57.0	90.0	520.0	250.0	12.0	210.0	510.0	50.0	500.0	2199.0	
	SSTL	51.0	90.0	520.0	250.0	12.0	210.0	510.0	50.0	500.0	2193.0	
	Initial > SSTL	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	
	Subsequent	1.0	1.0	1.0	1.0	1.0	5.0	100.0	10.0	100.0	220.0	
	SSTL	51.0	90.0	520.0	250.0	12.0	210.0	510.0	50.0	500.0	2193.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MW-33	Initial	520.0	7200.0	1500.0	7200.0	500.0	410.0	3200.0	1000.0	10000.0	31530.0	
	SSTL	53.0	7200.0	1500.0	7200.0	500.0	410.0	1136.0	1000.0	10000.0	28999.0	
	Initial > SSTL	467.0	0.0	0.0	0.0	0.0	0.0	2064.0	0.0	0.0	2531.0	
	Subsequent	240	7500	1600	11000	50	430	5000	500.00	5000	31320.0	
	SSTL	53.0	7200.0	1500.0	7200.0	500.0	410.0	1136.0	1000.0	10000.0	28999.0	
	Subsequent > SSTL	187.0	300.0	100.0	3800.0	0.0	20.0	3864.0	0.0	0.0	8271.0	
MW-35	Initial	4400.0	2000.0	1700.0	3500.0	300.0	580.0	5300.0	51.0	5000.0	22831.0	
	SSTL	56.0	2000.0	1700.0	3500.0	300.0	542.0	1181.0	51.0	5000.0	14330.0	
	Initial > SSTL	4344.0	0.0	0.0	0.0	0.0	38.0	4119.0	0.0	0.0	8501.0	
	Subsequent	1900	2200	1100	3300	84	530	2300	28.000	100	11542.0	
	SSTL	56.0	2000.0	1700.0	3500.0	300.0	542.0	1181.0	51.0	5000.0	14330.0	
	Subsequent > SSTL	1844.0	200.0	0.0	0.0	0.0	0.0	1119.0	0.0	0.0	3163.0	
MW-37	Initial	240.0	34.0	270.0	240.0	11.0	220.0	850.0	50.0	44.0	1959.0	
	SSTL	90.0	34.0	270.0	240.0	11.0	220.0	850.0	50.0	44.0	1809.0	
	Initial > SSTL	150.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	150.0	
	Subsequent	3.5	1	1	5.4	1	5.5	77	10	100	204.4	
	SSTL	90.0	34.0	270.0	240.0	11.0	220.0	850.0	50.0	44.0	1809.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	56.0	56.0	
MW-39	Initial	13.0	1300.0	460.0	4200.0	250.0	330.0	5000.0	500.0	5000.0	17053.0	
	SSTL	13.0	1300.0	460.0	4200.0	250.0	330.0	1607.0	500.0	5000.0	13660.0	
	Initial > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	3393.0	0.0	0.0	3393.0	
	Subsequent	1	1	1	1	1	5	100	10	100	220.0	
	SSTL	13.0	1300.0	460.0	4200.0	250.0	330.0	1607.0	500.0	5000.0	13660.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MW-40	Initial	290.0	2900.0	650.0	7100.0	500.0	530.0	10000.0	1000.0	10000.0	32970.0	
	SSTL	113.0	2900.0	650.0	7100.0	500.0	530.0	1876.0	1000.0	10000.0	24669.0	
	Initial > SSTL	177.0	0.0	0.0	0.0	0.0	0.0	8124.0	0.0	0.0	8301.0	
	Subsequent	0.51	1	1	1	1	5	100	10	100	219.5	
	SSTL	113.0	2900.0	650.0	7100.0	500.0	530.0	1876.0	1000.0	10000.0	24669.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MW-41	Initial	260.0	1000.0	1100.0	1000.0	1000.0	420.0	20000.0	2000.0	20000.0	46780.0	
	SSTL	257.0	1000.0	1100.0	1000.0	1000.0	420.0	3234.0	2000.0	20000.0	30011.0	
	Initial > SSTL	3.0	0.0	0.0	0.0	0.0	0.0	16766.0	0.0	0.0	16769.0	
	Subsequent	1	1	1	1	1	5	100	10	100	220.0	
	SSTL	257.0	1000.0	1100.0	1000.0	1000.0	420.0	3234.0	2000.0	20000.0	30011.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Table 3

Facility Name: Handy Pantry #65 / University Mart & Clouds Chevron — UST — 07584 / 07777 / 12352

Address: 2367 Taylor Street Columbia, South Carolina — Crawford Project No. — 7.0547

Site Specific Target Level Summary

Well ID:	Item	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphth	TAA	TAME	TBA	Total	
MW-54	Initial	5.0	5.0	5.0	5.0	5.0	5.0	100.0	10.0	100.0	240.0	
	SSTL	5.0	5.0	5.0	5.0	5.0	5.0	110.0	2.0	14.0	156.0	
	Initial > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	86.0	94.0	
	Subsequent	1	1	1	1	1.5	5	100	10	100	220.5	
	SSTL	5.0	5.0	5.0	5.0	5.0	5.0	110.0	2.0	14.0	156.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	86.0	94.0	
MW-58	Initial	4.8	25.0	20.0	25.0	93.0	11.0	1800.0	15.0	100.0	2093.8	
	SSTL	4.8	25.0	20.0	25.0	51.0	11.0	279.0	15.0	100.0	530.8	
	Initial > SSTL	0.0	0.0	0.0	0.0	42.0	0.0	1521.0	0.0	0.0	0.0	
	Subsequent	1	1	1	1	1	5	100	10	100	0.0	
	SSTL	1.0	1.0	1.0	1.0	1.0	5.0	100.0	10.0	100.0	220.0	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
MW-65	Initial	420.0	398.0	234.0	262.0	16.4	168.0	648.0	50.0	500.0	2696.4	
	SSTL	326.0	398.0	234.0	262.0	16.4	168.0	648.0	50.0	500.0	2602.4	
	Initial > SSTL	94.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Unable to Locate - Paved Over
	Subsequent	Unable to Locate - Paved Over										
	SSTL	326.0	398.0	234.0	262.0	16.4	168.0	648.0	50.0	500.0	2602.4	
	Subsequent > SSTL	Unable to Locate - Paved Over										
MW-5AR	Initial	9200.0	1000.0	1400.0	4400.0	160.0	810.0	1300.0	1000.0	10000.0	29270.0	
	SSTL	83.0	1000.0	1400.0	4400.0	160.0	108.0	1300.0	381.0	10000.0	18832.0	
	Initial > SSTL	9117.0	0.0	0.0	0.0	0.0	702.0	0.0	619.0	0.0	10438.0	
	Subsequent	5200	10000	810	5300	100	580	10000	1000.00	10000	42990.0	
	SSTL	83.0	1000.0	1400.0	4400.0	160.0	108.0	1300.0	381.0	10000.0	18832.0	
	Subsequent > SSTL	5117.0	9000.0	0.0	900.0	0.0	472.0	8700.0	619.0	0.0	24808.0	
PW-1R	Initial	460.0	3400.0	320.0	9200.0	50.0	250.0	710.0	500.0	5000.0	19890.0	
	SSTL	58.0	11928.0	3700.0	21680.0	290.0	19298.0	1114.0	330.0	29344.0	87742.0	
	Initial > SSTL	402.0	0.0	0.0	0.0	0.0	0.0	0.0	170.0	0.0	572.0	
	Subsequent	830.0	20000.0	1200.0	14000.0	500.0	600.0	50000.0	5000.0	50000.0	142130.0	
	SSTL	58.0	11928.0	3700.0	21680.0	290.0	19298.0	1114.0	330.0	29344.0	87742.0	
	Subsequent > SSTL	772.0	8072.0	0.0	0.0	210.0	0.0	48886.0	4670.0	20656.0	62610.0	
DW-3	Initial	2600.0	19000.0	2200.0	10000.0	1000.0	620.0	3600.0	2000.0	20000.0	61020.0	
	SSTL	45.0	8470.0	2200.0	10000.0	1000.0	620.0	3600.0	2000.0	20000.0	47935.0	
	Initial > SSTL	2555.0	10530.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13085.0	
	Subsequent	4300	16000	2300	11000	230	800	2600	50.000	2000	39280.0	
	SSTL	45.0	8470.0	2200.0	10000.0	1000.0	620.0	3600.0	2000.0	20000.0	47935.0	
	Subsequent > SSTL	4255.0	7530.0	100.0	1000.0	0.0	180.0	0.0	0.0	0.0	13065.0	
SW-1	Initial	130.0	2.8	23.0	36.0	17.0	6.5	340.0	2.6	23.0	580.9	
	SSTL	5.0	2.8	23.0	36.0	17.0	6.5	240.0	2.6	23.0	355.9	
	Initial > SSTL	125.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	225.0	
	Subsequent	1	1	1	1	0.76	5	44	10	100	163.8	
	SSTL	5.0	2.8	23.0	36.0	17.0	6.5	240.0	2.6	23.0	355.9	
	Subsequent > SSTL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	77.0	84.4	

SSTL = Site Specific Target Level
RBSL= Risk Based Screening Levels
MtBE= Methyl Tert-Butyl Ether
n/a = not applicable
0.0 - Excluded from Calculations

