MAR-01-2011 11:51 SURVEILLANCE MK 301 2252193695 P.02

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
FIELD INTERVIEW FORM

AGENCY INTEREST#: 175084 INSPECTION DATE: 2/21/11 TIME OF ARRIVAL: 5:00am

ALTERNATE ID#: (ID Type/Number) DEPARTURE DATE: 2/22/11 TIME OF DEPARTURE: 3:30pm

FACILITY NAME: Triple G Express - Incident Site PH #: 504-731-2847

LOCATION: Baton Rouge, LA I-10 MS River Bridge

PARISH NAME: East Baton Rouge

RECEIVING STREAM (BASIN/SUBSEGMENT):

MAILING ADDRESS: 800 St. George Ave. (Street/P.O. Box) Jefferson (City) LA (State) 70121 (ZIP)

FACILITY REPRESENTATIVE: Michael Maniscalco TITLE: Director of Safety

FACILITY REPRESENTATIVE PHONE NUMBER:

NAME, TITLE, ADDRESS and TELEPHONE of RESPONSIBLE OFFICIAL (if different from above):

INSPECTION TYPE: I IZ 9505 PROGRAM INVOLVED: AIR WASTE WATER OTHER Spill

INSPECTOR'S OBSERVATIONS: (e.g. AREAS AND EQUIPMENT INSPECTED, PROBLEMS, DEFICIENCIES, REMARKS, VERBAL COMMITMENTS FROM FACILITY REPRESENTATIVES)

On 2/21/11, I responded to an overturned semi-trailer truck on the Hwy 1 to I-10 on-ramp over the Port of Greater Baton Rouge. The semi spilled the diesel contents of its saddle tanks down the ramp and underneath the bridge to the ground below. Clean up took place on the bridge after the truck was cleared. I later contacted Cortney White of the Port of Greater Baton Rouge, he requested that any diesel that went on the ground be cleaned. Frank Piediscalzo of United States Environmental Services did the clean up on

AREAS OF CONCERN:

REGULATION	EXPLANATION	CORRECTED?
		YES NO
		YES NO

PHOTOS TAKEN: ☒ YES ☐ NO SAMPLES TAKEN: ☐ YES ☒ NO (Attach Chain-of-custody)

RECEIVED BY: SIGNATURE: Michael Maniscalco

PRINT NAME: Michael Maniscalco

(NOTE: SIGNATURE DOES NOT NECESSARILY INDICATE AGREEMENT WITH INSPECTOR'S STATED OBSERVATIONS)

INSPECTOR(S): [signature]

CROSS REFERENCE:

ATTACHMENTS:

REVIEWER:

NOTE: The information contained on this form reflects only the preliminary observations of the inspector(s). It should not be interpreted as a final determination by the Department of Environmental Quality or any of its officers or personnel as to any matter, including, but not limited to, a determination of compliance or lack thereof by the facility operator with any requirements of statutes regulations or permits. Each day of non-compliance constitutes a separate violation of the regulations and/or the Louisiana Environmental Quality Act.

REVISED: 02/03/2003

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
ADDITIONAL OBSERVATIONS (cont'd)

AGENCY INTEREST#: 175084 ALTERNATE ID#: _____ INSPECTION DATE: 2/22/11

FACILITY NAME: Triple G Express - Incident Site

INSPECTOR OBSERVATIONS CONT'd:

2/22/11, and put the contaminated dirt into barrels for landfill. I inspected the final clean up when it was finished and took pictures of the remediated site.

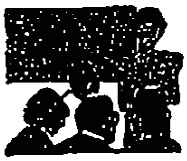
3/1/2011

INITIALS OF RECEIPT

REVISED: 05/01/2000

PAGE 2 OF 2

TOTAL P.03



FAX COVER SHEET

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
602 N. Fifth Street
Baton Rouge, LA 70802
Phone: 225-219-3600 / Fax: 225-219-3695

DATE: 3/1/11

FROM [redacted] Michael Maniscalco Triple C Express

PHONE: 504-731-2647 FAX: 504-731-2631

TO [redacted] Danny Burgard

PHONE: 225-219-3040 FAX: 225-219-3695

SUBJECT: Feild Interview Form

2 PAGES TO FOLLOW

COMMENTS: Please sign and print on the 1st page then initial the 2nd page

Your Signed Copies Returned
Thx M. Maniscalco

RECEIVED
MAR 01 2011
DEPT. OF ENVIRONMENTAL QUALITY

AI#: 175084	Location: I-10
Incident#: T129505	City: Port Allen
Photographer: Danny Burgard	Parish: West Baton Rouge

AI#:175084	Date:2/21/2011
Description: Diesel spilled on ramp	

AI#:175084	Date: 2/21/2011
Description: Overturned Semi	

AI#: 175084	Location: I-10
Incident#: T129505	City: Port Allen
Photographer: Danny Burgard	Parish: West Baton Rouge

AI#:175084	Date: 2/21/2011
Description: Spilled Diesel	

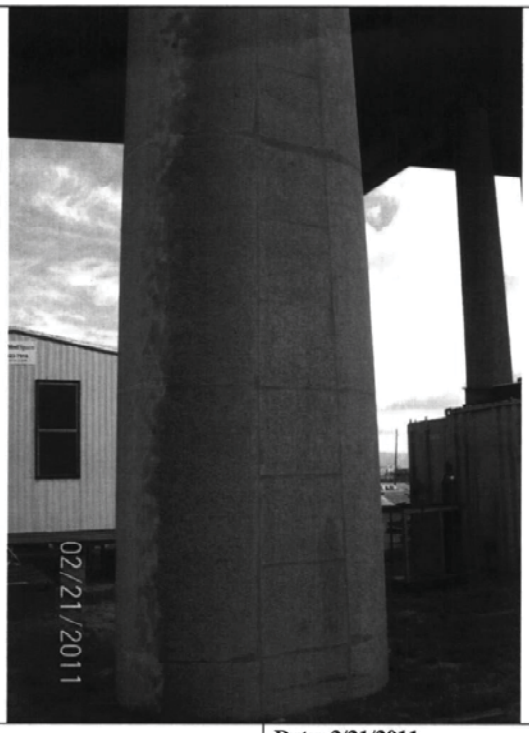
AI#:175084	Date: 2/21/2011
Description: Impacted Area	

AI#: 175084	Location: I-10
Incident#: T129505	City: Port Allen
Photographer: Danny Burgard	Parish: West Baton Rouge

AI#:175084	Date: 2/21/2011
Description: Sanding the On-Ramp	

AI#:175084	Date: 2/21/2011
Description: Sanded On-Ramp	

AI#: 175084	Location: I-10
Incident#: T129505	City: Port Allen
Photographer: Danny Burgard	Parish: West Baton Rouge



AI#:175084	Date: 2/21/2011
Description: Spilled Diesel	

AI#:175084	Date: 2/21/2011
Description: Spilled Diesel	

AI#: 175084	Location: I-10
Incident#: T129505	City: Port Allen
Photographer: Danny Burgard	Parish: West Baton Rouge

AI#:175084	Date: 2/21/2011
Description: Ground Impacted	

AI#:175084	Date:2/22/2011
Description: Remediated Area	

AI#: 175084	Location: I-10
Incident#: T129505	City: Port Allen
Photographer: Danny Burgard	Parish: West Baton Rouge

AI#:175084	Date: 2/22/2011
Description: Remediated Area	

AI#:175084	Date: 2/22/2011
Description: Contaminated Dirt in Barrels.	

PM 2/24/11

Section 3925

TRIPLE G EXPRESS, INC

PO Box 10485
Jefferson LA 70181
Office 504-731-2841
Fax 504-731-2831
Email: tgmike@bellsouth.net

02/24/2011

§3925. Written Notification

1. The name, address, telephone number, Agency Interest (AI) number (number assigned by the department) if applicable, and any other applicable identification numbers of the person, company, or other party who is filing the written report, and specific identification that the report is the written follow-up report required by this Section;

   Triple G Express, Inc, 800 St. George Ave Jefferson LA 70121

   Written report prepared by Michael A. Maniscalco, Safety Director, 504-731-2841 xtn 117

2. The time and date of prompt notification, the state official contacted when reporting, the name of the person making that notification, and identification of the site or facility, vessel, transport vehicle, or storage area from which the unauthorized discharge occurred;

   Triple G Express, Inc was notified of the accident on February 21, 2011 at approximately 5:39am. LA State Police, LADEQ, and various other State agencies had already been notified and responded to the scene. Through direct conversation with Danny Burgard, LADEQ, no further notification was required. The release occurred from a ruptured fuel tank on a tractor-truck what overturned. The tractor truck was a 1993 Freightliner vin# 1FUYDZYB9PH426873 belonging to Coon's Trucking LLC 2234 Park Circle, Baton Rouge LA 70819.

AI: 175084

3. Date(s), time(s), and duration of the unauthorized discharge and, if not corrected, the anticipated time it is expected to continue;

   The release occurred on February 21, 2011 at approximately 4:30am. The duration of the spill was less than 5 minutes.

Burgard, Danny

4. Details of the circumstances (unauthorized discharge description and root cause) and events leading to any unauthorized discharge, including incidents of loss of sources of radiation, and if the release point is subject to a permit:

   Named vehicle's saddle tank was ruptured when the vehicle overturned onto the driver's side as the vehicle was traveling the I-10 east entrance ramp to the Mississippi River Bridge from US Highway LA 1 North.

T129505

S11-0639

5. The common or scientific chemical name of each specific pollutant that was released as the result of an unauthorized discharge, including the CAS number and U.S. Department of Transportation hazard classification, and the best estimate of amounts of any or all released pollutants (total amount of each compound expressed in pounds, including calculations);

   Diesel Fuel, Class 3, CAS # 68476-34-6

   Best Estimate of Release approximately 378.54 Liters (80 U.S. gallons).

6. A statement of the actual or probable fate or disposition of the pollutant or source of radiation and what off-site impact resulted;

   Not Applicable

7. Remedial actions taken, or to be taken, to stop unauthorized discharges or to recover pollutants or sources of radiation;

   LADOTD responded in cooperation with other state authorities and took immediate action to contain and cleanup all diesel spilled onto the highway.

   Likewise, Triple G Express hired United States Environmental Services to execute remediation of contaminated soil beneath the elevated entrance ramp.

8. Procedures or measures which have or will be adopted to prevent recurrence of the incident or similar incidents, including incidents of loss of sources of radiation;

   Not applicable

9. If an unpermitted or unlicensed site or facility is involved in the unauthorized discharge, a schedule for submitting a permit or license application to the department, or rationale for not requiring a permit or license;

   Not applicable

10. The reporting party's status (former or present owner, operator, disposer, etc.);

    Operational

11. For discharges to the ground or groundwater, the following information shall also be included: all information of which the reporting party is aware that indicates pollutants are migrating, including, but not limited to, monitoring well data; possible routes of migrations; and all information of which the reporting party is aware regarding any public or private wells in the area of the migration used for drinking, stock watering, or irrigation;

    The spillage was well contained and there are no indications that any discharges are migrating.

12. What other agencies were notified;

    None

13. The names of all other responsible parties of which the reporting party is aware;

    None

14. A determination by the discharger of whether or not the discharge was preventable, or if not, an explanation of why the discharge was not preventable;

    Discharge was not a preventable occurrence.

15. The extent of injuries, if any; and

    No injuries resulted

16. The estimated quantity, identification, and disposition of recovered materials, if any.

    Approximately 4 – 55 gallon containers of contaminated soil was removed from beneath the elevated entrance ramp and replaced.

Please consider this written report as notification as required by LAC 33:I.3915, 3917 and 3919. These statements made herein are truthful and accurate to the best of our knowledge as evident by my signature below.

Sincerely,

Michael A. Maniscalco
Safety Director, Triple G Express, Inc.

Office of Environmental Compliance
Underground Storage Tank and Remediation Division
NFA, COC, or NFI Letters ONLY
(Use this form as an attachment to the OEC Route Slip for NFA, COC, or NFI Letters)

Originator:	T. DORAN	**Check One or Both as Applicable:**	☒ NFA Letter ☐ COC Letter or ☐ No Further Interest Letter

Required Cost/Fee Info

Final Invoicing Verification Contact	**Fee Payment Verification Contact**
PRP – Bridget Jones	Solid Waste – Vicki Thibodeaux
Environmental Conditions Review – Vicki Thibodeaux	Environmental Conditions Review – Vicki Thibodeaux
VRP – Vicki Thibodeaux	GW Fee – Vicki Thibodeaux

Date Fee Paid:	N/A GOVERNMENTAL ENTITY	**Fee Type:**	☐ SW ($1320) ☐ ECR ($1500) ☐ GW ($_____)
Date Final Invoice Paid:		**Invoice Type:**	☐ PRP ☐ VRP ☐ ECR (if costs incurred > $1500 fee)

Technical Criteria Checklist for NFA/COC

Document that vertical and lateral extent of impact has been defined to extent required. Check one:	☐ Industrial/Commercial ☒ Non-Industrial (residential)
Available information documents constituent concentrations in all media are less than or equal to the limiting RS at this time; OR Exceedance is addressed under a VRP Partial Remedial Action by Use Restrictions. *Verified by Team Leader (TL)*	HJD TL initials
Explain any unusual conditions or allowed exceedance.	

Controls in Place

Are either LaDEQ-approved Controls (Engineering or Institutional) or Use Restrictions (VRP) part of the remedy? If "YES", attach a Clerk of Court Certified Copy, and select which types of control: ☐ YES ☒ NO

Engineering Controls	Institutional Controls	
☐ Access Controls (Fences, etc.)	☐ Access Restrictions	☐ GW Use Restriction
☐ Cap/Surface Soil Barrier Construction/Maintenance	☐ Building/Construction Restrictions	☐ Land Restriction
☐ Impervious Cap	☐ City Ordinance	☐ Mortgage Notice (SW Industrial/Commercial)
☐ Signage	☐ Conveyance Notice (all Industrial/Commercial)	☐ Non-Residential Use Restriction
☐ Subsurface Containment	☐ Excavation Restriction	☐ Servitudes
	☐ Partial Remediation Agreement	☐ Other

Monitoring wells and/or borings were properly plugged and abandoned. *Verified by Team Leader (TL)*	HJD TL initials
Waste from investigation and/or corrective actions were properly disposed of, and disposal manifests or other documentation has been provided to LDEQ. *Verified by Team Leader (TL)*	HJD TL initials
Final inspection has been performed verifying conditions for NFA/COC.	☒ YES (Attach copy of FIF) 12/4/14

BOBBY JINDAL
GOVERNOR

PEGGY M. HATCH
SECRETARY

State of Louisiana

DEPARTMENT OF ENVIRONMENTAL QUALITY

OCT 15 2015 OFFICE OF ENVIRONMENTAL COMPLIANCE

Mr. Joey Lambert
Commercial Property Realty Trust
402 North 4th Street, First Floor
Baton Rouge, LA 70802

RE: No Further Action Notification
Brickyard Site, AI #1429
1059 Brickyard Lane
Baton Rouge, East Baton Rouge Parish, Louisiana

Dear Mr. Lambert:

The Louisiana Department of Environmental Quality – Underground Storage Tank and Remediation Division (LDEQ-USTRD) has completed its review of your Risk Evaluation/Corrective Action Program Report dated August 7, 2014, and later revised October 31, 2014 in your Response to Notice of Deficiency for the above referenced area of investigation, located at 1059 Brickyard Lane, Baton Rouge in East Baton Rouge Parish. Based on our review of this document and all previously submitted information, we have determined that no further action is necessary at this time. The Basis of Decision for this notification is attached.

No soils may be removed from this site without prior approval from LDEQ unless they are removed and disposed at a permitted disposal facility. Prior to the construction of enclosed structures over any portion of the impacted area, further evaluation and approval from LDEQ is warranted.

If you have any questions or need further information, please call the LDEQ Team Leader Mr. Tommy Doran at (225) 219-3019. Thank you for your cooperation in addressing this area.

Sincerely,

Gary A. Fulton Jr., Administrator
Underground Storage Tank and Remediation Division

Attachment - Basis of Decision

c: Imaging Operations – Inactive and Abandoned Sites
Charles E. Jones, CRA
Terri Gibson, LDEQ

Post Office Box 4312 • Baton Rouge, Louisiana 70821-4312 • Phone 225-219-3536 • Fax 225-219-3398
www.deq.louisiana.gov

BASIS OF DECISION FOR NO FURTHER ACTION

Brickyard Site (aka – Chevron USA, Baton Rouge, and Clearwater Fluids)
AI #1429

The Louisiana Department of Environmental Quality – Underground Storage Tank and Remediation Division (LDEQ-USTRD) has determined that The Brickyard Site requires No Further Action - At This Time.

The property was previously operated as a brickyard from 1885 to 1940. From 1940 to 1990, the site was owned and operated as the Chevron Asphalt Company Plant, as an asphalt emulsification plant. The site was purchase from Chevron USA in 1990 by Clearwater Fluids Recycling Incorporated. Clearwater Fluids operated the site until 1992 as a hazardous waste recycler. During Clearwater Ownership, the site consisted of a tank farm and a three-room warehouse complete with a loading dock. The tank farm consisted of twelve aboveground storage tanks (AST) with capacities ranging from 5,000 to 420,000 gallons. The warehouse contained three 85-gallon salvage drums and a 55-gallon drum containing investigation-derived waste, and spent PPE. In addition, six vats, two tanks, and a boiler were also stored in the warehouse. An on-site chemical lab was closed in 1986. All waste was shipped off-site, and all tanks and the warehouse were demolished in June and July 1998. These chemicals were inventoried in June of 1989 and subsequently disposed of off-site during a cleanup action later that year.

An LDEQ Site Assessment was conducted in May 1991. On February 18, 1992, the Department issued a Compliance Order to discontinue Clearwater's hazardous waste treatment storage, and disposal. However, Clearwater leased the land to Chem Rail Tank Cleaners between April and December of 1993 as a hazardous waste transfer facility.

An emergency response action (ERA) was conducted by the Department on June 27, 1994 in response to reports of a leaking tank on the site (Tank 1). Approximately 40,000 gallons of material was pumped from Tank 1 into fractionation, or "frac" tanks until the fluid level inside the tank was below the leak line. In response to the ERA, the Environmental Protection Agency (EPA) in accordance with the LDEQ, signed an Action Memorandum to access the site and begin removal activities. In August 1994, approximately 302,000 gallons of manifested hazardous waste was transported off-site to a deep well injection facility.

Remedial standards were developed for this property using LDEQ's RECAP Screening Standards and Management Option 1 standards for soil and Management Option 1 for groundwater. The standards that were applied to this site are listed in the table that appears at the end of this BOD.

The Site is currently used by the State for the property assistance facility, mail sorting, and printing operations. The Site is located in an area with commercial and residential properties. The Site is bordered to the north by Interstate 10, to the south by Terrace Avenue, to the west by River Road, and to the east by Louisiana Highway 30.

A survey of registered water wells within a one-mile radius of the Site identified 25 registered, active water wells.

The groundwater at this site has been classified as Groundwater Class 3A Drinking Water based upon slug tests from an investigation of a site located within one mile of the site. The distance from the Point of Compliance (POC) to the Point of Exposure (POE) and the thickness of the impacted groundwater within the permeable zone were used to select a Dilution and Attenuation Factor (DAF) of 63 from tables in Appendix H of the RECAP document.

Soil and groundwater sampling has confirmed that constituents of concern concentrations do not exceed the established site-specific remediation standards, so no remedial action was required. No Further Action - At This Time is granted when contamination is confirmed to exist at concentrations that do not exceed the established standards.

There are no institutional controls on this property.

An inspection of the site was performed on December 4, 2014 confirming that no investigation derived waste remains on site. No soils may be moved from this location without written authorization from the LDEQ unless they are removed and disposed at a permitted disposal facility.

Groundwater samples were gathered from soil boring holes that were properly developed into temporary monitoring wells. Following groundwater sample collection, the temporary wells were removed from the ground and the boreholes were plugged and abandoned in accordance the LDOTD *Handbook for the Construction of Geotechnical Borehole Water Monitoring System, December 2000.*

The impacted media, constituents of concern, maximum concentration remaining on site and limiting RECAP standard established for this site are listed in the following table:

Medium	Constituent of Concern	Soil AOIC or Groundwater CC	Basis of AOIC or CC	Limiting RS	Basis of LRS	Management Option
Soil 0'-15'	Arsenic	6.5 mg/kg	95%UCL	12 mg/kg	$Soil_{ai}$	SS
Soil 0'-15'	Aromatics >C21-C35	340 mg/kg	Max	1800	$Soil_{ai}$	MO-1
Groundwater	Acetone	0.11 mg/l	Max	208 mg/l	GW_{3DW}	MO-1
Groundwater	Bis (2-ethyl-hexyl)phthalate	0.011 mg/l	Max	0.34 mg/l	GW_{sol}	MO-1
Groundwater	Arsenic	0.037 mg/l	Max	3.15 mg/l	GW_{3DW}	MO-1
Groundwater	Barium	3.90 mg/l	Max	126 mg/l	GW_{3DW}	MO-1
Groundwater	Cadmium	0.013 mg/l	Max	0.63 mg/l	GW_{3DW}	MO-1
Groundwater	Chromium	0.13 mg/l	Max	3.2 mg/l	GW_{3DW}	MO-1
Groundwater	Lead	0.39 mg/l	Max	3.2 mg/l	GW_{3DW}	MO-1

Additional information on the details of the investigation and evaluation of this site may be obtained from LDEQ's Public Records Center located in the Galvez Building, Room 127, 602 N. Fifth Street, Baton Rouge, LA 70802. Additional information regarding the Public Records may be obtained by calling (225) 219-3168 or by emailing publicrecords@la.gov.

OFFICE OF ENVIRONMENTAL COMPLIANCE
UNDERGROUND STORAGE TANK AND REMEDIATION DIVISION
Routing/Approval Slip

AI No.	1429	Facility:	CHEVRON USA-BRICKYARD SITE	Date Routed:	10-2-15
Other ID No.		Location:	1059 BRICKYARD LANE, BATON ROUGE, E. BATON ROUGE		
Activity No.		Originator:	T. DORAN		
Section/Group:		Attachments:	NFA / BOD		
Description/Type of Document(s):	NFA w/ BOD				

Closure ☐ Comfort Letter ☐ Correspondence ☐ Corrective Action ☐ Conveyance Notice ☐

NFA ☒ NOD ☐ Personnel ☐ Other ☐

Technical Review	Req'd.	Initials	Date	Return to Originator?	Comments
Environmental Scientist	☒	JHD	10-2-15	☐Y ☐N	
Geology	☐			☐Y ☐N	
Legal	☐			☐Y ☐N	
Technical Advisor	☐			☐Y ☐N	
Other (_____)	☐			☐Y ☐N	
Additional Comments					

Management Review	Req'd.	Initials	Date	Return to Originator?	Comments
Supervisor	☒	ASK	10/6/15	☐Y ☐N	
Manager	☒		10/7/15	☐Y ☐N	
Administrator	☒		10/13/15	☐Y ☐N	
Assistant Secretary	☐			☐Y ☐N	
Deputy Secretary	☐			☐Y ☐N	
Secretary	☐			☐Y ☐N	
Other (_____)	☐			☐Y ☐N	
Additional Comments	Do not send FIF "Copy" to EDMS				

☐ TEMPO Data Entry Completed (Date Document Completed): _____

January 12, 1978

Butler's Service Station
1776 East Boulevard
Joseph Butler - Business Owner & Occupant
Sam Modicut - Property Owner

I was sent on a complaint originating from South Central Bell Telephone relative to gasoline in the man hole located at the northwest corner of East Boulevard and East Washington. Upon arrival I met with Mr. Eddy Graves of the Telephone Company and did discover what appeared to be gasoline floating on the surface of the water in the man hole; also a strong odor of gasoline was found present in this man hole.

I talked with the business owner, Mr. Joseph Butler about this condition and he informed me that he had Petro-Chem come and make a pressure test on these underground tanks and that they had in fact determined that two (2) of the 6,000 gallon tanks were leaking. These were the unleaded and premium gas tanks. The tank used for regular gas did not indicate any leakage. This test was conducted August 10, 1977 with the above results as shown.

Mr. Earl Vickry of Sullivan Oil Co. was contacted by Mr. Butler to have the gasoline pumped out. The gasoline was pumped out but the tanks were not filled with an inert material.

I therefore sent Mr. Sam Modicut a letter advising him of the proper procedure of abandonment of underground tanks.

J. K. Pinell

Inspector J. K. Pinell

flr

February 27, 1978

Butler Service Station
1776 East Boulevard
Joseph Butler - Business Owner & Occupant
Sam Modicut - Property Owner

On this date I was again requested to return to this location in regards to odor of gas and gasoline in the man hole at East Boulevard & East Washington on the northwest corner. I met with Mr. Henry Speaker, Supervisor for Grady Crawford Construction Company; Mr. Bill Long, Superintendent of South Central Bell; Mr. Kenny Gautreau, Manager Supervisor of the Cable Department of South Central Bell, and with Mr. Eddy Graves of the Repair Department of South Central Bell. Also Mr. Sam Modicut the property owner.

I again advised Mr. Modicut in person of what was needed in regards to these underground tanks. No gasoline has been placed in the tanks with leaks, however the ground is saturated with gasoline and each time it rains this gasoline comes to the surface in the man hole and pipe chases. Since liquid seeks its own level and water being heavier than gasoline, this gasoline is pushed forward to the levels of least resistance.

After speaking with all of the aforementioned people, I called Chief N. J. Arceneaux of the Fire Prevention to come to the scene as I found another matter I thought was of importance. Upon his arrival I informed him of what had taken place and the concern I had for the safety of the motel next door to this property. The concern I had was relative to the possibility of pockets of gasoline that may be existent under the motel due to the depth of the tanks and the slab of the building. Since it is not known exactly where these tanks are leaking. We spoke to Mr. Mack Anderson of the motel and made as good an investigation as possible to determine if any odor of gasoline was present in the motel. We did not find any odor nor indication of gasoline upon our investigation.

Mr. Earl Vickry of Sullivan Oil Company was present at this location and he reiterated the fact that these tanks had been pumped out.

Mr. Sam Modicut asked me for an extension of time to get these tanks removed and replaced. I granted him until March 29, 1978 to have this accomplished with the stipulation that if not complied with we would turn this matter over to the Parish Attorney for whatever legal actions may be necessary.

J. K. Pucciti

TO WHOM IT MAY CONCERN

FROM Property Owner - Mr. ( )Hodicut

TO Petrochem Maintenance, Inc.
P. O. Box 140 Baton Rouge, Louisiana 70895
504/272-1361

SUBJECT: Butler Service Station, E. Blvd. & E. Washington DATE: 6- 5-78

FOLD ↑ This letter is to confirm a request from Sullivan Oil Company to replace the Leaking underground tank with new tanks. These tanks are on order and as soon as they are ready we will schedule them to be installed. Job should be complete within 3 weeks.

RETURN TO → SIGNED James O. Langlois

James O. Langlois - Vice President

REPLY

RECE

AUG 2 3 1991

UNDERGRO

TANK DIVISION

DATE: SIGNED

FORM AVAILABLE FROM GRAYARC CO INC
882 THIRD AVE BKLYN N Y 11232

PERSON ADDRESSED RETURN THIS COPY TO SENDER

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

GROUND WATER PROTECTION DIVISION

LEAKING UNDERGROUND STORAGE TANK REPORT

OFFICIAL NOTIFICATION

REPORTED BY:

NAME JOE CARNAHON

ADDRESS SOUTH CENTRAL BELL

PHONE NUMBER ( )

DATE FOUND 1-9-87

MATERIAL INVOLVED

RECEIVED BY:

NAME SANDRA

DATE REPORTED 1-9-87

TIME REPORTED

PARISH ~~EAST~~ EBR

UST ID #

TANK FACILITY NAME

TANK FACILITY ADDRESS E. WASHINGTON & DELPIT
B.R., LA

CONTACT NAME

CONTACT PHONE NUMBER ( )

TANK FACILITY OWNER

OWNER MAILING ADDRESS

OWNER PHONE NUMBER ( )

INCIDENT DESCRIPTION AND ASSESSMENT: Mr CARNAHAN called and said that they had to replace a cable run for the second time because of gasoline contamination. On 1-15-87 at 1:50 pm started field investigation, but did not finish. At that time no nothing was found. On 1-19-87 at 9:00 AM returned to complete investigation. Took three borings on Mr Butler's property (Butler's Gas Station - Shell Gasoline) see diagram. The only place any contamination was found was in boring at Tank bed. The follow are the logs

REVIEWED BY:

DATE:

REV. 1 7/86

from the borings (Mr Butler's property is Site A

B1 Site A

0-3' red clay, no odor; 3'-5' brown sandy clay mixed w/ grey clay, no odor; 5'6" abandoned hole because not reached water; no signs of contamination - 0% explosive.

B2 Site A

0-1' reddish & grey clay mixed, no odor; 1-1'6" faint gas or methane odor 0% explosive; 1'6"-2'10" grey sandy clay, diesel odor; 5% explosive; 2'10"-7' grey clay w/ gravel, reached water table, odor, no sheening, 100% explosive.

B2 Site A

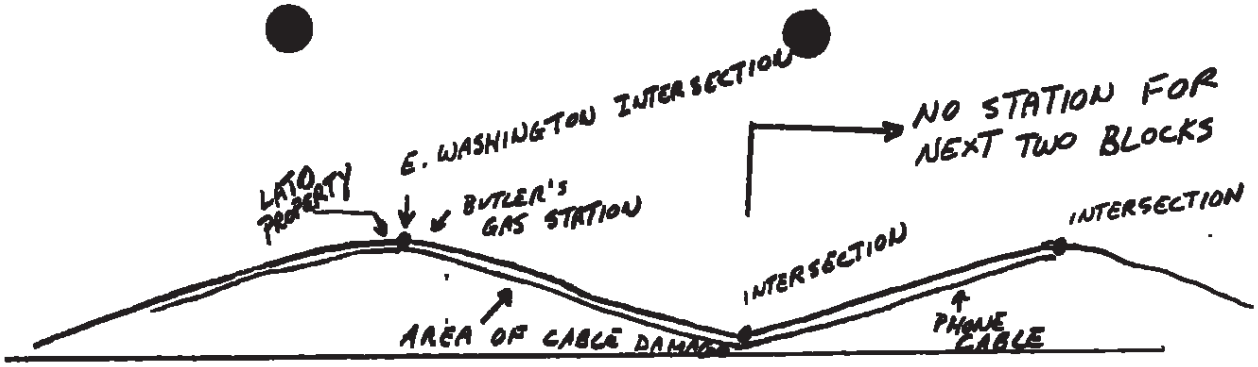
0'-4' sandy brown clay, no odor, 0% explosive, abandoned hole in something large & solid.

Next we went across the street to abandoned gasoline station. Property belongs to Sato family and Mr Sato Modesitt installed tanks when he used to rent the property - Two UST's are abandoned, and each has approx. 4" of product in them. Upon boring next to tank hole no contamination was found. Sato property is Site B.

B1 Site B

0'-6" shell; 6"-2' sandy clay, no odor; 2'-3' sandy clay no odor, 0% explosive; 3'-5' sandy clay, no odor 0% Explosive 5'-7' sandy clay; no odor, 0% explosive, abandoned hole, we reached water table.

No conclusive evidence at this time to determine source of gasoline contamination to South Central Bells telephone cable.



CROSS SECTION OF DELPIT

LATO FAMILY PROPERTY
740 E. WASHINGTON

SITE B

UST

UST

ISLAND

B-2 SB

1776 THOMAS H. DELPIT Dr.,
BUTLER'S GAS STATION

UST

UST

UST

B-2 SA

SITE A

PUMPS

TELEPHONE SPLICE BOX
PHONE CO. MAN HOLE

B3 SA

BUILDING

B-1 SA

DOWN HILL GRADE

THOMAS H. DELPIT Dr.

DOWN HILL GRADE

BLACK TOP.

PARKING

LOT

CAR WASH

E. WASHINGTON

KEY

• B-1 SA = BORING No. ONE SITE A., ETC.

--- = PROPERTY BOUNDARY

——— = CONTAMINATED PHONE CABLE

File / Dennis

State of Louisiana

Department of Environmental Quality

BUDDY ROEMER
Governor

PAUL TEMPLET
Secretary

July 16, 1991

CERTIFIED MAIL RECEIPT REQUESTED (P 366 459 713)

Mr. Frank Butler
1776 Thomas Delpit Dr.
Baton Rouge, Louisiana 70802

Attention: Mr. Frank Butler

RE: Request for Assessment
Butler's Gas Station
1776 Thomas Delpit Dr.
Baton Rouge, Louisiana
(East Baton Rouge Parish)
FID #17-001184
Incident #UE-91-2-0171

Dear Mr. Butler:

On May 23, 1991, an investigation was conducted at the above-referenced facility by representatives of this department. The results of this investigation indicate there has been substantial contamination of the soil by gasoline which may have leaked from the underground storage tanks and/or pipe lines present at this location.

Within twenty (20) days following release confirmation, you must submit a report in triplicate summarizing initial abatement steps taken to bring the situation under control. At a minimum, this report shall address the steps taken to:

1) Prevent further releases to the environment;

2) Monitor and mitigate fire and safety hazards posed by vapors and/or free product that may have migrated into subsurface structures;

3) Remedy hazards posed by contaminated soils;

4) Survey all areas likely to have been contaminated by the release;

5) Determine the presence of free-phased product in the subsurface and the progress of free-phased product removal; and

6) Submit the name of the Response Action Contractor chosen, and an assessment plan with a cost estimate to perform the work.

Within sixty (60) days following DEQ approval of the plan you must submit an investigation report in triplicate detailing the extent of subsurface contamination resulting from this incident. At a minimum, the investigation reports shall include the following:

1) Site diagram indicating all underground fixtures, piping, or other utility structures;

2) Specific designation as to location and material(s) of construction for all potable water supply lines at the site;

3) Delineation of the horizontal and vertical extent of the free-phased and dissolved hydrocarbons in soils and groundwater by soil exploration;

4) Installation of groundwater monitoring wells immediately outside of the confirmed zone of contamination defining both up-gradient and down-gradient boundary conditions;

5) A determination of groundwater elevations, direction and velocity of flow from at least three (3) of the monitoring wells;

6) A diagram showing the location of all boreholes and/or wells existing at the site;

7) A diagram indicating potentiometric lines;

8) Results of laboratory analyses from all existing and new wells where free-phased product was not observed. The following methods shall be used for soil samples taken from borings and for dissolved constituents in groundwater:

PRODUCT STORED	ANALYSIS NEEDED	ANALYTICAL PROCEDURE
Gasoline	BTEX	Solid Waste 846-Method 8020
	TPH-Gasoline	California Department of Health Services Method
Diesel	TPH-Diesel	California Department of Health Services Method
Used Oil	TCLP (heavy metals)	Solid Waste 846-Method 1311
	Oil and Grease	503 E Standard-Methods
	Volatile Organic Hydrocarbons	Solid Waste 846-Method 8240

9) Driller's logs from all boreholes and wells installed. For wells this should include the well construction information;

10) Provide results of tank and line tightness tests and reconciled inventory records for the prior ninety (90) days;

11) The type of free-phased product recovery system used;

12) The disposition and quantity of all recovered free-phased product, contaminated groundwater and soil; and

13) If necessary, a plan of additional investigation activities to determine off-site contamination must be included unless an alternate investigation plan is agreed upon by the Department.

In order for this work to qualify for reimbursement under the Louisiana Motor Fuels Underground Tank Trust, you must select a contractor from the attached state approved Response Action Contractors list to perform the above-referenced investigation or any corrective action that might be necessary. However, actions taken to abate an immediate hazard may be performed by a Response Action Contractor without obtaining cost estimates in advance. This may include, but not be limited to free product recovery, vapor abatement, or the removal of highly saturated soils. The Underground Storage Tank Division, however, shall be notified concerning these activities and will take all possible steps to oversee such activities in an effort to avoid cost overruns.

If it appears that the investigation reports cannot be submitted within the requested sixty (60) days after approval of assessment plan, please indicate in writing the reasons for the delay.

Following receipt of the reports, you will be contacted by division personnel regarding the final disposition of this matter. If corrective action is indicated, you will be placed on a time schedule for submittal of a corrective action plan and for continued monitoring and reporting.

Thank you for your cooperation. If you have any questions, please call Mr. Dennis D. Strickland at (504) 925-4519.

Sincerely,

Frank L. Dautriel, Program Manager
Underground Storage Tank Division

FLD\DDS\tb
Enclosures

State of Louisiana

Department of Environmental Quality

M.J. "MIKE" FOSTER, JR.
GOVERNOR

J. DALE GIVENS
SECRETARY

September 18, 2001

CERTIFIED MAIL – RETURN RECEIPT REQUESTED: 7099 3400 0007 7067 8683

Mary Modicut
c/o Joseph S. Modicut
8265 Albert Drive
Baton Rouge, LA 70806

RE: Butler Gas; **AI 26960**
1776 Thomas Delpit; Baton Rouge, LA; East Baton Rouge Parish
Facility ID No. 17-001184
Incident No.'s UE-91-2-0171

The Louisiana Department of Environmental Quality – Remediation Services Division (LDEQ-RSD) has reviewed the file for the above-referenced facility. However, the department is unable to fully assess the status of the facility in question. The file for the facility shows three (3) separate release notifications dating back to 1978. The department requested site assessments in 1991. A letter dated October 21, 1991 was received by the LDEQ. It states that you were in the process of selecting a contractor to do an assessment. However, the file does not contain any records of those assessments if they were indeed conducted.

LDEQ is unaware if business is still in operation at this facility. The business in question is Butler Gas. On March 21, 1997, LDEQ received a notification of a "used tire dealer." Again the department is unaware of the status of this possible business.

These matters are of priority and need to be resolved in a timely manner. Please contact Joe Botke at (225) 765-2682 with information concerning all the above-mentioned matters. Your response is appreciated.

Sincerely,

Joe Botke
Environmental Scientist I

C: UST File Room
Amy Lewis, RSD

STATE OF LOUISIANA
UNDERGROUND STORAGE TANK CLOSURE/ASSESSMENT FORM – PLEASE TYPE

Please complete and return withing sixty (60) days after UST system closure or change-in-service.