CRAWFORD ENVIRONMENTAL SERVICES

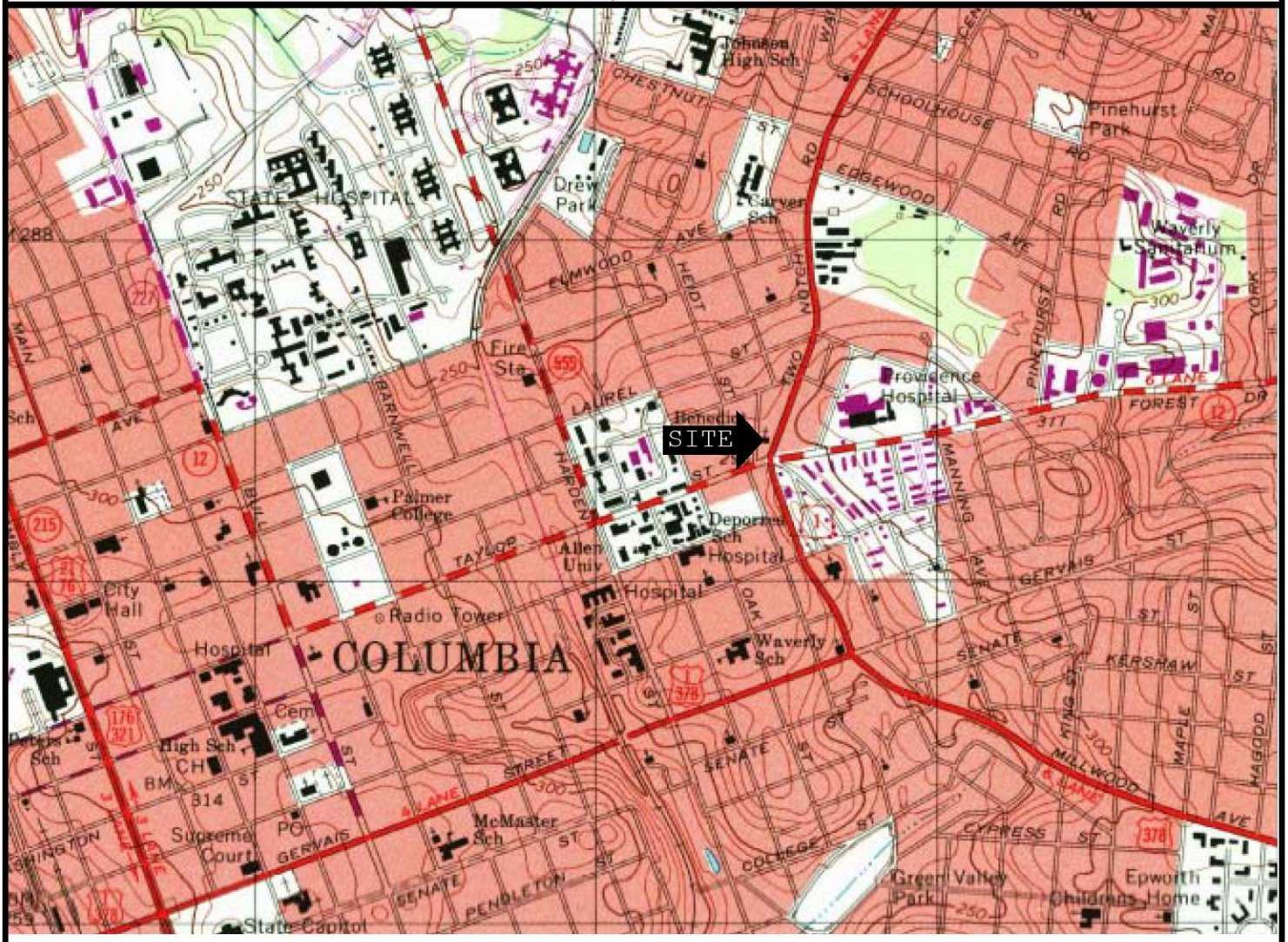
Initial>SSTL	325262.00
Subsequent>SSTL	209326.70
COC Reduction	35.64%

Figures

Figure 1: Topographic Map
Figure 2: Site Facility Base Map
Figure 3: Groundwater Chemicals of Concern Map
Figure 4: Groundwater Elevation Map

FIGURE 1

Site Location Map
Handy Pantry #65 / University Mart / Clouds Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina



CRAWFORD ENVIRONMENTAL SERVICES

15 Church Avenue, SW
Roanoke Virginia, 24011

540-343-6256 (office) 540-343-6259 (fax)

NORTH COLUMBIA, SOUTH CAROLINA

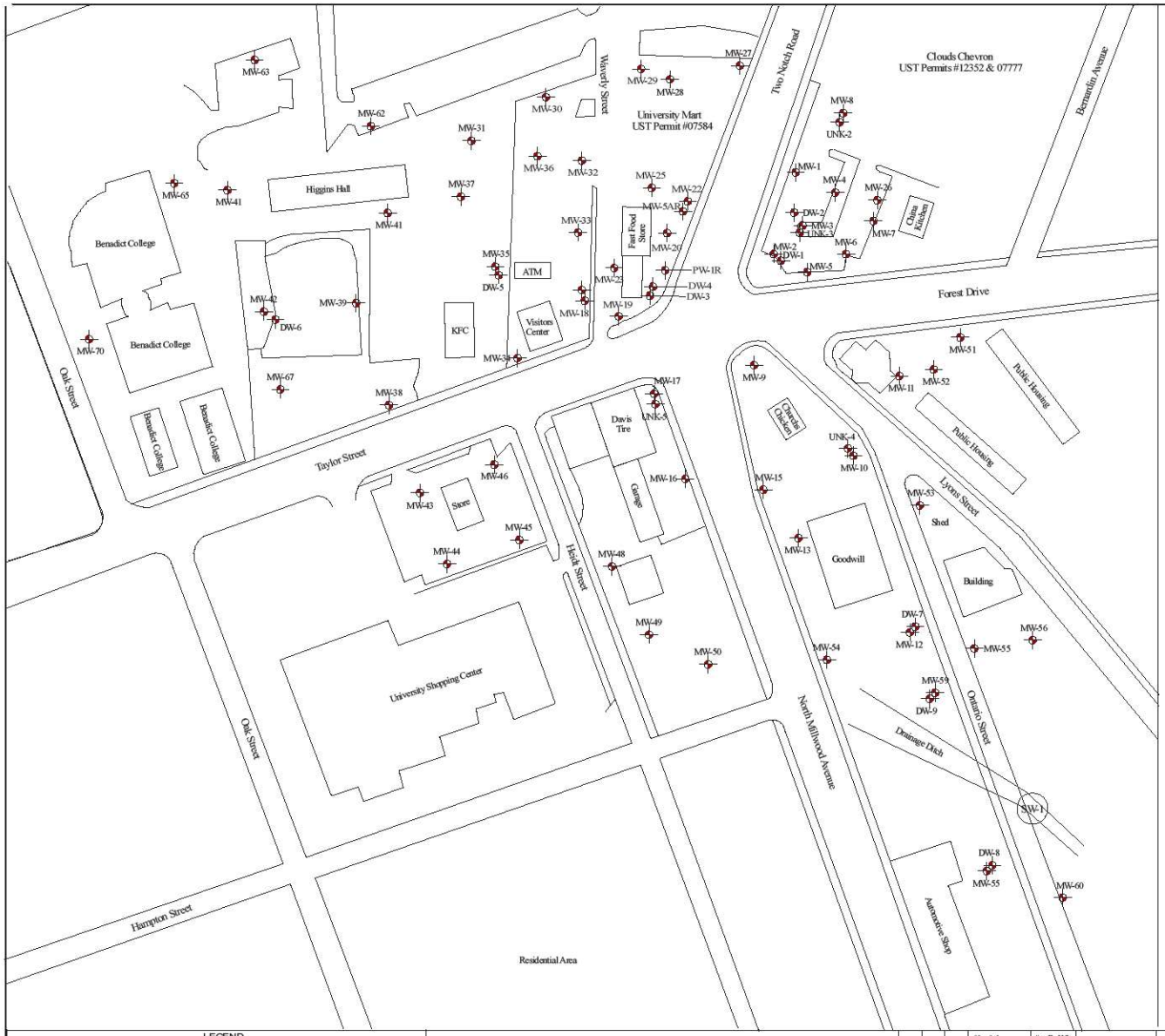
Source: U.S.G.S. Topographic Map of the Columbia North Quadrangle, Virginia, 7.5 Minute Series (1977, revised 1988)
Scale: 1:24,000 Contour Interval: 20 Feet
Vertical Datum: National Geodetic Vertical Datum 1929
Horizontal Datum: North American Datum1927

Project: CASE Report

Client: SCDHEC

CES Job #: 7.0547

Latitude:
034”00’42.72”N
Longitude:
081”01’00.13”W



LEGEND

Gasoline Dispenser	Air Sparge Well	Mail Boxes	Propane Tank
Diesel Dispenser	Future Recovery Well	Sign	Overhead Utility
Utility Pole	Flag Pole	Pay Phone	Metal Fence
Water Meter	Water Spigot	Air Conditioning Unit	Wooden Fence
Monitoring Well	Light Pole	Compressed Air	Manway
Storm Drain	Grease Trap	Waste Receptacle	UST Access

REV	BY	DATE

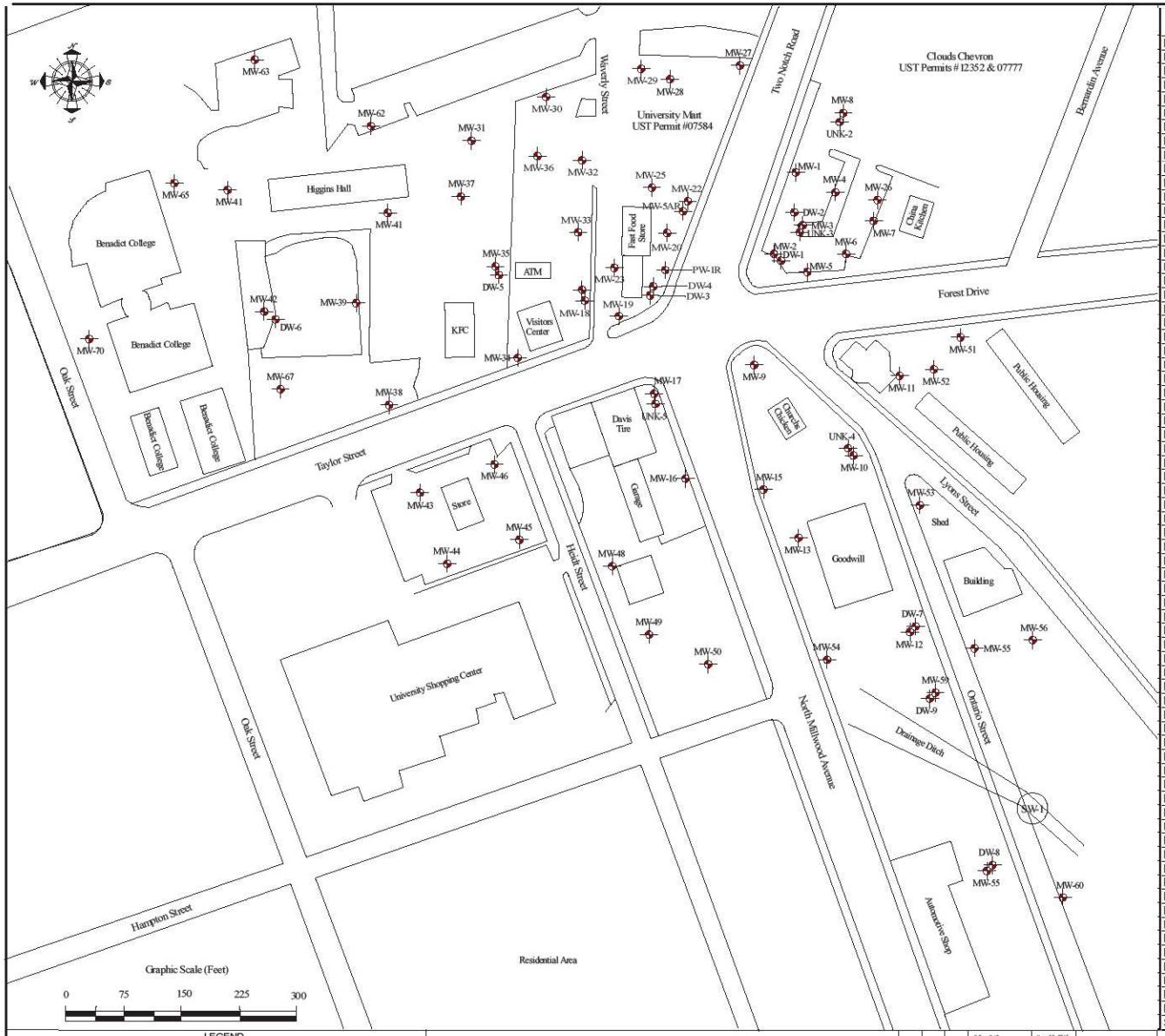
DR.: BJF Nov 30, 2015
CK.:
APP'D.:
SCALE: As Shown
CES PROJ. NO.: 7.0547

Corrective Action System Evaluation

CRAWFORD ENVIRONMENTAL SERVICES
15 Church Avenue, SW
Roanoke, Virginia 24011
540-343-6256
540-343-6259 (fax)

Figure Title
Site Plan
Handy Pantry/University Mart/Clouds Chevron
UST Permits # 07584 / 07777 / 12352
Intersection of Taylor and Two Notch Road
Columbia, South Carolina

DRAWING NUMBER	REV
Figure 2	0



Well ID:	Date:	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	MTBE	Naphthalene	TAA	TAME	TBA
MW-1	11/3/2015					Dry				
MW-2	11/4/2015	0.61	0.48	1.4	5.5	<1	2.6	<100	<10	<100
MW-3	11/4/2015	3000	8700	600	7200	720	360	<2000	140	<2000
MW-4	11/4/2015	<1	<1	<1	<1	1.9	<5	<100	<10	<100
MW-5	11/3/2015					Dry				
MW-6	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-7	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-8	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-9	11/4/2015	520	6200	1100	8600	<50	470	3000	<500	<5000
MW-10	11/4/2015	10	18	4.5	120	<1	46	<100	<10	<100
MW-11	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-12	11/4/2015	110	2	53	25	<1	10	1800	8.200	<100
MW-13	11/4/2015	<1	<1	<1	<1	<1	<1	<100	<10	<100
MW-15	11/3/2015					0.14-Feet of Free Product				
MW-16	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-17	11/4/2015	280	10000	660	13000	<100	720	<10000	<1000	<10000
MW-18	11/3/2015	990	5800	600	8900	93	260	<10000	<1000	<10000
MW-19	11/3/2015	2900	19000	720	17000	<100	1100	5400	<1000	<10000
MW-20	11/3/2015	930	11000	1000	17000	<50	1400	<5000	<500	<5000
MW-22	11/3/2015	6400	20000	740	24000	<100	1000	3900	<1000	<10000
MW-23	11/3/2015	2.9	8.5	1.5	190	<1	52	<100	<10	<100
MW-25	11/3/2015	14	150	200	2600	<1	340	390	<10	<100
MW-26	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-27	11/3/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-28	11/3/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-29	11/3/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-30	11/3/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-31	11/3/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-32	11/3/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-33	11/3/2015	240	7500	1600	11000	<50	430	<5000	<500	<5000
MW-34	11/3/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-35	11/3/2015	1900	2200	1100	3300	84	530	2300	28.000	<100
MW-36	11/3/2015	0.74	<1	1.6	<1	<1	16	<100	<10	<100
MW-37	11/3/2015	3.5	<1	<1	5.4	<1	5.5	77	<10	<100
MW-38	11/3/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-39	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-40	11/4/2015	0.51	<1	<1	<1	<1	<5	<100	<10	<100
MW-41	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-42	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-43	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-44	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-45	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-46	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-48	11/3/2015					Unable to Access - Locked Gate				
MW-49	11/3/2015					Unable to Access - Locked Gate				
MW-50	11/3/2015					Unable to Access - Locked Gate				
MW-51	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-53	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-54	11/4/2015	<1	<1	<1	<1	1.5	<5	<100	<10	<100
MW-55	11/4/2015	640	64	200	230	160	120	1200	11	56
MW-56	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-58	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-59	11/4/2015	1300	48	440	850	58	250	2800	19.000	<100
MW-60	11/3/2015					Unable to Locate				
MW-62	11/3/2015					0.52-Feet of Free Product				
MW-63	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-65	11/3/2015					Unable to Locate - Paved over				
MW-67	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-70	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
MW-5AR	11/3/2015	5200	10000	810	5300	<100	580	<10000	<1000	<10000
PW-1R	11/3/2015	830	20000	1200	14000	<500	600	<50000	<5000	<50000
DW-1	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-2	11/4/2015	<1	<1	<1	<1	8.7	<5	<100	<10	<100
DW-3	11/3/2015	4300	16000	2300	11000	230	800	2600	50.000	<2000
DW-4	11/3/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-5	11/4/2015	5900	490	200	1800	1100	170	4800	89.000	<100
DW-6	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-7	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-8	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
DW-9	11/4/2015	<1	<1	<1	<1	<1	<5	<100	<10	<100
SW-1	11/4/2015	<1	<1	<1	<1	<1	<5	44	<10	<100

LEGEND

Gasoline Dispenser	Air Sparge Well	Mail Boxes	Propane Tank
Diesel Dispenser	Future Recovery Well	Sign	Overhead Utility
Utility Pole	Flag Pole	Pay Phone	Metal Fence
Water Meter	Water Spigot	Air Conditioning Unit	Wooden Fence
Monitoring Well	Light Pole	Compressed Air	Manway
Storm Drain	Grease Trap	Waste Receptacle	UST Access