Return to: LDEQ-SURVEILLANCE DIVISION Questions: (225) 765-2953
P.O. Box 82215
Baton Rouge, LA 70884-2215

DEQ Facility Number 17-001184
DEQ Owner ID Number 00049100

I. OWNERSHIP OF TANKS

IF OWNER'S ADDRESS CHANGED, PLEASE CHECK ☐
JOSEPH S. MODICUT
OWNER NAME (CORPORATION/INDIVIDUAL, ETC.)
839 WOODSTONE DR.
MAILING ADDRESS
BATON ROUGE LA. 70808-5167
CITY STATE ZIP
E.B.R.
PARISH/COUNTY
(225) 769-7878
TELEPHONE (INCLUDE AREA CODE)
JOE MODICUT
NAME OF CONTACT PERSON

II. LOCATION OF TANKS

IF SAME AS SECTION I, PLEASE CHECK ☐
BULTER'S GAS STATION
FACILITY NAME OR COMPANY SITE IDENTIFIER
1776 THOMAS DELPIT DR.
STREET ADDRESS (P. O. BOX NOT ACCEPTABLE)
BATON ROUGE LA. 70802
CITY STATE ZIP
EAST BATON ROUGE
PARISH
(225)-387-9275
TELEPHONE (INCLUDE AREA CODE)
JOE MODICUT
CONTACT PERSON AT THIS LOCATION

III. TANK INFORMATION (Attach Continuation Sheets If Necessary)

DEQ ASSIGNED TANK NUMBERS	SIZE OF TANKS (GALLONS)	PRODUCT LAST STORED IN TANK	CHOOSE ONE PER TANK (1 = Removed, 2 = Closed-in-Place, 3 = Change-in-Service, 4 = Removed & Replaced)	TANK PROPERLY LABELED? CIRCLE		HIGHEST LEL OR OXYGEN READING' LEL'	Oxygen	DATE OF CLOSURE OR CHANGE-IN-SERVICE
4348	3000	GASOLINE	1-REMOVED	Y	N	0.0%		11/11/03
4349	3000	GASOLINE	1-REMOVED	Y	N	0.0%		11/12/03
4350	6000	GASOLINE	1-REMOVED	Y	N	0.0%		11/12/03
				Y	N			/ /
				Y	N			/ /

1 - Indicate the non-regulated substance to be stored in the tank
2 - A registration form addressing the replacement tank must be completed
3 - Highest reading recorded just before tank removed from excavation.
4 - Lower Explosive Limit

IV. TANK

A. Date cleaned 11/12/03
B. Date disposed/recycled 11/13/03
C. Name of disposal site/recycling site TO CUT FOR SCRAP @ DU-CO YARD

V. TANK SLUDGES

A. Date disposed/recycled / /
B. Volume removed NONE GENERATED cu/yds
C. Name of disposal site

VI. TANK WATERS/WASHWATERS

A. Date disposed/recycled 11/12/03
B. Volume removed 2720 gals
C. Name of disposal/recycling site U.S. FILTER

VII. CONTAMINATED SOIL

A. Date removed NONE GENERATED D. Date disposed / /
B. Volume of soil removed cu/yds
C. Name of disposal site

VIII. CONTAMINATED GROUNDWATER

A. Date removed NONE GENERATED D. Date disposed / /
B. Volume of groundwater removed gals
C. Name of disposal site/recycler

IX. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

JOSEPH S MODICUT — PRINT OR TYPE OWNER'S NAME
Joseph S Modicut — OWNER'S SIGNATURE
06/26/04 — DATE

MICHAEL G. DUCOTE — PRINT OR TYPE NAME OF CERTIFIED WORKER
Michael Ducote — SIGNATURE OF CERTIFIED UST WORKER
IRC-0061 — CERTIFICATE NO.
1/22/04 — DATE

FORMS THAT DO NOT INCLUDE THE OWNER'S AND UST WORKER'S SIGNATURES WILL BE REJECTED.

LDEQ RESPONSE - DO NOT WRITE BELOW THIS LINE

☒ DEQ AI No. 26960
☒ UST system removed from database; no further action required.
☐ UST system removed from database; additional information required. _____

Signature of LDEQ Representative: Charles Melchior — Telephone No.: (225)219-3644 — Date: 1/28/04 — Supervisor's Initials: BM

UST-SURV-02 **** INCOMPLETE FORMS MAY BE REJECTED ***** Revised 01/02

SURV. DIV. MAIN OFFICE FILE

UNDERGROUND STORAGE TANK CLOSURE/ASSESSMENT FORM

INSTRUCTIONS

Within **SIXTY DAYS** after completing a UST closure or change-in-service, this form along with **two copies** of the following must be provided to the Surveillance Division:

1. site drawing;
2. analytical results with chain-of-custody documents; and
3. copies of all manifests, bills of lading or receipts for the disposition of tank(s), tank contents, soil and waters.

All applicable information required on the form must be addressed. Forms that are incomplete may be rejected.

Please **PRINT** clearly (press hard, as you are making four copies). After completion, the owner is to forward all copies of the form to:

LDEQ-SURVEILLANCE DIVISION
P.O. BOX 82215
BATON ROUGE, LA 70884-2215.

The Surveillance Division will distribute the remaining copies of the form as follows:

1. Original (White) - Surv. Div. Main Office File
2. Pink - DEQ Regional Office File
3. Goldenrod - Permits Div. Registration Files
4. Blue - UST Owner (After DEQ Processing)

PROCEDURES TO BE FOLLOWED

The procedures which must be followed when performing a UST closure or change-in-service are provided in the "Underground Storage Tank Closure/Change-in-Service Assessment Guidelines." To obtain a copy of this document call the Surveillance Division at (225) 765-2953 or write to the address noted above.

NOTICE

Chapter 13 of the UST Regulations requires that owners of USTs ensure that the contractor chosen to perform the UST closure/change-in-service employs an individual who holds a current Louisiana DEQ certificate for closure. The certified person must be present at the site and exercising responsible supervisory control during the closure/change-in-service process. A list of contractors who employ DEQ certified workers can be obtained from the Permits Division, Certifications Section, at (225) 765-2554.

UNDERGROUND STORAGE TANK DIVISION
SITE DRAWING FORM

UST-ENF-08 Revised 3/29/95

Owner Name: JOSEPH S. MODICUT

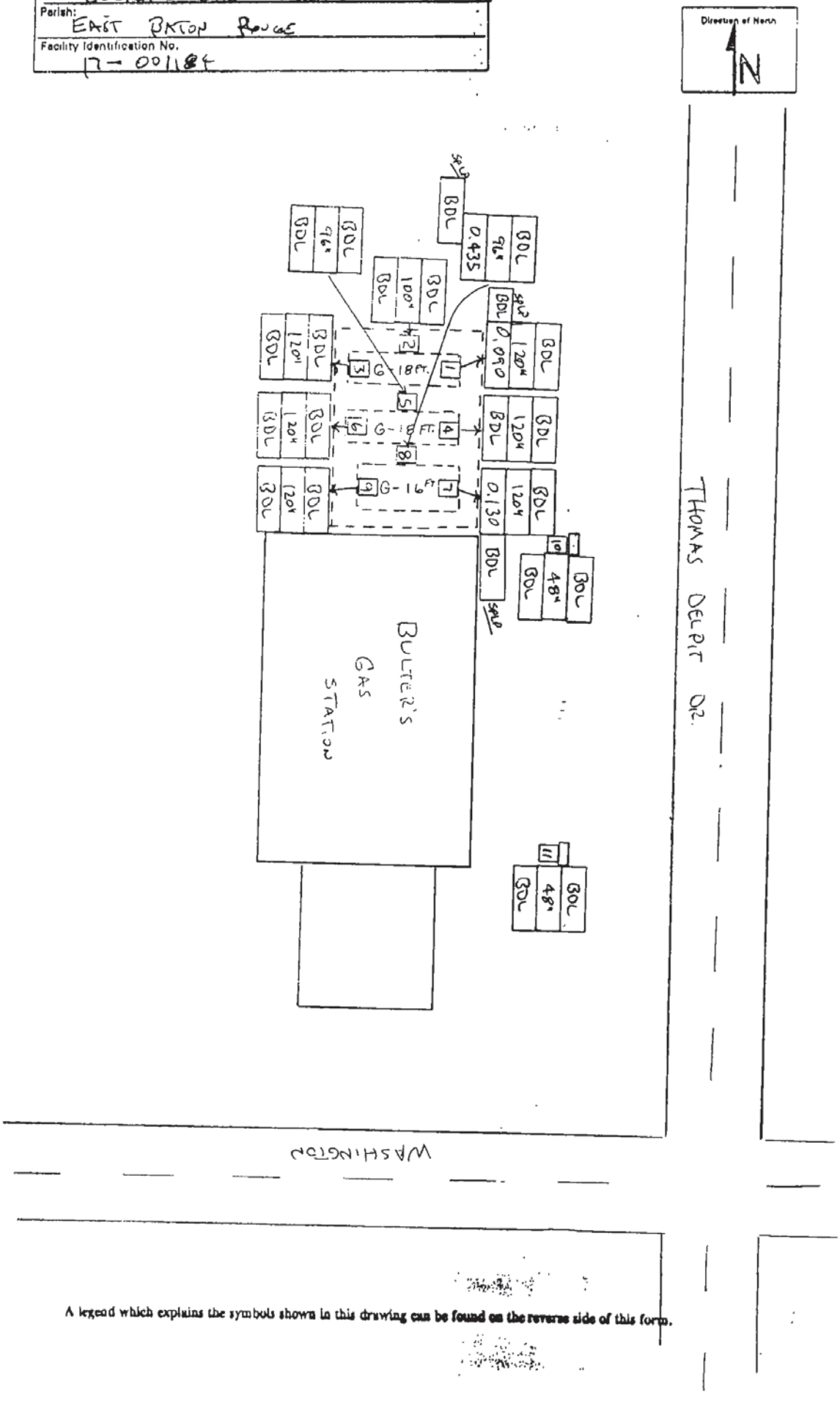
Facility Name: BULTER'S GAS STATION

Parish: EAST BATON ROUGE

Facility Identification No.: 17-00188

Total Number of Samples Collected - 11

One inch = approximately _____ feet



A legend which explains the symbols shown in this drawing can be found on the reverse side of this form.

USFilter
RECOVERY SERVICES MID-ATLANTIC INC.

SHIPPING DOCUMENT

SHIPPER INFORMATION	Shipper U.S. EPA I.D. # (if applicable)	Document No.
SHIPPER NAME	TRUCK #	WCF #
ADDRESS / CITY / STATE / ZIP		
PHONE #	CONTACT PERSON	

TRANSPORTER(S) INFORMATION

Vivendi Water Transport, Inc.
1657 Commerce Dr., Suite 10B
South Bend, IN 46628 PHONE (800) 355-2383

STATE REGISTRATIONS TX	# 86469 A85702
U.S. EPA I.D.	# INR000022798
U.S. D.O.T. REGISTRATION	# 828559
STATE REGISTRATIONS	#
U.S. EPA I.D.	#
U.S. D.O.T. REGISTRATION	#

DESIGNATED FACILITY INFORMATION

2107 Quincy St Dallas, Texas 75212 (800) 355-2380 EPA#. TXD987988359	14420 Union St Little Rock, AR 72206 (800) 355-2382 EPA#. ARD983286485	697 Highway 167 Opelousas, LA 70570 (337) 826-8001 EPA# LAR000049114	2800 Wicks Street Kilgore, TX 75662 (800) 880-7769 EPA# TXD982560005	320 Scoggins Road Springtown, TX 76082 (800) 252-6444 EPA# TXD988036026	2200 East Pierce Luling, TX 78648 (800) 875-3260 EPA# TXD982759748	2124 East Hwy 31 Corsicana, TX 75109 (903) 874-1188 EPA# TXD988059291
1122 US Hwy 190 W Port Allen, LA 70767 (800) 357-8362 EPA#: LAR000002030	4415 East Greenwood Baytown, TX 77520 (800) 355-2383 EPA# TXD988089421	315 Pronto Street Odessa, TX (915) 550-2533 EPA#. TXR000015610	9617 Wallisville Road Houston, TX 77013 (713) 670-0200 EPA#: TXR000032870	4320 S W 29th Street Oklahoma City, OK 73119 (405) 681-0759 EPA# OKR000017111		

U.S. D.O.T. DESCRIPTION	CONTAINERS: DRUM	CONTAINERS: TANK	TOTAL QUANTITY (GALLONS)	UNIT WT / VOL
HM ❑ Non-hazardous Industrial Wastewater ❑ Used Filters/Absorbants, Non DOT Regulated ❑ Oily Water, Non-hazardous ❑ Recycled Fuel Oil, Non DOT Regulated ❑ Fuel Oil, Combustible liquid, 3, NA 1993, PGIII ❑ RQ, Other regulated substances, Liquid, n.o.s., 9, NA 3082, PGIII (ethylene glycol) ❑ Combustible Liquid, n.o.s., (petroleum oil), 3, NA 1993, PGIII ❑ Flammable Liquid, n.o.s., (petroleum product), 3, UN 1993, PGIII		1	1615	
❑ ❑ _____	**EMERGENCY CONTACT: Chem-Trec 800-424-9300**			

SHIPPER'S CERTIFICATION: I hereby declare the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highways according to applicable international and national governmental regulations.
I certify that the material removed from the above premises is not hazardous waste as identified in 40 CFR Part 261, and does not contain PCB's as identified in 40 CFR Part 761.

PRINT/TYPE NAME	SIGNATURE	DATE

TRANSPORTER ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINT/TYPE NAME	SIGNATURE	DATE
		11/14/03

DESIGNATED FACILITY ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINT/TYPE NAME	SIGNATURE	DATE

White Copy - Generator Original Pink Copy - Accounting Canary Copy - Transporter
Green Copy - Return to Generator Blue Copy - Designated Facility

HSE 040 REV 12-2002

RECOVERY SERVICES MID-ATLANTIC INC.

SHIPPING DOCUMENT

SHIPPER INFORMATION	Shipper U.S. EPA I.D. # (if applicable)	Document No.
SHIPPER NAME Complete Environmental		TRUCK # 7-2 / WCF #
ADDRESS 1776 Washington Av. Pain Kricf, LA.	CITY	STATE / ZIP
PHONE # 318-481-6514	CONTACT PERSON Mike Little	

TRANSPORTER(S) INFORMATION

Vivendi Water Transport, Inc. 1657 Commerce Dr., Suite 10B South Bend, IN 46628 PHONE (800) 355-2383	STATE REGISTRATIONS TX # 86469 A85702 U.S. EPA I.D. # INR000022798 U.S. D.O.T. REGISTRATION # 828559
Complete Environmental 37 David Sloan Lane [illegible] MS 39475 601) 589-5156	STATE REGISTRATIONS # U.S. EPA I.D. # U.S. D.O.T. REGISTRATION #

DESIGNATED FACILITY INFORMATION

2107 Quincy St Dallas, Texas 75212 (800) 355-2380 EPA# TXD987988359	14420 Union St. Little Rock, AR 72206 (800) 355-2382 EPA# ARD983286485	697 Highway 167 Opelousas, LA 70570 (337) 826-8001 EPA#. LAR000049114	2800 Wicks Street Kilgore, TX 75662 (800) 880-7769 EPA# TXD982560005	320 Scoggins Road Springtown, TX 76082 (800) 252-6444 EPA#: TXD988036026	2200 East Pierce Luling, TX 78648 (800) 875-3260 EPA# TXD982759748	2124 East Hwy 31 Corsicana, TX 75109 (903) 874-1188 EPA#. TXD988059291
1122 US Hwy 190 W. Port Allen, LA 70767 (800) 357-8362 EPA# LAR000002030	4415 East Greenwood Baytown, TX 77520 (800) 355-2383 EPA#: TXD988089421	315 Pronto Street Odessa, TX (915) 550-2533 EPA# TXR000015610	9617 Wallisville Road Houston, TX 77013 (713) 670-0200 EPA# TXR000032870	4320 S W 29th Street Oklahoma City, OK 73119 (405) 681-0759 EPA# OKR000017111	[illegible handwriting]	

U.S. D.O.T. DESCRIPTION	CONTAINERS DRUM	CONTAINERS TANK	TOTAL QUANTITY (GALLONS)	UNIT WT/VOL
HM ☐ Non-hazardous Industrial Wastewater ☐ Used Filters/Absorbants, Non DOT Regulated ☐ Oily Water, Non-hazardous ☐ Recycled Fuel Oil, Non DOT Regulated ☐ Fuel Oil, Combustible liquid, 3, NA 1993, PGIII ☐ RQ, Other regulated substances, Liquid, n.o.s., 9, NA 3082, PGIII (ethylene glycol) ☐ Combustible Liquid, n.o.s., (petroleum oil), 3, NA 1993, PGIII ☐ Flammable Liquid, n.o.s., (petroleum product), 3, UN 1993, PGIII ☐ ✓ [illegible] water [illegible]		✓	1,017	
	EMERGENCY CONTACT: Chem-Trec 800-424-9300			

SHIPPER'S CERTIFICATION: I hereby declare the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highways according to applicable international and national governmental regulations.
I certify that the material removed from the above premises is not hazardous waste as identified in 40 CFR Part 261, and does not contain PCB's as identified in 40 CFR Part 761.

PRINT/TYPE NAME	SIGNATURE	DATE
X [illegible]	X [signature]	11-1-03

TRANSPORTER ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINT/TYPE NAME	SIGNATURE	DATE
[illegible]	[signature]	11-11-3

DESIGNATED FACILITY ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINT/TYPE NAME	SIGNATURE	DATE

White Copy - Generator Original Pink Copy - Accounting Canary Copy - Transporter
Green Copy - Return to Generator Blue Copy - Designated Facility

HSE 040 REV 12-2002

USFilter
RECOVERY SERVICES MID-ATLANTIC INC.

SHIPPING DOCUMENT

SHIPPER INFORMATION	Shipper U.S. EPA I.D. # (If applicable)	Document No. ____________
SHIPPER NAME ~YNETTE ENVIRONMENTAL		TRUCK # 20 / WCF #
ADDRESS 1776 WASHINGTON ST.	CITY BATON ROUGE	STATE LA. / ZIP
PHONE # 31- 481-6249	CONTACT PERSON MATT [illegible]	

TRANSPORTER(S) INFORMATION

Vivendi Water Transport, Inc. 1657 Commerce Dr., Suite 10B South Bend, IN 46628 PHONE (800) 355-2383	STATE REGISTRATIONS TX # 86469 A85702
	U.S. EPA I.D. # INR000022798
	U.S. D.O.T. REGISTRATION # 828559
YNETTE ENVIRONMENTAL	STATE REGISTRATIONS #
DAVID SWAN LANE	U.S. EPA I.D. #
[illegible]VIS, MS 39475	U.S. D.O.T. REGISTRATION #

DESIGNATED FACILITY INFORMATION

2107 Quincy St Dallas Texas 75212 (800) 355-2380 EPA# TXD987988359	14420 Union St. Little Rock, AR 72206 (800) 355-2382 EPA#. ARD983286485	697 Highway 167 Opelousas, LA 70570 (337) 826-8001 EPA# LAR000049114	2800 Wicks Street Kilgore, TX 75662 (800) 880-7769 EPA# TXD982560005	320 Scoggins Road Springtown, TX 76082 (800) 252-6444 EPA# TXD986036026	2200 East Pierce Luling, TX 78648 (800) 875-3260 EPA# TXD982759748	2124 East Hwy 31 Corsicana, TX 75109 (903) 874-1188 EPA#: TXD988059291
1122 US Hwy 190 W Port Allen, LA 70767 (800) 357-8362 EPA# LAR000002030	14415 East Greenwood Baytown, TX 77520 (800) 355-2383 EPA#: TXD988089421	315 Pronto Street Odessa, TX (915) 550-2533 EPA# TXR000015610	9617 Wallisville Road Houston, TX 77013 (713) 670-0200 EPA# TXR000032870	4320 S. W. 29th Street Oklahoma City, OK 73119 (405) 681-0759 EPA#. OKR000017111	[illegible] INTERNATIONAL [illegible], LA.	

U.S. D.O.T. DESCRIPTION	CONTAINERS DRUM	CONTAINERS TANK	TOTAL QUANTITY (GALLONS)	UNIT WT / VOL
PM ☐ Non-hazardous Industrial Wastewater ☐ Used Filters/Absorbants, Non DOT Regulated ☑ Oily Water, Non-hazardous ☐ Recycled Fuel Oil, Non DOT Regulated ☐ Fuel Oil, Combustible liquid, 3, NA 1993, PGIII ☐ RQ, Other regulated substances, Liquid, n.o.s., 9, NA 3082, PGIII (ethylene glycol) ☐ Combustible Liquid, n.o.s., (petroleum oil), 3, NA 1993, PGIII ☐ Flammable Liquid, n.o.s., (petroleum product), 3, UN 1993, PGIII		✓	38	
☐ ☐ OILY WATER, NON HAZARDOUS	EMERGENCY CONTACT: Chem-Trec 800-424-9300			

SHIPPER'S CERTIFICATION: I hereby declare the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highways according to applicable international and national governmental regulations.
I certify that the material removed from the above premises is not hazardous waste as identified in 40 CFR Part 261, and does not contain PCB's as identified in 40 CFR Part 761.

PRINT/TYPE NAME	SIGNATURE	DATE
[illegible]	[signature]	11-[illegible]

TRANSPORTER ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINT/TYPE NAME	SIGNATURE	DATE
JUAN FRANCIS	[signature]	11-11-03

DESIGNATED FACILITY ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINT/TYPE NAME	SIGNATURE	DATE

White Copy - Generator Original Pink Copy - Accounting Canary Copy - Transporter
Green Copy - Return to Generator Blue Copy - Designated Facility

HSE 040 REV 12-2002

SHERRY Laboratories

Testing Today - Protecting Tomorrow

2417 West Pinhook Road
Lafayette LA 70508-3344
(337) 235-0483

P O Box 81816
Lafayette LA 70598-1816
Fax (337) 233-6540
(800) 737-2378

CLIENT:	Du-Co UST Contractors	**Client Sample ID:**	#1
Lab Order:	L03110431	**Tag Number:**	
Project:	Butler's Gas Station	**Collection Date:**	11/11/2003 2:20:00 PM
Lab ID:	L03110431-01A	**Matrix:**	SOIL
Date Received:	13-Nov-03	**Date Reported:**	01-Dec-03

Analyses	Result	Detection Limit	Qual	Units	Date Analyzed	Analyst
METALS IN SOIL OR SLUDGE BY ICP		**SW6010B**				**STS**
Lead	7.39	0.687		ppm	11/21/2003 7:08:12 A	
BTEX IN SOIL BY GC		**SW8021B**				**CRM**
Benzene	0.090	0.040		ppm	11/20/2003 10:28:00 A	
Ethylbenzene	< 0.250	0.250		ppm	11/20/2003 10:28:00 A	
Methyl-tert-butylether	0.120	0.050		ppm	11/20/2003 10:28:00 A	
Toluene	< 0.250	0.250		ppm	11/20/2003 10 28:00 A	
Xylenes, Total	< 0.750	0.750		ppm	11/20/2003 10:28:00 A	
Surr: alpha, alpha, alpha-Trifluorotoluene	98.0	70-130		%REC	11/20/2003 10:28:00 A	
ALPHA,ALPHA,ALPHA-TRIFLUOROTOLUENE		**SW8015B**				**CRM**
Surr: alpha,alpha,alpha-trifluorotoluene	87.4	70-130		%REC	11/20/2003 10.28:00 A	
TPH (GASOLINE RANGE ORGANICS)		**SW8015B**				**CRM**
TPH (Gasoline Range C6 - C12)	< 50.0	50.0		ppm	11/20/2003 10:28:00 A	

Qualifiers:

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- B - Analyte detected in the associated Method Blank
- * - Value exceeds MCL or Permit Limitation
- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- MI+ - Matrix Interference
- H - Exceeds Holding Time

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CLIENT:	Du-Co UST Contractors	**Client Sample ID:**	#2
Lab Order:	L03110431	**Tag Number:**	
Project:	Butler's Gas Station	**Collection Date:**	11/11/2003 2:30:00 PM
Lab ID:	L03110431-02A	**Matrix:**	SOIL
Date Received:	13-Nov-03	**Date Reported:**	01-Dec-03

Analyses	Result	Detection Limit	Qual	Units	Date Analyzed	Analyst
METALS IN SOIL OR SLUDGE BY ICP	**SW6010B**					**STS**
Lead	95.7	0.570		ppm	11/21/2003 7:42:09 A	
BTEX IN SOIL BY GC	**SW8021B**					**CRM**
Benzene	< 0 0400	0.040		ppm	11/20/2003 10:51:00 A	
Ethylbenzene	< 0.250	0.250		ppm	11/20/2003 10:51:00 A	
Methyl-tert-butylether	< 0.0500	0.050		ppm	11/20/2003 10:51:00 A	
Toluene	< 0.250	0.250		ppm	11/20/2003 10:51:00 A	
Xylenes, Total	< 0.750	0 750		ppm	11/20/2003 10 51:00 A	
Surr: alpha, alpha, alpha-Trifluorotoluene	104	70-130		%REC	11/20/2003 10:51:00 A	
ALPHA,ALPHA,ALPHA-TRIFLUOROTOLUENE	**SW8015B**					**CRM**
Surr: alpha,alpha,alpha-trifluorotoluene	92.4	70-130		%REC	11/20/2003 10 51:00 A	
TPH (GASOLINE RANGE ORGANICS)	**SW8015B**					**CRM**
TPH (Gasoline Range C6 - C12)	< 50.0	50.0		ppm	11/20/2003 10:51:00 A	

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	MI- - Matrix Interference
	* - Value exceeds MCL or Permit Limitation	H - Exceeds Holding Time

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CLIENT:	Du-Co UST Contractors	**Client Sample ID:**	#3
Lab Order:	L03110431	**Tag Number:**	
Project:	Butler's Gas Station	**Collection Date:**	11/11/2003 2:45:00 PM
Lab ID:	L03110431-03A	**Matrix:**	SOIL
Date Received:	13-Nov-03	**Date Reported:**	01-Dec-03

Analyses	Result		Detection Limit	Qual	Units	Date Analyzed	Analyst
METALS IN SOIL OR SLUDGE BY ICP		**SW6010B**					**STS**
Lead	69.0		1.00		ppm	11/21/2003 7:46:56 A	
BTEX IN SOIL BY GC		**SW8021B**					**CRM**
Benzene	< 0.0400		0.040		ppm	11/20/2003 11:15:00 A	
Ethylbenzene	< 0.250		0.250		ppm	11/20/2003 11:15:00 A	
Methyl-tert-butylether	< 0.0500		0.050		ppm	11/20/2003 11:15:00 A	
Toluene	< 0.250		0.250		ppm	11/20/2003 11:15:00 A	
Xylenes, Total	< 0.750		0.750		ppm	11/20/2003 11:15:00 A	
Surr: alpha, alpha, alpha-Trifluorotoluene	102		70-130		%REC	11/20/2003 11:15:00 A	
ALPHA,ALPHA,ALPHA-TRIFLUOROTOLUENE		**SW8015B**					**CRM**
Surr: alpha,alpha,alpha-trifluorotoluene	90.4		70-130		%REC	11/20/2003 11:15:00 A	
TPH (GASOLINE RANGE ORGANICS)		**SW8015B**					**CRM**
TPH (Gasoline Range C6 - C12)	< 50.0		50.0		ppm	11/20/2003 11:15:00 A	

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
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	B - Analyte detected in the associated Method Blank	MI+ - Matrix Interference
	* - Value exceeds MCL or Permit Limitation	H - Exceeds Holding Time

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CLIENT:	Du-Co UST Contractors	**Client Sample ID:**	#4
Lab Order:	L03110431	**Tag Number:**	
Project:	Butler's Gas Station	**Collection Date:**	11/12/2003 9:00:00 AM
Lab ID:	L03110431-04A	**Matrix:**	SOIL
Date Received:	13-Nov-03	**Date Reported:**	01-Dec-03

Analyses	Result	Detection Limit	Qual	Units	Date Analyzed	Analyst
METALS IN SOIL OR SLUDGE BY ICP		**SW6010B**				**STS**
Lead	6.28	0.666		ppm	11/21/2003 7:51:42 A	
BTEX IN SOIL BY GC		**SW8021B**				**CRM**
Benzene	< 0.0400	0.040		ppm	11/20/2003 11:38:00 A	
Ethylbenzene	< 0.250	0.250		ppm	11/20/2003 11:38:00 A	
Methyl-tert-butylether	< 0.0500	0.050		ppm	11/20/2003 11:38:00 A	
Toluene	< 0.250	0.250		ppm	11/20/2003 11:38:00 A	
Xylenes, Total	< 0.750	0 750		ppm	11/20/2003 11:38:00 A	
Surr: alpha, alpha, alpha-Trifluorotoluene	101	70-130		%REC	11/20/2003 11:38:00 A	
ALPHA,ALPHA,ALPHA-TRIFLUOROTOLUENE		**SW8015B**				**CRM**
Surr: alpha,alpha,alpha-trifluorotoluene	88.2	70-130		%REC	11/20/2003 11:38:00 A	
TPH (GASOLINE RANGE ORGANICS)		**SW8015B**				**CRM**
TPH (Gasoline Range C6 - C12)	< 50.0	50.0		ppm	11/20/2003 11:38.00 A	

Qualifiers:

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J - Analyte detected below quantitation limits
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R - RPD outside accepted recovery limits
MI+ - Matrix Interference
H - Exceeds Holding Time

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CLIENT:	Du-Co UST Contractors	**Client Sample ID:**	#5
Lab Order:	L03110431	**Tag Number:**	
Project:	Butler's Gas Station	**Collection Date:**	11/12/2003 9:15:00 AM
Lab ID:	L03110431-05A	**Matrix:**	SOIL
Date Received:	13-Nov-03	**Date Reported:**	01-Dec-03

Analyses	Result		Detection Limit	Qual	Units	Date Analyzed	Analyst
METALS IN SOIL OR SLUDGE BY ICP		**SW6010B**					**STS**
Lead	4.22		0.774		ppm	11/21/2003 7:56:23 A	
BTEX IN SOIL BY GC		**SW8021B**					**CRM**
Benzene	< 0.0400		0.040		ppm	11/20/2003 12:02:00 P	
Ethylbenzene	< 0.250		0.250		ppm	11/20/2003 12:02:00 P	
Methyl-tert-butylether	< 0.0500		0.050		ppm	11/20/2003 12:02:00 P	
Toluene	< 0.250		0.250		ppm	11/20/2003 12:02:00 P	
Xylenes, Total	< 0.750		0.750		ppm	11/20/2003 12:02:00 P	
Surr: alpha, alpha, alpha-Trifluorotoluene	105		70-130		%REC	11/20/2003 12:02:00 P	
ALPHA,ALPHA,ALPHA-TRIFLUOROTOLUENE		**SW8015B**					**CRM**
Surr: alpha,alpha,alpha-trifluorotoluene	89.4		70-130		%REC	11/20/2003 12:02:00 P	
TPH (GASOLINE RANGE ORGANICS)		**SW8015B**					**CRM**
TPH (Gasoline Range C6 - C12)	< 50.0		50.0		ppm	11/20/2003 12:02:00 P	

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CLIENT:	Du-Co UST Contractors	**Client Sample ID:**	#6
Lab Order:	L03110431	**Tag Number:**	
Project:	Butler's Gas Station	**Collection Date:**	11/12/2003 9:25:00 AM
Lab ID:	L03110431-06A	**Matrix:**	SOIL
Date Received:	13-Nov-03	**Date Reported:**	01-Dec-03

Analyses	Result	Detection Limit	Qual	Units	Date Analyzed	Analyst
METALS IN SOIL OR SLUDGE BY ICP		**SW6010B**				**STS**
Lead	40.6	0.770		ppm	11/21/2003 8:01:11 A	
BTEX IN SOIL BY GC		**SW8021B**				**CRM**
Benzene	0.040	0.040		ppm	11/20/2003 12:25:00 P	
Ethylbenzene	< 0.250	0.250		ppm	11/20/2003 12:25:00 P	
Methyl-tert-butylether	< 0.0500	0.050		ppm	11/20/2003 12:25:00 P	
Toluene	< 0.250	0.250		ppm	11/20/2003 12:25:00 P	
Xylenes, Total	< 0.750	0.750		ppm	11/20/2003 12:25:00 P	
Surr: alpha, alpha, alpha-Trifluorotoluene	99.0	70-130		%REC	11/20/2003 12:25:00 P	
ALPHA,ALPHA,ALPHA-TRIFLUOROTOLUENE		**SW8015B**				**CRM**
Surr: alpha,alpha,alpha-trifluorotoluene	90.8	70-130		%REC	11/20/2003 12:25:00 P	
TPH (GASOLINE RANGE ORGANICS)		**SW8015B**				**CRM**
TPH (Gasoline Range C6 - C12)	< 50.0	50.0		ppm	11/20/2003 12 25:00 P	

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CLIENT:	Du-Co UST Contractors	**Client Sample ID:**	#7
Lab Order:	L03110431	**Tag Number:**	
Project:	Butler's Gas Station	**Collection Date:**	11/12/2003 4:45:00 PM
Lab ID:	L03110431-07A	**Matrix:**	SOIL
Date Received:	13-Nov-03	**Date Reported:**	01-Dec-03

Analyses	Result	Detection Limit	Qual	Units	Date Analyzed	Analyst
METALS IN SOIL OR SLUDGE BY ICP	**SW6010B**					**STS**
Lead	18.8	0.558		ppm	11/21/2003 8:05:53 A	
BTEX IN SOIL BY GC	**SW8021B**					**CRM**
Benzene	0.130	0 040		ppm	11/22/2003 4.35:00 P	
Ethylbenzene	0.260	0.250		ppm	11/22/2003 4:35:00 P	
Methyl-tert-butylether	< 0.0700	0.070		ppm	11/22/2003 4:35:00 P	
Toluene	< 0.250	0.250		ppm	11/22/2003 4:35:00 P	
Xylenes, Total	< 0.750	0.750		ppm	11/22/2003 4:35:00 P	
Surr: alpha, alpha, alpha-Trifluorotoluene	99.4	70-130		%REC	11/22/2003 4:35:00 P	
ALPHA,ALPHA,ALPHA-TRIFLUOROTOLUENE	**SW8015B**					**CRM**
Surr: alpha,alpha,alpha-trifluorotoluene	78.2	70-130		%REC	11/22/2003 4.35:00 P	
TPH (GASOLINE RANGE ORGANICS)	**SW8015B**					**CRM**
TPH (Gasoline Range C6 - C12)	< 50.0	50.0		ppm	11/22/2003 4:35:00 P	

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
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CLIENT:	Du-Co UST Contractors	**Client Sample ID:**	#8
Lab Order:	L03110431	**Tag Number:**	
Project:	Butler's Gas Station	**Collection Date:**	11/12/2003 4:55:00 PM
Lab ID:	L03110431-08A	**Matrix:**	SOIL
Date Received:	13-Nov-03	**Date Reported:**	01-Dec-03

Analyses	Result	Detection Limit	Qual	Units	Date Analyzed	Analyst
METALS IN SOIL OR SLUDGE BY ICP	**SW6010B**					**STS**
Lead	21.7	0.507		ppm	11/21/2003 8:10:42 A	
BTEX IN SOIL BY GC	**SW8021B**					**CRM**
Benzene	0.435	0.040		ppm	11/21/2003 3:20:00 A	
Ethylbenzene	0.490	0.250		ppm	11/21/2003 3:20:00 A	
Methyl-tert-butylether	< 0.0500	0.050		ppm	11/21/2003 3:20:00 A	
Toluene	< 0.250	0.250		ppm	11/21/2003 3:20:00 A	
Xylenes, Total	< 0.750	0.750		ppm	11/21/2003 3:20:00 A	
Surr: alpha, alpha, alpha-Trifluorotoluene	103	70-130		%REC	11/21/2003 3:20:00 A	
ALPHA,ALPHA,ALPHA-TRIFLUOROTOLUENE	**SW8015B**					**CRM**
Surr: alpha,alpha,alpha-trifluorotoluene	86.2	70-130		%REC	11/21/2003 3:20:00 A	
TPH (GASOLINE RANGE ORGANICS)	**SW8015B**					**CRM**
TPH (Gasoline Range C6 - C12)	< 50.0	50.0		ppm	11/21/2003 3:20:00 A	

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CLIENT:	Du-Co UST Contractors	**Client Sample ID:**	#9
Lab Order:	L03110431	**Tag Number:**	
Project:	Butler's Gas Station	**Collection Date:**	11/12/2003 5:05:00 PM
Lab ID:	L03110431-09A	**Matrix:**	SOIL
Date Received:	13-Nov-03	**Date Reported:**	01-Dec-03

Analyses	Result		Detection Limit	Qual	Units	Date Analyzed	Analyst
METALS IN SOIL OR SLUDGE BY ICP		**SW6010B**					**STS**
Lead	30.4		0.768		ppm	11/21/2003 8:15:31 A	
BTEX IN SOIL BY GC		**SW8021B**					**CRM**
Benzene	< 0.0400		0 040		ppm	11/21/2003 9:12:00 A	
Ethylbenzene	< 0.250		0.250		ppm	11/21/2003 9:12.00 A	
Methyl-tert-butylether	< 0.0500		0.050		ppm	11/21/2003 9 12:00 A	
Toluene	< 0.250		0.250		ppm	11/21/2003 9:12:00 A	
Xylenes, Total	< 0.750		0.750		ppm	11/21/2003 9:12:00 A	
Surr: alpha, alpha, alpha-Trifluorotoluene	103		70-130		%REC	11/21/2003 9.12:00 A	
ALPHA,ALPHA,ALPHA-TRIFLUOROTOLUENE		**SW8015B**					**CRM**
Surr: alpha,alpha,alpha-trifluorotoluene	81.6		70-130		%REC	11/21/2003 9:12:00 A	
TPH (GASOLINE RANGE ORGANICS)		**SW8015B**					**CRM**
TPH (Gasoline Range C6 - C12)	< 50.0		50.0		ppm	11/21/2003 9:12:00 A	

Qualifiers:

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CLIENT:	Du-Co UST Contractors	**Client Sample ID:**	#10
Lab Order:	L03110431	**Tag Number:**	
Project:	Butler's Gas Station	**Collection Date:**	11/12/2003 5:30:00 PM
Lab ID:	L03110431-10A	**Matrix:**	SOIL
Date Received:	13-Nov-03	**Date Reported:**	01-Dec-03

Analyses	Result	Detection Limit	Qual	Units	Date Analyzed	Analyst
METALS IN SOIL OR SLUDGE BY ICP		**SW6010B**				**STS**
Lead	36.2	0.830		ppm	11/21/2003 8:20:14 A	
BTEX IN SOIL BY GC		**SW8021B**				**CRM**
Benzene	< 0.0400	0.040		ppm	11/21/2003 9:35:00 A	
Ethylbenzene	< 0.250	0.250		ppm	11/21/2003 9:35:00 A	
Methyl-tert-butylether	< 0.0500	0.050		ppm	11/21/2003 9:35:00 A	
Toluene	< 0.250	0.250		ppm	11/21/2003 9:35:00 A	
Xylenes, Total	< 0.750	0.750		ppm	11/21/2003 9:35:00 A	
Surr: alpha, alpha, alpha-Trifluorotoluene	104	70-130		%REC	11/21/2003 9:35:00 A	
ALPHA,ALPHA,ALPHA-TRIFLUOROTOLUENE		**SW8015B**				**CRM**
Surr: alpha,alpha,alpha-trifluorotoluene	81.2	70-130		%REC	11/21/2003 9:35:00 A	
TPH (GASOLINE RANGE ORGANICS)		**SW8015B**				**CRM**
TPH (Gasoline Range C6 - C12)	< 50.0	50.0		ppm	11/21/2003 9 35:00 A	

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CLIENT:	Du-Co UST Contractors	**Client Sample ID:**	#11
Lab Order:	L03110431	**Tag Number:**	
Project:	Butler's Gas Station	**Collection Date:**	11/12/2003 5:45:00 PM
Lab ID:	L03110431-11A	**Matrix:**	SOIL
Date Received:	13-Nov-03	**Date Reported:**	01-Dec-03

Analyses	Result	Detection Limit	Qual	Units	Date Analyzed	Analyst
METALS IN SOIL OR SLUDGE BY ICP		**SW6010B**				**STS**
Lead	12.3	0.678		ppm	11/21/2003 8:24:51 A	
BTEX IN SOIL BY GC		**SW8021B**				**CRM**
Benzene	< 0.0400	0.040		ppm	11/21/2003 9:59:00 A	
Ethylbenzene	< 0.250	0.250		ppm	11/21/2003 9:59:00 A	
Methyl-tert-butylether	< 0.0500	0.050		ppm	11/21/2003 9:59:00 A	
Toluene	< 0.250	0.250		ppm	11/21/2003 9:59:00 A	
Xylenes, Total	< 0.750	0.750		ppm	11/21/2003 9:59:00 A	
Surr: alpha, alpha, alpha-Trifluorotoluene	111	70-130		%REC	11/21/2003 9:59:00 A	
ALPHA,ALPHA,ALPHA-TRIFLUOROTOLUENE		**SW8015B**				**CRM**
Surr: alpha,alpha,alpha-trifluorotoluene	83.4	70-130		%REC	11/21/2003 9:59:00 A	
TPH (GASOLINE RANGE ORGANICS)		**SW8015B**				**CRM**
TPH (Gasoline Range C6 - C12)	< 50.0	50.0		ppm	11/21/2003 9:59:00 A	

Qualifiers:

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R - RPD outside accepted recovery limits
MI+ - Matrix Interference
H - Exceeds Holding Time

L03110431

DEPARTMENT OF ENVIRONMENTAL QUALITY
UNDERGROUND STORAGE TANK DIVISION
CHAIN-OF-CUSTODY

PAGE 1 OF 1

SITE NAME: BUTLER'S GAS STATION

SITE ADDRESS: 1776 THOMAS DELPIT DR.