DR.: DJF Nov 30 2015
CK.:
APP'D.:
SCALE: As Shown
CES PROJ. NO.: 7.0547

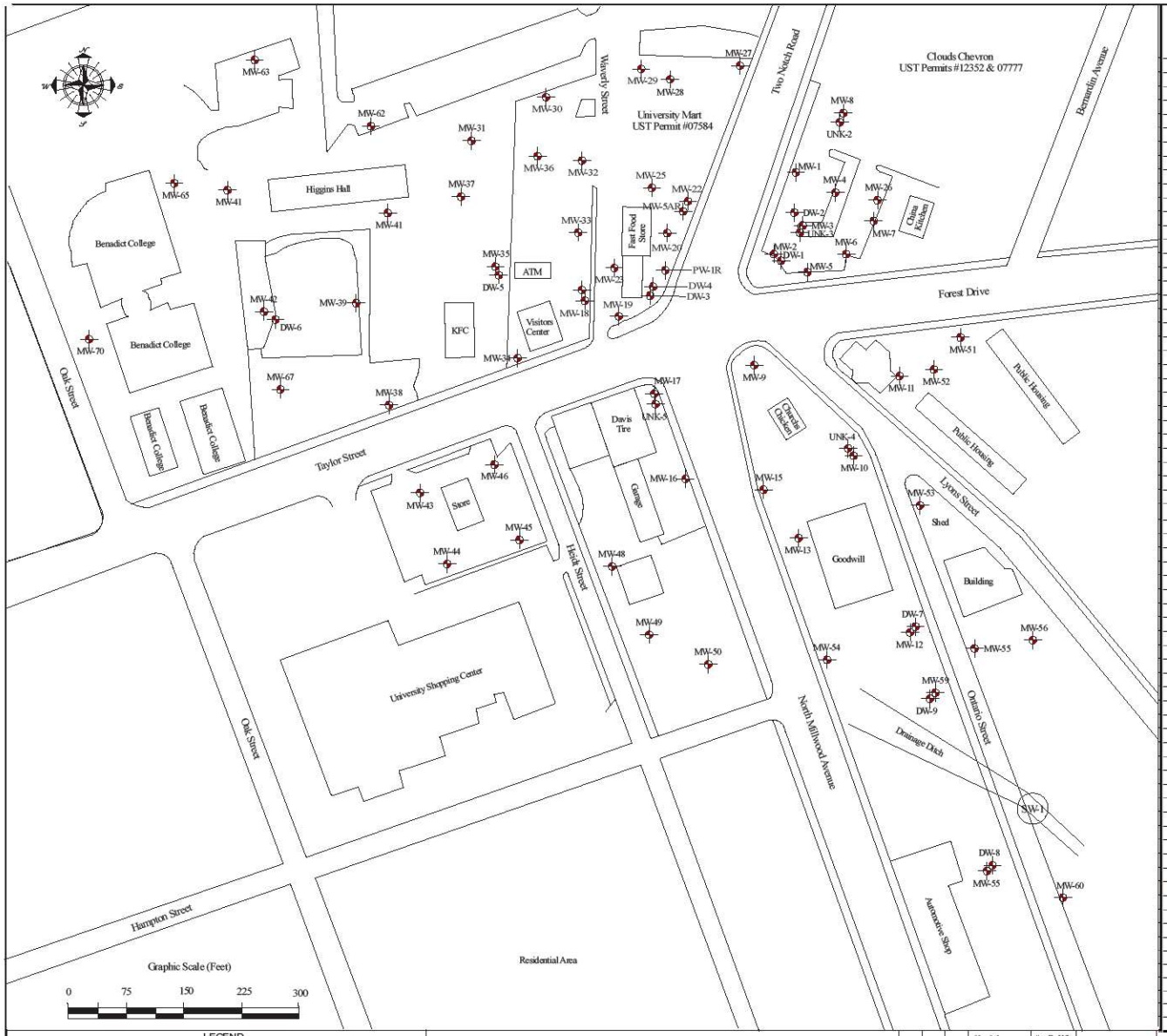
REV	BY	DATE

Corrective Action System Evaluation

CRAWFORD ENVIRONMENTAL SERVICES
15 Church Avenue, SW
Roanoke, Virginia 24011
540-343-6256
540-343-6259 (fax)

Figure Title
Concentrations of Concern Map
Handy Pantry/University Mart/Clouds Chevron
UST Permits # 07584 / 07777 / 12352
Intersection of Taylor and Two Notch Road
Columbia, South Carolina

DRAWING NUMBER: Figure 3
REV: 0



Monitor Well	Top of Casing (ft)	Date Measured	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Product Elevation (ft)	Groundwater Elevation (ft)
MW-1	93.89	11/3/2015	NA	DRY	NA	NA	DRY
MW-2	94.70	11/3/2015	NA	20.32	NA	NA	74.38
MW-3	94.45	11/3/2015	NA	23.29	NA	NA	71.16
MW-4	94.85	11/3/2015	NA	20.35	NA	NA	74.50
MW-5	95.26	11/3/2015	NA	DRY	NA	NA	DRY
MW-6	94.96	11/3/2015	NA	21.21	NA	NA	73.75
MW-7	95.93	11/3/2015	NA	21.79	NA	NA	74.14
MW-8	94.79	11/3/2015	NA	19.19	NA	NA	75.60
MW-9	92.30	11/3/2015	NA	20.04	NA	NA	72.26
MW-10	85.98	11/3/2015	NA	14.58	NA	NA	71.40
MW-11	88.46	11/3/2015	NA	17.16	NA	NA	71.30
MW-12	72.80	11/3/2015	NA	3.15	NA	NA	69.65
MW-13	80.44	11/3/2015	NA	9.82	NA	NA	70.62
MW-15	86.44	11/3/2015	14.51	14.64	0.13	71.93	71.80
MW-16	88.19	11/3/2015	NA	16.29	NA	NA	72.17
MW-17	92.45	11/3/2015	NA	20.47	NA	NA	71.98
MW-18	94.81	11/3/2015	NA	22.28	NA	NA	72.53
MW-19	93.96	11/3/2015	NA	21.81	NA	NA	72.15
MW-20	94.12	11/3/2015	NA	20.18	NA	NA	73.94
MW-22	94.25	11/3/2015	NA	19.01	NA	NA	75.24
MW-23	94.43	11/3/2015	NA	21.95	NA	NA	72.48
MW-25	93.09	11/3/2015	NA	17.73	NA	NA	75.36
MW-26	95.96	11/3/2015	NA	21.06	NA	NA	74.90
MW-27	91.40	11/3/2015	NA	11.21	NA	NA	80.19
MW-28	91.46	11/3/2015	NA	13.08	NA	NA	78.38
MW-29	91.09	11/3/2015	NA	13.19	NA	NA	77.90
MW-30	92.77	11/3/2015	NA	17.43	NA	NA	75.34
MW-31	95.20	11/3/2015	NA	22.53	NA	NA	72.67
MW-32	92.87	11/3/2015	NA	19.12	NA	NA	73.75
MW-33	93.84	11/3/2015	NA	21.48	NA	NA	72.36
MW-34	94.77	11/3/2015	NA	21.52	NA	NA	73.25
MW-35	93.71	11/3/2015	NA	21.37	NA	NA	72.34
MW-36	93.89	11/3/2015	NA	21.36	NA	NA	72.53
MW-37	93.78	11/3/2015	NA	21.36	NA	NA	72.42
MW-38	95.53	11/3/2015	NA	22.89	NA	NA	72.64
MW-39	96.19	11/3/2015	NA	23.79	NA	NA	72.40
MW-40	95.69	11/3/2015	NA	23.43	NA	NA	72.26
MW-41	94.85	11/3/2015	NA	22.77	NA	NA	72.08
MW-42	95.81	11/3/2015	NA	23.46	NA	NA	72.35
MW-43	95.15	11/3/2015	NA	22.21	NA	NA	72.94
MW-44	94.57	11/3/2015	NA	20.33	NA	NA	74.24
MW-45	92.51	11/3/2015	NA	19.45	NA	NA	73.06
MW-46	94.50	11/3/2015	NA	21.84	NA	NA	72.66
MW-48	89.95	11/3/2015	Unable to Access - Locked Gate				
MW-49	88.18	11/3/2015	Unable to Access - Locked Gate				
MW-50	84.09	11/3/2015	Unable to Access - Locked Gate				
MW-51	93.91	11/3/2015	NA	21.87	NA	NA	72.04
MW-53	79.60	11/3/2015	NA	8.49	NA	NA	71.11
MW-54	77.58	11/3/2015	NA	9.83	NA	NA	67.75
MW-55	71.22	11/3/2015	NA	1.19	NA	NA	70.03
MW-56	76.39	11/3/2015	NA	6.4	NA	NA	69.99
MW-58	76.37	11/3/2015	NA	4.52	NA	NA	71.85
MW-59	68.02	11/3/2015	NA	5.04	NA	NA	62.98
MW-60	67.94	11/3/2015	Unable to Locate				
MW-62	94.05	11/3/2015	22.15	22.67	0.52	71.90	71.38
MW-63	94.65	11/3/2015	NA	24.05	NA	NA	70.60
MW-65	94.04	11/3/2015	Unable to Locate				
MW-67	96.10	11/3/2015	NA	23.52	NA	NA	72.58
MW-70	95.49	11/3/2015	NA	22.89	NA	NA	72.60
MW-5AR	94.18	11/3/2015	NA	16.39	NA	NA	77.79
PW-1R	93.75	11/3/2015	NA	21.43	NA	NA	72.32
DW-1	94.66	11/3/2015	NA	46.28	NA	NA	48.38
DW-2	94.02	11/3/2015	NA	43.07	NA	NA	50.95
DW-3	93.75	11/3/2015	NA	21.29	NA	NA	72.46
DW-4	93.79	11/3/2015	NA	43.34	NA	NA	50.45
DW-5	93.74	11/3/2015	NA	42.89	NA	NA	50.85
DW-6	95.90	11/3/2015	NA	44.59	NA	NA	51.31
DW-7	72.79	11/3/2015	NA	22.97	NA	NA	49.82
DW-8	68.63	11/3/2015	NA	19.43	NA	NA	49.20
DW-9	76.47	11/3/2015	NA	23.62	NA	NA	52.85

LEGEND

Gasoline Dispenser	Air Sparge Well	Mail Boxes	Propane Tank
Diesel Dispenser	Future Recovery Well	Sign	Overhead Utility
Utility Pole	Flag Pole	Pay Phone	Metal Fence
Water Meter	Water Spigot	Air Conditioning Unit	Wooden Fence
Monitoring Well	Light Pole	Compressed Air	Manway
Storm Drain	Grease Trap	Waste Receptacle	UST Access

DR.: BJF Nov 30, 2015
CK.:
APP'D.:
SCALE: As Shown
CES PROJ. NO.: 7.0547

REV | BY | DATE

Corrective Action System Evaluation

CRAWFORD ENVIRONMENTAL SERVICES
15 Church Avenue, SW
Roanoke, Virginia 24011
540-343-6256
540-343-6259 (fax)

Figure Title
Groundwater Elevation Map
Handy Pantry/University Mart/Clouds Chevron
UST Permits # 07584 / 07777 / 12352
Intersection of Taylor and Two Notch Road
Columbia, South Carolina

DRAWING NUMBER: Figure 4
REV: 0

APPENDIX A

Purge Water Disposal Manifest

CRAWFORD
ENVIRONMENTAL
SERVICES

November 30, 2015

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management
Underground Storage Tank Management Division
2600 Bull Street
Columbia, SC 29201

Re: Purge Water Report- Development & Groundwater Sampling
Handy Pantry #65/University Mart & Cloud's Chevron
Intersection of Taylor Street and Two Notch Road
Columbia, South Carolina
UST Permit # 07584 / 07777 / 12352

Dear Project Manager;

The letter presents the certification that Crawford Environmental Services (CES) treated purge waters referenced below with a granular activated carbon unit prior to discharge. This was completed in accordance with the conditions laid out in the "Proposed Conditions for use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater" produced by the SCDHEC Bureau of Water.

A total of 208 gallons were treated on November 3 and 4, 2014 for the above referenced facility.

A record of treatment is available upon request. If you have any questions or comments please feel free to contact us at 540-798-5068.

Sincerely,

Daniel Fisher
Project Manager
Crawford Environmental Services

APPENDIX B

Groundwater Sampling Data Sheets

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-4-15	Site ID #: 07584	Site Name: Clads Chevron	Field Personnel: WH, MP, BE
County: Richland	Project Manager: Dan Fisher	General Weather Conditions: Overcast	Ambient Air Temp (°F): 65

Quality Assurance

Meter Name	Serial #:	Calibration: Yes, midday			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: (Y) or N	pH 7.0: (Y) or N	pH 10.0: (Y) or N	S.C.: (Y) or N
YSI 55 (Dissolved Oxygen)		(Y) or N			
LaMotte (Turbidity)		0.0 NTU: (Y) or N	1.0 NTU: (Y) or N	10.0 NTU: (Y) or N	

Well Information

Well ID: MW-2	Well Diameter (ft.): 2"	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: ___Bailer ___Pump
X MW ___IW ___RW ___Other_____ ___Private WSW ___Public WSW	Screened Interval (ft.): 20 to 30		Total Well Depth (TWD) (ft.): 30
Depth to Free Product (DFP) (ft.): N/A	Depth to Groundwater (DGW) (ft.): 20.32		Free Product Thickness (ft.): N/A
Length of water column (LWC = TWD – DGW) (ft.):	1 casing volume (CV = LWC x C) (gals.):		3 casing volumes (3 x CV) (gals.):

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0							
Time (military)	1345							
~~PH (s.u.)~~	6.15							
Specific Conductivity (µS/cm)	100.0							
Water Temperature (°C)	24.3							
Turbidity (NTU)	65.2							
Dissolved Oxygen (mg/L)	1.62							

Sampling Data

Sampled By:	Sampling Time: 1345	Duplicate: Y or N	If yes, Duplicate Time:

Notes: No Purge

Signature: [signature]

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-4-15	Site ID #: 07584	Site Name: Clouds Chevron	Field Personnel: LH, MP, BE
County: Richland	Project Manager: Dan Fisher	General Weather Conditions: Overcast	Ambient Air Temp (°F): 65

Quality Assurance

Meter Name	Serial #:	Calibration: Yes, Midday			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: (Y) or N	pH 7.0: (Y) or N	pH 10.0: (Y) or N	S.C.: (Y) or N
YSI 55 (Dissolved Oxygen)		(Y) or N			
LaMotte (Turbidity)		0.0 NTU: (Y) or N	1.0 NTU: (Y) or N	10.0 NTU: (Y) or N	

Well Information

Well ID: MW-3	Well Diameter (ft.): 2"	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: X Bailer ___Pump
X MW ___IW ___RW ___Other___ ___Private WSW ___Public WSW	Screened Interval (ft.): 19 to 29		Total Well Depth (TWD) (ft.): 29
Depth to Free Product (DFP) (ft.): N/A	Depth to Groundwater (DGW) (ft.): 20.15		Free Product Thickness (ft.): N/A
Length of water column (LWC = TWD – DGW) (ft.):	1 casing volume (CV = LWC x C) (gals.):		3 casing volumes (3 x CV) (gals.):

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0							
Time (military)	1350							
~~PH (s.u.)~~	5.71							
Specific Conductivity (µS/cm)	130.2							
Water Temperature (°C)	25.5							
Turbidity (NTU)	65.3							
Dissolved Oxygen (mg/L)	0.90							

Sampling Data

Sampled By:	Sampling Time: 1350	Duplicate: Y or (N)	If yes, Duplicate Time:

Notes: _____

Signature: _____

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-4-15	Site ID #: 07584	Site Name: Clouds Chevron	Field Personnel: BE, MP, WP
County: Richland	Project Manager: Dan Fisher	General Weather Conditions: Overcast	Ambient Air Temp (°F): 65

Quality Assurance

Meter Name	Serial #:	Calibration: Yes, Monday			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: Y or N	pH 7.0: Y or N	pH 10.0: Y or N	S.C.: Y or N
YSI 55 (Dissolved Oxygen)		Y or N			
LaMotte (Turbidity)		0.0 NTU: Y or N	1.0 NTU: Y or N	10.0 NTU: Y or N	

Well Information

Well ID: MW-4	Well Diameter (ft.): 2"	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: X Bailer ___Pump
X MW ___IW ___RW ___Other___ ___Private WSW ___Public WSW	Screened Interval (ft.): 18 to 28		Total Well Depth (TWD) (ft.): 28
Depth to Free Product (DFP) (ft.): N/A	Depth to Groundwater (DGW) (ft.): 20.35		Free Product Thickness (ft.): N/A
Length of water column (LWC = TWD – DGW) (ft.):	1 casing volume (CV = LWC x C) (gals.):		3 casing volumes (3 x CV) (gals.):

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0							
Time (military)	1340							
~~PH (s.u.)~~	7.94							
Specific Conductivity (µS/cm)	201.2							
Water Temperature (°C)	24.5							
Turbidity (NTU)	154							
Dissolved Oxygen (mg/L)	2.10							

Sampling Data

Sampled By:	Sampling Time: 1340	Duplicate: Y or (N)	If yes, Duplicate Time:

Notes: _____

Signature: _____

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-3-15	Site ID #: 07854	Site Name: Cloud's Chevron	Field Personnel: BE, MP, WH
County: Richland	Project Manager: Dan Fisher	General Weather Conditions: Overcast	Ambient Air Temp (°F): 65°

Quality Assurance

Meter Name	Serial #:	Calibration: No			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: Y or N	pH 7.0: Y or N	pH 10.0: Y or N	S.C.: Y or N
YSI 55 (Dissolved Oxygen)		Y or N			
LaMotte (Turbidity)		0.0 NTU: Y or N	1.0 NTU: Y or N	10.0 NTU: Y or N	

Well Information

Well ID: MW-5AR	Well Diameter (ft.): 2"	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: X Bailer ___Pump
X MW ___IW ___RW ___Other___ ___Private WSW ___Public WSW	Screened Interval (ft.): 18 to 28		Total Well Depth (TWD) (ft.): 28
Depth to Free Product (DFP) (ft.): N/A	Depth to Groundwater (DGW) (ft.): 16.39		Free Product Thickness (ft.): N/A
Length of water column (LWC = TWD – DGW) (ft.): 11.64	1 casing volume (CV = LWC x C) (gals.): 1.86		3 casing volumes (3 x CV) (gals.): 5.59

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)		DRY						
Time (military)	850	855						
PH (s.u.)	6.57	6.56						
Specific Conductivity (µS/cm)	242.1	491.0						
Water Temperature (°C)	23.9	23.6						
Turbidity (NTU)	6.15	over						
Dissolved Oxygen (mg/L)	1.55	1.81						

Sampling Data

Sampled By: WH, BE	Sampling Time: 855	Duplicate: Y or (N)	If yes, Duplicate Time:

Notes: No Bolts, Dry on 1st Vol

Signature:

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-4-15	Site ID #: 07584	Site Name: Cloud's Chevron	Field Personnel: BE, MP, WH
County: Richland	Project Manager: Dan Fisher	General Weather Conditions: Overcast	Ambient Air Temp (°F): 65

Quality Assurance

Meter Name	Serial #:	Calibration: Yes, Midday			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: Y or N	pH 7.0: Y or N	pH 10.0: Y or N	S.C.: Y or N
YSI 55 (Dissolved Oxygen)		Y or N			
LaMotte (Turbidity)		0.0 NTU: Y or N	1.0 NTU: Y or N	10.0 NTU: Y or N	

Well Information

Well ID: MW-6	Well Diameter (ft.): 2"	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: X Bailer ___Pump
X MW ___IW ___RW ___Other___ ___Private WSW ___Public WSW	Screened Interval (ft.): 20 to 30		Total Well Depth (TWD) (ft.): 30
Depth to Free Product (DFP) (ft.): N/A	Depth to Groundwater (DGW) (ft.): 21.21		Free Product Thickness (ft.): N/A
Length of water column (LWC = TWD – DGW) (ft.):	1 casing volume (CV = LWC x C) (gals.):		3 casing volumes (3 x CV) (gals.):

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0							
Time (military)	1330							
~~PH (s.u.)~~	6.17							
Specific Conductivity (µS/cm)	151							
Water Temperature (°C)	24.5							
Turbidity (NTU)	63.4							
Dissolved Oxygen (mg/L)	1.73							

Sampling Data

Sampled By:	Sampling Time: 1330	Duplicate: Y or N	If yes, Duplicate Time:

Notes: No Purge

Signature:

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-4-15	Site ID #: 07584	Site Name: Clouds Chevron	Field Personnel: BE, MP, WH
County: Richland	Project Manager: Don Fisher	General Weather Conditions: Overcast	Ambient Air Temp (°F): 65

Quality Assurance

Meter Name	Serial #:	Calibration: Yes, military			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: (Y) or N	pH 7.0: (Y) or N	pH 10.0: (Y) or N	S.C.: (Y) or N
YSI 55 (Dissolved Oxygen)		(Y) or N			
LaMotte (Turbidity)		0.0 NTU: (Y) or N	1.0 NTU: (Y) or N	10.0 NTU: (Y) or N	

Well Information

Well ID: MW-7	Well Diameter (ft.): 2	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: X Bailer ___Pump
X MW ___IW ___RW ___Other___ ___Private WSW ___Public WSW	Screened Interval (ft.): 20 to 30		Total Well Depth (TWD) (ft.): 30
Depth to Free Product (DFP) (ft.): N/A	Depth to Groundwater (DGW) (ft.): 21.79		Free Product Thickness (ft.): N/A
Length of water column (LWC = TWD – DGW) (ft.):	1 casing volume (CV = LWC x C) (gals.):		3 casing volumes (3 x CV) (gals.):