SITE LOCATION: BATON ROUGE LA. 70802

SITE PARISH: EAST BATON ROUGE

FID# 17-001184 INCIDENT #

SAMPLE NUMBER	COMP	GRAB	TIME	DATE	SAMPLE LOCATION	NO. OF CONTAINERS	ANALYSES	PRESERVATIVE	SAMPLED BY	DEPTH REMARKS
#1		✓	2:20 PM	11/11/03	EASTEND	2	BTEX TPH-GRO MTBE, LEAD	NATIVE SOIL	MIKE DUCOTE	120"
#2		✓	2:30 PM	"	BACKFILL	2		CENTER		100"
#3		✓	2:45 PM	"	WESTEND	2		NATIVE SOIL		120"
#4		✓	9:00 AM	11/12/03	EASTEND	2		NATIVE SOIL		120"
#5		✓	9:15 AM		BACKFILL	2		CENTER		96"
#6		✓	9:25 AM		WESTEND	2		NATIVE SOIL		120"
#7		✓	4:45 PM		EASTEND	2		NATIVE SOIL		120"
#8		✓	4:55 PM		BACKFILL	2		CENTER		96"
#9		✓	5:05 PM		WESTEND	2		NATIVE		120"
#10		✓	5:30 PM		ISLAND N	2		NORTH		48"
#11		✓	5:45 PM	"	ISLAND S	2		SOUTH	"	48"

CHAIN OF CUSTODY

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
Mike Ducote	11/13/03	8:30AM	J Bridwell 11-13-03 10:05

SEND REPORT TO: DU - CO

ADDRESS: Michael Ducote
1060 Rambleview Lane
Woodworth, LA 71485

COMMENTS: Fax # 318-346-6299

USTD-COC1 (4/92)

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CLIENT:	Du-Co UST Contractors	**Client Sample ID:**	#1-A
Lab Order:	L04010366	**Tag Number:**	FID #17-001184
Project:	Bulter's Gas Station	**Collection Date:**	1/12/04 9:30:00 AM
Lab ID:	L04010366-01A	**Matrix:**	SOIL
Date Received:	12-Jan-04	**Date Reported:**	16-Jan-04

Analyses	Result	Detection Limit	Qual	Units	Date Analyzed	Analyst
VOLATILES, SPLP LEACHED		**SW1312/8021B**				**CRM**
Benzene	< 0 00500	0 00500		ppm	1/14/04 3 55 00 P	
Ethylbenzene	< 0 00500	0 00500		ppm	1/14/04 3 55 00 P	
Toluene	< 0.00500	0 00500		ppm	1/14/04 3 55 00 P	
Xylenes, Total	< 0 0150	0.0150		ppm	1/14/04 3 55 00 P	
Surr. alpha, alpha, alpha-Trifluorotoluene	97.6	70-130		%REC	1/14/04 3 55 00 P	

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds MCL or Permit Limitation
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
MI+ - Matrix Interference
H - Exceeds Holding Time

SHERRY Laboratories
Testing Today – Protecting Tomorrow

2417 West Pinhook Road
Lafayette LA 70508-3344
(337) 235-0483

P O Box 81816
Lafayette LA 70598-1816
Fax (337) 233-6540
(800) 737-2378

CLIENT: Du-Co UST Contractors
Lab Order: L04010366
Project: Bulter's Gas Station
Lab ID: L04010366-02A
Date Received: 12-Jan-04

Client Sample ID: #7-A
Tag Number: FID #17-001184
Collection Date: 1/12/04 9:45:00 AM
Matrix: SOIL
Date Reported: 16-Jan-04

Analyses	Result	Detection Limit	Qual	Units	Date Analyzed	Analyst
VOLATILES, SPLP LEACHED		**SW1312/8021B**				**CRM**
Benzene	< 0.00500	0 00500		ppm	1/14/04 4:18:00 P	
Ethylbenzene	< 0 00500	0 00500		ppm	1/14/04 4 18:00 P	
Toluene	< 0.00500	0.00500		ppm	1/14/04 4:18 00 P	
Xylenes, Total	< 0 0150	0 0150		ppm	1/14/04 4.18 00 P	
Surr. alpha, alpha, alpha-Trifluorotoluene	98 2	70-130		%REC	1/14/04 4.18.00 P	

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds MCL or Permit Limitation
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
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Lafayette LA 70598-1816
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(800) 737-2378

CLIENT: Du-Co UST Contractors
Lab Order: L04010366
Project: Bulter's Gas Station
Lab ID: L04010366-03A
Date Received: 12-Jan-04

Client Sample ID: #8-A
Tag Number: FID #17-001184
Collection Date: 1/12/04 9:50:00 AM
Matrix: SOIL
Date Reported: 16-Jan-04

Analyses	Result	Detection Limit	Qual	Units	Date Analyzed	Analyst
VOLATILES, SPLP LEACHED		**SW1312/8021B**				**CRM**
Benzene	< 0.00500	0 00500		ppm	1/14/04 4.42 00 P	
Ethylbenzene	< 0.00500	0.00500		ppm	1/14/04 4.42.00 P	
Toluene	< 0.00500	0 00500		ppm	1/14/04 4.42 00 P	
Xylenes, Total	< 0 0150	0.0150		ppm	1/14/04 4·42 00 P	
Surr· alpha, alpha, alpha-Trifluorotoluene	97.6	70-130		%REC	1/14/04 4·42.00 P	

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds MCL or Permit Limitation
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
MI+ - Matrix Interference
H - Exceeds Holding Time

4010366

DEPARTMENT OF ENVIRONMENTAL QUALITY
UNDERGROUND STORAGE TANK DIVISION
CHAIN-OF-CUSTODY

PAGE 1 OF 1

SITE NAME: BULTER'S GAS STATION

SITE ADDRESS: 1776 THOMAS DELPIT DR.

SITE LOCATION: BATON ROUGE LA. 70802

SITE PARISH: EAST BATON ROUGE

FID# 17-001184 INCIDENT #

	SAMPLE NUMBER	COMP	GRAB	TIME	DATE	SAMPLE LOCATION	NO. OF CONTAINERS	ANALYSES (SPLP / BTEX)	PRESERVATIVES	SAMPLED BY	DEPTH ~~REMARKS~~
1	#1-A		~~/~~	9:30am	1-12-04	EAST END	1			Mike Ducote	120"
2	#7-A		~~/~~	9:45am	1	EAST END	1			1	120"
3	#8-A		~~/~~	9:50am	1	BACKFILL	1			1	96"

CHAIN OF CUSTODY

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
Mike Ducote	1-12-04	1:50	

SEND REPORT TO: DU - CO
Michael Ducote

ADDRESS: 1060 Rambleview Lane
Woodworth, LA 71485

COMMENTS: Fax # 318-346-6299

USTD-COC1 (4/92)

AI 71560

S06-0723
T 86368
Charles Melchior / CRO

INCIDENT # _____

DATE 04/11/06

LOUISIANA NOTIFICATION REQUIREMENTS

This form should be completed and submitted to the Underground Storage Tank Division within seven (7) calendar days after verbal notification.

If mailed, submittal date will be the postmark date of the written notification. Forward to:

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
P. O. Box 4312
Baton Rouge, LA 70821-4312
Attention: SURVEILLANCE DIVISION – SPOC
"UNAUTHORIZED DISCHARGE NOTIFICATION REPORT"

1. Name of person, company, or other party who is filing the written report.

   CRA, Inc., Baton Rouge, Louisiana, as environmental consultant for Shell Oil Products US on behalf of Motiva Enterprises LLC; represented by Joyce Davis; 13258 FM 1960, Houston, TX 77065

2. Time and date of verbal notification, name of person making the notification, and identification of the site or facility. (Name and address)

   March 10, 2006, 8:09 a.m., to LDEQ/SPOC, Baton Rouge; Andre R. Bankston, CRA, Inc., Baton Rouge, LA (see Exhibit 1)

   Shell Retail Store No. 142059
   2300 South Acadian Thruway
   Baton Rouge, East Baton Rouge Parish, Louisiana

RECEIVED
APR 17 2006
DEQ
Single Point of Contact

3. Release date and time.

   Unknown

4. Incident details and/or emergency condition.

   Analytical results for several soil and groundwater samples collected during site assessment activities indicated hydrocarbon concentrations above the LDEQ RECAP Screening Option Screening Standards (SO SS). No emergency conditions existed.

5. Product released and estimated quantity released in gallons.

   Gasoline - Quantity released is unknown.

6. Surface or groundwater impact.

   Soil benzene and TPH-GRO concentrations above RECAP SO SS were detected. Groundwater benzene, ethylbenzene, MTBE, and TPH-GRO concentrations above RECAP SO SS were detected.

7. Action taken to stop release.

   Not Applicable.

8. Measures taken to prevent recurrence of the incident.

   Tank tightness tests and inventory data record review.

9. Is the U.S.T. system registered?

   YES **X** U.S.T. ID# **17-008376**

   NO _____

ANSWER THE FOLLOWING ONLY IF GROUNDWATER CONTAMINATION IS CONFIRMED

1. Reporting party status (owner, operator, consultant, etc.).

   Environmental consultant for Shell Oil Products US, on behalf of Motiva Enterprises LLC.

2. Attach groundwater contamination data and/or analytical results.

   Tables summarizing soil and groundwater analytical results and a site plan are included as Exhibit 2.

3. Possible routes of migration.

   Groundwater, underground utility corridors

4. List all abandoned or active water wells within the immediate area.

   A list of registered water wells within a 1-mile radius of the site is included as Exhibit 3.

5. Names of all other responsible parties.

   N/A

EXHIBIT 1

LDEQ ONLINE INCIDENT REPORTING FORM

Online Incident Reporting

Thank You

Please print this page for your records.

Your confirmation number is: **PINX 2864**

Reporting Company Information	
Date/Time Reported: 3/10/2006 8:09:11 AM	
Type of Incident: Spill Incident/Release	
First Name:	Andre
Last Name:	Bankston
Title:	
Company:	Conestoga-Rovers & Associates
Phone #:	225-292-9007
Mailing Address:	4915 South Sherwood Forest Blvd.
City:	Baton Rouge
State:	Louisiana
Zip:	70816
Email:	

Responsible Party Information		
Name of Responsible Party: Motiva Enterprises LLC		
Location of Incident: Shell Retail Store No. 142059, 2300 South Acadian Thruway, Baton Rouge, LA		
Mailing Address (if different from above): 13258 FM 1960		
City: Houston	State: Texas	Zip: 77065

Date of Discharge:	Unknown
Time Noticed:	Began: N/A Ended: N/A
Parish:	East Baton Rouge
Media Affected:	Soil/Water
If water, name of nearest water body: Dawson Creek	
If air, note wind direction and weather conditions: N/A	
Description of Release/Spill	
Product/material release and quantity:	

Suspected petroleum hydrocarbons

Description of release:
Laboratory results for soil and groundwater samples collected during the site investigation activities had concentrations greater than RECAP Screening Option Screening Standards.

How was the spill contained?: N/A

How was the spill cleaned?: N/A

Directions for Reaching the Site

The site is located north of the intersection of South Acadian Thruway and I-10 South Acadian Thruway Exit (Exit 157B).

EXHIBIT 2

SITE PLAN AND SAMPLING RESULT(S)

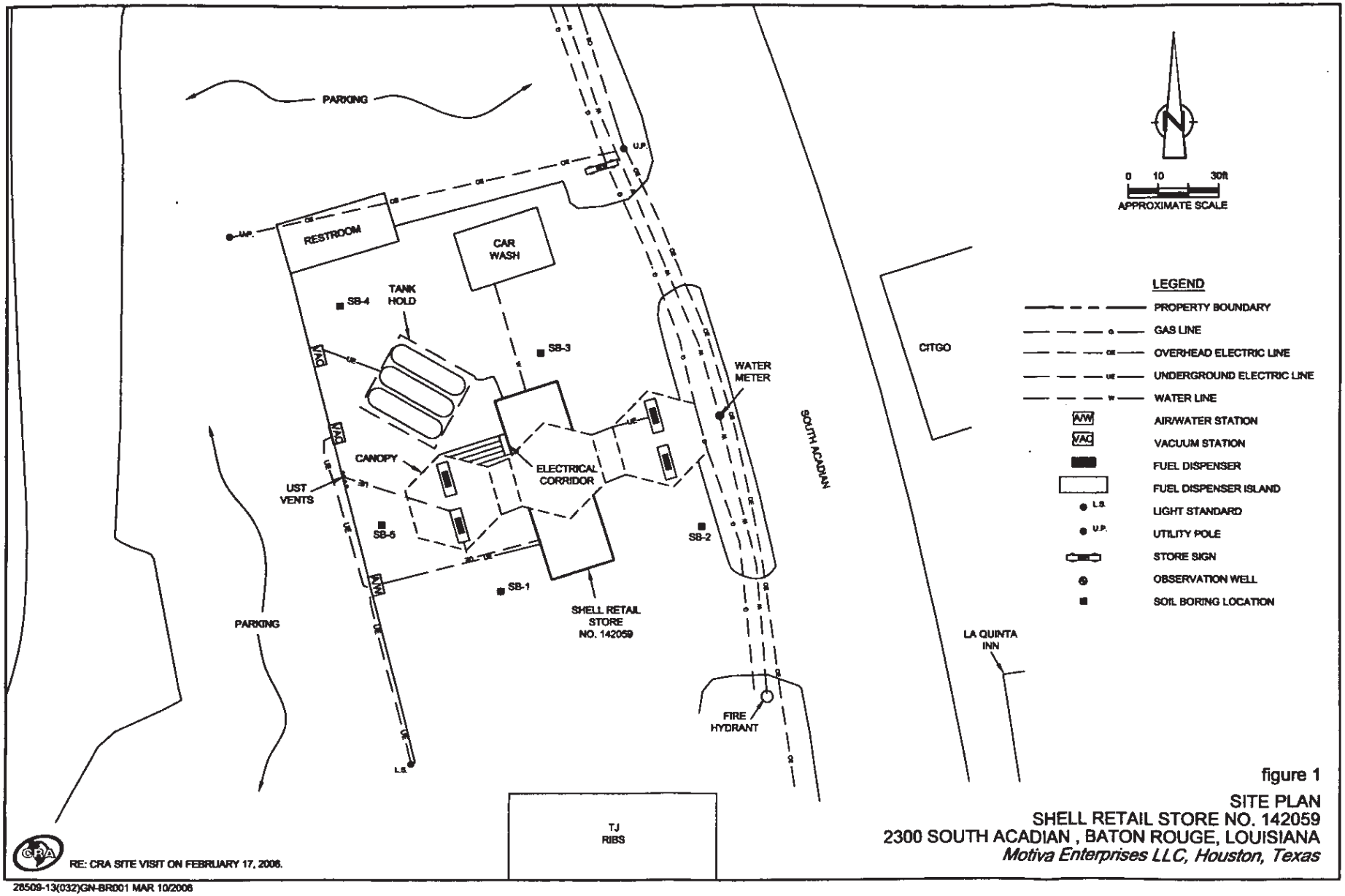

figure 1

SITE PLAN
SHELL RETAIL STORE NO. 142059
2300 SOUTH ACADIAN , BATON ROUGE, LOUISIANA
Motiva Enterprises LLC, Houston, Texas

RE: CRA SITE VISIT ON FEBRUARY 17, 2006.

28509-13(032)GN-BR001 MAR 10/2006

TABLE 1A

SOIL ANALYTICAL LABORATORY DATA
SHELL RETAIL STORE NO. 142059
2300 SOUTH ACADIAN THRUWAY
BATON ROUGE, EAST BATON ROUGE PARISH, LOUISIANA

Sample Location (depth, ft-bgs)	*Sample Date*	*Parameters*					
		Benzene (mg/kg)	*Toluene (mg/kg)*	*Ethylbenzene (mg/kg)*	*Xylenes (mg/kg)*	*MTBE (mg/kg)*	*TPH-GRO (mg/kg)*
SOIL_SSi		*3.1**	*470**	*230**	*120**	*4,700**	*510**
SOIL_SSGW		*0.051**	*20**	*19**	*150**	*0.077**	*65**
SB-1 (12'-15')	02/22/06	<0.00196	<0.00196	<0.00196	<0.00489	<0.002	<9.19
SB-2 (12' - 15')	02/22/06	<0.00197	<0.00197	<0.00197	<0.00493	<0.002	<10.8
SB-3 (6'-9')	02/22/06	**0.0575**	0.0634	1.67	0.2	0.003	**728**
SB-4 (12'-15')	02/22/06	**0.468**	0.0972	0.667	0.531	0.069	**88.6**
SB-5 (12'-15')	02/22/06	<0.00196	<0.00196	<0.00196	<0.00489	0.002	<9.58

mg/kg = Milligrams per kilogram, which is equivalent to parts per million (ppm)
MTBE = Methyl tert-butyl ether
TPH-DRO = Total Petroleum Hydrocarbons-Diesel Range Organics
TPH-GRO = Total Petroleum Hydrocarbons-Gasoline Range Organics

* Screening standards (SS) specified in the LDEQ's October 20, 2003, RECAP Table 1 - Screening Option Screening Standard for Soil and Groundwater.

Notes: Highlighted SS are the limiting SS from LDEQ's October 20, 2003, RECAP Table 1 - Screening Option Screening Standard for Soil and Groundwater.
Bold and highlighted sample concentrations are those that exceed the LDEQ SS.

TABLE 2A

GROUNDWATER ANALYTICAL LABORATORY DATA
SHELL RETAIL STORE NO. 142059
2300 SOUTH ACADIAN THRUWAY
BATON ROUGE, EAST BATON ROUGE PARISH, LOUISIANA

Sample I.D.	Sample Date	Parameter					
		Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	MTBE (mg/L)	TPH-GRO (mg/L)
GW_SS		***0.005****	***1.0****	***0.7****	***10****	***0.02****	***0.15****
SB-1	02/22/06	<0.001	<0.001	<0.001	<0.003	0.00979	<0.1
SB-2	02/22/06	<0.001	<0.001	<0.001	<0.003	0.00272	<0.1
SB-3	02/22/06	**0.04**	0.0124	0.0744	0.0214	0.0132	**81.7**
SB-4	02/22/06	**1.46**	0.246	**2.43**	3.13	**1.12**	**87.3**
SB-5	02/22/06	<0.001	<0.001	<0.001	<0.003	<0.001	**0.25**

mg/L = Milligrams per liter, which is equivalent to parts per million (ppm)
MTBE = Methyl tert-butyl ether
TPH-DRO = Total Petroleum Hydrocarbons-Diesel Range Organics
TPH-GRO = Total Petroleum Hydrocarbons-Gasoline Range Organics

* Screening standards (SS) specified in the LDEQ's October 20, 2003, RECAP Table 1 - Screening Option Screening Standards for Soil and Groundwater.

Note: Bold and highlighted sample concentrations are those that exceed the LDEQ SS.

EXHIBIT 3

REGISTERED WATER WELLS

Registered Water Wells

Public Works & Water Resources Division
Water Resources Section

Wells located within 1 mile radius
of Latitude 30°25'35" and Longitude 91°09'02"

Parish	Section	Owner Name	DOTD Well #	Owner Well #	Driller's Name	Well Depth (ft)	Well Use	Casing Size (in)	Drill Date	Water Level (ft)	W.L. Date Measured	Geologic Unit	Latitude	Longitude	Avail Info	Distance in Miles
East Baton Rouge	95	EB REC PARK COM	-117		EBERHART	1402	PLUGGED	8X6	28-Jun	28	06/16/28	12112BR	302612	910828	ED W	0.9
East Baton Rouge	94	JOLLY, HENRY	-130		EBERHART	1147	DESTROYED	4X2.50	20-Jul			12108BR	302520	910920	D	0.41
East Baton Rouge	96	BATES, C	-156		EBERHART	1200	DESTROYED	2.5	18-Jun	28	06/08/18	12112BR	302541	910919	D W	0.3
East Baton Rouge	96	BATES, C	-157		EBERHART	1552	IRRIGATION	6X4	Jun-42	23	08/01/44	12115BR	302541	910919	D Q W	0.3
East Baton Rouge	94	ALDRICH, S W	-219		UNKNOWN	1444	PLUGGED	4X2.50	.	8.5	04/30/59	12112BR	302512	910825	E Q W	0.75
East Baton Rouge	95	EB REC PARK COM	-495	2	HARRELL GUY	498	DESTROYED	6X4	Aug-48	72	08/23/48	11204BR	302612	910829	DM W	0.89
East Baton Rouge	68	LSU BATON ROUGE	-554		EBERHART	294	PLUGGED	6X6X6	Nov-53	30.2	11/19/53	112SLBR	302504	910945	D Q W	0.92
East Baton Rouge	96	RAMSEY, J	-734		HERRINGTON	504	DOMESTIC	2	1960	69	00/00/60	11204BR	302551	910859	W	0.31
East Baton Rouge	94	U S GEOL SURVEY	-778		SUMMERS, D. K.	2586	OBSERVATION	4X2.50	Mar-65	40.1	03/16/65	12220BR	302509	910827	EDMQ W	0.76
East Baton Rouge	94	U S GEOL SURVEY	- 780A		SUMMERS, D. K.	1622	OBSERVATION	4	Mar-65	1.52	04/23/65	12112BR	302509	910827	MQ W	0.76
East Baton Rouge	94	U S GEOL SURVEY	- 780B		SUMMERS, D. K.	1913	OBSERVATION	2	Mar-65	8.58	04/23/65	12115BR	302509	910827	Q W	0.76
East Baton Rouge	94	U S GEOL SURVEY	-781		SUMMERS, D. K.	2286	OBSERVATION	4X2.50X2	Apr-65	122.38	04/23/65	12220BR	302535	910904	EDMQ W	0.03
East Baton Rouge	94	U S GEOL SURVEY	- 782A		SUMMERS, D. K.	1189	OBSERVATION	4	Apr-65	18.72	04/23/65	12110BR	302535	910904	MQ W	0.03
East Baton Rouge	94	U S GEOL SURVEY	- 782B		SUMMERS, D. K.	1681	OBSERVATION	4X4X4	Apr-65	53.67	04/23/65	12115BR	302535	910904	MQ W	0.03
East Baton Rouge	96	U S GEOL SURVEY	- 807A		SUMMERS BROS	1713	PLUGGED	4	May-66	64.73	05/19/66	12115BR	302611	910912	EDMQ W	0.71
East Baton Rouge	96	U S GEOL SURVEY	- 807B		SUMMERS BROS	2264	PLUGGED	4X2.50X2	May-66	132.14	05/19/66	12220BR	302611	910912	EDMQ W	0.71
East Baton Rouge	94	LA WTR RESOURCE	-823	ST ALOY	STAMM-SCHEELE	582	OBSERVATION	2	Aug-67	28.69	08/21/67	11204BR	302500	910858	E Q W	0.67
East Baton Rouge	96	LA WTR RESOURCE	-824	CATHOLIC S	STAMM-SCHEELE	581	OBSERVATION	2	Sep-67	84.93	09/22/67	11206BR	302553	910920	E Q W	0.45
East Baton Rouge	96	LA WTR RESOURCE	-825	CATHOLIC L	STAMM-SCHEELE	475	OBSERVATION	2	Sep-67	57.26	09/22/67	11204BR	302553	910920	Q W	0.45
East Baton Rouge	95	U S GEOL SURVEY	-917		SUMMERS BROS	1736	OBSERVATION	4X2.50	Oct-73	119.08	10/23/73	12115BR	302614	910830	EDMQ W	0.91
East Baton Rouge	94	PUEA, WAYNE	-5354Z		ROUYEA'S	250	HEAT PUMP		Nov-85			11200NWM	302536	910912	D	0.17
East Baton Rouge	53	SOUTHLAND CORP	-5458Z	MW-1	IT CORPORATION	16	MONITOR	4	Dec-86			112SESC	302601	910941	D	0.81
East Baton Rouge	53	SOUTHLAND CORP	-5459Z	MW-2	IT CORPORATION	16	MONITOR	4	Dec-86			112SESC	302601	910941	D	0.81
East Baton Rouge	53	SOUTHLAND CORP	-5460Z	MW-3	IT CORPORATION	16	MONITOR	4	Dec-86			112SESC	302601	910941	D	0.81
East Baton Rouge	53	SOUTHLAND CORP	-5461Z	MW-4	IT CORPORATION	16	MONITOR	4	Dec-86			112SESC	302601	910941	D	0.81
East Baton Rouge	69	CHERRLOUSE, M S	-5597Z		ECONOMY	200	HEAT PUMP		Jul-87			11200NWM	302537	910953	D	0.84
East Baton Rouge	96	LEA, MAXWELL	-5635Z		ROUYEA'S	250	HEAT PUMP		Jan-88			11200NWM	302555	910854	D	0.4
East Baton Rouge	94	CHEVRON	-5636Z	MW-1	PSI/PTL	16	PLUGGED	4	Feb-88			112SESC	302530	910902	D	0.1
East Baton Rouge	94	CHEVRON	-5637Z	MW-2	PSI/PTL	16	PLUGGED	4	Feb-88			112SESC	302530	910902	D	0.1
East Baton Rouge	94	CHEVRON	-5638Z	MW-3	PSI/PTL	11	MONITOR	4	Feb-88			112SESC	302530	910902	D	0.1
East Baton Rouge	94	CHEVRON	-5639Z	MW-4	PSI/PTL	16	PLUGGED	4	Feb-88			112SESC	302530	910902	D	0.1
East Baton Rouge	94	EXXON CO USA	-5911Z	MW-1	ATEC	15	EXCAVATED	4	Jan-92	3.9	01/24/92	112SESC	302534	910816	D W	0.76
East Baton Rouge	94	EXXON CO USA	-5912Z	MW-2	ATEC	20	PLUGGED	4	Jan-92	3.07	01/26/92	112SESC	302534	910816	D W	0.76
East Baton Rouge	94	EXXON CO USA	-5913Z	MW-3	ATEC	15	PLUGGED	4	Jan-92	0.99	01/26/92	112SESC	302534	910816	D W	0.76
East Baton Rouge	94	EXXON CO USA	-5914Z	MW-4	ATEC	15	EXCAVATED	4	Jan-92	2.6	01/26/92	112SESC	302534	910816	D W	0.76
East Baton Rouge	94	TEXACO	-6081Z	MW-3	PSI/PTL	15	MONITOR	4	Jan-89			112SESC	302515	910824	D	0.73

Registered Water Wells

Public Works & Water Resources Division
Water Resources Section

Wells located within 1 mile radius
of Latitude 30°25'35" and Longitude 91°09'02"

Parish	Section	Owner Name	DOTD Well #	Owner Well #	Driller's Name	Well Depth (ft)	Well Use	Casing Size (in)	Drill Date	Water Level (ft)	W.L. Date Measured	Geologic Unit	Latitude	Longitude	Avail Info	Distance in Miles
East Baton Rouge	94	TEXACO	-6082Z	MW-4	PSI/PTL	15	MONITOR	4	Jan-89			112SESC	302515	910824	D	0.73
East Baton Rouge	94	TEXACO	-6083Z	MW-5	PSI/PTL	15	MONITOR	4	Jan-89			112SESC	302515	910824	D	0.73
East Baton Rouge	94	TEXACO	-6084Z	MW-6	PSI/PTL	15	MONITOR	4	Jan-89			112SESC	302515	910824	D	0.73
East Baton Rouge	94	TEXACO	-6085Z	MW-7	PSI/PTL	15	MONITOR	4	Jan-89			112SESC	302515	910824	D	0.73
East Baton Rouge	94	STAR ENTERPRISE	-6123Z	MW-8	LAYNE (LA)	16	MONITOR	4	Mar-89	5	04/07/89	112SESC	302515	910817	D W	0.84
East Baton Rouge	94	STAR ENTERPRISE	-6124Z	MW-9	LAYNE (LA)	16	PLUGGED	4	Mar-89	5	04/07/89	112SESC	302514	910818	D W	0.83
East Baton Rouge	94	STAR ENTERPRISE	-6125Z	MW-10	LAYNE (LA)	16	MONITOR	4	Mar-89	4	04/07/89	112SESC	302515	910817	D W	0.84
East Baton Rouge	94	STAR ENTERPRISE	-6126Z	MW-11	LAYNE (LA)	16	PLUGGED	4	Mar-89	5	04/07/89	112SESC	302515	910817	D W	0.84
East Baton Rouge	94	STAR ENTERPRISE	-6127Z	MW-12	LAYNE (LA)	16	DESTROYED	4	Mar-89	4	04/07/89	112SESC	302515	910817	D W	0.84
East Baton Rouge	94	STAR ENTERPRISE	-6128Z	MW-13	LAYNE (LA)	16	PLUGGED	4	Mar-89	5	04/07/89	112SESC	302514	910818	D W	0.83
East Baton Rouge	94	STAR ENTERPRISE	-6129Z	MW-14	LAYNE (LA)	16	MONITOR	4	Mar-89	5	04/07/89	112SESC	302514	910818	D W	0.83
East Baton Rouge	94	STAR ENTERPRISE	-6130Z	MW-15	LAYNE (LA)	16	PLUGGED	4	Mar-89	4	04/07/89	112SESC	302515	910817	D W	0.84
East Baton Rouge	94	CHEVRON	-6198Z	1	LAYNE (LA)	12	MONITOR	4	May-89	8	05/25/89	112SESC	302512	910830	D W	0.69
East Baton Rouge	94	CHEVRON	-6199Z	2	LAYNE (LA)	12	MONITOR	4	May-89	7	05/25/89	112SESC	302512	910830	D W	0.69
East Baton Rouge	94	CHEVRON	-6200Z	3	LAYNE (LA)	12	PLUGGED	4	May-89	7	05/25/89	112SESC	302512	910830	D W	0.69
East Baton Rouge	94	CHEVRON	-6249Z	MW-4	WARE LIND	10	PLUGGED	4	Aug-89			112SESC	302518	910823	D	0.72
East Baton Rouge	95	CHEVRON	-6266Z	MW-6A	PSI/PTL	11	PLUGGED	4	Aug-89	2	08/10/89	112SESC	302532	910900	D W	0.07
East Baton Rouge	95	CHEVRON	-6267Z	MW-9	PSI/PTL	16	PLUGGED	4	Aug-89	2	08/10/89	112SESC	302532	910900	D W	0.07
East Baton Rouge	94	RACETRAC PETRO	-6302Z	MW-89-1	EUSTIS	20	MONITOR	2	Oct-89	11.5	10/24/89	112SESC	302536	910815	D W	0.78
East Baton Rouge	94	RACETRAC PETRO	-6303Z	MW-89-2	EUSTIS	16	MONITOR	2	Oct-89	11	10/24/89	112SESC	302536	910815	D W	0.78
East Baton Rouge	94	RACETRAC PETRO	-6304Z	MW-89-3	EUSTIS	17	MONITOR	2	Oct-89	6.3	10/23/89	112SESC	302536	910815	D W	0.78
East Baton Rouge	94	CHEVRON	-6399Z	MW-3	UNKNOWN	.	EXCAVATED		.			112MRVAC	302533	910900		0.05
East Baton Rouge	94	CHEVRON	-6400Z	MW-5	UNKNOWN	.	EXCAVATED		.			112MRVAC	302533	910900		0.05
East Baton Rouge	94	CHILIS RESTAURA	-6504Z	MW-1	CUSTOM CORING	35	MONITOR	2	Jun-90	12.5	06/30/90	112SESC	302517	910820	D W	0.77
East Baton Rouge	94	CHILIS RESTAURA	-6505Z	MW-2	CUSTOM CORING	20	MONITOR	2	Jun-90	8.5	06/30/90	112SESC	302517	910820	D W	0.77
East Baton Rouge	94	STAR VIDEO	-6534Z	MW-1	ENCOR	13	PLUGGED	4	Aug-90	7.9	08/24/90	112SESC	302521	910920	D W	0.4
East Baton Rouge	94	STAR VIDEO	-6535Z	MW-2	ENCOR	20	PLUGGED	4	Aug-90	11.1	08/24/90	112SESC	302521	910920	D W	0.4
East Baton Rouge	94	STAR VIDEO	-6536Z	MW-3	ENCOR	15	PLUGGED	4	Aug-90	9.3	08/24/90	112SESC	302521	910920	D W	0.4
East Baton Rouge	94	STAR ENTERPRISE	-6542Z	MW-1	PSI/PTL	14	PLUGGED	4	Oct-90	8.62	10/03/90	112SESC	302538	910812	D W	0.83
East Baton Rouge	94	STAR ENTERPRISE	-6543Z	MW-2	PSI/PTL	14	PLUGGED	4	Oct-90	8.62	10/03/90	112SESC	302538	910812	D W	0.83
East Baton Rouge	94	TEXACO	-6544Z	MW-3	PSI/PTL	14	MONITOR	4	Oct-90	8.62	10/03/90	112SESC	302538	910812	D W	0.83
East Baton Rouge	94	STAR ENTERPRISE	-6545Z	MW-4	PSI/PTL	14	PLUGGED	4	Oct-90	8.62	10/03/90	112SESC	302538	910812	D W	0.83
East Baton Rouge	94	STAR ENTERPRISE	-6546Z	MW-5	PSI/PTL	14	PLUGGED	4	Oct-90	8.62	10/03/90	112SESC	302538	910812	D W	0.83
East Baton Rouge	96	EXXON CO USA	-6632Z	MW-1	CCI	33	MONITOR	4	Dec-90	23	12/10/90	112SESC	302609	910913	D W	0.68
East Baton Rouge	96	EXXON CO USA	-6633Z	MW-2	CCI	35	MONITOR	4	Dec-90	25	12/10/90	112SESC	302609	910913	D W	0.68
East Baton Rouge	96	EXXON CO USA	-6634Z	MW-3	CCI	31	MONITOR	4	Dec-90	22.5	12/10/90	112SESC	302609	910913	D W	0.68

Registered Water Wells

Public Works & Water Resources Division
Water Resources Section

Wells located within 1 mile radius
of Latitude 30°25'35" and Longitude 91°09'02"