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0							
Time (military)	1325							
~~PH (s.u.)~~	6.29							
Specific Conductivity (µS/cm)	255.6							
Water Temperature (°C)	22.5							
Turbidity (NTU)	244							
Dissolved Oxygen (mg/L)	1.94							

Sampling Data

Sampled By:	Sampling Time: 1325	Duplicate: Y or (N)	If yes, Duplicate Time:

Notes: _____

Signature: _____

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-4-15	Site ID #: 07584	Site Name: Clouds Chevron	Field Personnel: BE, MP, WH
County: Richland	Project Manager: Dan Fisher	General Weather Conditions: Overcast	Ambient Air Temp (°F): 65

Quality Assurance

Meter Name	Serial #	Calibration: Yes, Morning			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: (Y) or N	pH 7.0: (Y) or N	pH 10.0: (Y) or N	S.C.: (Y) or N
YSI 55 (Dissolved Oxygen)		(Y) or N			
LaMotte (Turbidity)		0.0 NTU: (Y) or N	1.0 NTU: (Y) or N	10.0 NTU: (Y) or N	

Well Information

Well ID: MW-9	Well Diameter (ft.): 2	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: X Bailer ___ Pump
X MW ___ IW ___ RW ___ Other ___ ___ Private WSW ___ Public WSW		Screened Interval (ft.): 20 to 30	Total Well Depth (TWD) (ft.): 30
Depth to Free Product (DFP) (ft.): N/A	Depth to Groundwater (DGW) (ft.): 20.04		Free Product Thickness (ft.): N/A
Length of water column (LWC = TWD – DGW) (ft.):	1 casing volume (CV = LWC x C) (gals.):		3 casing volumes (3 x CV) (gals.):

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0							
Time (military)	1010							
PH (s.u.)	5.95							
Specific Conductivity (µS/cm)	231.0							
Water Temperature (°C)	24.3							
Turbidity (NTU)	39.2							
Dissolved Oxygen (mg/L)	1.93							

Sampling Data

Sampled By:	Sampling Time: 1010	Duplicate: Y or (N)	If yes, Duplicate Time:

Notes: No Purge

Signature: [signature]

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-4-15	Site ID #: 07584	Site Name: Clads Chevron	Field Personnel: BE, MP, LW
County: Richland	Project Manager: Dan Fisher	General Weather Conditions: Overcast	Ambient Air Temp (°F): 65

Quality Assurance

Meter Name	Serial #:	Calibration: Yes, Holiday			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: (Y) or N	pH 7.0: (Y) or N	pH 10.0: (Y) or N	S.C.: (Y) or N
YSI 55 (Dissolved Oxygen)		(Y) or N			
LaMotte (Turbidity)		0.0 NTU: (Y) or N	1.0 NTU: (Y) or N	10.0 NTU: (Y) or N	

Well Information

Well ID: MW-8	Well Diameter (ft.): 2"	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: X Bailer ___ Pump
X MW ___ IW ___ RW ___ Other_____ ___ Private WSW ___ Public WSW		Screened Interval (ft.): 18.5 to 28	Total Well Depth (TWD) (ft.): 28
Depth to Free Product (DFP) (ft.): N/A	Depth to Groundwater (DGW) (ft.): 19.99		Free Product Thickness (ft.): N/A
Length of water column (LWC = TWD – DGW) (ft.):	1 casing volume (CV = LWC x C) (gals.):		3 casing volumes (3 x CV) (gals.):

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0							
Time (military)	1320							
~~PH (s.u.)~~	6.47							
Specific Conductivity (µS/cm)	48.4							
Water Temperature (°C)	25.1							
Turbidity (NTU)	25.1							
Dissolved Oxygen (mg/L)	1.51							

Sampling Data

Sampled By:	Sampling Time: 1320	Duplicate: Y or (N)	If yes, Duplicate Time:

Notes: No Purge

Signature: [signature]

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-4-15	Site ID #: 07584	Site Name: Clouds Chevron	Field Personnel: BE, MP, WH
County: Richland	Project Manager: Dan Fisher	General Weather Conditions: Overcast	Ambient Air Temp (°F): 65

Quality Assurance

Meter Name	Serial #	Calibration: Yes, Morning			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: (Y) or N	pH 7.0: (Y) or N	pH 10.0: (Y) or N	S.C.: (Y) or N
YSI 55 (Dissolved Oxygen)		(Y) or N			
LaMotte (Turbidity)		0.0 NTU: (Y) or N	1.0 NTU: (Y) or N	10.0 NTU: (Y) or N	

Well Information

Well ID: MW-10	Well Diameter (ft.): 2	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: ___Bailer ___Pump
X MW ___IW ___RW ___Other_____ ___Private WSW ___Public WSW		Screened Interval (ft.): 18 to 28	Total Well Depth (TWD) (ft.): 28
Depth to Free Product (DFP) (ft.): N/A	Depth to Groundwater (DGW) (ft.): 14.58		Free Product Thickness (ft.): N/A
Length of water column (LWC = TWD – DGW) (ft.):	1 casing volume (CV = LWC x C) (gals.):		3 casing volumes (3 x CV) (gals.):

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0							
Time (military)	1015							
PH (s.u.)	6.30							
Specific Conductivity (µS/cm)	100.8							
Water Temperature (°C)	24.5							
Turbidity (NTU)	42.1							
Dissolved Oxygen (mg/L)	2.29							

Sampling Data

Sampled By:	Sampling Time: 1015	Duplicate: Y or (N)	If yes, Duplicate Time:

Notes: _____

Signature: D. Lee

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-4-15	Site ID #: 07584	Site Name: Clouds Chevron		Field Personnel: WH, MP, BE	
County: Richland	Project Manager: Dan Fisher	General Weather Conditions: Overcast		Ambient Air Temp (°F): 65	

Quality Assurance

Meter Name	Serial #:	Calibration: Yes, Mornings			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: (Y) or N	pH 7.0: (Y) or N	pH 10.0 (Y) or N	S.C (Y) or N
YSI 55 (Dissolved Oxygen)		(Y) or N			
LaMotte (Turbidity)		0.0 NTU: (Y) or N	1.0 NTU: (Y) or N	10.0 NTU: (Y) or N	

Well Information

Well ID: MW-11	Well Diameter (ft.): 2	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: ___Bailer ___Pump
X MW ___IW ___RW ___Other_____ ___Private WSW ___Public WSW		Screened Interval (ft.): to Unknown	Total Well Depth (TWD) (ft.): 30
Depth to Free Product (DFP) (ft.): N/A	Depth to Groundwater (DGW) (ft.): 17.16		Free Product Thickness (ft.): N/A
Length of water column (LWC = TWD – DGW) (ft.):	1 casing volume (CV = LWC x C) (gals.):		3 casing volumes (3 x CV) (gals.):

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0							
Time (military)	1100							
PH (s.u.)	8.22							
Specific Conductivity (µS/cm)	105.2							
Water Temperature (°C)	22.5							
Turbidity (NTU)	~~618~~ 58.5							
Dissolved Oxygen (mg/L)	2.00							

Sampling Data

Sampled By:	Sampling Time: 1160	Duplicate: Y or (N)	If yes, Duplicate Time:

Notes: _____

Signature: _____

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-4-15	Site ID #: 07584	Site Name: Clouds Chevron	Field Personnel: BE, MP, WH
County: Richland	Project Manager: Dan Fisher	General Weather Conditions: Overcast	Ambient Air Temp (°F): 65

Quality Assurance

Meter Name	Serial #:	Calibration: Yes, Morning			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: (Y) or N	pH 7.0: (Y) or N	pH 10.0: (Y) or N	S.C.: (Y) or N
YSI 55 (Dissolved Oxygen)		(Y) or N			
LaMotte (Turbidity)		0.0 NTU: (Y) or N	1.0 NTU: (Y) or N	10.0 NTU: (Y) or N	

Well Information

Well ID: MW-12	Well Diameter (ft.):	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: X Bailer ___ Pump
X MW ___ IW ___ RW ___ Other_____ ___ Private WSW ___ Public WSW		Screened Interval (ft.): to Unknown	Total Well Depth (TWD) (ft.): 24.65
Depth to Free Product (DFP) (ft.): N/A	Depth to Groundwater (DGW) (ft.): 3.15		Free Product Thickness (ft.): N/A
Length of water column (LWC = TWD – DGW) (ft.):	1 casing volume (CV = LWC x C) (gals.):		3 casing volumes (3 x CV) (gals.):

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0							
Time (military)	1115							
PH (s.u.)	7.62							
Specific Conductivity (µS/cm)	306.9							
Water Temperature (°C)	23.9							
Turbidity (NTU)	156							
Dissolved Oxygen (mg/L)	2.23							

Sampling Data

Sampled By:	Sampling Time: 1115	Duplicate: Y or (N)	If yes, Duplicate Time:

Notes: _____

Signature: _____

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-4-15	Site ID #: 07584	Site Name: Clouds Chevron	Field Personnel: MP, BE, WH
County: Richland	Project Manager: Dan Fisher	General Weather Conditions: Overcast	Ambient Air Temp (°F): 65

Quality Assurance

Meter Name	Serial #:	Calibration: Yes, Morning			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: Y or N	pH 7.0: Y or N	pH 10.0: Y or N	S.C.: Y or N
YSI 55 (Dissolved Oxygen)		Y or N			
LaMotte (Turbidity)		0.0 NTU: Y or N	1.0 NTU: Y or N	10.0 NTU: Y or N	

Well Information

Well ID: MW-13	Well Diameter (ft.):	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: ___Bailer ___Pump
___MW ___IW ___RW ___Other_____ ___Private WSW ___Public WSW		Screened Interval (ft.): to	Total Well Depth (TWD) (ft.):
Depth to Free Product (DFP) (ft.):	Depth to Groundwater (DGW) (ft.):		Free Product Thickness (ft.):
Length of water column (LWC = TWD – DGW) (ft.):	1 casing volume (CV = LWC x C) (gals.):		3 casing volumes (3 x CV) (gals.):

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0							
Time (military)	1030							
PH (s.u.)	6.63							
Specific Conductivity (µS/cm)	106.5							
Water Temperature (°C)	24.4							
Turbidity (NTU)	24.6							
Dissolved Oxygen (mg/L)	2.83							

Sampling Data

Sampled By:	Sampling Time: 1030	Duplicate: Y or N	If yes, Duplicate Time:

Notes: No Purge

Signature: _____

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-3-15	Site ID #: 07584	Site Name: Cloud's Chevron	Field Personnel: BE, WH, MP
County: Richland	Project Manager: Dan Fisher	General Weather Conditions: Overcast	Ambient Air Temp (°F): 67°

Quality Assurance

Meter Name	Serial #	Calibration: Yes. Morning + Midday			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: (Y) or N	pH 7.0: (Y) or N	pH 10.0: (Y) or N	S.C.: (Y) or N
YSI 55 (Dissolved Oxygen)		(Y) or N			
LaMotte (Turbidity)		0.0 NTU: (Y) or N	1.0 NTU: (Y) or N	10.0 NTU: (Y) or N	

Well Information

Well ID: MW-15	Well Diameter (ft.): 2"	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: X Bailer ___ Pump
X MW ___ IW ___ RW ___ Other_____ ___ Private WSW ___ Public WSW		Screened Interval (ft.): 15 to 25	Total Well Depth (TWD) (ft.): 25
Depth to Free Product (DFP) (ft.): 14.51	Depth to Groundwater (DGW) (ft.): 14.63		Free Product Thickness (ft.): 0.12
Length of water column (LWC = TWD – DGW) (ft.):	1 casing volume (CV = LWC x C) (gals.):		3 casing volumes (3 x CV) (gals.):

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)								
PH (s.u.)								
Specific Conductivity (µS/cm)								
Water Temperature (°C)								
Turbidity (NTU)								
Dissolved Oxygen (mg/L)								

Sampling Data

Sampled By: Not Sampled	Sampling Time:	Duplicate: Y or N	If yes, Duplicate Time:

Notes: Free Product

Signature: [signature]

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-4-15	Site ID #: 07584	Site Name: Clouds Chevron	Field Personnel: BE, MP, WH
County: Richland	Project Manager: Dan Fisher	General Weather Conditions: Overcast	Ambient Air Temp (°F): 65

Quality Assurance

Meter Name	Serial #:	Calibration: Yes, Morning			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: (Y) or N	pH 7.0: (Y) or N	pH 10.0: (Y) or N	S.C.: (Y) or N
YSI 55 (Dissolved Oxygen)		(Y) or N			
LaMotte (Turbidity)		0.0 NTU: (Y) or N	1.0 NTU: (Y) or N	10.0 NTU: (Y) or N	

Well Information

Well ID: MW-16	Well Diameter (ft.): 2"	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: ___Bailer ___Pump
X MW ___IW ___RW ___Other_____ ___Private WSW ___Public WSW	Screened Interval (ft.): 15 to 25		Total Well Depth (TWD) (ft.): 25
Depth to Free Product (DFP) (ft.): N/A	Depth to Groundwater (DGW) (ft.): 16.29		Free Product Thickness (ft.): N/A
Length of water column (LWC = TWD – DGW) (ft.):	1 casing volume (CV = LWC x C) (gals.):		3 casing volumes (3 x CV) (gals.):

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0							
Time (military)	940							
PH (s.u.)	6.37							
Specific Conductivity (µS/cm)	256.9							
Water Temperature (°C)	25.1							
Turbidity (NTU)	99.6							
Dissolved Oxygen (mg/L)	1.92							

Sampling Data

Sampled By:	Sampling Time: 940	Duplicate: Y or (N)	If yes, Duplicate Time:

Notes: No Purge

Signature: T. [illegible]

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-4-15	Site ID #: 07584	Site Name: Clouds Chevron	Field Personnel: BE, MP, WH
County: Richland	Project Manager: Dan Fisher	General Weather Conditions: Overcast	Ambient Air Temp (°F): 65

Quality Assurance

Meter Name	Serial #:	Calibration: Yes, Morning			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: (Y) or N	pH 7.0: (Y) or N	pH 10.0: (Y) or N	S.C.: (Y) or N
YSI 55 (Dissolved Oxygen)		(Y) or N			
LaMotte (Turbidity)		0.0 NTU: (Y) or N	1.0 NTU: (Y) or N	10.0 NTU: (Y) or N	

Well Information

Well ID: MW-17	Well Diameter (ft.): 2"	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: ___Bailer ___Pump
___MW ___IW ___RW ___Other_____ ___Private WSW ___Public WSW		Screened Interval (ft.): 20 to 30	Total Well Depth (TWD) (ft.): 30
Depth to Free Product (DFP) (ft.): N/A	Depth to Groundwater (DGW) (ft.): 20.47		Free Product Thickness (ft.): N/A
Length of water column (LWC = TWD – DGW) (ft.):	1 casing volume (CV = LWC x C) (gals.):		3 casing volumes (3 x CV) (gals.):

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0							
Time (military)	935							
PH (s.u.)	5.62							
Specific Conductivity (µS/cm)	394.5							
Water Temperature (°C)	29.0							
Turbidity (NTU)	29.5							
Dissolved Oxygen (mg/L)	2.69							

Sampling Data

Sampled By:	Sampling Time: 935	Duplicate: Y or (N)	If yes, Duplicate Time:

Notes: No Purge

Signature: [signature]

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-3-15	Site ID #: 07584	Site Name: Cloud's Chevron	Field Personnel: WH, BE, MP
County: Richland	Project Manager: Dan Fisher	General Weather Conditions: Overcast	Ambient Air Temp (°F): 70

Quality Assurance

Meter Name	Serial #:	Calibration: Yes, Morning			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: Y or N	pH 7.0 or N	pH 10.0 or N	S.C. or N
YSI 55 (Dissolved Oxygen)		or N			
LaMotte (Turbidity)		0.0 NTU: or N	1.0 NTU: or N	10.0 NTU: or N	

Well Information

Well ID: MW-18	Well Diameter (ft.): 2"	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: X Bailer ___Pump
___MW ___IW ___RW ___Other_____ ___Private WSW ___Public WSW		Screened Interval (ft.): 20 to 30	Total Well Depth (TWD) (ft.): 30
Depth to Free Product (DFP) (ft.): N/A	Depth to Groundwater (DGW) (ft.): 22.13		Free Product Thickness (ft.): N/A
Length of water column (LWC = TWD – DGW) (ft.):	1 casing volume (CV = LWC x C) (gals.):		3 casing volumes (3 x CV) (gals.):

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)	1050							
PH (s.u.)	5.39							
Specific Conductivity (µS/cm)	254.3							
Water Temperature (°C)	24.3							
Turbidity (NTU)	185							
Dissolved Oxygen (mg/L)	3.22							

Sampling Data

Sampled By: WH, BE	Sampling Time: 1050	Duplicate: Y or (N)	If yes, Duplicate Time:

Notes: No Purge, No Bolts, Missing Cap

Signature: [signature]

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-3-15	Site ID #: 07584	Site Name: Cloud's Chevron	Field Personnel: BE MP WH	
County: Richland	Project Manager: Dan Fisher	General Weather Conditions: Overcast	Ambient Air Temp (°F): 65-0	

Quality Assurance

Meter Name	Serial #:	Calibration: No			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: Y or N	pH 7.0: Y or N	pH 10.0: Y or N	S.C.: Y or N
YSI 55 (Dissolved Oxygen)		Y or N			
LaMotte (Turbidity)		0.0 NTU: Y or N	1.0 NTU: Y or N	10.0 NTU: Y or N	

Well Information

Well ID: MW-19	Well Diameter (ft.): 2"	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: X Bailer ___ Pump
X MW ___ IW ___ RW ___ Other_____ ___ Private WSW ___ Public WSW	Screened Interval (ft.): 20 to 30		Total Well Depth (TWD) (ft.): 30
Depth to Free Product (DFP) (ft.): N/A	Depth to Groundwater (DGW) (ft.): 21.81		Free Product Thickness (ft.): N/A
Length of water column (LWC = TWD – DGW) (ft.):	1 casing volume (CV = LWC x C) (gals.):		3 casing volumes (3 x CV) (gals.):

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)	825							
~~PH (s.u.)~~	6.13							
Specific Conductivity (µS/cm)	388.7							
Water Temperature (°C)	24.3							
Turbidity (NTU)	4.14							
Dissolved Oxygen (mg/L)	1.61							

Sampling Data

Sampled By: BE, MP, WH	Sampling Time: 825	Duplicate: Y or (N)	If yes, Duplicate Time:

Notes: No Purge, No Bolts, Pad Cracked

Signature: T. [illegible]

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-3-15	Site ID #: 07584	Site Name: Cloud's Chevron	Field Personnel: BE, MP, WH
County: Richland	Project Manager: Dan Fisher	General Weather Conditions: Overcast	Ambient Air Temp (°F): 65°

Quality Assurance

Meter Name	Serial #:	Calibration: No			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: Y or N	pH 7.0: Y or N	pH 10.0: Y or N	S.C.: Y or N
YSI 55 (Dissolved Oxygen)		Y or N			
LaMotte (Turbidity)		0.0 NTU: Y or N	1.0 NTU: Y or N	10.0 NTU: Y or N	