Parish	Section	Owner Name	DOTD Well #	Owner Well #	Driller's Name	Well Depth (ft)	Well Use	Casing Size (in)	Drill Date	Water Level (ft)	W.L. Date Measured	Geologic Unit	Latitude	Longitude	Avail Info	Distance in Miles
East Baton Rouge	94	STAR VIDEO	-6729Z	MW-4	CUSTOM CORING	16	PLUGGED	4	Jul-91	12	07/24/91	112SESC	302521	910920	D W	0.4
East Baton Rouge	94	STAR VIDEO	-6730Z	MW-5	CUSTOM CORING	16	PLUGGED	4	Jul-91	12	07/24/91	112SESC	302521	910920	D W	0.4
East Baton Rouge	94	STAR ENTERPRISE	-6876Z	MW-16	FUGRO (GS)	16	PLUGGED	4	Sep-92	6	09/11/92	112SESC	302516	910823	D W	0.74
East Baton Rouge	94	STAR ENTERPRISE	-6877Z	MW-17	FUGRO (GS)	16	PLUGGED	4	Sep-92	6	09/10/92	112SESC	302516	910823	D W	0.74
East Baton Rouge	94	STAR ENTERPRISE	-6878Z	MW-18	FUGRO (GS)	16	PLUGGED	4	Sep-92	6	09/10/92	112SESC	302516	910823	D W	0.74
East Baton Rouge	94	STAR ENTERPRISE	-7007Z	MW-6	PROFESSIONAL	11	PLUGGED	4	Jan-93	2	01/22/93	112SESC	302536	910814	D W	0.79
East Baton Rouge	94	CHEVRON	-7224Z	MW-5	RUST ENVIRON-	13	PLUGGED	4	Nov-93	2.01	12/07/93	112MRVAC	302517	910823	D W	0.73
East Baton Rouge	94	J & S POOL PRO	-7234Z	MW-1	GROUNDWATER/	12	MONITOR	2	Dec-93	3	12/16/93	112MRVAC	302522	910901	D W	0.25
East Baton Rouge	94	RACETRAC PETRO	-7317Z	MW-10	SOIL TESTING	20	MONITOR	2	May-94	12	05/05/94	112SESC	302525	910822	D W	0.69
East Baton Rouge	94	RACETRAC PETRO	-7318Z	MW-11	SOIL TESTING	20	MONITOR	2	May-94	12	05/05/94	112SESC	302525	910822	D W	0.69
East Baton Rouge	94	CHEVRON	-7438Z	MW-9	G & E	12	PLUGGED	4	Aug-94	4.1	08/25/94	112SESC	302533	910902	D W	0.04
East Baton Rouge	94	CHEVRON	-7514Z	MW-7	UNKNOWN	7	PLUGGED	2	.			112SESC	302530	910902		0.1
East Baton Rouge	94	CHEVRON	-7515Z	MW-8	UNKNOWN	7	PLUGGED	2	.			112SESC	302530	910902		0.1
East Baton Rouge	94	STAR ENTERPRISE	-7571Z	MW-4R	FUGRO (GS)	13	PLUGGED	4	Dec-94	2.2	03/14/95	112SESC	302516	910826	D W	0.7
East Baton Rouge	94	STAR ENTERPRISE	-7572Z	MW-7R	FUGRO (GS)	19	PLUGGED	4	Dec-94	0.69	03/14/95	112SESC	302515	910826	D W	0.71
East Baton Rouge	94	STAR ENTERPRISE	-7573Z	MW-8R	FUGRO (GS)	13	PLUGGED	4	Dec-94	8	12/09/94	112SESC	302516	910826	D W	0.7
East Baton Rouge	94	STAR ENTERPRISE	-7574Z	MW-10R	FUGRO (GS)	13	PLUGGED	4	Dec-94	0.81	03/09/95	112SESC	302516	910826	D W	0.7
East Baton Rouge	94	STAR ENTERPRISE	-7575Z	MW-19	FUGRO (GS)	12	PLUGGED	2	Dec-94	6	12/15/94	112SESC	302516	910827	D W	0.68
East Baton Rouge	94	RITE AID INC	-8122Z	MW-1	CRA, INC.	12	PLUGGED	2	Mar-99	3.52	03/12/99	112SESC	302500	910835	D W	0.8
East Baton Rouge	94	RITE AID INC	-8123Z	MW-2	CRA, INC.	12	DESTROYED	2	Mar-99	2.56	03/12/99	112SESC	302500	910835	D W	0.8
East Baton Rouge	94	RITE AID INC	-8124Z	MW-3	CRA, INC.	12	PLUGGED	2	Mar-99	2.17	03/12/99	112SESC	302500	910835	D W	0.8
East Baton Rouge	94	RITE AID INC	-8125Z	MW-4S	CRA, INC.	10	PLUGGED	2	Mar-99	6.03	03/12/99	112SESC	302501	910834	D W	0.8
East Baton Rouge	94	RITE AID INC	-8126Z	MW-4D	CRA, INC.	29	PLUGGED	2	Mar-99	9.15	03/12/99	112SESC	302501	910834	D W	0.8
East Baton Rouge	94	RITE AID INC	-8127Z	MW-5	CRA, INC.	10	PLUGGED	2	Mar-99	5.25	03/12/99	112SESC	302502	910835	D W	0.77
East Baton Rouge	94	RITE AID INC	-8128Z	MW-6	CRA, INC.	10	PLUGGED	2	Mar-99	9.39	03/12/99	112SESC	302502	910835	D W	0.77
East Baton Rouge	94	HENDRICK, NEAL	-8245Z	MW-1	SOIL TESTING	15	PLUGGED	4	Sep-99	6.2	09/17/99	112SESC	302527	910926	D W	0.42
East Baton Rouge	94	HENDRICK, NEAL	-8246Z	MW-2	SOIL TESTING	16	PLUGGED	4	Sep-99	6.1	09/17/99	112SESC	302527	910926	D W	0.42
East Baton Rouge	94	MARABELLAS 66	-8247Z	MW-3	SOIL TESTING	16	PLUGGED	4	Sep-99	6	09/17/99	112SESC	302527	910926	D W	0.42
East Baton Rouge	94	MARABELLAS 66	-8248Z	MW-4	SOIL TESTING	16	PLUGGED	4	Sep-99	8.58	09/17/99	112SESC	302527	910926	D W	0.42
East Baton Rouge	94	MARABELLAS 66	-8249Z	MW-5	SOIL TESTING	16	PLUGGED	4	Sep-99	9.75	09/17/99	112SESC	302527	910926	D W	0.42
East Baton Rouge	94	HENDRICK, NEAL	-8405Z	MW-6	SOIL TESTING	15	PLUGGED	4	Jun-00	DRY	09/17/99	112SESC	302527	910926	D W	0.42
East Baton Rouge	94	EXXON MOBIL	-8521Z	MW-1	CRA, INC.	14	PLUGGED	2	01-May	3.63	05/14/01	112SESC	302516	910909	D W	0.38
East Baton Rouge	94	EXXON MOBIL	-8522Z	MW-2	CRA, INC.	18	PLUGGED	2	01-May	2.52	05/14/01	112SESC	302516	910909	D W	0.38
East Baton Rouge	94	EXXON MOBIL	-8523Z	MW-3	CRA, INC.	12	PLUGGED	2	01-May	4.39	05/14/01	112SESC	302516	910909	D W	0.38
East Baton Rouge	94	EXXON MOBIL	-8524Z	MW-4	CRA, INC.	14	PLUGGED	2	01-May	5	05/14/01	112SESC	302516	910909	D W	0.38
East Baton Rouge	94	EXXON MOBIL	-8525Z	MW-5	CRA, INC.	12	PLUGGED	2	01-May	6.98	05/14/01	112SESC	302516	910909	D W	0.38

Registered Water Wells

Public Works & Water Resources Division
Water Resources Section

Wells located within 1 mile radius
of Latitude 30°25'35" and Longitude 91°09'02"

Parish	Section	Owner Name	DOTD Well #	Owner Well #	Driller's Name	Well Depth (ft)	Well Use	Casing Size (in)	Drill Date	Water Level (ft)	W.L. Date Measured	Geologic Unit	Latitude	Longitude	Avail Info	Distance in Miles
East Baton Rouge	94	HENDRICK, NEAL	-8648Z	MW-5R	EXPLORATION	19	PLUGGED	2	02-Aug	4	08/16/02	112SESC	302525	910923	D W	0.4
East Baton Rouge	94	EXXON MOBIL	-8653Z	MW-1	CRA, INC.	14	PLUGGED	2	02-Sep	7.95	09/13/02	112MRVAC	302500	910835	D W	0.8
East Baton Rouge	94	EXXON MOBIL	-8654Z	MW-2	CRA, INC.	14	PLUGGED	2	02-Sep	4.87	09/13/02	112MRVAC	302500	910835	D W	0.8
East Baton Rouge	82	BATON ROUGE, LA	-8748Z	PH1-08	PROFESSIONAL	48	MONITOR	2	03-Sep	8.02	09/12/03	0	302519	910824	D W	0.7
East Baton Rouge	94	CHEVRON PRODUCT	-8777Z	MW-1	CRA, INC.	14	PLUGGED	2	03-Nov	3.74	12/09/03	0	302517	910823	D W	0.73
East Baton Rouge	94	CHEVRON PRODUCT	-8778Z	MW-2	CRA, INC.	14	PLUGGED	2	03-Nov	3.7	12/09/03	0	302517	910824	D W	0.72
East Baton Rouge	94	CHEVRON PRODUCT	-8779Z	MW-3	CRA, INC.	14	PLUGGED	2	03-Nov	2.11	12/09/03	0	302518	910824	D W	0.71
East Baton Rouge	94	CHEVRON PRODUCT	-8780Z	MW-4	CRA, INC.	14	PLUGGED	2	03-Nov	3.34	12/09/03	0	302518	910823	D W	0.72
East Baton Rouge	95	BR PUBLIC WORKS	-8885Z	T03-109	CAPOZZOLI	59	PIEZOMETER	2	05-Jan	18	02/22/05	0	302547	910846	D W	0.35
East Baton Rouge	94	BR PUBLIC WORKS	-8886Z	T03-120	CAPOZZOLI	56	PIEZOMETER	2	05-Jan	12	02/17/05	0	302527	910847	D W	0.29
East Baton Rouge	94	BR PUBLIC WORKS	-8887Z	T03-121	CAPOZZOLI	56	PIEZOMETER	2	05-Jan	14	02/21/05	0	302524	910848	D W	0.31
East Baton Rouge	94	BR PUBLIC WORKS	-8901Z	T03-23	PROFESSIONAL	46	PIEZOMETER	2	05-Jan	2.78	02/17/05	0	302520	910835	D W	0.53
East Baton Rouge	95	BR PUBLIC WORKS	-8904Z	T03-103	CAPOZZOLI	51	PIEZOMETER	2	05-Feb	8	02/22/05	0	302610	910848	D W	0.71
East Baton Rouge	95	BR PUBLIC WORKS	-8905Z	T03-107	CAPOZZOLI	58	PIEZOMETER	2	05-Jan	19	02/22/05	0	302555	910846	D W	0.46
East Baton Rouge	94	BR PUBLIC WORKS	-8906Z	T03-117	CAPOZZOLI	42	PIEZOMETER	2	05-Feb	13	02/21/05	0	302538	910840	D W	0.37
East Baton Rouge	67	BR PUBLIC WORKS	-8923Z	T03-38	CAPOZZOLI	20	PIEZOMETER	2	05-Mar	7	03/18/05	0	302542	910958	D W	0.93
East Baton Rouge	96	BR PUBLIC WORKS	-8937Z	T03-112	CAPOZZOLI	31	PIEZOMETER	2	05-Mar	13	03/17/05	0	302544	910913	D W	0.25
East Baton Rouge	94	BR PUBLIC WORKS	-8938Z	T03-114	CAPOZZOLI	27	PIEZOMETER	2	05-Mar	9	03/18/05	0	302537	910905	D W	0.06
East Baton Rouge	67	BR PUBLIC WORKS	-8942Z	T03-48	PROFESSIONAL	41	PIEZOMETER	2	05-Feb	15.3	03/31/05	0	302531	910949	D W	0.78
East Baton Rouge	67	BR PUBLIC WORKS	-8943Z	T03-49	PROFESSIONAL	36	PIEZOMETER	2	05-Feb	7.3	03/31/05	0	302530	910943	D W	0.68
East Baton Rouge	67	BR PUBLIC WORKS	-8944Z	T03-51	PROFESSIONAL	41	PIEZOMETER	2	05-Feb	38.25	03/25/05	0	302530	910935	D W	0.55
East Baton Rouge	67	BR PUBLIC WORKS	-8945Z	T03-52	PROFESSIONAL	24	PIEZOMETER	2	05-Jan	2.59	02/17/05	0	302503	910948	D W	0.98
East Baton Rouge	44	BR PUBLIC WORKS	-8946Z	T03-59	PROFESSIONAL	42	PIEZOMETER	2	05-Feb	35.7	03/31/05	0	302529	910929	D W	0.46
East Baton Rouge	94	BR PUBLIC WORKS	-8970Z	T03-30	PROFESSIONAL	31	PIEZOMETER	2	05-Feb	7.7	04/07/05	0	302514	910852	D W	0.43
East Baton Rouge	67	BR PUBLIC WORKS	-8971Z	T03-45	PROFESSIONAL	49	PIEZOMETER	2	05-Feb	19.2	04/07/05	0	302533	910956	D W	0.89
East Baton Rouge	67	BR PUBLIC WORKS	-8972Z	T03-55	PROFESSIONAL	25	PIEZOMETER	2	05-Mar	11.6	04/08/05	0	302512	910946	D W	0.85
East Baton Rouge	67	BR PUBLIC WORKS	-8973Z	T03-56	PROFESSIONAL	26	PIEZOMETER	2	05-Mar	7.8	04/08/05	0	302518	910945	D W	0.78
East Baton Rouge	94	BR PUBLIC WORKS	-8974Z	T03-67	PROFESSIONAL	43	PIEZOMETER	2	05-Feb	3.99	04/08/05	0	302510	910856	D W	0.49
East Baton Rouge	94	BR PUBLIC WORKS	-8985Z	T03-26	PROFESSIONAL	46	PIEZOMETER	2	05-Mar	6.2	06/23/05	0	302520	910847	D W	0.38
East Baton Rouge	94	BR PUBLIC WORKS	-8987Z	T03-31	PROFESSIONAL	47	PIEZOMETER	2	05-Mar	4	06/23/05	0	302512	910852	D W	0.47
East Baton Rouge	94	BR PUBLIC WORKS	-8988Z	T03-65	PROFESSIONAL	53	PIEZOMETER	2	05-Mar	8.3	06/23/05	0	302512	910900	D W	0.44

CONESTOGA-ROVERS & ASSOCIATES

4915 S. Sherwood Forest Blvd.
Baton Rouge, Louisiana 70816
Telephone: (225) 292-9007 Fax: (225) 292-3614
www.CRAworld.com

TRANSMITTAL

DATE: 04/11/06

REFERENCE NO.: 28509

PROJECT NAME: Unauthorized Discharge Notification Reports

TO: Louisiana Department of Environmental Quality
P.O. Box 4312
Baton Rouge, LA 70821-4312
Attention: Surveillance Division - SPOC

RECEIVED
APR 17 2006
DEQ
Single Point of Contact

Please find enclosed:
- ☐ Draft
- ☒ Originals
- ☐ Prints
- ☐ Final
- ☐ Other

Sent via:
- ☒ Mail
- ☐ Overnight Courier
- ☐ Same Day Courier
- ☐ Other

QUANTITY	DESCRIPTION
1	Shell Retail Store No. 101205, 2205 Sherwood Forest Boulevard, Baton Rouge, LA
1	Shell Retail Store No. 101207, 5055 Jones Creek Road, Baton Rouge, LA
1	Shell Retail Store No. 101208, 5035 Government Street, Baton Rouge, LA
1	Shell Retail Store No. 101218, 2959 College Drive, Baton Rouge, LA
1	Shell Retail Store No. 101220, 1330 Plank Road, Baton Rouge, LA
1	Shell Retail Store No. 101221, 3375 Perkins Road, Baton Rouge, LA
1	Shell Retail Store No. 101237, 5377 Highland Road, Baton Rouge, LA
1	Shell Retail Store No. 101239, 500 North Highway 190, Covington, LA
1	Shell Retail Store No. 101247, 102 Rushing Road West, Denham Springs, LA
1	Shell Retail Store No. 101249, 3536 Drusilla Lane, Baton Rouge, LA
1	Shell Retail Store No. 101812, 28005 Walker Road South, Walker, LA
1	Shell Retail Store No. 142059, 2300 South Acadian Thruway, Baton Rouge, LA
1	Shell Retail Store No. 142066, 4851 O'Neal Lane, Baton Rouge, LA
1	Shell Retail Store No. 142067, 14940 Airline Highway, Baton Rouge, LA
1	Shell Retail Store No. 165631, 9320 Burbank Drive, Baton Rouge, LA
1	Shell Retail Store No. 165792, 6678 Siegen Lane, Baton Rouge, LA
1	Shell Retail Store No. 166272, 31799 LA Highway 16, Denham Springs, LA
1	Shell Retail Store No. 166535, 8133 Plank Road, Baton Rouge, LA

- ☐ As Requested
- ☒ For Your Use
- ☐ For Review and Comment
- ☐

CONESTOGA-ROVERS
& ASSOCIATES

4915 S. Sherwood Forest Blvd.
Baton Rouge, Louisiana 70816
Telephone: (225) 292-9007 Fax: (225) 292-3614
www.CRAworld.com

COMMENTS:

If you have any questions, please call Tim Powers at (225) 292-9007.

Copy to: Thomas B. Powers

Completed by: Andre Bankston [Please Print] Signed: Andre Bankston

Filing: **Correspondence File**

1040 U.S. POSTAGE P855553118
7212 $05.00 0 APR 11 2006
3865 MAILED FROM ZIP CODE 70816

CONESTOGA-ROVERS & ASSOCIATES
4915 S. Sherwood Forest Blvd.
Baton Rouge, LA 70816
Telephone: 225.292.9007

LDEQ
SURVEILLANCE DIVISION - SPOC
PO BOX 4312
BATON ROUGE LA 70821-4312

UNDERGROUND STORAGE TANKS DIVISION
REMEDIATION PROCESS
UST RELEASE NOTIFICATION FORM

INCIDENT NUMBER: 86368

NOTIFICATION INFORMATION

RECEIVED BY: Chris Delmar
DATE: 03/10/2006 **TIME:** 08:11
DATE DISCOVERED: 03/10/2006
DATE CONFIRMED: 03/10/2006

REPORTED BY: Andre Bankston
Conestoga Rovers
ADDRESS: 4815 Sherwood Forest Blvd
Baton Rouge, La 70816

TELEPHONE: 225-292-9007

X **GASOLINE**
☐ **DIESEL**
☐ **USED OIL**
☐ **NEW OIL**
☐ **HAZARDOUS SUBSTANCE**
☐ **OTHER:**

☐ **PIPING LEAK**
☐ **UST LEAK**
☐ **DISPENSER LEAK**
☐ **SPILL** ☐ **OVERFILL**
X **UNKNOWN**
☐ **OTHER:**

FACILITY INFORMATION

UST FACILITY ID # 17-008376
AI # 71560
AOI NAME: Shell # 142059
AOI ADDRESS: 2300 South Acadian Thruway
Baton Rouge, La

PARISH: East Baton Rouge
CONTACT PERSON: Myra Lowery
TELEPHONE: (985) 649-4524

AI OWNER NAME: Shell Oil Products US

ADDRESS: 4646 Hwy 6 South, #348
Sugarland, TX 77478-5214

CONTACT PERSON: Joyce M. Davis
TELEPHONE: (281) 416-8714

RELEASE STATUS

☐ **Assessment Required – Date (if known):**
☐ **Pending Further Information - Comments:**

How was the release detected?
☐ **Release Detection Monitoring (Specify method)**

☐ **Closure Assessment** ☐ **Compliance Inspection**
☐ **Real Estate Assessment**
X **Other (specify) Site Assessment**

☐ **Remediation Complete**
Date:
Method:

Trust Fund Eligible ☐ **Yes** ☐ **No** ☐ **Unknown**

Evidence of off-site migration? ☐ **No**
☐ **Yes (specify)**

INCIDENT DESCRIPTION

TPH-G and BTEX were above RECAP SS in soils
TPH-G, Benzene, Ethylbenzene and MTBE were above RECAP SS in soils

URS

December 15, 2009

Mr. Tim B. Knight, Administrator
Louisiana Department of Environmental Quality
Underground Storage Tanks Division – Remediation Process
Post Office Box 4314
Baton Rouge, Louisiana 70821-4314

Re: Limited Groundwater Investigation Report
Motiva Enterprises, LLC
Former Shell Retail Outlet at 2300 South Acadian Thruway
Baton Rouge, LA 70808
Circle K #2709730; Former Shell No. 142059
Agency Interest #71560
UST-FID No. 17-008376; Incident No. 86368
URS Project No. 49206684.00001

Dear Mr. Knight:

URS is pleased to present this report for the additional groundwater investigation conducted November 9-13, 2009 at the former Shell retail station located at 2300 South Acadian Thruway, Baton Rouge, Louisiana (see Figure 1) for Shell Oil Products US (Shell) on behalf of Motiva Enterprises, LLC. The site is a former Shell gasoline retail facility now operated by Circle K Stores, Inc.

BACKGROUND

On February 22, 2006, Conestoga-Rovers & Associates (CRA) completed a divestment initial subsurface investigation (DISI), on behalf of Motiva, at the current Circle K #2709730 and former Shell Retail Store No. 142059 located at 2300 South Acadian Thruway in Baton Rouge, Louisiana. During the investigation, five soil exploration borings (SB-1 through SB-5) were installed. Analytical results from this investigation indicated elevated benzene levels at SB-4 in the soil and shallow groundwater, which was located northwest of the underground storage tank (UST) hold. On October 26, 2006, Response Action Contractor (RAC) work at the site was transitioned from CRA to URS Corporation (URS) by Shell, on behalf of Motiva. On May 8, 2008, the LDEQ informed Shell that a limited groundwater investigation in the immediate vicinity of SB-4 be performed based on the MO-2 groundwater standard calculated by the LDEQ. On September 30, 2008 URS submitted a remedial investigation work plan to the LDEQ on behalf of Shell. This work plan was approved by the LDEQ on December 22, 2008. URS performed the site work on January 28, 2009 and submitted the report to the LDEQ on March 11,

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2009. The LDEQ reviewed the report and requested in correspondence dated May 29, 2009 that additional investigation of the groundwater at the site be conducted to ascertain the concentration of benzene currently present in the shallow groundwater by installing a permanent monitor well and also installing a recovery well for future use. The LDEQ also requested that a slug test be conducted to determine a site-specific yield to assist in the risk assessment process at the site through the LDEQ's RECAP program. The additional groundwater investigation work plan was submitted by URS, on behalf of Motiva, on July 17, 2009. The LDEQ approved this work plan on September 28, 2009. This report provides the results of the investigation conducted in November 2009.

FIELD ACTIVITIES

The field activities began on November 9, 2009. On November 10-11, 2009, one permanent monitoring well, MW-1, and one permanent recovery well, RW-1, were completed to approximately 27 feet below ground surface (bgs) to determine the current level of impact near the property boundary in the shallow groundwater in the vicinity of boring SB-4, and to provide a remediation option in the future as directed by the LDEQ. The well locations are shown on Figure 2. Organic Vapor Analyzer (OVA) readings were taken at two-foot intervals during sampling. Soil samples were not collected for laboratory analysis. Groundwater samples of the uppermost water-bearing zone were collected from the well locations and analyzed for benzene by Method 8260B.

The borings for the wells were completed by direct-push methods with an all-terrain vehicle (ATV) Geoprobe rig by Walker-Hill, a licensed water well contractor in the state of Louisiana, at the location of RW-1. The shallow soil borings were completed to a depth at which the uppermost permeable or water-bearing zone was encountered. A thin-walled soil sampling tube was used at 4-foot intervals until completion depth or probe refusal. The soil cores were recovered in 2-inch diameter plastic liners and cut open in the field and logged by a URS geologist. The boring logs for both MW-1 and RW-1 provide a description of the subsurface soil including lithology, soil color, length of recovered sample, soil consistency, and soil classification in accordance with the Unified Soil Classification System (equivalent to ASTM D 2487 and 2488). Soil classifications were prepared in the field at the time of sampling and are subject to change based upon subsequent review. The original boring log was recorded directly in the field, and the typed copy prepared for the report was checked to verify that the final log accurately reproduced the contemporaneous log. The borings logs for MW-1 and RW-1 are presented in Attachment 1. The boring logs for

the February 2006 investigation for borings SB-1 through SB-5 are also presented in Attachment 1.

All drilling, well installation, purging, sampling, grouting and disposal of investigation derived waste (IDW) was performed in accordance with the *Field Branches Quality System Technical Procedures* (US EPA Region IV, November 2007). Drilling was performed in accordance with the latest version of the LDOTD and LDEQ *Construction of Geotechnical Boreholes and Groundwater Monitoring Systems Handbook, December 2000.*

Permanent Monitor Well and Recovery Well Installation

The wells MW-1 and RW-1 were installed by use of a hollow-stem auger to a depth of 27 feet (bgs) following the appropriate LDOTD and LDEQ methods for installation. The wells were installed in the first encountered permeable zone.

Monitoring well MW-1 was constructed of 2-inch diameter Schedule 40 PVC with a 10-foot pre-packed screen length placed at a depth of approximately 17 to 27 feet below ground surface with a #10 slot screen (0.010 inches) followed by blank casing with a lockable cap and a flush mount completion at ground surface. The casing was set inside the hollow stem rods which were retracted as the well was set. The well was completed with a three-foot bentonite plug placed in the well annulus followed by a bentonite grout mixture to the surface to prevent surface infiltration.

Recovery well RW-1 was installed near SB-4 for potential use during future investigation or remedial activities at the site. The well was installed as a 4-inch diameter schedule 40 PVC with a 10-foot standard #10 slot screen. 20/40 Silica sand was used as filter media and a standard Bentonite seal and surface grout was also installed per current LDOTD and LDEQ guidance. This well was also installed as a flush mount. A 2' x 2' vault was installed to allow room for future installation of a recovery system. Due to the close proximity of RW-1 to MW-1 the lithology was similar and MW-1 was installed the same as RW-1 but with a flush mount lid for a 2-inch well. Well construction diagrams for MW-1 and RW-1 are included in Attachment 2. The wells were surveyed on November 13, 2009. Surveyed elevations and well construction details are summarized in Table 1. The wells will be registered with LDOTD for inclusion in the state-wide registered water well database.

Sample Collection Procedure

After the wells were installed, each well was purged and sampled. Purging was accomplished using a monsoon pump until the following criteria were met:

- The well water was clear (or clear as possible under the limits of possible suspended colloids).
- Three well volumes of standing water (minimum) were removed.
- Field measurements for temperature, conductivity and pH had stabilized

Temperature, conductivity and pH observations were recorded for each well volume on a Groundwater Collection Report Form. These forms are provided in Attachment 3.

The groundwater samples were analyzed in accordance with *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (SW-846, 3rd Edition and subsequent updates) for benzene by Method 8260B.

Slug Test and Data Evaluation

The slug test was performed in monitor well MW-1 on November 12, 2009. The slug was placed in MW-1 to a depth of approximately 19 to 21 feet bgs in the well which was within the screened interval. The well screen was placed across a permeable zone of silty sand approximately 7 feet in thickness. The silty sand is overlain by approximately 20 feet of silty clay. The slug was 2.9 feet long, approximately 1.2 inches in diameter and occupied a volume of approximately 0.022 cubic feet (or approximately 0.164 gallons). Data recorded in displacement in feet over time were collected when the slug was placed in the well, *slug in*, and then when the slug was removed, *slug out*. It was determined that the *slug out* data provided the best determination of the hydraulic conductivity for the permeable zone based on the linearity of the slug test results. Based on the lithology and assuming unconfined conditions, the standing water column in the MW-1 was 20.9 feet and thus used as the saturated thickness for the purpose of the slug test data evaluation. The slug test data were evaluated by AQTESOLV® software. The print out of the *slug out* test data is provided in Attachment 4.

The hydraulic conductivity was determined to be 7.132×10^{-5} ft/minute or 3.523×10^{-5} cm/sec by the Bouwer-Rice Method. The estimated yield of the permeable zone was calculated using the

formula for an unconfined aquifer provided in Appendix F of the LDEQ 2003 RECAP document. The calculation indicated a yield of approximately 115 gallons per day. This calculation is provided on a spreadsheet in Attachment 4.

Because the yield is less than 800 gallons per day, the first permeable zone at the former Shell retail station is a Class 3A groundwater regardless of TDS content. Furthermore, because the nearest reported downgradient surface water body is Dawson Creek which is approximately 110 to 120 feet to the west of the site (see Figure 2) and the creek is not listed in LAC 33 IX., Section 1123 as a drinking water source, the proper classification for the creek with respect to the tables in Appendix I of the LDEQ 2003 RECAP document is GW3NDW.

Decontamination of Equipment and Handling of IDW

All IDW (purge water, decontamination wash water, excess borehole materials, and PPE) was collected into suitable containers, transferred to a designated temporary storage area on site and labeled. URS will arrange for proper transportation and disposal of these materials in accordance with the applicable Shell policies and procedures and local regulations.

Data Quality Assurance/Quality Control and Evaluation

Based on the Quality Assurance/Quality Control (QA/QC) evaluation, the data are suitable for use in LDEQ's Risk Evaluation Corrective Action Program (RECAP). QA/QC samples were collected and analyzed to assess the potential for contamination of samples due to field activities and/or handling and transport to evaluate the precision and accuracy of the analytical data from the off-site laboratory. The QA/QC sample program included trip blanks to evaluate potential cross-contamination of samples during shipment. One trip blank was included in the sample ice chest containing the groundwater samples for analysis for benzene for sample shipment.

Sample Shipment and Reporting

Samples were shipped to SPL Laboratories in Lafayette, Louisiana for analysis. The analytical laboratory report is presented in Attachment 5.

ANALYTICAL RESULTS

Soil analytical results from the February 2006 field investigation are presented in Table 2 for an industrial setting and are presented in Table 3 for a non-industrial setting. Groundwater analytical

results from the February 2006, January 2009 and November 2009 field investigations are shown in Table 4.

Discussion of Groundwater Analytical Results

The analytical results for benzene concentrations in the groundwater samples collected at the site indicate that exceedances of the RECAP Screening Standard of 0.005 mg/l for benzene were reported at SB-3 and SB-4 in February 2006, SB-4A in January 2009 and RW-1 with a maximum concentration observed at SB-4A of 5.8 mg/l (see Figure 3). The concentration of benzene in RW-1 to the west of Boring SB-4A was reported at 1.2 mg/l which is also above the RECAP SS. The concentration of benzene in MW-1 to the south of Boring SB-4A and west of the tank hold was reported at 0.0037 mg/l which is below the RECAP Screening Standard. The observed concentrations of benzene suggest that the exceedances of the RECAP SS for benzene are localized in the northwest portion of the station property.

Motiva awaits the review by the LDEQ of the analytical results presented above and the site-specific slug test data to determine the groundwater classification for direction toward site closure.

If you have any questions or comments, please contact us at (225) 922-5700.

Very truly yours,

William R. Hurdle, CHMM
Senior Environmental Scientist

M. Jason Lanclos, P.E.
Project Engineer

cc: Mr. Alan Karr, LDEQ
Mr. Scott Burkey, Shell

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TABLES

TABLE 1

MONITOR WELL CONSTRUCTION DETAILS
FORMER SHELL RETAIL STORE NO. 142059
2300 SOUTH ACADIAN THRUWAY
BATON ROUGE, LOUISIANA

Monitor Well ID	Installation Date	Well Construction Material	Casing Slot Size	Total Depth (ft bgs)[1]	Top of Casing Elevation (ft MSL)[2]	Ground Surface Elevation (ft MSL)	Screen Interval (ft bgs)
MW-1	11/11/2009	2" PVC	0.010"	27.0	28.28	28.68	17.0-27.0
RW-1	11/10/2009	4" PVC	0.010"	27.0	28.35	28.64	17.0-27.0

NOTES:

1 ft bgs = feet below ground surface.

2 ft MSL = Mean Sea Level, NAVD 88.

TABLE 2 -Industrial

SUMMARY OF TPH-GRO, BTEX, MTBE and FUEL OXYGENATES ANALYTICAL RESULTS - SURFACE SOIL
FORMER SHELL RETAIL STORE NO. 142059
2300 SOUTH ACADIAN THRUWAY
BATON ROUGE, LOUISIANA

Boring Location	Sample Date	Sample ID	Sample Depth (ft)	TPH by Method 8015B (mg/kg)[1]	BTEX, MTBE, Fuel Oxygenates by Method 8260B (mg/kg)[2]								
				GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	DIPE	ETBE	TAME	TBA
RECAP Screening Standard (Soil_SSi) (mg/kg)				**65**	**3.1**	**470**	**230**	**120**	**4700**	**100**	**4700**	**140**	**12000**
RECAP Screening Standard (Soil_SSGW) (mg/kg)				**65**	**0.051**	**20**	**19**	**150**	**0.077**	**2.7**	**0.077**	**4.8**	**9.0**
RECAP Screening Standard (Soil_Sat) (mg/kg)				**--**	**900**	**520**	**230**	**150**	**9800**	**4600**	**9800**	**1900**	**140000**
RECAP SCREENING STANDARD*				**65**	**0.051**	**20**	**19**	**120**	**0.077**	**2.7**	**0.077**	**4.8**	**9.0**
SB-1	2/22/2006	SB-1 (12-15)	12-15	<9.19	<0.00196	<0.00196	<0.00196	<0.00489	<0.002	0.002	<0.005	<0.002	<0.049
SB-2	2/22/2006	SB-2 (12-15)	12-15	<10.8	<0.00197	<0.00197	<0.00197	<0.00493	<0.002	<0.002	<0.005	<0.002	<0.049
SB-3	2/22/2006	SB-3 (6-9)	6-9	**728**	**0.0575**	0.0634	1.67	0.200	0.003	0.013	<0.005	0.002	<0.047
SB-4	2/22/2006	SB-4 (12-15)	12-15	**88.6**	**0.468**	0.0972	0.667	0.531	0.069	0.235	<0.005	0.002	**10.4**
SB-5	2/22/2006	SB-5 (12-15)	12-15	<9.58	<0.00196	<0.00196	<0.00196	<0.00489	0.002	0.094	<0.005	<0.002	0.362

NOTES:

* RECAP Screening Standard for soil is the minimum of the SOIL_SSi, SOIL_SSGW and SOILsat which are listed in the 2003 LDEQ RECAP Table 1 or Table 2 or obtained from LDEQ

[1] TPH by Method 8015B Modified for Gasoline Range Organics (GRO). Reported in mg/kg.

[2] BTEX, MTBE and Fuel Oxygenates by Method 8260B for Volatile Organic Analytes. Reported in mg/kg.

DIPE = Diisopropyl ether, standards obtained from LDEQ

ETBE = Ethyl tert-butyl ether, per LDEQ MTBE is used as a surrogate compound

MTBE = Methyl tert-butyl ether

TAME = tert-Amyl methyl ether, standards obtained from LDEQ

TBA = tert-Butyl alcohol, standards obtained from LDEQ

BOLD Print indicates exceedance of the respective Screening Standard

TABLE 3 - Non-Industrial

SUMMARY OF TPH-GRO, BTEX, MTBE and FUEL OXYGENATES ANALYTICAL RESULTS - SURFACE SOIL
FORMER SHELL RETAIL STORE NO. 142059
2300 SOUTH ACADIAN THRUWAY
BATON ROUGE, LOUISIANA

Boring Location	Sample Date	Sample ID	Sample Depth (ft)	TPH by Method 8015B (mg/kg)[1]	BTEX, MTBE, Fuel Oxygenates by Method 8260B (mg/kg)[2]								
				GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	DIPE	ETBE	TAME	TBA
RECAP Screening Standard (Soil_SSni) (mg/kg)				**65**	**1.5**	**68**	**160**	**18**	**650**	**15**	**650**	**21**	**1400**
RECAP Screening Standard (Soil_SSGW) (mg/kg)				**65**	**0.051**	**20**	**19**	**150**	**0.077**	**2.7**	**0.077**	**4.8**	**9.0**
RECAP Screening Standard (Soil_Sat) (mg/kg)				**--**	**900**	**520**	**230**	**150**	**9800**	**4600**	**9800**	**1900**	**140000**
RECAP SCREENING STANDARD*				**65**	**0.051**	**20**	**19**	**18**	**0.077**	**2.7**	**0.077**	**4.8**	**9.0**
SB-1	2/22/2006	SB-1 (12-15)	12-15	<9.19	<0.00196	<0.00196	<0.00196	<0.00489	<0.002	0.002	<0.005	<0.002	<0.049
SB-2	2/22/2006	SB-2 (12-15)	12-15	<10.8	<0.00197	<0.00197	<0.00197	<0.00493	<0.002	<0.002	<0.005	0.002	<0.049
SB-3	2/22/2006	SB-3 (6-9)	6-9	**728**	**0.0575**	0.0634	1.67	0.200	0.003	0.013	<0.005	<0.002	<0.047
SB-4	2/22/2006	SB-4 (12-15)	12-15	**88.6**	**0.468**	0.0972	0.667	0.531	0.069	0.235	<0.005	0.002	**10.4**
SB-5	2/22/2006	SB-5 (12-15)	12-15	<9.58	<0.00196	<0.00196	<0.00196	<0.00489	0.002	0.094	<0.005	<0.002	0.362

NOTES:

* RECAP Screening Standard for soil is the minimum of the SOIL_SSi, SOIL_SSGW and SOILsat which are listed in the 2003 LDEQ RECAP Table 1 or Table 2 or obtained from LDEQ

[1] TPH by Method 8015B Modified for Gasoline Range Organics (GRO). Reported in mg/kg.

[2] BTEX, MTBE and Fuel Oxygenates by Method 8260B for Volatile Organic Analytes. Reported in mg/kg.

DIPE = Diisopropyl ether, standards obtained from LDEQ

ETBE = Ethyl tert-butyl ether, per LDEQ MTBE is used as a surrogate compound

MTBE = Methyl tert-butyl ether

TAME = tert-Amyl methyl ether, standards obtained from LDEQ

TBA = tert-Butyl alcohol, standards obtained from LDEQ

BOLD Print indicates exceedance of the respective Screening Standard

TABLE 4

SUMMARY OF TPH-GRO, BTEX, MTBE and FUEL OXYGENATES ANALYTICAL RESULTS - GROUNDWATER
FORMER SHELL RETAIL STORE NO. 142059
2300 SOUTH ACADIAN THRUWAY
BATON ROUGE, LOUISIANA

Boring Location	Sample Date	Sample ID	Screened Interval (ft-bgs)	TPH by Method 8015B (mg/l)[1]	BTEX, MTBE, Fuel Oxygenates by Method 8260B (mg/l)[2]								
				GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	DIPE	ETBE	TAME	TBA
RECAP SCREENING STANDARD*				**0.15**	**0.005**	**1.0**	**0.7**	**10**	**0.02**	**0.069**	**0.02**	**0.079**	**0.33**
SB-1	2/22/2006	SB-1	13-18	<0.1	<0.001	<0.001	<0.001	<0.003	0.00979	0.011	<0.001	<0.001	<0.01
SB-2	2/22/2006	SB-2	12-17	<0.1	<0.001	<0.001	<0.001	<0.003	0.00272	0.0216	<0.001	<0.001	<0.01
SB-3	2/22/2006	SB-3	12-17	**81.7**	**0.0400**	0.0124	0.0744	0.0214	0.0132	**0.0766**	<0.001	0.00286	0.0787
SB-4	2/22/2006	SB-4	12-17	**87.3**	**1.46**	0.246	**2.43**	3.13	**1.12**	**1.34**	**0.153**	**0.220**	**41.0**
SB-4A	1/28/2009	SB-04A	19-24	**11**	**5.8**	0.12	**1.4**	0.125	NA	NA	NA	NA	NA
SB-5	2/22/2006	SB-5	12-17	**0.250**	<0.001	<0.001	<0.001	<0.003	<0.001	0.00890	<0.001	<0.001	**0.943**
MW-1	11/12/2009	MW-1	17-27	NA	0.0037	NA	NA	NA	NA	NA	NA	NA	NA
RW-1	11/12/2009	RW-1	17-27	NA	**1.2**	NA	NA	NA	NA	NA	NA	NA	NA

NOTES:

* RECAP Screening Standard for groundwater is the GW_SS which are listed in the 2003 LDEQ RECAP Table 1 or obatined from LDEQ.

[1] TPH by Method 8015B Modified for Gasoline Range Organics (GRO). Reported in mg/l.

[2] BTEX, MTBE and Fuel Oxygenates by Method 8260B for Volatile Organic Analytes. Reported in mg/l.

DIPE = Diisopropyl ether, standards obtained from LDEQ

ETBE = Ethyl tert-butyl ether, per LDEQ MTBE is used as a surrogate compound

MTBE = Methyl tert-butyl ether

TAME = tert-Amyl methyl ether, standards obtained from LDEQ

TBA = tert-Butyl alcohol, standards obtained from LDEQ

NA = Not Analyzed

BOLD Print indicates exceedance of the respective Screening Standard

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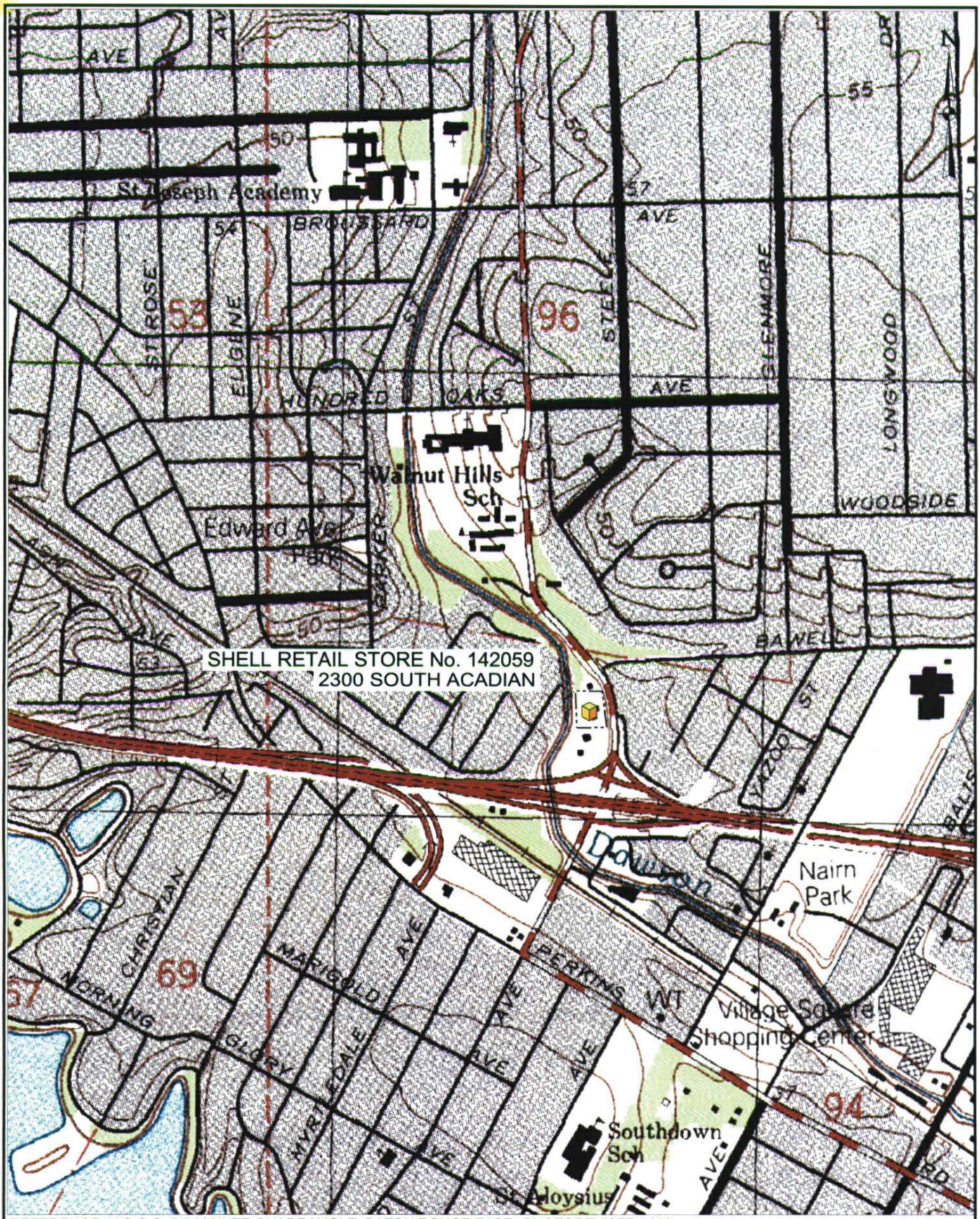
FIGURES



REFERENCE: U.S.G.S. 7.5 MINUTE QUADRANGLE, BATON ROUGE EAST. PHOTOREVISED 1992.

Shell Oil Products	URS 7389 Florida Blvd., Suite 300 Baton Rouge, Louisiana 70806 225/922-5700	FORMER SHELL RETAIL STORE NO. 142059 2300 SOUTH ACADIAN THRUWAY BATON ROUGE, LOUISIANA	FILE NO. 49206684
	SCALE: 1"=1000' / DRAWN BY: WPS / DATE: 08/12/08 / CHKD. BY: WRH / DATE: 08/12/08	SITE LOCATION MAP	FIG. NO. 1

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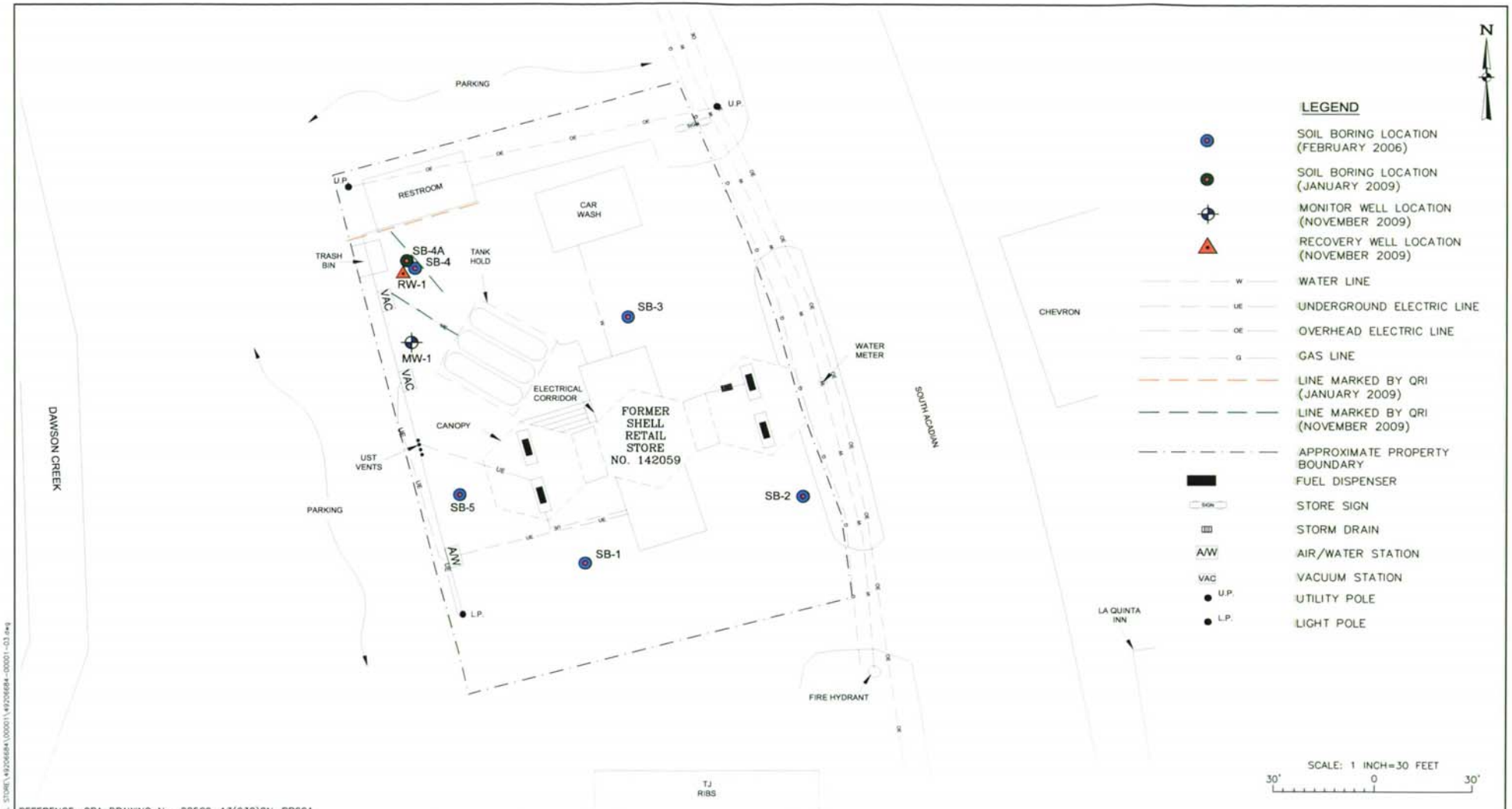

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Shell Oil Products

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7389 Florida Blvd., Suite 300
Baton Rouge, Louisiana 70806
225/922-5700

REFERENCE DRAWINGS

SCALE: 1"=30'
DESIGNED:
DRAWN: WPS
CHECKED: WRH
PEER REVIEWED:
DATE: 11/30/09

FORMER SHELL RETAIL STORE NO. 142059
2300 SOUTH ACADIAN THRUWAY
BATON ROUGE, LOUISIANA

SITE LAYOUT AND
PROPOSED WELL LOCATIONS

REVISION: △
PROJECT: 492066684
FIGURE: 2

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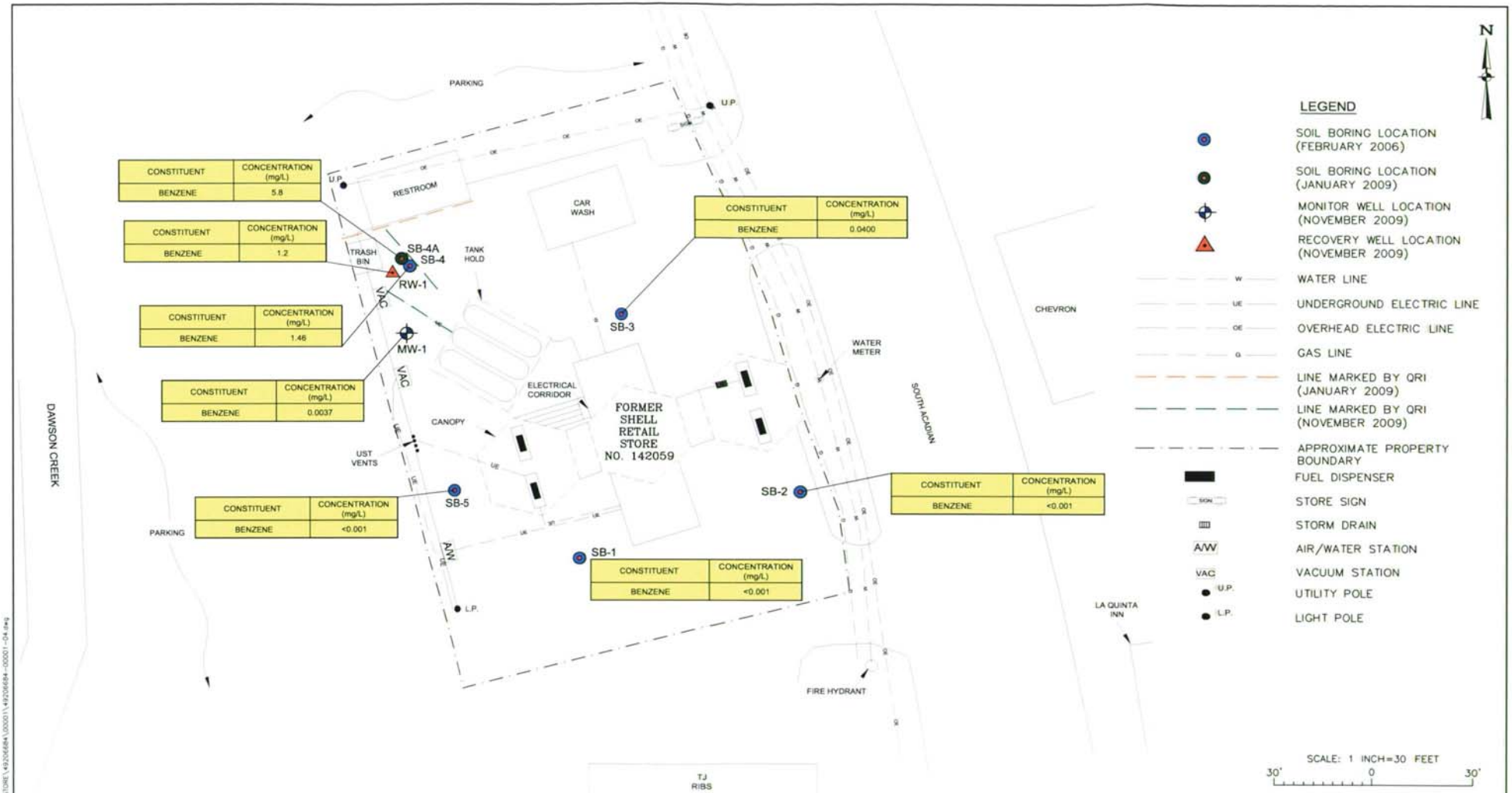

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Shell Oil Products

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7389 Florida Blvd., Suite 300
Baton Rouge, Louisiana 70806
225/922-5700

REFERENCE DRAWINGS

SCALE: 1"=30'
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CHECKED: WRH
PEER REVIEWED:
DATE: 12/01/09

FORMER SHELL RETAIL STORE NO. 142059
2300 SOUTH ACADIAN THRUWAY
BATON ROUGE, LOUISIANA

CONCENTRATIONS OF BENZENE IN SHALLOW GROUNDWATER

REVISION: △
PROJECT: 492066684
FIGURE: 3

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ATTACHMENT 1

BORING LOGS

BORING LOG

Project: Shell Retail Store No. 142059
2300 S. Acadian Thruway
Baton Rouge, Louisiana

Client: Motiva Enterprises, LLC
Houston, Texas

No. SB-1

File No.: 28509-13
Date: 02/22/06
Drilling Co.: Walker-Hill Environmental
Supervisor: Brad Richardson
Type Rig: Geoprobe 6610 DT
Logged by: GED

LABORATORY TEST DATA					FIELD DATA					BORING DATA	
Moisture Content (%)	Atterberg Test: Liquid Limit (%)	Atterberg Test: Plastic Index (%)	% Finer than #200 Sieve	Other	Organic Vapor Meter (1) (ppm)	Penetrometer (Tons/Sq.ft) or Std Pen. Test (blows/foot)	Sampling	Depth (feet)	Water Level	Screen Interval	Air Knife (8" O.D.): 0 to 5' Direct Push Sampler (2" O.D.): 5' to 25' Start Time: 0745 Finish Time: 0825
					42.5	•					Concrete pavement Gray silty CLAY (CL)
					8.5	•		5			
					8.8	•					
					1.8	•		10			
					1.8	•			▽		-- wet
					1.4	•		15			
					<0.1	•		20			-- light gray
					<0.1	•					
					<0.1	•		25			Boring terminated at 25' bgs and grouted to the surface.
								30			
								35			

Shelby Tube

Direct Push Sampler

Auger Cuttings

No Recovery

(1) MiniRAE PID

▽ Water First Noted

Stratification is Inferred And May Not be Exact.
Soil Classification Based on Visual-Manual Procedure

Conestoga-Rovers & Associates

• No Penetrometer or SPT Value

BORING LOG

Project: Shell Retail Store No. 142059
2300 S. Acadian Thruway
Baton Rouge, Louisiana

Client: Motiva Enterprises, LLC
Houston, Texas

No. SB-2

File No.: 28509-13
Date: 02/22/06
Drilling Co.: Walker-Hill Environmental
Supervisor: Brad Richardson
Type Rig: Geoprobe 6610 DT
Logged by: GED

LABORATORY TEST DATA					FIELD DATA					BORING DATA	
Moisture Content (%)	Atterberg Test: Liquid Limit (%)	Atterberg Test: Plastic Index (%)	% Finer than #200 Sieve	Other	Organic Vapor Meter (1) (ppm)	Penetrometer (Tons/Sq.ft) or Std Pen. Test (blows/foot)	Sampling	Depth (feet)	Water Level	Screen Interval	Air Knife (8" O.D.): 0 to 5' Direct Push Sampler (2" O.D.): 5' to 17' Start Time: 0840 Finish Time: 0910
					7.9	•					Concrete pavement Gray silty CLAY (CL)
					3.2	•		5			
					<0.1	•					
					2.0	•		10			
					<0.1	•					
					0.5	•		15			
											Boring terminated at 17' bgs and and grouted to the surface..
								20			
								25			
								30			
								35			

Shelby Tube
Direct Push Sampler
Auger Cuttings
No Recovery

(1) MiniRAE PID

Water First Noted

Stratification is Inferred And May Not be Exact.
Soil Classification Based on Visual-Manual Procedure

Conestoga-Rovers & Associates

• No Penetrometer or SPT Value

BORING LOG

Project: Shell Retail Store No. 142059
2300 S. Acadian Thruway
Baton Rouge, Louisiana

Client: Motiva Enterprises, LLC
Houston, Texas

No. SB-3

File No.: 28509-13
Date: 02/22/06
Drilling Co.: Walker-Hill Environmental
Supervisor: Brad Richardson
Type Rig: Geoprobe 6610 DT
Logged by: GED

LABORATORY TEST DATA					FIELD DATA					BORING DATA	
Moisture Content (%)	Atterberg Test: Liquid Limit (%)	Atterberg Test: Plastic Index (%)	% Finer than #200 Sieve	Other	Organic Vapor Meter (1) (ppm)	Penetrometer (Tons/Sq.ft) or Std Pen. Test (blows/foot)	Sampling	Depth (feet)	Water Level	Screen Interval	Air Knife (8" O.D.): 0 to 5' Direct Push Sampler (2" O.D.): 5' to 17' Start Time: 0930 Finish Time: 1000
					47	•					Concrete pavement Dark gray silty CLAY (CL) with hydrocarbon odor
					175	•		5			
					473	•		10			
					87.5	•			▽		
					14.9	•		15			
								20			Boring terminated at 17' bgs and grouted to the surface.
								25			
								30			
								35			

Shelby Tube

Direct Push Sampler

Auger Cuttings

No Recovery

(1) MiniRAE PID

▽ Water First Noted

Stratification is Inferred And May Not be Exact.
Soil Classification Based on Visual-Manual Procedure

Conestoga-Rovers & Associates

• No Penetrometer or SPT Value

BORING LOG

Project: Shell Retail Store No. 142059
2300 S. Acadian Thruway
Baton Rouge, Louisiana

Client: Motiva Enterprises, LLC
Houston, Texas

No. SB-4

File No.: 28509-13
Date: 02/22/06
Drilling Co.: Walker-Hill Environmental
Supervisor: Brad Richardson
Type Rig: Geoprobe 6610 DT
Logged by: GED

LABORATORY TEST DATA					FIELD DATA					BORING DATA	
Moisture Content (%)	Atterberg Test: Liquid Limit (%)	Atterberg Test: Plastic Index (%)	% Finer than #200 Sieve	Other	Organic Vapor Meter (1) (ppm)	Penetrometer (Tons/Sq.ft) or Std Pen. Test (blows/foot)	Sampling	Depth (feet)	Water Level	Screen Interval	Air Knife (8" O.D.): 0 to 5' Direct Push Sampler (2" O.D.): 5' to 17' Start Time: 1005 Finish Time: 1030
					76.9	*		0			Concrete pavement Dark gray silty CLAY (CL)
					147	*		5			
					66.4	*					
					195	*		10			
					86.4	*			▽		
					38.5	*		15			
								20			Boring terminated at 17' bgs and grouted to the surface.
								25			
								30			
								35			

Shelby Tube

Direct Push Sampler

Auger Cuttings

No Recovery

(1) MiniRAE PID

▽ Water First Noted

Stratification is Inferred And May Not be Exact.
Soil Classification Based on Visual-Manual Procedure

Conestoga-Rovers & Associates

* No Penetrometer or SPT Value

BORING LOG

Project: Shell Retail Store No. 142059
2300 S. Acadian Thruway
Baton Rouge, Louisiana

Client: Motiva Enterprises, LLC
Houston, Texas

No. SB-5

File No.: 28509-13
Date: 02/22/06
Drilling Co.: Walker-Hill Environmental
Supervisor: Brad Richardson
Type Rig: Geoprobe 6610 DT
Logged by: GED

LABORATORY TEST DATA					FIELD DATA					BORING DATA	
Moisture Content (%)	Atterberg Test: Liquid Limit (%)	Atterberg Test: Plastic Index (%)	% Finer than #200 Sieve	Other	Organic Vapor Meter (1) (ppm)	Penetrometer (Tons/Sq.ft) or Std Pen. Test (blows/foot)	Sampling	Depth (feet)	Water Level	Screen Interval	Air Knife (8" O.D.): 0 to 5' Direct Push Sampler (2" O.D.): 5' to 17' Start Time: 1035 Finish Time: 1100
					5.3	•					Concrete pavement Gray silty CLAY (CL)
					18.4	•		5			
					22.3	•					
					7.0	•		10			
					3.1	•			▽		
					3.5	•		15			
											Boring terminated at 17' bgs and grouted to the surface.
								20			
								25			
								30			
								35			

Shelby Tube

Direct Push Sampler

Auger Cuttings

No Recovery

(1) MiniRAE PID

▽ Water First Noted

Stratification is Inferred And May Not be Exact.
Soil Classification Based on Visual-Manual Procedure

Conestoga-Rovers & Associates

• No Penetrometer or SPT Value

LOG OF WELL SB-4A

Client Shell Oil Products US
Project Name Site Assessment Report
Location Retail Outlet at 2300 S. Acadian Thruway
Number 49206684.00001

Drill Contractor Walker-Hill Environmental, Inc.
Drill Method Direct Push
Drilling Started 1/28/09 **Ended** 1/28/09
Logged By Jed Smith

Ground Surface Elevation NS
Elevation NS
Total Depth 24' bgs
Depth To Water

DEPTH FEET	SAMPLE NO.	TIME	PID (ppm)	RECOVERY (inch)	USCS	LITHOLOGY	DESCRIPTION
							No log due to air knifing for borehole clearance.
6		12:00					
8			54.2	12	CL		Soft, gray Silty CLAY with odor
			304		CL		Soft, grayish green to light brown Silty CLAY with frequent silt partings, odor, moist
10		12:05		36			
			69.7				
12							
			46.4				
14		12:10		48			
			18.3				
16							Stiff, gray to orange Silty CLAY with some ferrous nodules
			21.0		CL		
18		12:15					
			12.6				
20							Gray, fine Silty SAND with some clay matrix, moist
			5.4		SM		—increase in moisture content
22		12:25		36			
			6.8				
24							Total depth of boring at 24' bgs. 3/4" well installed to 24' with 5' prepacked screen.
26							
28							

TEMPORARY WELL CONSTRUCTION DETAIL

- 2" Diameter Geoprobe Hole
- 3/4" Diameter Schedule 40 PVC
- Bentonite Seal
- Filter Sand
- 3/4" PVC pipe with 0.01" machined slots

DEPTH FEET

URS Corporation
7389 Florida Boulevard, Suite 300
Baton Rouge, LA 70806
Telephone: 225 922-5700
Fax: 225 922-5701

Remarks:

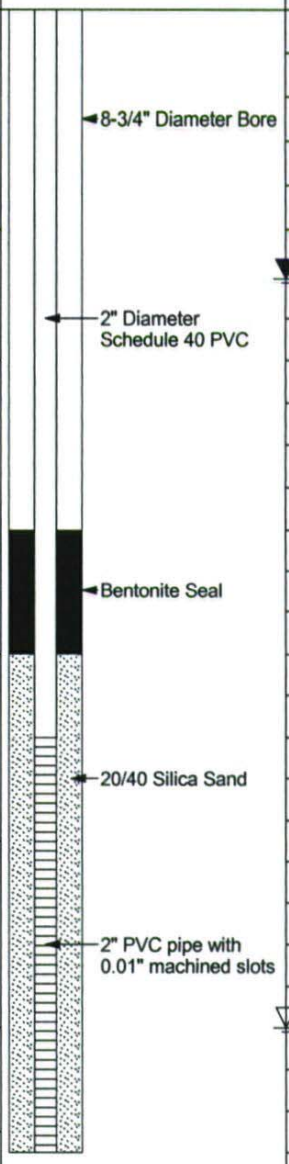
NS = Not Surveyed

LOG OF WELL MW-1

Client Shell Oil Products US
Drill Contractor Walker-Hill Environmental, Inc.
Ground Surface Elevation NS
Project Name Site Assessment Report
Drill Method Hollow-Stem Auger
Elevation NS
Location Retail Outlet at 2300 S. Acadian Thruway
Drilling Started 11/10/09 **Ended** 11/10/09
Total Depth 28' bgs
Number 49206684.00001
Logged By Jed Smith
Depth To Water ATD 24'
AD 6.1' After 24 hrs

DEPTH FEET	SAMPLE NO.	TIME	PID (ppm)	RECOVERY (inch)	USCS	LITHOLOGY	DESCRIPTION
2			0.0	0			No Recovery Due to Airknifing
4							
6		08:35	0.0	36	CL		Soft, gray Silty CLAY
8							
10		08:40	0.0	48	CL		Soft, grayish-green to light brown Silty CLAY with frequent silt partings, odor, moist
12							
14		08:50	0.0	48			
16					CL		Stiff, gray to orange Silty CLAY with ferrous nodules
18		09:00	0.0	48			
20					SM		Gray, fine Silty SAND with some clay matrix, moist
22		09:10	0.0	48			
24					SM		Gray, fine Silty SAND, interbedded with clay, wet
26		09:30	0.0	48			
28					CH		Stiff, grayish-orange CLAY
30							Boring terminated at 27' bgs. 2 inch well installed. 17-27 feet bgs screened interval 0.010 slot, 20/40 silica sand. Lithology for log of MW-1 was transcribed from log of RW-1 performed on 11/09/09.

WELL CONSTRUCTION DETAIL



DEPTH FEET

URS Corporation
7389 Florida Boulevard, Suite 300
Baton Rouge, LA 70806
Telephone: 225 922-5700
Fax: 225 922-5701

Remarks:

NS = Not Surveyed
ATD = At Time of Drilling
AD = After Drilling

LOG OF WELL RW-1

Client Shell Oil Products US | **Drill Contractor** Walker-Hill Environmental, Inc. | **Ground Surface Elevation** NS

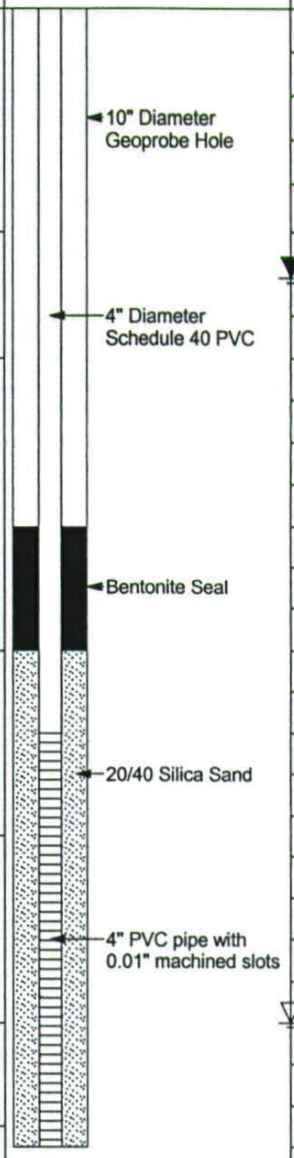
Project Name Site Assessment Report | **Drill Method** Hollow-Stem Auger | **Elevation** NS

Location Retail Outlet at 2300 S. Acadian Thruway | **Drilling Started** 11/9/09 **Ended** 11/9/09 | **Total Depth** 28' bgs

Number 49206684.00001 | **Logged By** Jed Smith | **Depth To Water** ▽ **ATD** 24'

▼ **AD** 6.1' **After** 24 hrs

DEPTH FEET	SAMPLE NO.	TIME	PID (ppm)	RECOVERY (inch)	USCS	LITHOLOGY	DESCRIPTION
0							No Recovery Due to Airknifing
2				0			
4							
6		14:30		36	CL		Soft, gray Silty CLAY
8					CL		Soft, grayish-green to light brown Silty CLAY with frequent silt partings, odor, moist
10		14:39		48			
12							
14		14:45		48			
16					CL		Stiff, gray to orange Silty CLAY with ferrous nodules
18		15:00		48			
20					SM		Gray, fine Silty SAND with some clay matrix, moist
22		15:15		48			
24					SM		Gray, fine Silty SAND, interbedded with clay
26		15:30		48			
28					CH		Stiff, grayish-orange CLAY
30							Boring terminated at 27' bgs. 4 inch well installed. 17-27 feet bgs screened interval 0.010 slot, 20/40 silica sand.



DEPTH FEET: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30

URS Corporation
7389 Florida Boulevard, Suite 300
Baton Rouge, LA 70806
Telephone: 225 922-5700
Fax: 225 922-5701

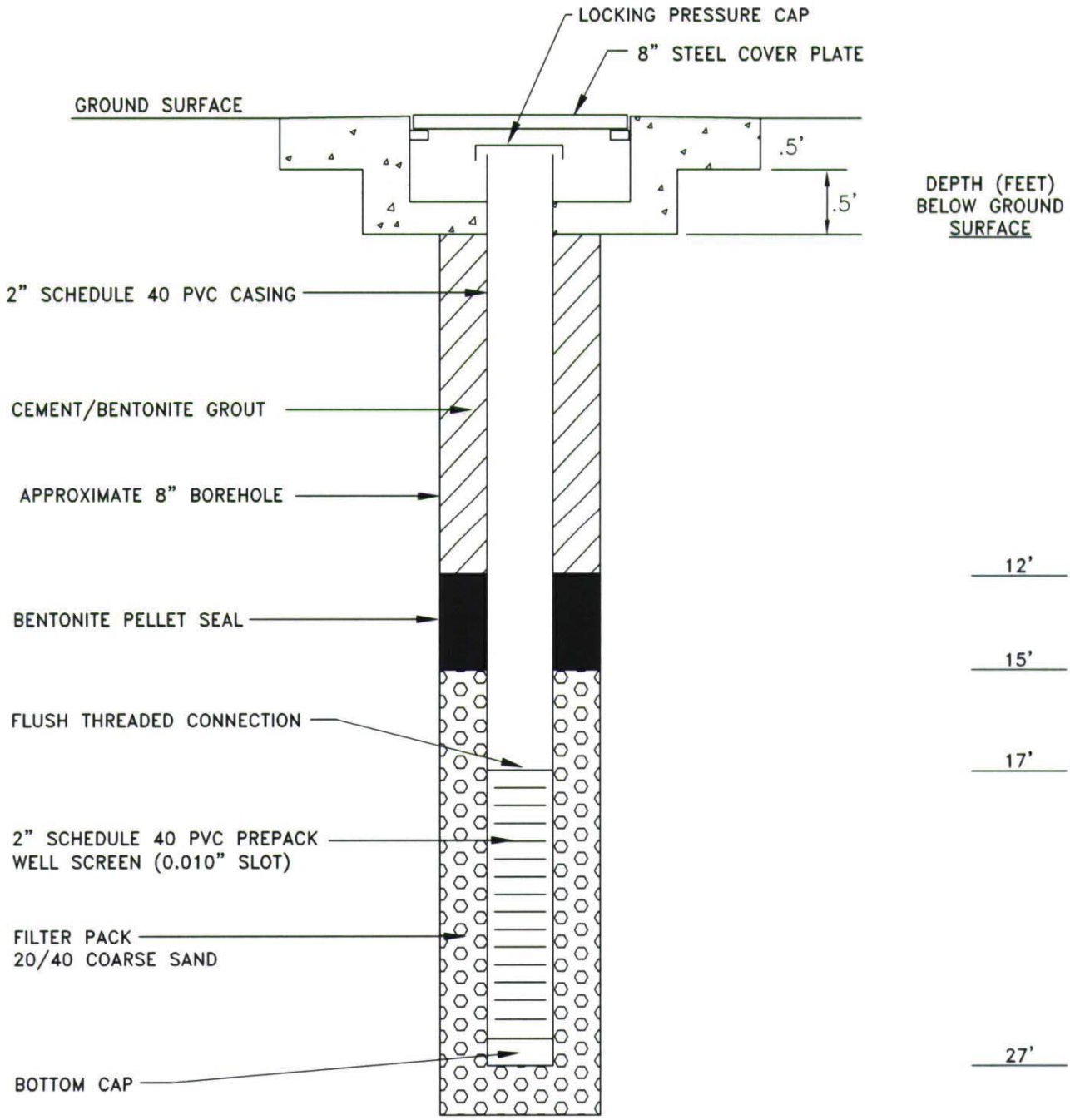
Remarks:

NS = Not Surveyed
ATD = At Time of Drilling
AD = After Drilling

URS

ATTACHMENT 2

WELL CONSTRUCTION DETAILS



Shell Oil Products

URS
7389 Florida Blvd., Suite 300
Baton Rouge, Louisiana 70806
225/922-5700

SCALE:	DRAWN BY: DB	DATE: 12/05/09
N.T.S.	CHKD. BY: JS	DATE: 12/05/09

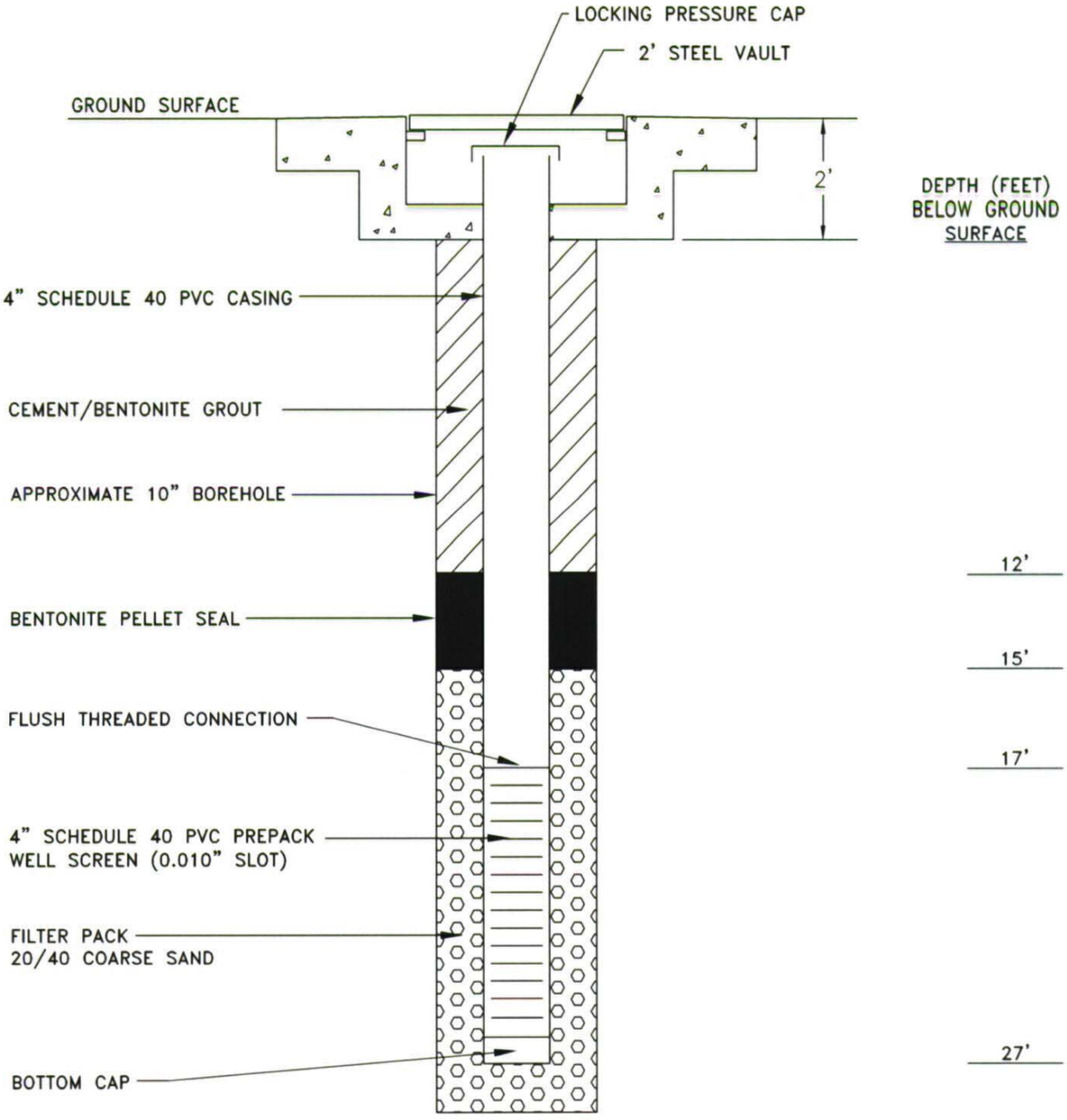
FORMER SHELL RETAIL STORE NO. 142059
2300 SOUTH ACADIAN THRUWAY
BATON ROUGE, LOUISIANA

FLUSH MOUNT MW-1
CONSTRUCTION DIAGRAM

PROJ. NO. 49206684

FIG. NO.

I:\UP CAD\DRAWINGS\SHELL\RETAIL STORE\49206684\00001\49206684-00001-05.DWG - MW-1 - Friday, December 04, 2009 3:05:01 PM



Shell Oil Products

URS
7389 Florida Blvd., Suite 300
Baton Rouge, Louisiana 70806
225/922-5700

SCALE:	DRAWN BY: DB	DATE: 12/05/09
N.T.S.	CHKD. BY: JS	DATE: 12/05/09

FORMER SHELL RETAIL STORE NO. 142059
2300 SOUTH ACADIAN THRUWAY
BATON ROUGE, LOUISIANA

FLUSH MOUNT RW-1
CONSTRUCTION DIAGRAM

PROJ. NO. 49206684

FIG. NO.