Well Information

Well ID: MW-20	Well Diameter (ft.): 2"	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: X Bailer ___ Pump
X MW ___ IW ___ RW ___ Other_____ ___ Private WSW ___ Public WSW	Screened Interval (ft.): 20 to 30		Total Well Depth (TWD) (ft.): 30
Depth to Free Product (DFP) (ft.): N/A	Depth to Groundwater (DGW) (ft.): 20.18		Free Product Thickness (ft.): N/A
Length of water column (LWC = TWD – DGW) (ft.):	1 casing volume (CV = LWC x C) (gals.):		3 casing volumes (3 x CV) (gals.):

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)	905							
PH (s.u.)	6.57							
Specific Conductivity (µS/cm)	299.9							
Water Temperature (°C)	24.2							
Turbidity (NTU)	2.64							
Dissolved Oxygen (mg/L)	5.10							

Sampling Data

Sampled By:	Sampling Time: 905	Duplicate: Y or (N)	If yes, Duplicate Time:

Notes: No Purge, No Bolts, Cracked Pad, Water in vault

Signature: [signature]

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-3-15	Site ID #: 07584	Site Name: Cloud's Chevron	Field Personnel: BE, MP, WH	
County: Richland	Project Manager: Dan Fister	General Weather Conditions: Overcast		Ambient Air Temp (°F): 65°

Quality Assurance

Meter Name	Serial #:	Calibration: NO			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: Y or N	pH 7.0: Y or N	pH 10.0: Y or N	S.C.: Y or N
YSI 55 (Dissolved Oxygen)		Y or N			
LaMotte (Turbidity)		0.0 NTU: Y or N	1.0 NTU: Y or N	10.0 NTU: Y or N	

Well Information

Well ID: MW-22	Well Diameter (ft.): 2"	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: X Bailer ___Pump
X MW ___IW ___RW ___Other_____ ___Private WSW ___Public WSW		Screened Interval (ft.): 20 to 30	Total Well Depth (TWD) (ft.): 30
Depth to Free Product (DFP) (ft.): N/A	Depth to Groundwater (DGW) (ft.): 19.01		Free Product Thickness (ft.): N/A
Length of water column (LWC = TWD – DGW) (ft.): 10.99	1 casing volume (CV = LWC x C) (gals.): 1.76		3 casing volumes (3 x CV) (gals.): 5.28

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)		1.76	3.52	5.27				
Time (military)	910	915	917	920				
~~PH (s.u.)~~	6.03	6.11	6.15	6.12				
Specific Conductivity (µS/cm)	313.9	396.6	377.4	383.9				
Water Temperature (°C)	23.9	23.9	23.9	23.9				
Turbidity (NTU)	2.47	343	304	352				
Dissolved Oxygen (mg/L)	3.28	2.33	3.24	3.12				

Sampling Data

Sampled By: BE, WH	Sampling Time: 0920	Duplicate: Y or (N)	If yes, Duplicate Time:

Notes: _____

Signature: _____

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-3-15	Site ID #: 07584	Site Name: CLOUD'S CHEVRON	Field Personnel: BE, MP, WH
County: Richland	Project Manager: Da Fisher	General Weather Conditions: Overcast	Ambient Air Temp (°F): 65°

Quality Assurance

Meter Name	Serial #:	Calibration: NO			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: Y or N	pH 7.0: Y or N	pH 10.0: Y or N	S.C.: Y or N
YSI 55 (Dissolved Oxygen)		Y or N			
LaMotte (Turbidity)		0.0 NTU: Y or N	1.0 NTU: Y or N	10.0 NTU: Y or N	

Well Information

Well ID: MW-23	Well Diameter (ft.): 2"	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: X Bailer ___Pump
X MW ___IW ___RW ___Other___ ___Private WSW ___Public WSW		Screened Interval (ft.): 20 to 30	Total Well Depth (TWD) (ft.): 30
Depth to Free Product (DFP) (ft.): N/A	Depth to Groundwater (DGW) (ft.): 21.95		Free Product Thickness (ft.): N/A
Length of water column (LWC = TWD – DGW) (ft.):	1 casing volume (CV = LWC x C) (gals.):		3 casing volumes (3 x CV) (gals.):

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)	815							
PH (s.u.)	6.46							
Specific Conductivity (µS/cm)	192.0							
Water Temperature (°C)	23.6							
Turbidity (NTU)	8.09							
Dissolved Oxygen (mg/L)	1.94							

Sampling Data

Sampled By: BE, WH	Sampling Time: 815	Duplicate: Y or (N)	If yes, Duplicate Time:

Notes: No Purge, Pad Broken

Signature: T.

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-3-15	Site ID #: 07584	Site Name: CLOUD's CHEVRON	Field Personnel: BE, MP, WH
County: Richland	Project Manager: Dan Fisher	General Weather Conditions: Overcast	Ambient Air Temp (°F): 65°

Quality Assurance

Meter Name	Serial #:	Calibration: Yes. AM Test			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: (Y) or N	pH 7.0: (Y) or N	pH 10.0: (Y) or N	S.C.: (Y) or N
YSI 55 (Dissolved Oxygen) ORP		(Y) or N 210			
LaMotte (Turbidity)		0.0 NTU: (Y) or N	1.0 NTU: (Y) or N	10.0 NTU: (Y) or N	

Well Information

Well ID: MW-25	Well Diameter (ft.): 2"	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: X Bailer ___Pump
X MW ___IW ___RW ___Other___ ___Private WSW ___Public WSW	Screened Interval (ft.): to N/A		Total Well Depth (TWD) (ft.): 25.6
Depth to Free Product (DFP) (ft.): N/A	Depth to Groundwater (DGW) (ft.): 17.76		Free Product Thickness (ft.): N/A
Length of water column (LWC = TWD – DGW) (ft.):	1 casing volume (CV = LWC x C) (gals.):		3 casing volumes (3 x CV) (gals.):

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)								
Time (military)	800							
~~PH (s.u.)~~	6.66							
Specific Conductivity (µS/cm)	469.5							
Water Temperature (°C)	21.1							
Turbidity (NTU)	5.65							
Dissolved Oxygen (mg/L)	5.10							

Sampling Data

Sampled By: WH, BE	Sampling Time: 805	Duplicate: Y or (N)	If yes, Duplicate Time:

Notes: No Purge, No Bolts, Pad Damaged

Signature: T. Hill

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-4-15	Site ID #: 07584	Site Name: Clouds Chevron	Field Personnel: BE, MP, WH
County: Richland	Project Manager: Dan Fisher	General Weather Conditions: Overcast	Ambient Air Temp (°F): 65

Quality Assurance

Meter Name	Serial #:	Calibration: Yes, Midday			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: (Y) or N	pH 7.0: (Y) or N	pH 10.0: (Y) or N	S.C.: (Y) or N
YSI 55 (Dissolved Oxygen)		(Y) or N			
LaMotte (Turbidity)		0.0 NTU: (Y) or N	1.0 NTU: (Y) or N	10.0 NTU: (Y) or N	

Well Information

Well ID: MW-26	Well Diameter (ft.): 2"	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: X Bailer ___Pump
X MW ___IW ___RW ___Other___ ___Private WSW ___Public WSW	Screened Interval (ft.): to UNKNOWN		Total Well Depth (TWD) (ft.): 30
Depth to Free Product (DFP) (ft.): N/A	Depth to Groundwater (DGW) (ft.): 21.06		Free Product Thickness (ft.): N/A
Length of water column (LWC = TWD – DGW) (ft.):	1 casing volume (CV = LWC x C) (gals.):		3 casing volumes (3 x CV) (gals.):

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0							
Time (military)	1345							
PH (s.u.)	5.37							
Specific Conductivity (µS/cm)	99.3							
Water Temperature (°C)	24.2							
Turbidity (NTU)	27.0							
Dissolved Oxygen (mg/L)	2.32							

Sampling Data

Sampled By:	Sampling Time: 1345	Duplicate: Y or (N)	If yes, Duplicate Time:

Notes: No Purge

Signature: [signature]

D H E C

Underground Storage Tank Management Division
Field Data Information Sheet – Sampling

Site Information

Date: 11-3-15	Site ID #: 07584	Site Name: Cloud's Chevron	Field Personnel: BE, MP, WH
County: Richland	Project Manager: Dan Fisher	General Weather Conditions: Overcast	Ambient Air Temp (°F): 70°

Quality Assurance

Meter Name	Serial #:	Calibration: No			
YSI 63 (pH, Specific Conductivity, Temperature)		pH 4.0: Y or N	pH 7.0: Y or N	pH 10.0: Y or N	S.C.: Y or N
YSI 55 (Dissolved Oxygen)		Y or N			
LaMotte (Turbidity)		0.0 NTU: Y or N	1.0 NTU: Y or N	10.0 NTU: Y or N	

Well Information

Well ID: MW-27	Well Diameter (ft.): 2"	Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	Method of Purging/Sample Collection: X Bailer ___Pump
X MW ___IW ___RW ___Other___ ___Private WSW ___Public WSW		Screened Interval (ft.): 15 to 30	Total Well Depth (TWD) (ft.): 30
Depth to Free Product (DFP) (ft.): NA	Depth to Groundwater (DGW) (ft.): 11.21		Free Product Thickness (ft.): N/A
Length of water column (LWC = TWD – DGW) (ft.): 18.79	1 casing volume (CV = LWC x C) (gals.): 3.00		3 casing volumes (3 x CV) (gals.): 9.00

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)		3	6	9				
Time (military)	1000	1005	1010	1015				
PH (s.u.)	6.03	6.03	5.98	5.71				
Specific Conductivity (µS/cm)	640	765	695	710				
Water Temperature (°C)	24.4	24.2	23.4	22.9				
Turbidity (NTU)	237	934	Over	Over				
Dissolved Oxygen (mg/L)	4.34	5.50	5.30	4.80				

Sampling Data

Sampled By: BE, WH	Sampling Time: 1015	Duplicate: Y or (N)	If yes, Duplicate Time:

Notes: No Bails

Signature: T. [illegible]