URS

ATTACHMENT 3

GROUNDWATER COLLECTION REPORT FORMS

URS

GROUNDWATER COLLECTION REPORT

PROJECT NUMBER AND NAME S. Acadian Thwy 49206684.0001 LOCATION Baton Rouge, LA
COLLECTOR/OPERATOR Jed Smith WELL NO. MW-1
TYPE OF SAMPLE _____ ☒ GRAB ( ) COMPOSITE ( ) OTHER _____
METHOD OF SAMPLING IF OTHER THAN MONITOR WELL _____ SHUTTLE NO. _____

MONITOR WELL INFORMATION

EVACUATION: DATE/TIME 11/12/09 1430 METHOD OF EVACUATION Monsoon Pump
INITIAL DEPTH TO WATER LEVEL 6.1 TOP OF CASING TO BOTTOM 27ft
GALLONS PER WELL VOLUME 3.4 TOTAL GALLONS EVACUATED ~10
FINAL DEPTH TO WATER N/A ELEVATION TOP OF CASING _____

SAMPLING: DATE/TIME 11/12/09 0845 METHOD OF SAMPLING Clean Bailer
DEPTH TO WATER LEVEL 6.1

SAMPLE DATA

FIELD REPLICATE #1	TEMP.	22.5	pH	7.02	CONDUCTIVITY	0.99
FIELD REPLICATE #2	TEMP.	22.5	pH	7.02	CONDUCTIVITY	0.98
FIELD REPLICATE #3	TEMP.	22.5	pH	7.01	CONDUCTIVITY	0.98
FIELD REPLICATE #4	TEMP.		pH		CONDUCTIVITY	

GENERAL INFORMATION

WEATHER CONDITIONS AT TIME OF SAMPLING Cool Sunny
SAMPLING CHARACTERISTICS Clear
CONTAINERS AND PRESERVATIVES 3 HCL Preserved VOA's

RECOMMENDATION/OBSERVATIONS _____

SAMPLE ID NUMBERS MW-1
SAMPLING PERSONNEL _____ TIME 845 TO 900
(SIGNED)
DATE 11/12/09

URS

GROUNDWATER COLLECTION REPORT

PROJECT NUMBER AND NAME S. Acadian Thy 4420 6684 LOCATION Baton Rouge, LA
COLLECTOR/OPERATOR Joel Smith WELL NO. RW-3
TYPE OF SAMPLE _____ (X) GRAB ( ) COMPOSITE ( ) OTHER _____
METHOD OF SAMPLING IF OTHER THAN MONITOR WELL _____ SHUTTLE NO. _____

MONITOR WELL INFORMATION

EVACUATION: DATE/TIME 11/11/01 1330 METHOD OF EVACUATION Monsoon Pump
INITIAL DEPTH TO WATER LEVEL 6.1 TOP OF CASING TO BOTTOM 27 FT
GALLONS PER WELL VOLUME 13.62B TOTAL GALLONS EVACUATED ~40 gallons
FINAL DEPTH TO WATER N/A ELEVATION TOP OF CASING N/A

SAMPLING: DATE/TIME 11/12/01 0830 METHOD OF SAMPLING Clean Bailer
DEPTH TO WATER LEVEL 6.1

SAMPLE DATA

FIELD REPLICATE #1	TEMP.	22.3	pH	7.10	CONDUCTIVITY	0.98
FIELD REPLICATE #2	TEMP.	22.4	pH	7.11	CONDUCTIVITY	0.98
FIELD REPLICATE #3	TEMP.	22.4	pH	7.11	CONDUCTIVITY	0.98
FIELD REPLICATE #4	TEMP.		pH		CONDUCTIVITY	

GENERAL INFORMATION

WEATHER CONDITIONS AT TIME OF SAMPLING Cool, Sunny
SAMPLING CHARACTERISTICS Clear
CONTAINERS AND PRESERVATIVES 3 HCL Preserved VOA's

RECOMMENDATION/OBSERVATIONS

SAMPLE ID NUMBERS RW-1
SAMPLING PERSONNEL TIME 0830 TO 0845

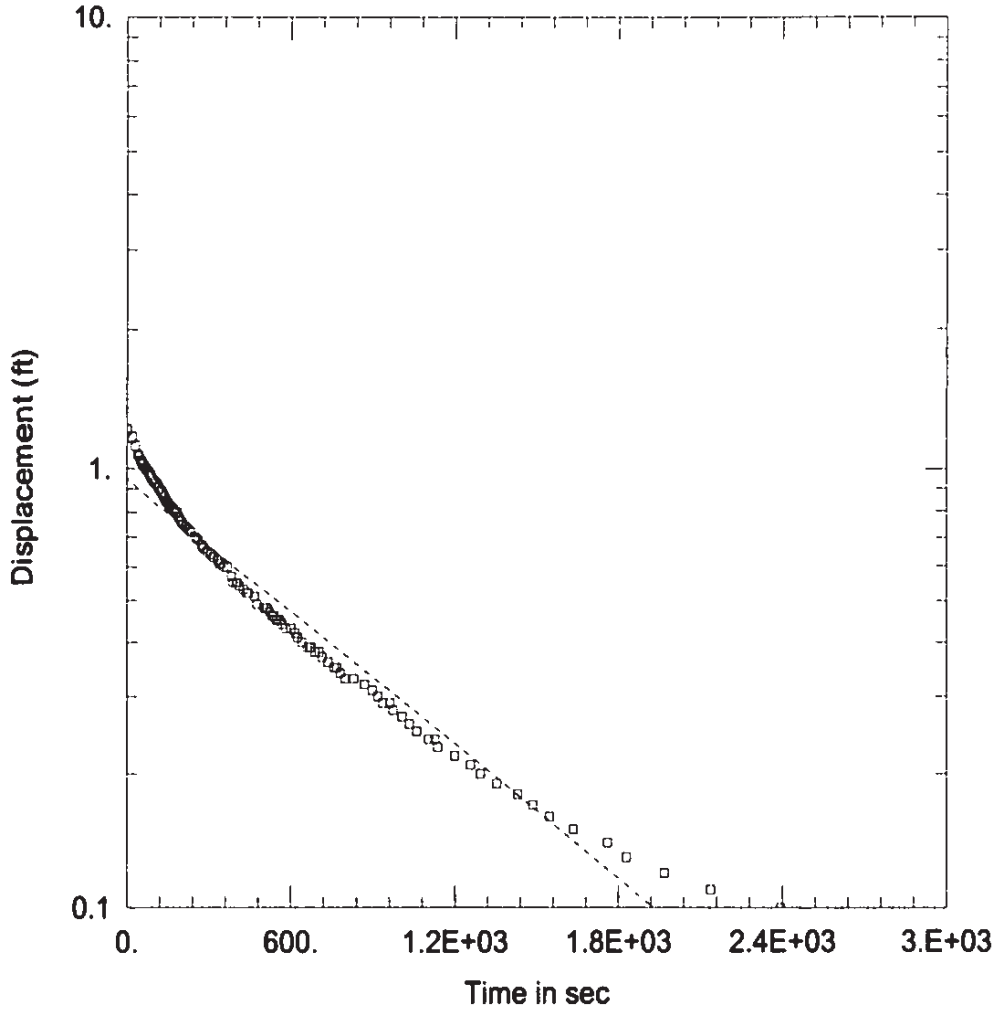
(SIGNED) DATE 11/12/01

H:\CTMCGOWAN\FORMS\GWCR-MW.DOC

URS

ATTACHMENT 4

SLUG TEST RESULTS AND AQUIFER YIELD CALCULATION



WELL TEST ANALYSIS

Data Set: I:\...\slugout.aqt
Date: 12/04/09 Time: 14:49:17

PROJECT INFORMATION

Company: URS Corp
Client: Shell Oil Products
Project: 49206684
Test Location: Store #142059
Test Well: MW-1
Test Date: 11/12/09

AQUIFER DATA

Saturated Thickness: 20.9 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW-1)

Initial Displacement: 1.21 ft Water Column Height: 21.03 ft
Casing Radius: 0.083 ft Wellbore Radius: 0.354 ft
Screen Length: 10. ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice
K = 7.132E-05 ft/min y0 = 0.9463 ft

Data Set: I:\Projects\Shell Retail\49206684-2300 S Acadian\Addl GW Inv Report-Nov 2009\Slug Test Data\slug
Date: 12/04/09
Time: 14:47:12

PROJECT INFORMATION

Company: URS Corp
Client: Shell Oil Products
Project: 49206684
Location: Store #142059
Test Date: 11/12/09
Test Well: MW-1

AQUIFER DATA

Saturated Thickness: 20.9 ft
Anisotropy Ratio (Kz/Kr): 1.

OBSERVATION WELL DATA

Number of observation wells: 1

Observation Well No. 1: MW-1

X Location: 0. ft
Y Location: 0. ft

No. of observations: 113

Observation Data

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
19.	1.17	233.	0.72	660.	0.39
31.	1.13	250.	0.7	670.	0.39
40.	1.08	261.	0.69	674.	0.39
44.	1.07	274.	0.67	688.	0.38
49.	1.05	282.	0.66	704.	0.38
53.	1.04	294.	0.65	714.	0.37
57.	1.03	307.	0.64	736.	0.36
61.	1.02	317.	0.63	758.	0.35
66.	1.01	333.	0.62	768.	0.35
69.	1.	341.	0.61	781.	0.34
75.	0.99	345.	0.61	797.	0.33
79.	0.98	354.	0.6	829.	0.33
84.	0.97	367.	0.6	868.	0.32
87.	0.96	383.	0.57	897.	0.31
91.	0.95	389.	0.55	917.	0.3
95.	0.94	400.	0.55	935.	0.29
100.	0.93	404.	0.55	962.	0.29
105.	0.93	412.	0.54	973.	0.28
109.	0.92	427.	0.53	1006.	0.27
115.	0.91	438.	0.52	1033.	0.26
118.	0.9	445.	0.52	1059.	0.25

Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)	Time (sec)	Displacement (ft)
126.	0.89	467.	0.51	1103.	0.24
130.	0.88	476.	0.49	1126.	0.24
134.	0.87	500.	0.48	1136.	0.23
139.	0.86	510.	0.48	1198.	0.22
144.	0.85	513.	0.48	1256.	0.21
150.	0.84	522.	0.47	1293.	0.2
156.	0.83	531.	0.46	1353.	0.19
165.	0.82	538.	0.46	1431.	0.18
172.	0.81	546.	0.45	1486.	0.17
178.	0.8	552.	0.45	1547.	0.16
184.	0.8	561.	0.45	1635.	0.15
189.	0.78	568.	0.44	1760.	0.14
194.	0.77	581.	0.43	1829.	0.13
199.	0.76	601.	0.43	1969.	0.12
203.	0.75	615.	0.42	2138.	0.11
214.	0.74	625.	0.41	2394.	0.1
223.	0.73	641.	0.4		

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

VISUAL ESTIMATION RESULTS

Estimated Parameters

Parameter	Estimate	
K	3.623E-05	cm/sec
y0	0.9463	ft

FORMER SHELL RETAIL STATION
2300 SOUTH ACADIAN THRUWAY
BATON ROUGE, LOUISIANA
SLUG TEST YIELD CALCULATION WORKSHEET
for UNCONFINED AQUIFER

Data from Slug Test Graphs	T (ft^2/min)	b (ft)	Calculated K (ft/min)
MW-1 slug out	0.001491	20.9	0.00007132
Average	0.001491	**20.9**	0.00007132

Average T value from above (Transmissivity) in ft^2/min 0.001491
Average saturated thickness from above (b) 20.9

Calculated average conductivity from above (k) 0.00007132 ft/min
Metric Conversion for Yield Equation 0.00003623 cm/sec

Maximum Sustainable Yield Calculation

Hydraulic conductivity (k) in cm/sec from above 0.00003623

b (saturated thickness in feet) from above 20.9

Standard Yield Equation for a Un-Confined Aquifer:

$16(K)(b)^2$ / {6.3 + log (k*b)} 0.079647 yield in gpm

Maximum Sustainable Yield =	**114.7 yield in gpd**

SUMMARY

Average saturated thickness (ft)	**20.9**
Maximum Sustainable Yield (gpd)	**114.7**

URS

ATTACHMENT 5

ANALYTICAL LABORATORY REPORT

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Case Narrative for:

SHELL OIL PRODUCTS CO.

Certificate of Analysis Number:

09110620

Report To:		Project Name:	SHELL INC #: 86368/ URS PROJ #: 4920
URS CORPORATION		Site:	142059/ 2300 SOUTH ACADIAN THWY
RON LEE		Site Address:	
7389 Florida Boulevard			
Suite 300		PO Number:	
Baton Rouge		State:	Louisiana
LA		State Cert. No.:	02048
70806-		Date Reported:	11/23/2009
ph: (225) 922-5700	fax:		

NFS: "Non-flashing solid" - This designation is used to indicate a measurement of ignitability on a soil sample or solid matrix that did not flash or burn at the minimum rate as required in the analytical method specification.

Please note that as of July 14, 2005, EPA does not require the use of reactive cyanide and reactive sulfide methods for waste classifications. These test methods have been deleted from SW-846.

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data for those samples spiked by the laboratory and may be applicable to other samples of similar matrix from the site. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group.

The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process. If insufficient sample is supplied for MS/MSD, a Laboratory Control Sample (LCS) and a Laboratory Control Sample Duplicate (LCSD) are reported with the analytical batch and serve as the batch quality control (QC).

Results are reported on a Wet Weight Basis unless otherwise noted in the sample unit field as -dry.

The collection of samples using encores, terracores or other field collection devices may result in inconsistent initial sample weights for the parent sample and MS/MSD samples.

The MS/MSD recovery and precision data are calculated based on detected spike concentrations that are adjusted for initial sample weights. As a result of the variability between initial sample weights, the calculated RPD may have increased bias.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Cristina Thibeaux
Project Manager

11/23/2009
Date

Test results meet all requirements of NELAC, unless specified in the narrative.

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

SHELL OIL PRODUCTS CO.

Certificate of Analysis Number:

09110620

Report To: URS CORPORATION
RON LEE
7389 Florida Boulevard
Suite 300
Baton Rouge
LA
70806-
ph: (225) 922-5700 fax: (225) 922-5701

Fax To:

Project Name: SHELL INC #: 86368/ URS PROJ #: 4920
Site: 142059/ 2300 SOUTH ACADIAN THWY
Site Address:

PO Number:
State: Louisiana
State Cert. No.: 02048
Date Reported: 11/23/2009

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
RW-1	09110620-01	Water	11/12/2009 8:30:00 AM	11/13/2009 4:15:00 PM	299066	☐
MW-1	09110620-02	Water	11/12/2009 8:45:00 AM	11/13/2009 4:15:00 PM	299066	☐
TRIP BLANK	09110620-03	Water	11/12/2009	11/13/2009 4:15:00 PM	299066	☐
TCLP-RCI	09110620-04	Soil	11/12/2009 3:00:00 PM	11/13/2009 4:15:00 PM	299066	☐

Cristina Thibeaux
Project Manager

11/23/2009
Date

Ron Benjamin
Laboratory Director

Tristan Davis
Quality Assurance Officer

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SCOTT, LA 70583
(337) 237-4775

Client Sample ID: RW-1 **Collected:** 11/12/2009 8:30 **SPL Sample ID:** 09110620-01

Site: 142059/ 2300 SOUTH ACADIAN THWY

Analyses/Method	Result	QUAL	Rep.Limit	DIL Factor	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS:METHOD 8260B:BTEX - WATER			**MCL**	**SW8260B**	**Units: mg/L**		
Benzene	1.2		0.005	5	11/20/09 13:49	DN	3350648
Surr: 1,2-Dichloroethane-d4	106		% 75-120	5	11/20/09 13:49	DN	3350648
Surr: 4-Bromofluorobenzene	97.9		% 89-109	5	11/20/09 13:49	DN	3350648
Surr: Toluene-d8	99.4		% 89-110	5	11/20/09 13:49	DN	3350648

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

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Client Sample ID: MW-1 **Collected:** 11/12/2009 8:45 **SPL Sample ID:** 09110620-02

Site: 142059/ 2300 SOUTH ACADIAN THWY

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS:METHOD 8260B:BTEX - WATER			**MCL**	**SW8260B**	**Units: mg/L**		
Benzene	0.0037		0.001	1	11/20/09 18:44	DN	3351551
Surr: 1,2-Dichloroethane-d4	96.1	%	75-120	1	11/20/09 18:44	DN	3351551
Surr: 4-Bromofluorobenzene	99.3	%	89-109	1	11/20/09 18:44	DN	3351551
Surr: Toluene-d8	100	%	89-110	1	11/20/09 18:44	DN	3351551

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

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Client Sample ID: TRIP BLANK **Collected:** 11/12/2009 0:00 **SPL Sample ID:** 09110620-03

Site: 142059/ 2300 SOUTH ACADIAN THWY

Analyses/Method	Result	QUAL	Rep.Limit		Dil Factor	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS:METHOD 8260B:BTEX - WATER			**MCL**	**SW8260B**	**Units: mg/L**			
Benzene	ND		0.001		1	11/19/09 4:32	NDG	3348741
Surr: 1,2-Dichloroethane-d4	98.4		% 75-120		1	11/19/09 4:32	NDG	3348741
Surr: 4-Bromofluorobenzene	98.1		% 89-109		1	11/19/09 4:32	NDG	3348741
Surr: Toluene-d8	95.6		% 89-110		1	11/19/09 4:32	NDG	3348741

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

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Client Sample ID: TCLP-RCI **Collected:** 11/12/2009 15:00 **SPL Sample ID:** 09110620-04

Site: 142059/ 2300 SOUTH ACADIAN THWY

Analyses/Method	Result	QUAL	Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
IGNITABILITY-SOLID				**MCL**	**SW1030**	**Units: mm/sec**		
Ignitability	NFS		0		1	11/17/09 9:00	DB	3344413
PH- ON SOIL				**MCL**	**SW9045D**	**Units: Std Units**		
pH	8.74		1.00		1	11/17/09 13:30	DB	3344901
REACTIVE CYANIDE BY SW7.3.3.2 & SW9014				**MCL**	**SW7.3.3.2**	**Units: mg/Kg**		
Reactive Cyanide	ND		1		1	11/18/09 10:00	CJD	3347295
REACTIVE SULFIDE BY SW7.3.4.2 & SW9034				**MCL**	**SW7.3.4.2**	**Units: mg/Kg**		
Reactive Sulfide	ND		8.5	500	1	11/17/09 16:30	CJD	3347594
TCLP METALS BY METHOD 6010B				**MCL**	**SW6010B**	**Units: mg/L**		
Lead	ND		0.1	5	1	11/19/09 13:35	SVW	3350671

Prep Method	Prep Date	Prep Initials	Prep Factor	Leach Method	Leachate Date	Leach Initials
SW3010A	11/18/2009 17:00	SA	1.00	SW1311	11/17/2009	KT

TCLP PURGEABLE AROMATICS (BENZENE)				**MCL**	**SW8021B**	**Units: ug/L**		
Benzene	ND		10		10	11/20/09 9:46	SJA	3350563
Surr: 1,4-Difluorobenzene	106	%	61-146		10	11/20/09 9:46	SJA	3350563
Surr: 4-Bromofluorobenzene	102	%	64-159		10	11/20/09 9:46	SJA	3350563

Leach Method	Leachate Date	Leach Initials
SW1311	11/18/2009	KT

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
* - Surrogate Recovery Outside Advisable QC Limits
J - Estimated Value between MDL and PQL
E - Estimated Value exceeds calibration curve
TNTC - Too numerous to count
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

Quality Control Documentation

LAFAYETTE LABORATORY
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Quality Control Report

SHELL OIL PRODUCTS CO.

SHELL INC #: 86368/ URS PROJ #: 49206684.00001

Analysis: TCLP Purgeable Aromatics (Benzene) **WorkOrder:** 09110620
Method: SW8021B **Lab Batch ID:** R221183

Method Blank

RunID: HPPP_091118D-3350556 Units: ug/L
Analysis Date: 11/19/2009 23:12 Analyst: SJA

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09110620-04A	TCLP-RCI

Analyte	Result	Rep Limit
Benzene	ND	1.0
Surr: 1,4-Difluorobenzene	110.8	61-146
Surr: 4-Bromofluorobenzene	110.5	64-159

Leachate Blank

RunID: HPPP_091118D-3350560 Units: ug/L
Analysis Date: 11/20/2009 8:08 Analyst: SJA

Analyte	Result	Rep Limit
Benzene	ND	1.0
Surr: 1,4-Difluorobenzene	103.9	57-136
Surr: 4-Bromofluorobenzene	104.9	57-136

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: HPPP_091118D-3350557 Units: ug/L
Analysis Date: 11/20/2009 0:18 Analyst: SJA

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Benzene	50.0	43.4	86.7	50.0	44.8	89.5	3.2	11	82	119
Surr: 1,4-Difluorobenzene	30.0	29.7	99.0	30.0	29.7	98.9	0.1	30	61	146
Surr: 4-Bromofluorobenzene	30.0	29.7	98.9	30.0	28.4	94.8	4.2	30	64	159

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 09110620-04
RunID: HPPP_091118D-3350564 Units: ug/L
Analysis Date: 11/20/2009 10:19 Analyst: SJA

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte Detected In The Associated Method Blank
J - Estimated Value Between MDL And PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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Quality Control Report

SHELL OIL PRODUCTS CO.

SHELL INC #: 86368/ URS PROJ #: 49206684.00001

Analysis: TCLP Purgeable Aromatics (Benzene) **WorkOrder:** 09110620
Method: SW8021B **Lab Batch ID:** R221183

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	ND	500	475	95.0	500	471	94.2	0.792	23	54	158
Surr: 1,4-Difluorobenzene	ND	300	299	99.6	300	296	98.6	0.973	30	61	146
Surr: 4-Bromofluorobenzene	ND	300	308	103	300	298	99.2	3.56	30	64	159

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte Detected In The Associated Method Blank
J - Estimated Value Between MDL And PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

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Quality Control Report

SHELL OIL PRODUCTS CO.

SHELL INC #: 86368/ URS PROJ #: 49206684.00001

Analysis: TCLP Metals by Method 6010B **WorkOrder:** 09110620
Method: SW6010B **Lab Batch ID:** 84991

Method Blank

RunID: ICPDV_091119C-3350669 Units: mg/L
Analysis Date: 11/19/2009 13:25 Analyst: SVW
Preparation Date: 11/18/2009 17:00 Prep By: SA Method: SW3010A

Samples In Analytical Batch:

Lab Sample ID	Client Sample ID
09110620-04A	TCLP-RCI

Analyte	Result	Rep Limit
Lead	ND	0.1

Laboratory Control Sample (LCS)

RunID: ICPDV_091119C-3350670 Units: mg/L
Analysis Date: 11/19/2009 13:30 Analyst: SVW
Preparation Date: 11/18/2009 17:00 Prep By: SA Method: SW3010A

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Lead	10.00	9.488	94.88	80	120

Sample Duplicate

Original Sample: 09110620-04
RunID: ICPDV_091119C-3350671 Units: mg/L
Analysis Date: 11/19/2009 13:35 Analyst: SVW
Preparation Date: 11/18/2009 17:00 Prep By: SA Method: SW3010A
Leach Date: 11/17/2009 0:00 Leach By: KT Method: SW1311

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Lead	ND	ND	0	20

Matrix Spike (MS)

Sample Spiked: 09110620-04
RunID: ICPDV_091119C-3350673 Units: mg/L
Analysis Date: 11/19/2009 13:44 Analyst: SVW
Preparation Date: 11/18/2009 17:00 Prep By: SA Method: SW3010A

Analyte	Sample Result	Spike Added	MS Result	MS % Recovery	Low Limit	High Limit
Lead	ND	10	9.720	96.93	75	125

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte Detected In The Associated Method Blank
J - Estimated Value Between MDL And PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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Quality Control Report

SHELL OIL PRODUCTS CO.

SHELL INC #: 86368/ URS PROJ #: 49206684.00001

Analysis: Volatile Organics:Method 8260B:BTEX - water **WorkOrder:** 09110620
Method: SW8260B **Lab Batch ID:** R221072

Method Blank

RunID: GA_091118C-3348740 Units: ug/L
Analysis Date: 11/19/2009 4:02 Analyst: NDG

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09110620-03A	TRIP BLANK

Analyte	Result	Rep Limit
Benzene	ND	1.0
Surr: 1,2-Dichloroethane-d4	100.0	75-120
Surr: 4-Bromofluorobenzene	99.1	89-109
Surr: Toluene-d8	96.9	89-110

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: GA_091118C-3348738 Units: ug/L
Analysis Date: 11/19/2009 0:35 Analyst: NDG

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Benzene	50.0	47.2	94.3	50.0	46.5	92.9	1.5	23	88	117
Surr: 1,2-Dichloroethane-d4	50.0	49.3	98.6	50.0	48.7	97.4	1.2	30	75	120
Surr: 4-Bromofluorobenzene	50.0	50.5	101	50.0	49.5	99.1	1.8	30	89	109
Surr: Toluene-d8	50.0	49.9	99.7	50.0	50.1	100	0.5	30	89	110

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte Detected In The Associated Method Blank
J - Estimated Value Between MDL And PQL
E - Estimated Value exceeds calibration curve
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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Quality Control Report

SHELL OIL PRODUCTS CO.

SHELL INC #: 86368/ URS PROJ #: 49206884.00001

Analysis: Volatile Organics:Method 8260B:BTEX - water **WorkOrder:** 09110620
Method: SW8260B **Lab Batch ID:** R221193

Method Blank

RunID: GB_091120A-3350645 Units: ug/L
Analysis Date: 11/20/2009 12:20 Analyst: DN

Samples In Analytical Batch:

Lab Sample ID	Client Sample ID
09110620-01A	RW-1

Analyte	Result	Rep Limit
Benzene	ND	1.0
Surr: 1,2-Dichloroethane-d4	92.7	75-120
Surr: 4-Bromofluorobenzene	99.6	89-109
Surr: Toluene-d8	98.1	89-110

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: GB_091120A-3350644 Units: ug/L
Analysis Date: 11/20/2009 10:52 Analyst: DN

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Benzene	50.0	52.9	106	50.0	51.5	103	2.7	23	88	117
Surr: 1,2-Dichloroethane-d4	50.0	52.0	104	50.0	51.4	103	1.1	30	75	120
Surr: 4-Bromofluorobenzene	50.0	51.0	102	50.0	49.0	98.0	4.0	30	89	109
Surr: Toluene-d8	50.0	50.6	101	50.0	50.3	101	0.6	30	89	110

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte Detected In The Associated Method Blank
J - Estimated Value Between MDL And PQL
E - Estimated Value exceeds calibration curve
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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Quality Control Report

SHELL OIL PRODUCTS CO.

SHELL INC #: 86368/ URS PROJ #: 49206684.00001

Analysis: Volatile Organics:Method 8260B:BTEX - water **WorkOrder:** 09110620
Method: SW8260B **Lab Batch ID:** R221235

Method Blank

RunID: GB_091120C-3351545 Units: ug/L
Analysis Date: 11/20/2009 12:20 Analyst: DN

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09110620-02A	MW-1

Analyte	Result	Rep Limit
Benzene	ND	1.0
Surr: 1,2-Dichloroethane-d4	92.7	75-120
Surr: 4-Bromofluorobenzene	99.6	89-109
Surr: Toluene-d8	98.1	89-110

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: GB_091120C-3351543 Units: ug/L
Analysis Date: 11/20/2009 10:52 Analyst: DN

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Benzene	50.0	52.9	106	50.0	51.5	103	2.7	23	88	117
Surr: 1,2-Dichloroethane-d4	50.0	52.0	104	50.0	51.4	103	1.1	30	75	120
Surr: 4-Bromofluorobenzene	50.0	51.0	102	50.0	49.0	98.0	4.0	30	89	109
Surr: Toluene-d8	50.0	50.6	101	50.0	50.3	101	0.6	30	89	110

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte Detected In The Associated Method Blank
J - Estimated Value Between MDL And PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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Quality Control Report

SHELL OIL PRODUCTS CO.

SHELL INC #: 86368/ URS PROJ #: 49206684.00001

Analysis:	**Ignitability-Solid**	**WorkOrder:**	**09110620**
Method:	**SW1030**	**Lab Batch ID:**	**R220831**

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09110620-04A	TCLP-RCI

Sample Duplicate

Original Sample:	09110620-04		
RunID:	WET_091117O-3344413	Units:	mm/sec
Analysis Date:	11/17/2009 9:00	Analyst:	DB

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Ignitability	NFS	NFS	0	20

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte Detected In The Associated Method Blank
J - Estimated Value Between MDL And PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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Quality Control Report

SHELL OIL PRODUCTS CO.

SHELL INC #: 86368/ URS PROJ #: 49206684.00001

Analysis:	**pH- on Soil**	**WorkOrder:**	**09110620**
Method:	**SW9045D**	**Lab Batch ID:**	**R220855**

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09110620-04A	TCLP-RCI

Laboratory Control Sample (LCS)

RunID: WET_091117U-3344895 Units: Std Units
Analysis Date: 11/17/2009 13:30 Analyst: DB

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
pH	7.000	7.010	100.1	99.7	100.3

Sample Duplicate

Original Sample: 09110604-01
RunID: WET_091117U-3344898 Units: Std Units
Analysis Date: 11/17/2009 13:30 Analyst: DB

Analyte	Sample Result	DUP Result	RPD	RPD Limit
pH	8.5	8.51	0.118	0.7

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte Detected In The Associated Method Blank
J - Estimated Value Between MDL And PQL
E - Estimated Value exceeds calibration curve
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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Quality Control Report

SHELL OIL PRODUCTS CO.

SHELL INC #: 86368/ URS PROJ #: 49206684.00001

Analysis: Reactive Cyanide by SW7.3.3.2 & SW9014 **WorkOrder:** 09110620
Method: SW7.3.3.2 **Lab Batch ID:** R220994

Method Blank

RunID: WET_091118V-3347288 Units: mg/Kg
Analysis Date: 11/18/2009 10:00 Analyst: CJD

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09110620-04A	TCLP-RCI

Analyte	Result	Rep Limit
Reactive Cyanide	ND	1.0

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: WET_091118V-3347289 Units: mg/Kg
Analysis Date: 11/18/2009 10:00 Analyst: CJD

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Reactive Cyanide	10.00	0.7150	7.150	10.00	0.7230	7.230	1.1	20	0.1	50

Sample Duplicate

Original Sample: 09110604-01
RunID: WET_091118V-3347291 Units: mg/Kg
Analysis Date: 11/18/2009 10:00 Analyst: CJD

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Reactive Cyanide	ND	ND	0	20

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte Detected In The Associated Method Blank
J - Estimated Value Between MDL And PQL
E - Estimated Value exceeds calibration curve
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

SHELL OIL PRODUCTS CO.

SHELL INC #: 86368/ URS PROJ #: 49206684.00001

Analysis: Reactive Sulfide by SW7.3.4.2 & SW9034 **WorkOrder:** 09110620
Method: SW7.3.4.2 **Lab Batch ID:** R221017

Method Blank

RunID: WET_091117ZM-3347591 Units: mg/Kg
Analysis Date: 11/17/2009 16:30 Analyst: CJD

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
09110620-04A	TCLP-RCI

Analyte	Result	Rep Limit
Reactive Sulfide	ND	8.5

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: WET_091117ZM-3347592 Units: mg/Kg
Analysis Date: 11/17/2009 16:30 Analyst: CJD

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Reactive Sulfide	500.0	135.9	27.19	500.0	127.4	25.49	6.4	20	0.1	60

Sample Duplicate

Original Sample: 09110620-04
RunID: WET_091117ZM-3347594 Units: mg/Kg
Analysis Date: 11/17/2009 16:30 Analyst: CJD

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Reactive Sulfide	ND	ND	0	20

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte Detected In The Associated Method Blank
J - Estimated Value Between MDL And PQL
E - Estimated Value exceeds calibration curve
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

Sample Receipt Checklist

And

Chain of Custody

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Sample Receipt Checklist

Workorder:	09110620	Received By:	JM
Date and Time Received:	11/13/2009 4:15:00 PM	Carrier name:	SPL-Driver-Other
Temperature:	4.5°C	Chilled by:	Water Ice

1.	Shipping container/cooler in good condition?	Yes	☑	No ☐	Not Present	☐
2.	Custody seals intact on shippping container/cooler?	Yes	☑	No ☐	Not Present	☐
3.	Custody seals intact on sample bottles?	Yes	☐	No ☐	Not Present	☑
4.	Chain of custody present?	Yes	☑	No ☐		
5.	Chain of custody signed when relinquished and received?	Yes	☑	No ☐		
6.	Chain of custody agrees with sample labels?	Yes	☑	No ☐		
7.	Samples in proper container/bottle?	Yes	☑	No ☐		
8.	Sample containers intact?	Yes	☑	No ☐		
9.	Sufficient sample volume for indicated test?	Yes	☑	No ☐		
10.	All samples received within holding time?	Yes	☑	No ☐		
11.	Container/Temp Blank temperature in compliance?	Yes	☑	No ☐		
12.	Water - VOA vials have zero headspace?	Yes	☐	No ☐	VOA Vials Not Present	☑
13.	Water - Preservation checked upon receipt (except VOA*)?	Yes	☐	No ☐	Not Applicable	☑

*VOA Preservation Checked After Sample Analysis

SPL Representative: _____ Contact Date & Time: _____

Client Name Contacted: _____

Non Conformance Issues: _____

Client Instructions: _____

SPL, Inc.
Analysis Request & Chain of Custody Record

SPL Workorder No. 09110620 | 299066 | page 1 of 1

Client Name: URS Corporation
Address: 7389 Florida Blvd Suite 300
City: Baton Rouge State: LA Zip: 70806
Phone/Fax: 225-922-5760 / 225-922-5701
Client Contact: Ron Lee Email: Ron_Lee@urscorp.com
Project Name/No.: 2300 Sixth Acadian Thwy / 49206684 00001
Site Name: 2300 Sixth Acadian Thwy
Site Location: Baton Rouge, LA
Invoice To: URS Corp. Ph:

Matrix: W=water S=soil O=oil A=air SL=sludge E=encore X=other
Bottle: P=plastic A=amber glass G=glass V=vial X=other
Size: 1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other
Pres.: 1=HCl 2=HNO3 3=H2SO4 X=other

Requested Analysis

SAMPLE ID	DATE	TIME	comp	grab	matrix	bottle	size	pres.	Number of Containers	8260-B	TCLP Lead & Benzene + RCI							
RW-1	11/12/09	0830		X	W	V	40	1	3	✓								3
MW-1	11/12/09	0845		X	W	V	40	1	3	✓								3
Trip Blank	11/12/09				W	V	40	1	3	✓								3
TCLP-RCI	11/12/09	1500	X		S	G	X	X	3		✓							3

Client/Consultant Remarks:

Laboratory remarks: RS303-8 (2W) + CS/cooler

Intact? ☑ Y ☐ N
Ice? ☑ Y ☐ N
Temp: 4.5

Requested TAT
☐ 1 Business Day ☐ Contract
☐ 2 Business Days ☒ Standard
☐ 3 Business Days
☐ Other
Rush TAT requires prior notice

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☐
Standard QC ☐ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☐

Special Detection Limits (specify):

PM review (initial):

	date	time	
1. Relinquished by Sampler: [signature]	11/13/09	0700	2. Received by: Renee Sam
3. Relinquished by: Renee Sam	11/13/09	1615	4. Received by: [signature]
5. Relinquished by:	date	time	6. Received by Laboratory:

☐ 8880 Interchange Drive, Houston, TX 77054 (713) 660-0901
☒ 500 Ambassador Caffery Parkway, Scott, LA 70583 (337) 237-4775
☐ 459 Hughes Drive, Traverse City, MI 49686 (231) 947-5777

Groundwater & Environmental Services, Inc.

TEXAS OFFICE

June 28, 2011

Mr. Thomas Harris, Administrator
Louisiana Department of Environmental Quality
Underground Storage Tanks and Remediation Division
P.O. Box 4312
Baton Rouge, Louisiana 70821-4312

Re: Risk Evaluation/Corrective Action Program Evaluation
Former Shell No. 142059
2300 S. Acadian Thruway
Baton Rouge, Louisiana 70808
Facility UST I.D. No.: 17-008376
Incident I.D. No.: 86368
Agency Interest No.: 71560

Dear Mr. Harris:

As consultant for Shell Oil Products US (SOPUS), Groundwater & Environmental Services, Inc. (GES) herein submits three copies of the Risk Evaluation/Corrective Action Program (RECAP) Evaluation for the above-referenced site.

If you should have any questions or comments or require additional information, please contact Larry Braud, GES Project Manager at (504) 331-7810 or Mr. Ken Springer, Shell Senior Program Manager at (281) 324-5921.

Sincerely,

GROUNDWATER & ENVIRONMENTAL SERVICES, INC.

Ryan Francis
Associate Geologist

Larry Braud, P.G.
Project Manager

RISK EVALUATION/CORRECTIVE ACTION
PROGRAM EVALUATION

FORMER SHELL NO. 142059
2300 S. ACADIAN THRUWAY
BATON ROUGE, LOUISIANA
FACILITY UST I.D. NO.: 17-008376
INCIDENT I.D. NO.: 86368
AGENCY INTEREST NO.: 71560

Risk Evaluation/Corrective Action Program Report

Former Shell Branded Service Station #142059
2300 South Acadian Thruway
Baton Rouge, East Baton Rouge Parish, Louisiana
AGENCY INTEREST NO. 71560

Prepared for:

Shell Oil Products US
P.O. Box 1087
Huffman, Texas 77336-1087

Prepared by:

Groundwater & Environmental Services, Inc.
307 France Street, Suite B
Baton Rouge, Louisiana 70802

June 26, 2011

EXECUTIVE SUMMARY

A Risk Evaluation/Corrective Action Program (RECAP) Evaluation has been completed for the Former Shell Branded Service Station #142059 located at 2300 S. Acadian Thruway in Baton Rouge, Louisiana. Groundwater & Environmental Services, Inc. (GES), for Shell oil Products US (SOPUS) on behalf of Motiva Enterprises, LLC (Motiva), prepared the evaluation in accordance with the Louisiana Department of Environmental Quality (LDEQ) RECAP dated October 20, 2003. The evaluation utilized data gathered during site investigations conducted by the previous consultants for the site, Conestoga-Rovers & Associates (CRA) and URS Corporation in 2006 and 2009, respectively, along with the Input Parameter Form submitted by Delta Consultants in 2010. Additional groundwater data was collected by GES in accordance with the *Groundwater Sampling Work Plan Proposal and RECAP Extension Request* dated April 26, 2011. A summary of RECAP Evaluation findings follows:

- **Reason for Investigation and RECAP Evaluation** – GES' evaluation was conducted to assess the site in accordance with LDEQ's October 20, 2003 RECAP document as directed by the LDEQ/Underground Storage Tanks Division in correspondence dated October 22, 2010.
- **Site Characteristics** - The site is located at 2300 S. Acadian Thruway, Baton Rouge, East Baton Rouge Parish, Louisiana. The approximate 0.47-acre site is an active retail gasoline facility. Three USTs are present in the UST hold in the northwest corner of the property.
- **Site Status** - Active retail gasoline station with car wash.
- **Release Source** - The source of the release is unknown. Hydrocarbon constituent concentrations above RECAP Table 1 Limiting Screening Standards were discovered in 2006 during a Phase II Environmental Site Assessment conducted for due diligence prior to a property transaction.
- **Soil Type** - The soils encountered at the site are described as predominantly clay and silt overlying silty sand.
- **Highest Concentrations in all Impacted Media** - Analytical results following all field work activities indicated that there were petroleum hydrocarbon constituent concentrations remaining in surface soil and groundwater above the RECAP Screening Option Screening Standards (SO SS). Three constituents in surface soil had concentrations that exceeded the limiting surface soil RECAP SO SS. The maximum total petroleum hydrocarbons-gasoline range organics (TPH-GRO) concentration is 728 milligrams per kilogram (mg/kg), the maximum benzene concentration is 0.468 mg/kg and the maximum tert-butyl alcohol (TBA) concentration is 10.4 mg/kg. Surface soil constituents that were detected at concentrations above the SO SS were evaluated under the RECAP Management Option-1 (MO-1) and then under MO-2 as needed.

  Analytical results from groundwater samples collected during the groundwater sampling investigations indicated concentrations of eight petroleum hydrocarbon constituents above the RECAP SO SS. The maximum benzene concentration was 5.8 milligrams per liter (mg/L), the maximum ethylbenzene concentration was 2.43 mg/L, the maximum methyl tert-butyl ether (MTBE) concentration was 1.12 mg/L, the maximum diisopropyl ether (DIPE) concentration was 1.34 mg/L, the maximum ethyl tert-butyl ether (ETBE) concentration was 0.153 mg/L, the maximum tert-amyl methyl ether (TAME) concentration was 0.22 mg/L, the maximum TBA concentration was 41 mg/L, and the maximum TPH-GRO concentration was 87.3 mg/L. The groundwater constituents that were detected at concentrations above the SO SS were evaluated under the RECAP MO-1 and then under MO-2 as needed.

- **Free Product Conditions** – Non-aqueous phase liquids (NAPL) were not encountered in any of the soil borings or monitor wells at this site.
- **Potential and/or Affected Receptors** - Potential receptors identified in the immediate vicinity of the site include underground utilities adjacent to the site.
- **Problem Evaluation** – Based on the findings this RECAP Evaluation, GES recommends that a corrective action plan (CAP) be developed for this site.

Recap Form 1
RECAP Submittal Summary

A COMPLETED RECAP SUBMITTAL SUMMARY FORM SHALL BE INCLUDED AS THE FIRST PAGE OF THE RECAP SUBMITTAL.

1. Agency Interest Name: Former Shell Branded Service Station #142059
2. AI#: 71560
3. Name of Area of Investigation: AOI-1
4. Facility Owner Name: Circle K
5. Facility Owner Mailing Address: 25 W. Cedar Street, Pensacola, FL 32502
6. Responsible Party Name: Shell Oil Products US
7. Facility Operator Mailing Address: 25 W. Cedar Street, Pensacola, FL 32502
8. Facility Physical Address: 2300 S. Acadian Thruway, Baton Rouge, LA
9. Parish: East Baton Rouge Parish
10. Latitude/Longitude of Primary Facility Entrance: 30°25'33"N/91°09'03"W
11. Latitude/Longitude Method: Topographic Mapping Software
12. Facility Contact Person: Ken Springer
13. Facility Contact Person's Phone Number: (281) 324-5921
14. Facility Contact Person's Mailing Address: P.O. Box 1087, Huffman, TX 77336-1087
15. Facility Contact Person's E-mail Address: kenneth.springer@shell.com
16. Area of Investigation Location: AOI-1 = area encompassing the site store and UST system
17. Area of Investigation Size: 15,600 ft^2
18. Horizontal and Vertical Extent of the Area of Investigation has been identified? [X] Yes [ ] No
19. Describe the Current and Historical Uses of the Property on which the AOI is located and the Time Periods for Each Use/Activity: The site is currently operated as a gasoline retail facility. Prior site use is unknown.
20. Indicate How Release Occurred (if known): Unknown
21. List Constituents Released (if known): Gasoline

22. RECAP Submittal Date: July 26, 2011

23. RECAP Submittal Prepared by: Larry Braud, P.G.

24. RECAP Submittal Preparer's Employer: Groundwater & Environmental Services, Inc.

25. RECAP Submittal Preparer's Phone Number: (504) 331-7810

26. Site Ranking: [ ] Class 1 [ ] Class 2 [X] Class 3 [ ] Class 4

27. Media Impacted:

[X] Surface Soil	[ ] Groundwater 1A	[ ] Surface water
[ ] Potential Surface Soil	[ ] Groundwater 1B	[ ] Sediment
[ ] Subsurface Soil	[ ] Groundwater 2A	[ ] Biota
	[ ] Groundwater 2B	
	[ ] Groundwater 2C	
	[X] Groundwater 3A	
	[ ] Groundwater 3B	
	[ ] Groundwater Classification Unknown	

28. Is soil present at 0-3 ft bgs impacted? [ ] Yes [X] No

29. Release volume: Unknown

30. Is NAPL Present? [ ] Yes [X] No

31. Aquifer: 112 SESC – S.E. LA AQ. System Surficial Confining Unit

(a) Distance from AOC/AOI to the nearest downgradient property boundary: 0 feet
(b) Distance from AOC/AOI to the nearest downgradient surface water body: 115 feet

(c) Depth from known contamination to the nearest Groundwater Classification 1 aquifer: ~385 feet

(d) If a GW 1 or 2 aquifer, distance from POC to nearest downgradient drinking water wells: N/A

32. Distance from known contamination to nearest enclosed occupied structure: ~15 feet

33. Depth Groundwater First Encountered: ~ 6 feet below ground surface

34. Distance from POC to POE: 115 feet

35. Dilution Factor Applied: 4.1 DF3

36. Fractional Organic Carbon Content: 0.0069

37. Current Land Use: [ ] Non-Industrial [X] Industrial NAICS: 44711

38. Potential Future Land Use: [ ] Non-Industrial [X] Industrial NAICS: 44711

39. Is There Offsite Contamination? [ ] Yes [X] No

(a) If Yes, Land Use Offsite: [ ] Non-Industrial [ ] Industrial NAICS:
(b) If Yes, Identify the Landowner(s), Lessee(s), and/or Servitude Holder(s):

40. Management Option(s) Applied at the AOI: [X] SO [X] MO-1 [X] MO-2 [ ] MO-3

41. Provide documentation that the AOI meets the criteria for the Option implemented: See Section 5.1.2 of this submittal

42. Current Status of the AOI: N/A

(a) The AOI will be further evaluated under: [ ] MO-1 [ ] MO-2 [ ] MO-3.

(b) Medium for further evaluation: _____

(c) Exceedances:

43. The AOI will be remediated under: [ ] SO [ ] MO-1 [ ] MO-2 [ ] MO-3.

(a) Medium requiring remediation: NA
(b) Corrective Action Standards: [ ] Non-industrial [X] Industrial
(c) Institutional Controls Are Proposed? [ ] Yes [X] No [ ] Institutional Controls Already Present
(d) Interim Corrective Actions Have Been Performed? [ ] Yes [X] No [ ] Not Applicable
(e) If yes, explain.

44. Exceedances and Corrective Action Standards to be applied:

Surface Soil:

COC	**[X] AOIC** **[ ] CC**	**[ ] LSS** **[ ] MO-1 LRS** **[ ] MO-2 LRS** **[ ] MO-3 LRS** **[ ] Alternate MO-3 RS**

Groundwater:

COC	**[ ] AOIC** **[X] CC**	**[ ] LSS** **[ ] MO-1 LRS** **[ ] MO-2 LRS** **[ ] MO-3 LRS** **[ ] Alternate MO-3 RS**

45. All constituent concentrations in all impacted media:

[X] comply with the applicable RECAP standards; **or**

[ ] have been remediated to the applicable RECAP; **or**

[ ] alternate remediation standards and a NFA-ATT determination is being requested **and**:

(a) RECAP Standards Applied: [ ] Non-industrial [ ] Industrial
(b) There are institutional controls on this property: [ ] Yes [ ] No
(c) If yes, type of institutional control employed:_____
(d) If applicable, the conveyance notice has been filed with the _____ (parish) Clerk of Court noting that the AOI was closed under industrial standards.

46. RECAP Standards Applied at the AOI:

Medium: Surface Soil

COC	[X] AOIC [ ] CC	[ ] LSS [X] MO-1 LRS [X] MO-2 LRS [ ] MO-3 LRS [ ] Alternate Standards
Benzene	0.468	0.53
TPH-GRO	728	1,000
TBA	10.4	2,788

Medium: Groundwater

COC	[ ] AOIC [X] CC	[ ] LSS [X] MO-1 LRS [X] MO-2 LRS [ ] MO-3 LRS [ ] Alternate Standards
Benzene	1.2	5.72
Ethylbenzene	2.43	33.21
MTBE	1.12	2,255
TPH-GRO	87.3	127.1
DIPE	1.34	7.79
ETBE	0.153	1.353
TAME	0.22	217.3
TBA	41	1,025

47. Provide documentation that the AOIC and/or CC will continue to comply with the applicable standard: See RECAP Evaluation presented herein.

48. If groundwater was impacted, provide a description of aquifer use and list the locations and depths of the nearest drinking water supply wells: See Sections 3.3 and 4.3 as well as Figure 3, Appendix A of this submittal.

49. Provide: (a) a description of the remedial actions implemented; (b) verification that the source has been removed/mitigated and that residual constituent concentrations comply with the LSS or LRS; and (c) a discussion on the offsite disposal of investigation and remediation wastes including types, quantities, disposal location, etc.

(a) No interim corrective action has been implemented;
(b) The source of release has not been determined. The fuel storage and dispensing system in use at the site is in compliance with UST regulations. See RECAP Evaluation for development of LRS and comparisson to constituent concentrations; and
(c) Waste soil and water generated for previous assessments was removed as documented in the various assessment reports. Purge water genreated during recent well sampling event has been containerized in a 55-gallon steel drum and will be properly disposed.

50. If applicable, discuss monitoring well plugging and abandonment: N/A

51. Is There a Current or Potential Ecological Impact? [ ] Yes [X] No

1.0 SITE HISTORY

1.1 PREVIOUS LAND USE

The site was utilized as a Shell gasoline retail facility from an unknown date until December 2006 when the site was sold to Circle K. Circle K has operated the site as a gasoline retail facility since December 2006 to the present.

1.2 CURRENT LAND USE

The site is currently operated by Circle K Stores, Inc. as an active retail gasoline facility. The site is located at 2300 S. Acadian Thruway, Baton Rouge, East Baton Rouge Parish, Louisiana. A site location map showing the location of the site is presented as **Figure 1, Appendix A.**

The site is located on the west side of S. Acadian Thruway immediately north of the intersection of S. Acadian Thruway and Interstate I-10 as shown on **Figure 1, Appendix A.** The site is bordered on the north and west by parking lots, to the south by T.J. Ribs Restaurant, and to the east by S. Acadian Thruway. A surrounding land use map is included as **Figure 2, Appendix A.** Surrounding sensitive receptors, including registered water wells within a one-mile radius of the site, are included as **Figure 3, Appendix A.**

The store building is situated in the central portion of the site, the underground storage tank (UST) hold is located in the northwest portion of the site, and the dispenser islands are to the east and west of the store building. A total of three (3) USTs are present on the site in the UST hold. The site is entirely paved with concrete. A detailed site plan of the facility is presented as **Figure 4, Appendix A.**

1.3 UNDERGROUND STORAGE TANKS

Three (3) 10,000-gallon gasoline USTs were installed at the site in April 1983 and are currently active.

1.4 FUTURE LAND USE

No change in the property's current use is anticipated.

1.5 ZONING OF SITE

According to the City of Baton Rouge Office of the Planning Commission, the site is zoned C-2, Commercial. The land use in the area is primarily commercial and residential. Pertinent information concerning the surrounding area land use is depicted on **Figure 2, Appendix A**.

1.6 DESCRIPTION OF RELEASE AND PREVIOUS SITE INVESTIGATIONS

On February 22, 2006, Conestoga-Rovers & Associates (CRA) completed a divestment initial subsurface investigation (DISI), on behalf of Motiva, at the current Circle K #2709730 and former Shell Retail Store No. 142059 located at 2300 South Acadian Thruway in Baton Rouge, Louisiana. The DISI may be found in the LDEQ Electronic Database Management System (EDMS) under document number 5483824. During the investigation, five soil exploration borings (SB-1 through SB-5) were installed. Analytical results from this investigation indicated elevated benzene levels at SB-4 in the soil and shallow groundwater, which was located

northwest of the underground storage tank (UST) hold. On October 26, 2006, Response Action Contractor (RAC) work at the site was transitioned from CRA to URS Corporations (URS) by Shell, on behalf of Motiva. On May 8, 2008, the Louisiana Department of Environmental Quality (LDEQ) requested to Shell that a limited groundwater investigation in the immediate vicinity of SB-4 be performed based on the MO-2 groundwater standard calculated for another facility within a one-mile radius of the site. On September 30, 2008, URS submitted a remedial investigation work plan to the LDEQ on behalf of Shell. This work plan was approved by the LDEQ on December 22, 2008. URS performed the site work on January 28, 2009 and submitted the report to the LDEQ on March 11, 2009 (EDMS doc. #6333738).

The LDEQ reviewed the report and requested, in correspondence dated May 29, 2009, that additional investigation of the groundwater at the site be conducted to ascertain the concentration of benzene currently present in the shallow groundwater by installing a permanent monitor well and also installing a recovery well for future use. The LDEQ also requested that a slug test be conducted to determine a site-specific yield to assist in the risk assessment process at the site through the LDEQ's RECAP program. The additional groundwater investigation work plan was submitted by URS, on behalf of Motiva, on July 17, 2009. The LDEQ approved this work plan on September 28, 2009. URS performed the site work on November 9-13, 2009 and submitted the report to the LDEQ on December 15, 2009 (EDMS doc. #6134236).

Delta Consultants (Delta) assumed environmental consulting responsibilities and submitted a RECAP Input Parameter Form at the request of Shell, on behalf of Motiva, on August 13, 2010 (EDMS doc. #6800931). The LDEQ approved this Input Parameter Form in correspondence dated October 22, 2010.

On October 1, 2010, Response Action Contractor (RAC) work at the site was transitioned from Delta to Groundwater & Environmental Services, Inc. (GES) by Shell, on behalf of Motiva.

On April 26, 2011, GES submitted a Groundwater Sampling Work Plan to further evaluate inconsistent dissolved benzene concentrations at co-located wells SB-4/SB-4A/RW-1. The proposal was approved by LDEQ on May 11, 2011 and the results incorporated into this RECAP Evaluation.

2.0. EMERGENCY/INTERIM CORRECTIVE ACTION

The petroleum hydrocarbon impact at the site did not create an immediate threat to health or the environment. No emergency/interim corrective action has been conducted at the site.

3.0 INVESTIGATION DESCRIPTION

3.1 SAMPLE COLLECTION AND SCREENING RATIONALE

The investigation activities at the site were conducted to assess the extent of hydrocarbon impact in the soil and groundwater. The samples collected were analyzed for hydrocarbon indicator compounds and hydrocarbon mixtures.

CRA conducted the initial field work at the site and filed the notification of unauthorized release in April 2006. URS was subsequently contracted by Shell to act as the environmental consultant for the project and conducted two groundwater investigations at the site in January and November 2009. No field work was conducted by the subsequent consultant, Delta. GES implemented the Groundwater Sampling Work Plan in May of 2011.

3.2 SOIL BORING AND MONITOR WELL PLACEMENT

Soil borings/temporary monitoring wells SB-1 through SB-5 were installed near the UST pit and dispensers for a Phase II Environmental Site Assessment (ESA) conducted for due diligence preceding a property transaction. Temporary monitoring well SB-4A was installed at the direction of LDEQ to further evaluate conditions detected at SB-4. Permanent monitoring wells MW-1 and RW-1 were also installed at the direction of LDEQ to further evaluate conditions detected during the previous investigations.

The soil boring/monitor well locations, along with other pertinent features, are shown on **Figure 4, Appendix A.**

3.2.1 DRILLING AND SOIL SAMPLING

Specific details regarding drilling previous site investigation activities can be found in the reports and correspondence listed below that were previously submitted by CRA, URS, and Delta.

- *Unauthorized Discharge Notification Report,* April 11, 2006 (EDMS doc. #5483824);
- *Limited Groundwater Investigation Report,* March 11, 2009 (EDMS doc. #6333738);
- *Limited Groundwater Investigation Report,* December 15, 2009 (EDMS doc. #6134236) and;
- RECAP Input Parameter Form Submittal, August 13, 2010 (EDMS doc. #6800931).

Details of the soils encountered during sampling activities, along with initial groundwater measurements, are included on soil boring logs in the URS report dated December 15, 2009 (EDMS doc. #6134236), and shown on the soil cross-sections. The soil cross-section location map is included as **Figure 5** and the cross-sections A-A' and B-B' are included as **Figures 6 and 7, respectively, in Appendix A.**

A summary of the soil analytical laboratory results from previous investigations that were utilized in this evaluation are summarized in **Table 1, Appendix B**. The distribution of soil concentrations are depicted on **Figures 8 & 9, Appendix A**. Previous soil analytical laboratory reports and chain-of-custody records were included in the reports and correspondence listed above.

3.2.2 MONITOR WELL CONSTRUCTION AND DEVELOPMENT

Construction details, including monitor well cross sections, for wells MW-1 and RW-1 were included in the *Limited Groundwater Investigation Report,* submitted December 15, 2009 (EDMS doc. #6134236).

3.2.3 ELEVATION SURVEY

The vertical elevations of the ground surface and top-of-casing at each well location have been surveyed and recorded in elevations relative to mean sea level (**Table 2, Appendix B**).

3.2.4 GROUNDWATER MEASUREMENTS AND SAMPLING

CRA collected the initial groundwater samples from five temporary wells installed in soil borings SB-1 through SB-5 during the DISI conducted on February 22, 2006. Groundwater samples were collected from an additional temporary well, SB-4A, during site investigation activities conducted by URS on January 28, 2009. URS again mobilized to the site in November 2009 and installed two permanent wells MW-1 and RW-1. Groundwater samples were collected from these wells on November 12, 2009. The groundwater sampling events are detailed in the following reports:

- *Unauthorized Discharge Notification Report,* April 11, 2006 (EDMS doc. #5483824);
- *Limited Groundwater Investigation Report,* March 11, 2009 (EDMS doc. #6333738); and
- *Limited Groundwater Investigation Report,* December 15, 2009 (EDMS doc. #6134236).

On April 26, 2011, GES submitted a Groundwater Sampling Work Plan to further evaluate inconsistent dissolved benzene concentrations at co-located wells SB-4/SB-4A/RW-1. The proposal was approved by LDEQ on May 11, 2011 and the results incorporated into this RECAP Evaluation.

A summary of the groundwater analytical laboratory results from previous investigations that were utilized in this evaluation are summarized in **Table 3, Appendix B**. The distribution of groundwater concentrations are depicted on **Figures 10 & 11, Appendix A**. Previous groundwater analytical laboratory reports and chain-of-custody records were included in the reports and correspondence listed above. The field sampling data sheet, analytical laboratory report and chain-of-custody records for the Groundwater Sampling Work Plan implemented by GES are included in **Appendix F**.

3.2.5 INVESTIGATION DERIVED WASTE

All investigation derived waste has been removed from the site.

3.3 GEOLOGY/HYDROLOGY DISCUSSION

3.3.1 REGIONAL GEOLOGY

Surface soils of the terrace are commonly silty clays derived from loess (wind blown deposits) with fine grained clays and clayey silts with lenses of fine sands which are typical of the alluvial sediments that compose the majority of the terrace deposits. The shallow sediments overlie several hundred feet of earlier Pleistocene alluvium and deltaic deposits composed of 20 to 200 feet thick, relatively continuous and interconnected, sand strata separated by clay horizons. These are in turn underlain by many thousand feet of Tertiary aged and older fluvial, deltaic and marine sediments that dip and thicken to the south.

3.3.2 REGIONAL GROUNDWATER CHARACTERISTICS

The groundwater resources in the Baton Rouge area are divided into a shallow zone composed of Holocene and Pleistocene alluvial deposits and a deeper zone composed of older Pleistocene through Miocene sand strata. The water bearing units of the shallow zone consist of discontinuous sandy strata that generally exhibit low potential for groundwater production because of low permeabilities, small areal extent and variable water quality. The deeper groundwater zone consists of numerous productive aquifers developed in the Pleistocene through older Miocene sand strata, beginning with the 400-foot depth aquifer and continuing at intervals down to approximately 2,800 feet. The uppermost aquifer of concern is the "400-foot" aquifer, which occurs at the uppermost, widespread, Pleistocene sand and is a main source of groundwater for industrial use in the area. The "400-foot" aquifer sands typically occur at approximately 400 feet below the ground surface and range from 100 to 300 feet in thickness. The "400-foot" aquifer is underlain by equivalents of the "600-foot" and deeper sands from the north Baton Rouge area. The aquifers deeper than 1,200 feet are sources for municipal drinking water and industrial uses.

The information presented in this section is derived from the inspection of USGS topographic maps of the area, the Geologic Map of Louisiana by J. Snead and R. McCulloh (1984); the Louisiana Hydrologic Atlas Map No. 2, U.S. Geological Survey Water-Resources Investigations Report 86-4150, (1986) by C.W. Smoot; Ground-Water conditions in the Baton Rouge Area 1954-59, Water Resources Bulletin No. 2, by C.O. Morgan (1961); and Maps of the "400-foot," "600-foot," and Adjacent Aquifers and Confining Beds, Baton Rouge Area, Louisiana, Water Resources Technical Report No. 48, by E.K. Kuniansky, D.C. Dial, and D.A. Trudeau (1989).

A survey of registered water wells within a one-mile radius of the site was conducted. The survey indicated 66 water wells within the area. Of those, 29 are registered as monitor wells, 22 are registered as piezometers, 8 are registered as multiple purpose observation, 3 are registered as heat pump hole, 2 are registered as water level observation, 1 is registered as environmental recovery, and 1 is registered as domestic. A 7.5 minute quadrangle map showing the locations of the registered water wells within a one-mile radius of the site is included as **Figure 3, Appendix A**.

3.3.3 AREA OF CONCERN SOIL AND GROUNDWATER CHARACTERISTICS

In general, the soils encountered during previous investigations at the site were described as clay and silty clay overlying a layer of silty sand to the maximum depth of exploration at 27 ft below ground surface (bgs). A cross-section location map and soil cross-sections showing the site lithology are presented as **Figures 5, 6, and 7 Appendix A**, respectively.

Only two permanent monitor wells have been installed at the site and therefore a potentiometric map of the groundwater elevations cannot be produced using site-specific information. However, the trend of groundwater as measured in 1994 at the Chevron Service Station located across the street (2302 S. Acadian Thruway, AI #20620) is generally west to northwest (groundwater flow information gathered from EDMS doc. #565416). The monitor well water level data are presented in **Table 2, Appendix B**.

3.3.4 AQUIFER TEST RESULTS

Slug testing for the determination of hydraulic conductivity was conducted in monitoring well MW-1 by URS on November 12, 2009. The URS report dated December 15, 2009 (EDMS doc.

#6134236) indicates that the slug utilized during the testing was 2.9 feet long, approximately 1.2 inches in diameter, an occupied a volume of approximately 0.164 gallons. The testing was conducted as a slug-in and a slug-out test by quickly inserting and removing the slug from the well, respectively. It was determined that the slug-out test provided the best data for use in calculation of the hydraulic conductivity. During the tests, data was recorded in displacement in feet over time for the duration of the water level recovery period. The hydraulic conductivity (K) values were calculated by the Bouwer-Rice method as determined from a well test recovery versus time graph with the commercially available software application AQTESOLV. The K value used was 7.132×10^{-5} feet/minute or 0.1207 ft/day.

The potential well yield from the zone of the investigation was estimated with the Cooper and Jacob modification of the Theis equation. The calculation using the average K value of 0.1207 feet/day is presented in the URS report. The results show a well yield of approximately 115 gallons per day (gpd) can be expected from the site.

3.3.5 GROUNDWATER CLASSIFICATION

In accordance with the 2003 LDEQ RECAP document, groundwater at the site is designated as Classification 3A Non Drinking Water based on the following: 1) there is no current or potential use of the shallow groundwater at the site based on water use in the area from the LDOTD water well survey; 2) the maximum attainable yield from the stratum is less than 800 gpd based on the slug test data (see EDMS doc. #6134236); 3) and groundwater would potentially discharge to a water body that is not used as a drinking water supply. The surface water body is discussed in Section 5.4.

3.4 CONSTITUENTS OF CONCERN DISTRIBUTION

The potential constituents of concern (COCs) for soil and groundwater at the site have been identified as the applicable gasoline-related petroleum hydrocarbon constituents listed in Table D-1, Appendix D of the RECAP document: total petroleum hydrocarbons-gasoline range organics (TPH-GRO), benzene, toluene, ethylbenzene, xylenes, and methyl tert-butyl ether (MTBE). Additional potential COCs have been identified by SOPUS as diisopropyl ether (DIPE), ethyl tert-butyl ether (ETBE), tert-amyl methyl ether (TAME), and tert-butyl alcohol (TBA). (See **Tables 1, 3, and 4, Appendix B**).

Analyses of soil samples collected during site investigations identified three COCs with concentrations in surface soil above RECAP Table 1 Limiting Screening Standards (LSS): benzene, TPH-GRO, and TBA (see **Table 1, Appendix B**). The COC concentrations are depicted on **Figures 8 and 9, Appendix A**.

Analyses of groundwater samples identified eight COCs with concentrations above the LSS: benzene, ethylbenzene, MTBE, TPH-GRO, DIPE, ETBE, TAME, and TBA (see **Tables 3, Appendix B**). The COC concentrations from the most recent groundwater sampling event are depicted on **Figures 10 and 11, Appendix A**.

3.5 OFF-SITE IMPACT

Based on the results of the investigations, soil and groundwater analytical data confirm there is no off-site hydrocarbon impact.

3.6 OFF-SITE SOURCES

A survey of the area immediately surrounding the site indicated no potential off-site sources of petroleum hydrocarbon compounds in groundwater or soils.

3.7 UNUSUAL CONDITIONS OR FINDINGS

No unusual conditions or findings were noted during the investigation activities.

4.0 MIGRATION PATHWAYS AND SENSITIVE RECEPTORS

4.1 CONTAMINANT MIGRATION PATHWAYS

The release at the site was to the surface soil and groundwater. Possible man-made pathways for exposure to the COCs exist at the site including underground utility corridors. Potential natural pathways for exposure include soil and groundwater vapor, contact with surface soil, leaching of soil to groundwater, and groundwater migration to surface water bodies. Exposure routes from soils and groundwater include dermal contact, ingestion, and inhalation of outdoor vapors.

4.2 BIOLOGICAL RECEPTORS

Natural receptors include groundwater, soil, surface water bodies near the site, and air. The release has impacted soil and groundwater and there is a potential pathway to air due to the volatility of the released constituents. The nearest surface water body is the Dawson Creek located approximately 115 feet west of the site. It is not likely that surface water would be impacted by groundwater migrating from the site due the limited extent of the soil and groundwater impact and low permeability of typical native soils.

4.3 MAN-MADE RECEPTORS

Based on water well survey information obtained from the LDOTD Water Resources Section, there are 66 active water wells registered within a one-mile radius of the site. The locations of the active water wells are presented on the Sensitive Receptor Map, **Figure 3, Appendix A**. Their classifications are discussed in Section 3.3.1.

5.0 RECAP EVALUATION RESULTS

5.1 GENERAL

This RECAP Evaluation utilized data gathered during the 2006 through 2009 site investigations, the 2010 input parameter form and recent groundwater re-sampling at RW-1. The RECAP Evaluation was used to evaluate the AOIs for compliance with RECAP standards calculated using the October 2003 RECAP document. A summary of the pertinent site RECAP information is presented in the RECAP submittal summary (RECAP Form 1) which is included as Page iv of this submittal. The AOI has been identified and is illustrated on the site plan included as **Figure 4, Appendix A**.

5.1.1 SITE RANKING AND JUSTIFICATION

In accordance with the LDEQ RECAP, the site ranking was selected based on the ranking system in Standard Guide for Risk-Based Corrective Action at Petroleum Release Sites (ASTM E 1739-95). On the scale of one to four, with four being the lowest in urgency of response action required to protect human health and the environment, the site receives a ranking of three since it does not present a long-term threat to human health, safety or sensitive environmental receptors.

The ranking is justified on the basis of:

1) Shallow impacted soils and shallow groundwater are not present in significant quantities and are not accessible due to the presence of concrete over the majority of the site;
2) The shallow groundwater is not used for potable water anywhere in the city; and
3) Potential for human contact with surface soils is non-existent because the surface is largely covered by grass or concrete pavement.

5.1.2 RECAP OPTION(S) IDENTIFICATION

The site was evaluated under the RECAP Screening Option Screening Standard (SO SS), RECAP Appendix I Evaluation, RECAP Management Option-1 (MO-1) and RECAP Management Option-2 (MO-2). The following information is furnished to demonstrate applicability for site evaluation using these options:

- A non-industrial exposure evaluation is proposed. Area of Investigation (AOI-1) is within a commercial area and no sensitive subpopulations exist on the site. An industrial evaluation is appropriate for current site usage. The non-industrial evaluation is proposed at the request of the site owner in order to determine the applicability of site closure without the hindrance of institutional controls.
- The potential for human exposure is limited to exposure pathways via ingestion, outdoor inhalation from volatilization from the soil and groundwater, and dermal contact with impacted soil. Exposure pathways via surface water are virtually non-existent.
- Soil and groundwater impacted with volatile constituents are not documented to exist near the existing enclosed structure (store building) at the site. The potential pathway of soil and groundwater vapor to an enclosed structure has, therefore, not been evaluated.
- The area of impacted soil is less than 0.5 acre.
- NAPL is not present at the site.

- High fugitive dust emissions are not present due to the presence of surface pavement and grass cover over most of the site.
- Based on the relatively flat topography and presence of surface pavement over a large portion of the site, the potential for impact to any surface water via runoff is virtually non-existent. In addition, impact to biota is similarly non-existent.
- The potential for discharge of COCs to surface water via a groundwater discharge from the AOI is virtually non-existent due to the low permeability of soils at the site and the distance to the nearest surface water body from the site (approximately 115 feet).
- There are no unusual current or future site conditions that may affect exposure potential at the site.

5.1.3 PREVIOUS RECAP ASSESSMENT RESULTS

No previous RECAP evaluations have been completed at the site.

5.2 DATA EVALUATION/USABILITY

The analytical laboratory data generated during CRA and URS site investigations have been evaluated to determine if the data could be used for risk assessment purposes. In accordance with RECAP investigation requirements, laboratory data was generated using EPA-approved analytical methods, sample quantitation limits were within acceptable limits, and blank Quality Assurance/Quality Control (QA/QC) samples were provided periodically to assess field and/or laboratory contamination. Based on this review, the data is considered acceptable for use in this RECAP evaluation. An analytical data evaluation (RECAP Form 3) is included in **Appendix C**.

5.3 AOI IDENTIFICATION

Based on the findings from the site work, one Area of Investigation (AOI) consisting of all sample locations that exhibit constituent concentrations above SO SS values as discussed in Section 5.6.1 has been identified. A figure showing the proposed boundaries of the AOI is presented as **Figure 4, Appendix A**.

AOI-1 is irregular in shape and encompasses the majority of the site including the store building, dispensers, and tank hold. AOI-1 includes the locations of all soil borings and monitor wells. A comparison of the COC concentrations to the LRS is discussed in Section 5.6.6. The surface area of AOI-1 is approximately 7,200 ft^2.

5.4 POC AND POE

The point of compliance (POC) is a sampling location where the groundwater protection standard is enforced and at which reproducible and representative samples can be withdrawn. The point of exposure (POE) for sites where groundwater is classified as 3A is the nearest downgradient surface water body. However, the direction of groundwater flow has never been evaluated at the site. The trend of groundwater as measured at the Chevron Service Station located across the street (2302 S. Acadian Thruway, AI #20620) in 1994 is generally west to northwest (groundwater flow information gathered from EDMS doc. 565416.) This coincides with the direction to the nearest surface water body, Dawson Creek, at a distance of approximately 115 feet west of the nearest POC, monitoring well RW-1.

5.5 DEVELOPMENT OF A CONCEPTUAL MODEL

The conceptual site model (CSM) developed for the site is presented as **Figure 12, Appendix A.** The model includes identification of all sources, source media, migration pathways, exposure media, exposure points/pathways, and receptors. Current and future land use at the site was considered in developing the CSM. In addition, all applicable standard exposure criteria were used based on the MO-1 and M)-2 management options.

5.5.1 ESTIMATION OF THE AREA OF INVESTIGATION CONCENTRATIONS AND COMPLIANCE CONCENTRATIONS

The area of investigation concentration (AOIC) for soils at the site has been determined in accordance with RECAP requirements and is presented in **Table 4, Appendix B**, for AOI-1. The AOICs for soils represent the highest measured concentrations of the COCs in soil samples collected from AOI-1. Analytical results for soil samples indicate the zone of petroleum hydrocarbon impact is within the zone of surface soils (0 to 15 ft-bgs).

The compliance concentration (CC) for groundwater is the concentration of each COC in the groundwater at the POC, identified 1 in Section 5.4 as permanent monitoring well RW-1. RW-1 is co-located with former temporary monitoring wells SB-4 and SB-4A near a single point in the northwest quadrant of the Site. The highest dissolved concentration of each COC at the site has been detected in one of these co-located wells. The CCs for groundwater were determined as the highest measured concentrations of the COCs in groundwater samples collected at either of SB-4, SB-4 or RW-1, with the exception of the benzene CC.

The highest dissolved benzene concentration, 5.80 milligrams per liter (mg/L), was detected in the sample collected at temporary monitoring well SB-4A on January 28, 2009. This was significantly higher than the previous benzene concentration of 1.46 mg/L in sample SB-4 collected on February 22, 2006 and the subsequent benzene concentration of 1.2 mg/L in sample RW-1 collected on November 12, 2009. Because the benzene concentrations in samples from SB-4 and RW-1 were consistent with each other, were significantly different from that in SB-4A and the fact that SB-4A was a temporary well set in a direct-push technology (DPT) boring, GES proposed an additional sampling of permanent well RW-1 to confirm its suspicion that the benzene data from SB-4A may be anomalous. RW-1 was re-sampled with LDEQ approval on May 19, 2011 and the concentration detected was 0.800 mg/L. GES believes the SB-4A dissolved benzene data is anomalous and proposes that the benzene concentration at RW-1 in 2009, 1.2 mg/L, be used as the CC for benzene in groundwater.

The CC for the POC is presented in **Table 4, Appendix B**, for AOI-1.

5.6 IDENTIFICATION OF THE RECAP STANDARDS FOR EACH IMPACTED MEDIUM

The LDEQ RECAP SO SS, MO-1 and MO-2 standards were considered in the evaluation of all exposure pathways at AOI-1.

The RS derived for each AOI for each RECAP management option were determined as follows:

5.6.1 SCREENING OPTION

The RECAP SO SS for soil and groundwater at AOI-1 have been determined based on the site land use scenario and a determination of risk-based parameters in accordance with the RECAP document. AOI-1 is considered an industrial facility; however, non-industrial SO SS values applicable for the soil ($Soil\_SS_{ni}$) that are protective of human health been developed at the request of the property owner in order to alleviate the use restrictions required for closure under the industrial scenario.

The $Soil\_SS_{ni}$ were compared with the SS protective of groundwater (Soil_SSGW) and the lowest value was selected as the limiting SS (LSS). The SO SS for soil were taken directly from Table 1 of the RECAP document. The SS for groundwater, GW_SS, were also selected from RECAP Table 1. The SS for the constituents DIPE, ETBE, TAME, and TBA are not provided in RECAP Table 1. For these COCs, the SS previously submitted by URS in their March 11, 2009 *Limited Groundwater Investigation Report* were used.

A comparison of the SO LSS with the AOICs for the soil in AOI-1 (**Table 4, Appendix B**) indicates the following:

- Benzene, TBA, and TPH-GRO exceeded the SO SS in surface soils.

A comparison of the GW_SS with the CC for groundwater in AOI-1 (**Table 4, Appendix B**) indicates the following:

- Benzene, ethylbenzene, MTBE, TPH-GRO, DIPE, ETBE, TAME, and TBA exceeded the SO SS for groundwater.

The COCs whose AOIC or CC was greater than the respective SO LSS values were carried forward to the next tier of evaluation under RECAP MO-1.

5.6.2 IDENTIFICATION OF THE MO-1 RECAP STANDARDS FOR EACH IMPACTED MEDIUM

The RECAP MO-1 RS have been determined with MO-1. The RS are based on the non-industrial site land use scenario and site groundwater classification as previously discussed.

$Soil_{ni}$: The soil standards protective of human health were determined using the following criteria:

- The distance from the POC to the POE, is approximately 115 feet as previously noted;
- A source length of 30 feet;
- Groundwater Classification 3 aquifer; and
- An average foc value of 0.0069.

Based on this information, the initial values for $Soil_{ni}$ were selected from the RECAP Table 2 or developed on the RECAP Appendix H Spreadsheet attached in **Appendix D** as needed for the constituents ETBE, DIPE, TAME and TBA. $Soil_{ni}$ values were made to account for additivity where more than one COC present in the soil elicits non-carcinogenic effects on the same target organ/system. The applicable target organ/systems for each COC are provided in **Table 9, Appendix B**. The $Soil_{ni}$ values were adjusted for additivity to calculate the final MO-1 $Soil_{ni}$ values illustrated in **Table 5, Appendix B**.

$\underline{Soil_{GW3NDW}}$: Initial $Soil_{GW3NDW}$ values for the COCs were determined from the RECAP Table 2 or developed on the attached RECAP Appendix H Spreadsheet as needed for the constituents ETBE, DIPE, TAME and TBA. The S_d (thickness of impacted groundwater) of < 5 feet and distance from POC to POE of 115 feet determines an MO-1 dilution factor (DF3) of 4.1 for AOI-1 as determined from RECAP Section H1.1.2.1. The DF3 was applied to the $Soil_{GW3NDW}$ values to calculate an adjusted $Soil_{GW3NDW}$ RS for each COC as listed in **Table 5, Appendix B**.

$\underline{Soil_{sat}}$: The standard that limits a constituent to its saturation limit in soil ($Soil_{sat}$) was determined from the RECAP Table 2, where applicable, or developed on the attached RECAP Appendix H Spreadsheet as needed for the constituents ETBE, DIPE, TAME and TBA. The $Soil_{sat}$ standards for each COC are listed in **Table 5, Appendix B**.

$\underline{GW_{airni}}$: The standards protective of vapor from groundwater to outdoor air in an industrial setting were selected from the RECAP Table 3 or developed on the attached RECAP Appendix H Spreadsheet as needed for the constituents ETBE, DIPE, TAME and TBA. GW_{airni} values were made to account for additivity if more than one COC present in the groundwater elicits non-carcinogenic effects on the same target organ/system. The values were adjusted for additivity and are listed in **Table 6, Appendix B**.

$\underline{GW_{3NDW}}$: Initial GW_{3NDW} values were selected from the RECAP Table 3 or developed on the attached RECAP Appendix H Spreadsheet as needed for the constituents ETBE, DIPE, TAME and TBA. The DF3 of 4.1 was applied to the GW_{3NDW} values to calculate an adjusted GW_{3NDW} for each COC as shown in **Table 6, Appendix B**.

Water Solubility: The standard that limits a constituent to its solubility in water was selected from the RECAP Table 3 or developed on the attached RECAP Appendix H Spreadsheet as needed for the constituents ETBE, DIPE, TAME and TBA. The MO-1 standards for solubility for AOI-1 are presented in **Table 6, Appendix B**.

Results of Management Option-1 Evaluation: The MO-1 LRS were compared with the AOICs for soil and the CCs for groundwater for AOI-1 on. The results indicate adsorbed TPH-GRO and dissolved benzene concentrations exceed their respective MO-1 LRS and must be evaluated further under MO-2.

5.6.3 IDENTIFICATION OF THE MO-2 STANDARDS FOR EACH IMPACTED MEDIUM IN AOI-1

The RECAP MO-2 RS have been determined based on the non-industrial site land use scenario and site groundwater classification as previously discussed. For the calculation of site-specific MO-2 RS, the attached RECAP Appendix H Spreadsheet was input with geotechnical soil parameters including:

- Dry soil bulk density of 1.7 g/cm^3;
- Total porosity of 0.358491;
- Volumetric moisture content of 0.21;
- Volumetric air content of 0.148491;
- Specific gravity of 2.65; and
- FOC of 0.0069.

The RECAP Appendix H Spreadsheet containing site-specific geotechnical data for the development of MO-2 RS is provided in **Appendix D**.

$Soil_{ni}$: The $Soil_{ni}$ values obtained from the RECAP Appendix H spreadsheet were adjusted for additivity to calculate the final MO-2 $Soil_{ni}$ values illustrated in **Table 7, Appendix B**.

$Soil_{GW3NDW}$: Initial $Soil_{GW3NDW}$ values for the COCs were obtained from the RECAP Appendix H Spreadsheet. A Domenico DAF of 440 was also obtained from the RECAP Appendix H Spreadsheet and applied to the $Soil_{GW3NDW}$ values to calculate an adjusted MO-2 $Soil_{GW3NDW}$ RS for each COC as listed in **Table 7, Appendix B**.

$Soil_{sat}$: $Soil_{sat}$ standards from the RECAP Appendix H Spreadsheet for each COC are listed in **Table 7, Appendix B**.

GW_{airni}: Initial GW_{airni} values were obtained from the RECAP Appendix H Spreadsheet. The values were adjusted for additivity as shown in **Table 8, Appendix B**.

GW_{3NDW}: Initial GW_{3NDW} values were obtained from the RECAP Appendix H Spreadsheet. The Domenico DAF of 440 obtained from the RECAP Appendix H Spreadsheet was applied to the GW_{3NDW} RS values to calculate an adjusted GW_{3NDW} for each COC as listed in **Table 8, Appendix B**.

Water Solubility: The water Solubility standards from the RECAP Appendix H Spreadsheet are presented in **Table 8, Appendix B**.

Results of Management Option-2 Evaluation: The MO-2 LRS were compared with the TPH-GRO AOIC for soil and the benzene CC for groundwater. Both adsorbed TPH-GRO and dissolved benzene concentrations are below their respective MO-2 RS and require no further evaluation. A comparison of site concentrations to their final RECAP RS is presented in **Table 10A, Appendix B**.

5.7 ECOLOGICAL EVALUATION

In accordance with the 2003 RECAP document requirements, an Ecological Checklist was completed for the site in order to make an initial determination of whether an ecological risk assessment would be required. Based on site conditions and the checklist assessment criteria, no additional ecological assessment activities should be required at the site. A copy of the completed Ecological Checklist (RECAP Form 18) is included as **Appendix E**.

6.0 SUMMARY OF FINDINGS

6.1 RELEASE SOURCES

The source of the release is considered to be from the UST system at the site.

6.2 SOIL TYPE

The soils encountered at the site during previous site investigation activities were described as clay overlying silty sand to approximately 27 ft bgs, the maximum depth of exploration.

6.3 HIGH CONCENTRATIONS

Analytical laboratory results for soil samples collected during the historical site investigation activities indicated the highest concentrations of hydrocarbon constituents in soil were detected in samples collected from the portions of the site north of the building and northwest of the tank field including borings SB-3, SB-4, SB-4A, and RW-1. The distribution of the constituents detected in soil is presented as **Figures 8 and 9, Appendix A**.

The highest concentrations of hydrocarbon constituents in groundwater were also detected in samples collected from the portions of the site north of the building and northwest of the tank field. The distribution of the constituents detected in groundwater is presented as **Figures 10 and 11, Appendix A**.

6.4 FREE PRODUCT CONDITIONS

NAPL was not detected in any of the soil borings or monitor wells during the site investigations.

6.5 POTENTIAL AND/OR AFFECTED RECEPTORS

Potential receptors identified in the immediate vicinity of the site include underground utilities adjacent to the site. There are no known affected receptors.

6.6 OFF-SITE IMPACT

The results of the historical site investigations have revealed no off-site impacts as discussed in Section 5.

6.7 OFF-SITE SOURCES

A survey of the area immediately surrounding the site identified no off-site sources of petroleum compounds in groundwater or soil.

6.8 GROUNDWATER CONDITIONS

First-encountered groundwater occurs between 6.1 and 8.08 ft bgs. The groundwater flow direction has not been determined at the site but for this evaluation has been conservatively assumed to flow directly to the nearest surface water body west-northwest of the site. Data collected from the site indicate the groundwater is designated as Classification 3A based on a calculated yield of less than 800 gpd.

7.0 RECOMMENDATIONS

Based on the findings of the RECAP Evaluation, all COC concentrations in soil and groundwater are below site-specific RECAP Standards. Shell Oil Products US, on behalf of Motiva Enterprises, LLC, and GES request No Further Action At This Time (NFA-ATT) status for the site.

8.0 REFERENCES

Louisiana Department of Environmental Quality, Risk Evaluation Corrective Action Program, October 20, 2003

Snead, J. and R. McCulloh, Geologic Map of Louisiana, 1984.

SIGNATURE PAGE

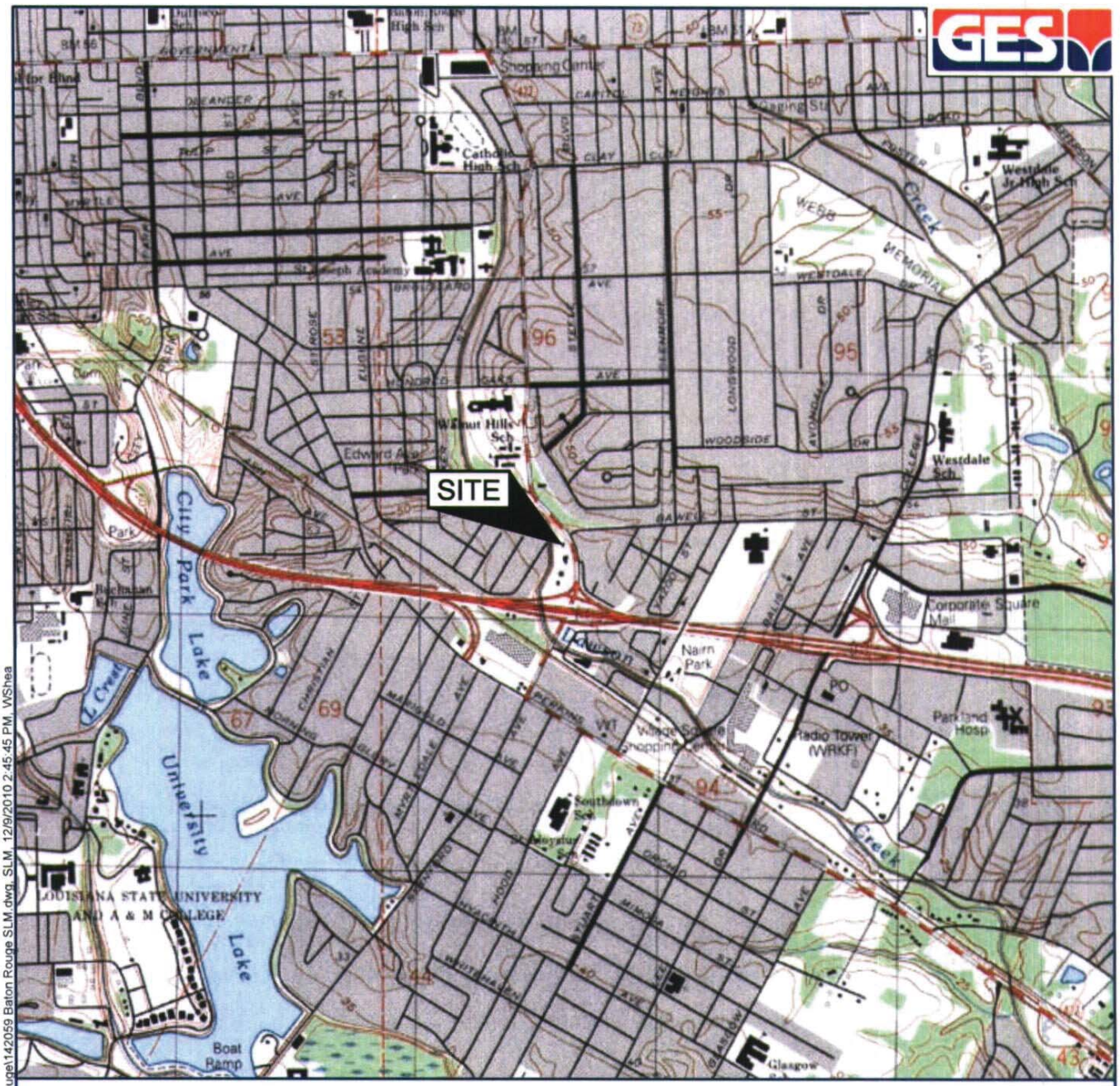
The following Groundwater & Environmental Services, Inc. employees prepared the RECAP Evaluation Report for Former Shell Retail Store No. 142059, located at 2300 South Acadian Thruway in Baton Rouge, East Baton Rouge Parish, Louisiana, dated June 2011.

Larry Braud, P.G.
Project Manager

Ryan Francis
Associate Geologist

APPENDIX A

FIGURES



SOURCE: USGS 7.5 MINUTE SERIES
TOPOGRAPHIC QUADRANGLE 1992
BATON ROUGE WEST, LOUISIANA
CONTOUR INTERVAL = 5'

QUADRANGLE LOCATION

COORDINATES
LAT. 30° 25' 34.85"
LONG. 91° 09' 03.35"

DECIMAL EQUIVALENT
LAT. ---
LONG. ---

STATE PLANE
Y 700678.17
X 3338280.21

NORTH

DRAFTED BY: W.G.S. (N.J.)	SITE LOCATION MAP
CHECKED BY:	FORMER SHELL STATION 2300 SOUTH ACADIAN THRUWAY BATON ROUGE, LOUISIANA
REVIEWED BY:	

Groundwater & Environmental Services, Inc.
307 FRANCE STREET, SUITE B, BATON ROUGE, LOUISIANA 70802

SCALE IN FEET	DATE	FIGURE
0 2000	12-9-10	1

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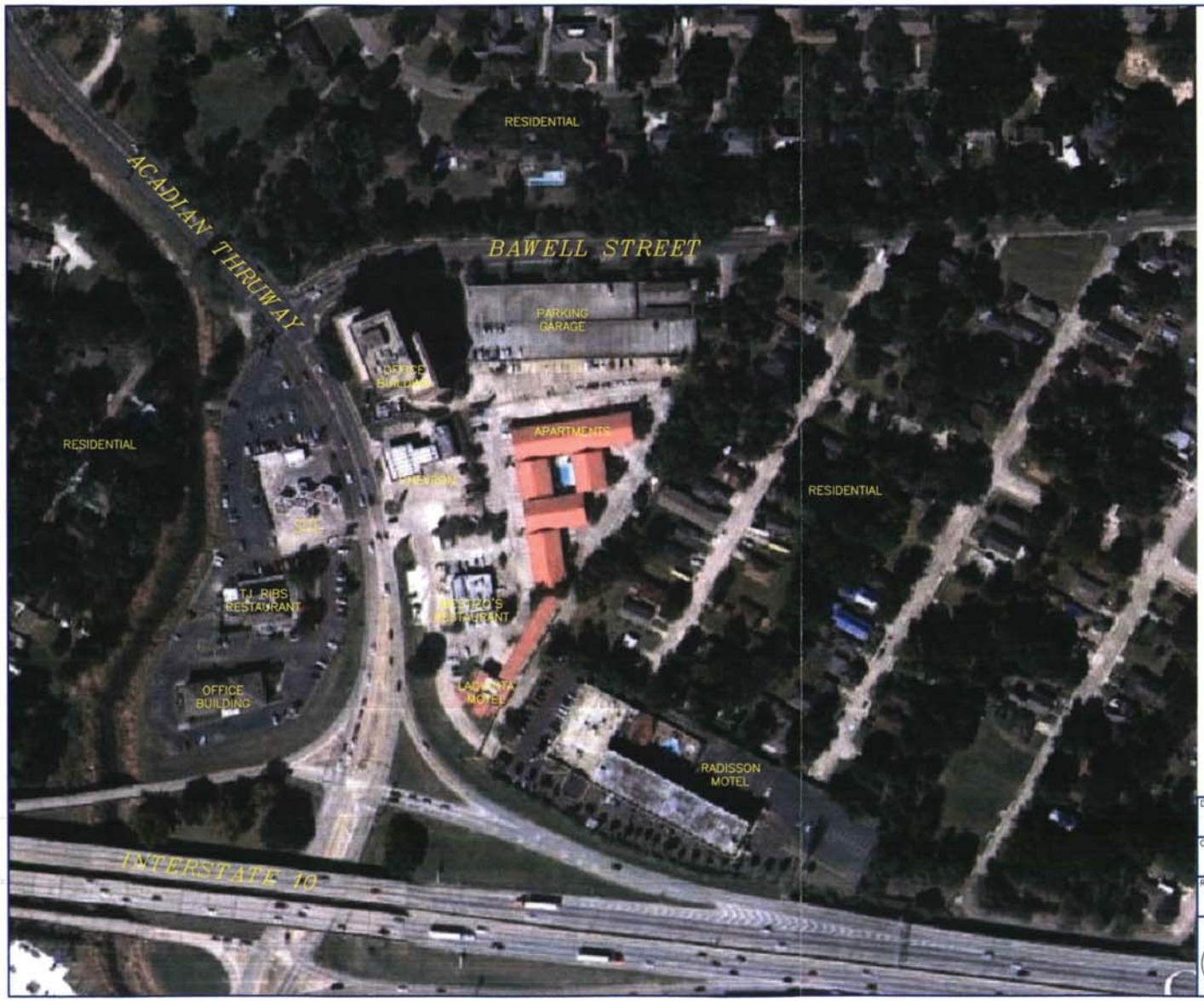

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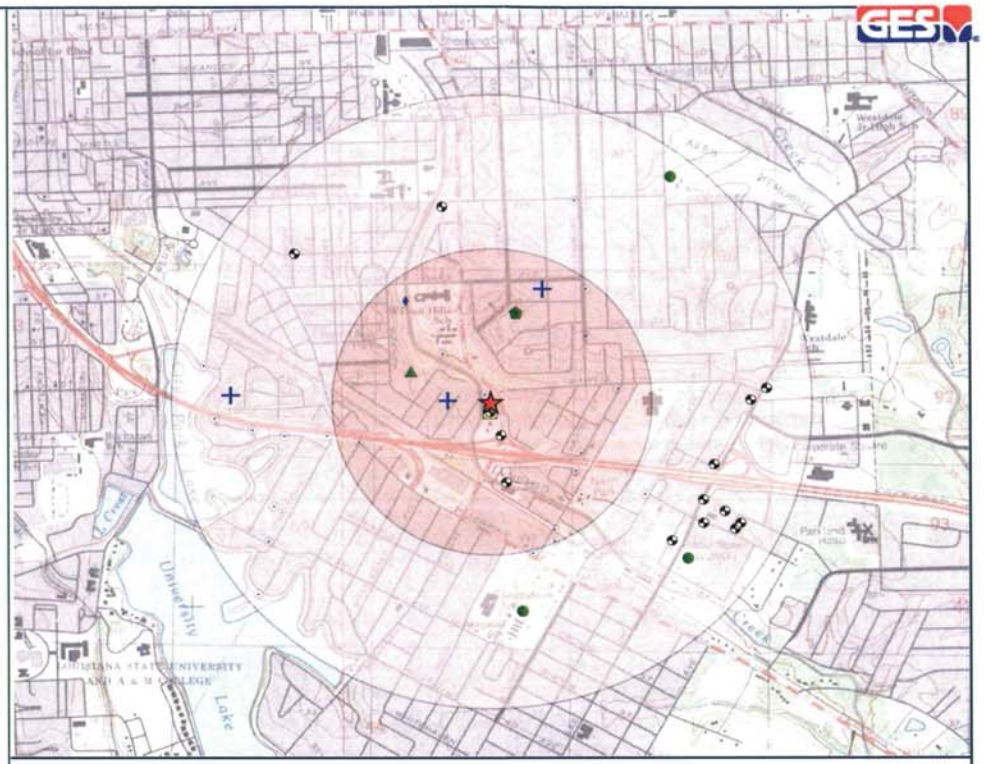
GES

DRAFTED BY: W.G.S. (N.J.)	LOCAL AREA MAP	
CHECKED BY:	FORMER SHELL STATION 2300 SOUTH ACADIAN THRUWAY BATON ROUGE, LOUISIANA	
REVIEWED BY:	Groundwater & Environmental Services, Inc. 307 FRANCE STREET, SUITE B, BATON ROUGE, LOUISIANA 70802	
NORTH	SCALE IN FEET 0 APPROXIMATE 200	DATE 12-9-10
		FIGURE 2

LOCAL WELL #	LATITUDE	LONGITUDE	OWNERS NAME	WELL DEPTH	DATE COMPLETED	GEOLOGIC UNIT	DRILLER	DATE REGISTERED	CASING DIA	CASING MATERIAL	SCREEN INTERVAL	NUMBER	USE DESCRIPTION
734	302551	910859	RAMSEY, J	104	1960	112GMER	HERRINGTON	NA	2	METAL	494-504	NA	domestic
64542	302534	910904	SHELL OIL	27	11/09	00000000	URS CORPORATION	01/10	4	PLASTIC	17-27	RW-1	environmental recovery
53542	302538	910912	PUEA, WAYNE	250	11/85	112GNWM	ROUTEA 6	12/85	NA	NA	NA	NA	heat pump hole
55972	302537	910853	CHERRI LOUISE, M S	200	07/87	112GNWM	ECONOMY	09/87	NA	NA	NA	NA	heat pump hole
56162	302606	910854	LEA, MAXWELL	250	01/88	112GNWM	ROUTEA 5	02/88	NA	NA	NA	NA	heat pump hole
157	302541	910916	BATES, C	1553	06/42	121116R	EBERHART	NA	6X4	STEEL	1510-1553	NA	irrigation
61992	302512	910830	CHEVRON	12	05/89	112SESC	LAYNE (LA)	07/89	4	PLASTIC	2-12	3	monitor
61987	302512	910830	CHEVRON	12	05/89	112SESC	LAYNE (LA)	07/89	4	PLASTIC	2-12	1	monitor
61282	302514	910818	STAR ENTERPRISE	16	03/89	112SESC	LAYNE (LA)	04/89	4	PLASTIC	1-16	MW-14	monitor
60842	302515	910824	TEXACO	15	01/89	112SESC	PSI(PT)	03/89	4	PLASTIC	1-15	MW-6	monitor
60852	302515	910824	TEXACO	15	01/89	112SESC	PSI(PT)	03/89	4	PLASTIC	1-15	MW-7	monitor
60812	302515	910824	TEXACO	15	01/89	112SESC	PSI(PT)	03/89	4	PLASTIC	1-15	MW-3	monitor
60822	302515	910824	TEXACO	15	01/89	112SESC	PSI(PT)	03/89	4	PLASTIC	1-15	MW-4	monitor
60832	302515	910824	TEXACO	15	01/89	112SESC	PSI(PT)	03/89	4	PLASTIC	1-15	MW-5	monitor
61232	302515	910817	STAR ENTERPRISE	18	03/89	112SESC	LAYNE (LA)	04/89	4	PLASTIC	1-18	MW-8	monitor
61252	302515	910817	STAR ENTERPRISE	18	03/89	112SESC	LAYNE (LA)	04/89	4	PLASTIC	1-18	MW-10	monitor
65042	302517	910820	CHILIS RESTAURA	35	06/90	112SESC	CUSTOM CORING	07/90	2	PLASTIC	20-35	MW-1	monitor
65052	302517	910820	CHILIS RESTAURA	20	06/90	112SESC	CUSTOM CORING	07/90	2	PLASTIC	5-20	MW-2	monitor
67462	302519	910824	BATON ROUGE, LA	40	09/93	112PLSC	PROFESSIONAL	09/93	2	PLASTIC	43-48	PH1-08	monitor
72342	302522	910901	J & S POOL PRO	12	12/93	112MRVAC	GROUNDWATER	01/94	2	PLASTIC	2-12	MW-1	monitor
73172	302525	910822	RACETRAC PETRO	20	05/94	112SESC	SOIL TESTING	06/94	2	PLASTIC	10-20	MW-10	monitor
73182	302525	910822	RACETRAC PETRO	20	05/94	112SESC	SOIL TESTING	06/94	2	PLASTIC	10-20	MW-11	monitor
56382	302530	910902	CHEVRON	11	02/88	112SESC	PSI(PT)	02/88	4	PLASTIC	1-11	MW-3	monitor
64852	302534	910904	SHELL OIL	27	11/09	00000000	URS CORPORATION	01/10	4	PLASTIC	NA	MW-1	monitor
63022	302536	910815	RACETRAC PETRO	22	10/89	112SESC	EUSTIS	11/89	2	PLASTIC	10-20	MW-89-1	monitor
63032	302536	910815	RACETRAC PETRO	18	10/89	112SESC	EUSTIS	11/89	2	PLASTIC	6-16	MW-89-2	monitor
63042	302536	910815	RACETRAC PETRO	17	10/89	112SESC	EUSTIS	11/89	2	PLASTIC	3-17	MW-89-3	monitor
65442	302538	910812	TEXACO	14	10/90	112SESC	PSI(PT)	11/90	4	PLASTIC	2-15	MW-3	monitor
54562	302601	910941	SOUTHLAND CORP	16	12/86	112SESC	IT CORPORATION	12/86	4	PLASTIC	6-15	MW-1	monitor
54582	302601	910941	SOUTHLAND CORP	16	12/86	112SESC	IT CORPORATION	12/86	4	PLASTIC	6-16	MW-2	monitor
54602	302601	910941	SOUTHLAND CORP	16	12/86	112SESC	IT CORPORATION	12/86	4	PLASTIC	6-16	MW-3	monitor
54612	302601	910941	SOUTHLAND CORP	16	12/86	112SESC	IT CORPORATION	12/86	4	PLASTIC	6-16	MW-4	monitor
66322	302609	910913	EXXON CO USA	33	12/90	112SESC	CO	03/91	4	PLASTIC	18-33	MW-1	monitor
66332	302609	910913	EXXON CO USA	35	12/90	112SESC	CO	03/91	4	PLASTIC	20-35	MW-2	monitor
66342	302609	910913	EXXON CO USA	31	12/90	112SESC	CO	03/91	4	PLASTIC	16-31	MW-3	monitor
823	302500	910858	LA WTR RESOURCE	563	08/67	112GMER	STAMM-SCHEELE	NA	2	METAL	874-562	ST ALOY	multiple purpose observation
760A	302509	910827	U S GEOL SURVEY	1633	03/65	121133R	SUMMERS, D. K.	NA	4	METAL	1617-1622	NA	multiple purpose observation
760B	302509	910827	U S GEOL SURVEY	1913	03/65	121158R	SUMMERS, D. K.	NA	2	METAL	1902-1913	NA	multiple purpose observation
778	302509	910827	U S GEOL SURVEY	2586	03/65	122208R	SUMMERS, D. K.	NA	4X2.50	METAL	2581-2586	NA	multiple purpose observation
781	302535	910904	U S GEOL SURVEY	2286	04/65	122208R	SUMMERS, D. K.	NA	4X2.50X2	METAL	2245-2286	NA	multiple purpose observation
782A	302535	910904	U S GEOL SURVEY	1189	04/65	121108R	SUMMERS, D. K.	NA	4	METAL	1184-1189	NA	multiple purpose observation
782B	302535	910904	U S GEOL SURVEY	1681	04/65	121158R	SUMMERS, D. K.	NA	4X4X4	METAL	1676-1681	NA	multiple purpose observation
977	302614	910835	U S GEOL SURVEY	1736	10/73	121158R	SUMMERS BROS	NA	4X2.50	METAL	1731-1736	NA	multiple purpose observation
66462	302503	910949	BR PUBLIC WORKS	24	01/05	112MRVAC	PROFESSIONAL	04/05	2	PLASTIC	19-24	TD3-52	piezometer
66742	302510	910858	BR PUBLIC WORKS	43	02/05	112PLSC	PROFESSIONAL	06/05	2	PLASTIC	38-43	TD3-67	piezometer
66772	302511	910848	BR PUBLIC WORKS	28	02/05	112MRVAC	PROFESSIONAL	06/05	2	PLASTIC	23-28	TD3-55	piezometer
66472	302512	910852	BR PUBLIC WORKS	47	02/05	112PLSC	PROFESSIONAL	06/05	2	PLASTIC	42-47	TD3-51	piezometer
66732	302514	910852	BR PUBLIC WORKS	31	02/05	112SESC	PROFESSIONAL	06/05	2	PLASTIC	26-31	TD3-30	piezometer
66722	302518	910949	BR PUBLIC WORKS	26	02/05	112MRVAC	PROFESSIONAL	06/05	2	PLASTIC	21-26	TD3-58	piezometer
66852	302520	910847	BR PUBLIC WORKS	46	03/05	112PLSC	PROFESSIONAL	06/05	2	PLASTIC	41-46	TD3-26	piezometer
66012	302520	910835	BR PUBLIC WORKS	46	01/05	112PLSC	PROFESSIONAL	03/05	2	PLASTIC	41-46	TD3-23	piezometer
66872	302524	910847	BR PUBLIC WORKS	56	01/05	112PLSC	CAPOZZOLI	02/05	2	PLASTIC	51-56	TD3-121	piezometer
66862	302527	910847	BR PUBLIC WORKS	56	01/05	112PLSC	CAPOZZOLI	02/05	2	PLASTIC	51-56	TD3-120	piezometer
66482	302529	910928	BR PUBLIC WORKS	42	02/05	112SESC	PROFESSIONAL	04/05	2	PLASTIC	37-42	TD3-59	piezometer
66432	302530	910943	BR PUBLIC WORKS	36	02/05	112PLSC	PROFESSIONAL	04/05	2	PLASTIC	31-36	TD3-49	piezometer
66442	302530	910935	BR PUBLIC WORKS	41	02/05	112MRVA	PROFESSIONAL	04/05	2	PLASTIC	36-41	TD3-51	piezometer
66422	302531	910949	BR PUBLIC WORKS	41	02/05	112MRVA	PROFESSIONAL	04/05	2	PLASTIC	36-41	TD3-48	piezometer
66712	302533	910956	BR PUBLIC WORKS	49	02/05	112MRVA	PROFESSIONAL	06/05	2	PLASTIC	44-49	TD3-45	piezometer
66162	302537	910905	BR PUBLIC WORKS	27	03/05	112SESC	CAPOZZOLI	04/05	2	PLASTIC	22-27	TD3-114	piezometer
66062	302538	910840	BR PUBLIC WORKS	42	02/05	112PLSC	CAPOZZOLI	03/05	2	PLASTIC	37-42	TD3-117	piezometer
66232	302542	910958	BR PUBLIC WORKS	20	03/05	112MRVAC	CAPOZZOLI	04/05	2	PLASTIC	15-20	TD3-38	piezometer
66372	302544	910913	BR PUBLIC WORKS	31	03/05	112SESC	CAPOZZOLI	04/05	2	PLASTIC	26-31	TD3-112	piezometer
66952	302547	910846	BR PUBLIC WORKS	59	01/05	112PLSC	CAPOZZOLI	02/05	2	PLASTIC	54-59	TD3-109	piezometer
66962	302555	910846	BR PUBLIC WORKS	58	02/05	112PLSC	CAPOZZOLI	03/05	2	PLASTIC	53-58	TD3-107	piezometer
66042	302610	910848	BR PUBLIC WORKS	51	02/05	112PLSC	CAPOZZOLI	03/05	2	PLASTIC	46-51	TD3-103	piezometer
824	302553	910920	LA WTR RESOURCE	561	08/67	112GMER	STAMM-SCHEELE	NA	2	METAL	575-561	CATHOLIC S	water level observation
825	302553	910920	LA WTR RESOURCE	475	08/67	112GMER	STAMM-SCHEELE	NA	2	METAL	489-475	CATHOLIC L	water level observation



LEGEND

SITE

Well Location (Approximate)

Well Use Description

- domestic
- environmental recovery
- heat pump hole
- irrigation
- monitor
- multiple purpose observation
- piezometer
- water level observation

Buffer Distance from Site

- 1/2 mile
- 1 mile

SOURCE

USGS 7.5 MINUTE SERIES
TOPOGRAPHIC QUADRANGLE 1992
BATON ROUGE WEST, LOUISIANA
CONTOUR INTERVAL = 5'

SITE COORDINATES

LOUISIANA STATE PLANE SOUTH
NAD83 COORDINATES:
X = 3338280.21
Y = 700678.17

APPROXIMATE SITE COORDINATES
LATITUDE 30° 25' 34.85"
LONGITUDE 91° 09' 03.35"

DRAFTED BY: D.L.O. (N.J.)
CHECKED BY:
REVIEWED BY:
NORTH

WELL LOCATION MAP

SHELL STATION # 142059
2300 SOUTH ACADIAN THRUWAY
BATON ROUGE, LOUISIANA

Groundwater & Environmental Services, Inc.
307 FRANCE STREET, SUITE B, BATON ROUGE, LOUISIANA 70802

SCALE IN FEET
0 2,000

DATE: 12-8-10

FIGURE: 3

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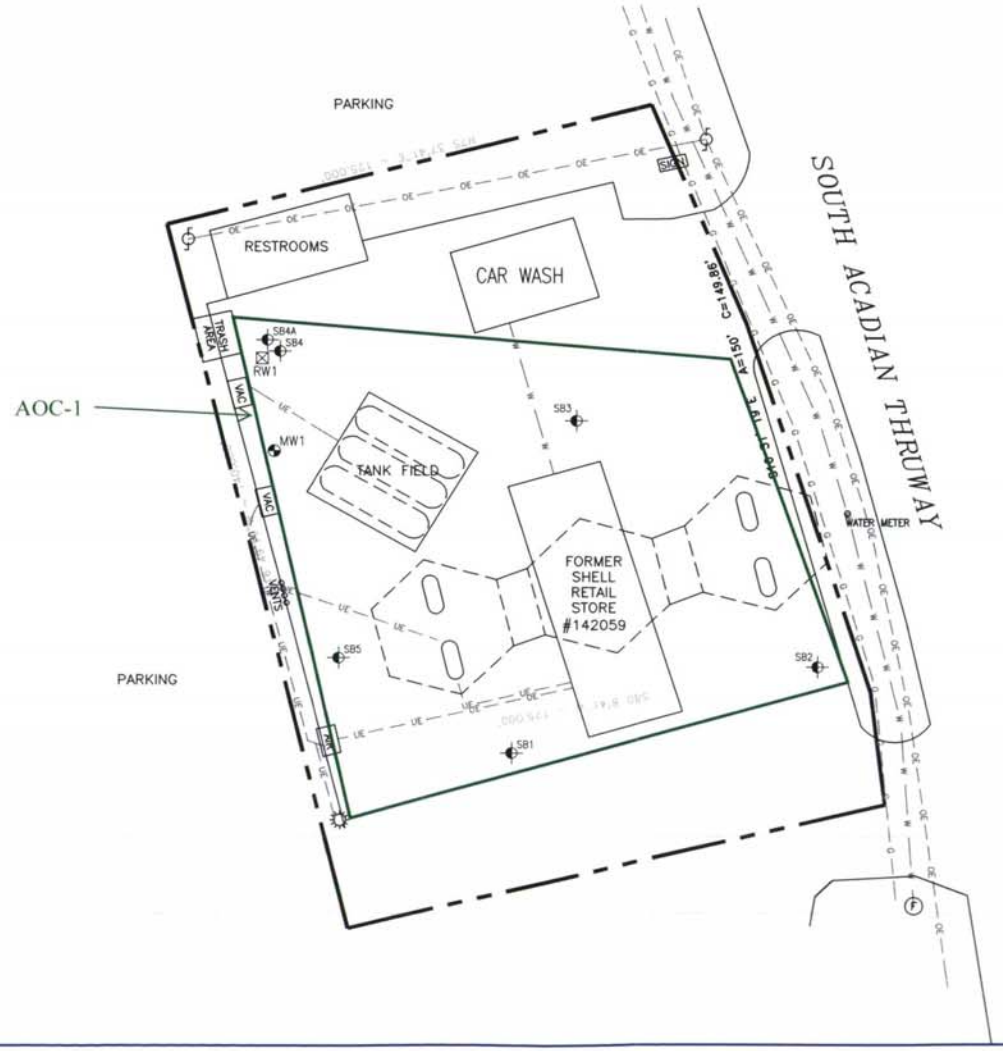

LEGEND

- PROPERTY BOUNDARY
- LIGHT POLE
- UTILITY POLE
- DISPENSER ISLAND
- FIRE HYDRANT
- MONITORING WELL
- RECOVERY WELL
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND WATER LINE
- UNDERGROUND GAS LINE
- OVERHEAD ELECTRIC
- SOIL BORING

DRAFTED BY: W.G.S. (N.J.)	SITE MAP
CHECKED BY:	FORMER SHELL STATION 2300 SOUTH ACADIAN THRUWAY BATON ROUGE, LOUISIANA
REVIEWED BY:	Groundwater & Environmental Services, Inc. 307 FRANCE STREET, SUITE B, BATON ROUGE, LOUISIANA 70802
NORTH	SCALE IN FEET: 0 APPROXIMATE 30 / DATE: 12-9-10 / FIGURE: 4

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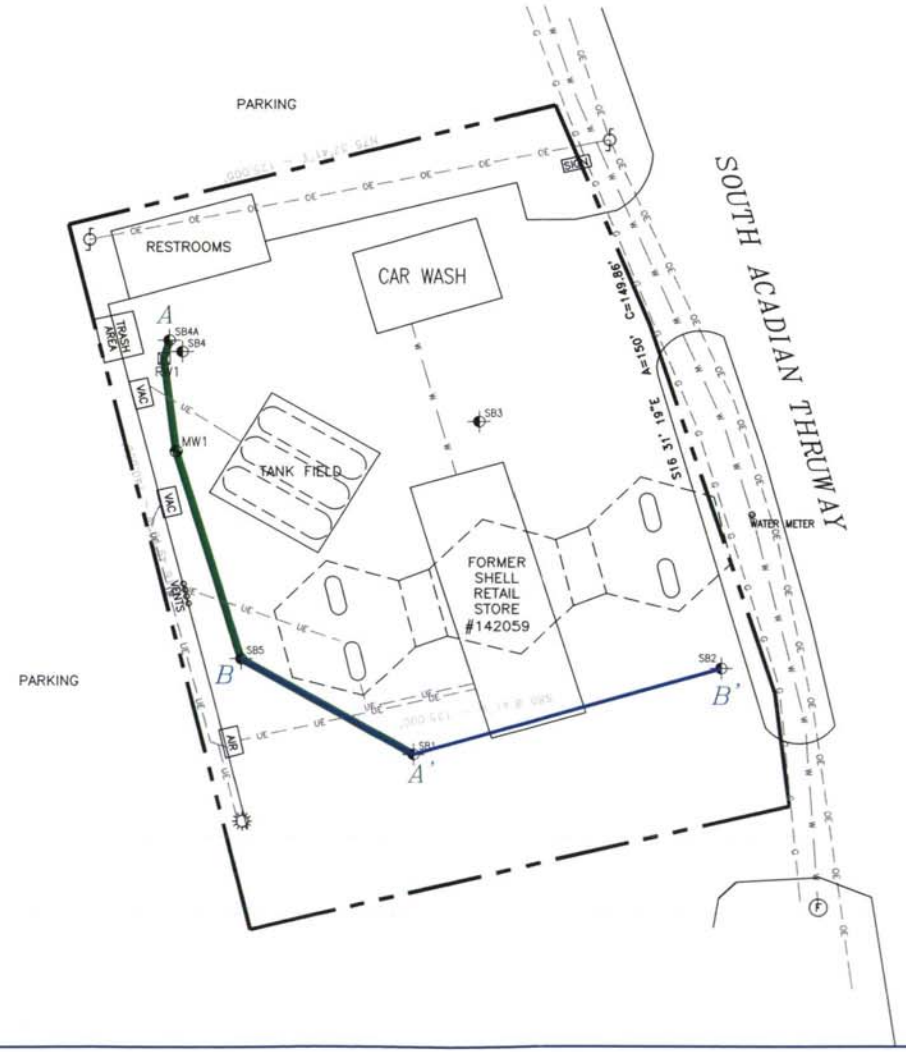

LEGEND

- PROPERTY BOUNDARY
- LIGHT POLE
- UTILITY POLE
- DISPENSER ISLAND
- FIRE HYDRANT
- MONITORING WELL
- RECOVERY WELL
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND WATER LINE
- UNDERGROUND GAS LINE
- OVERHEAD ELECTRIC
- SOIL BORING

DRAFTED BY: W.G.S. (N.J.)	CROSS SECTION LOCATION MAP
CHECKED BY:	FORMER SHELL STATION 2300 SOUTH ACADIAN THRUWAY BATON ROUGE, LOUISIANA
REVIEWED BY:	Groundwater & Environmental Services, Inc. 307 FRANCE STREET, SUITE B, BATON ROUGE, LOUISIANA 70802
NORTH	SCALE IN FEET: 0 APPROXIMATE 30 / DATE: 12-9-10 / FIGURE: 5

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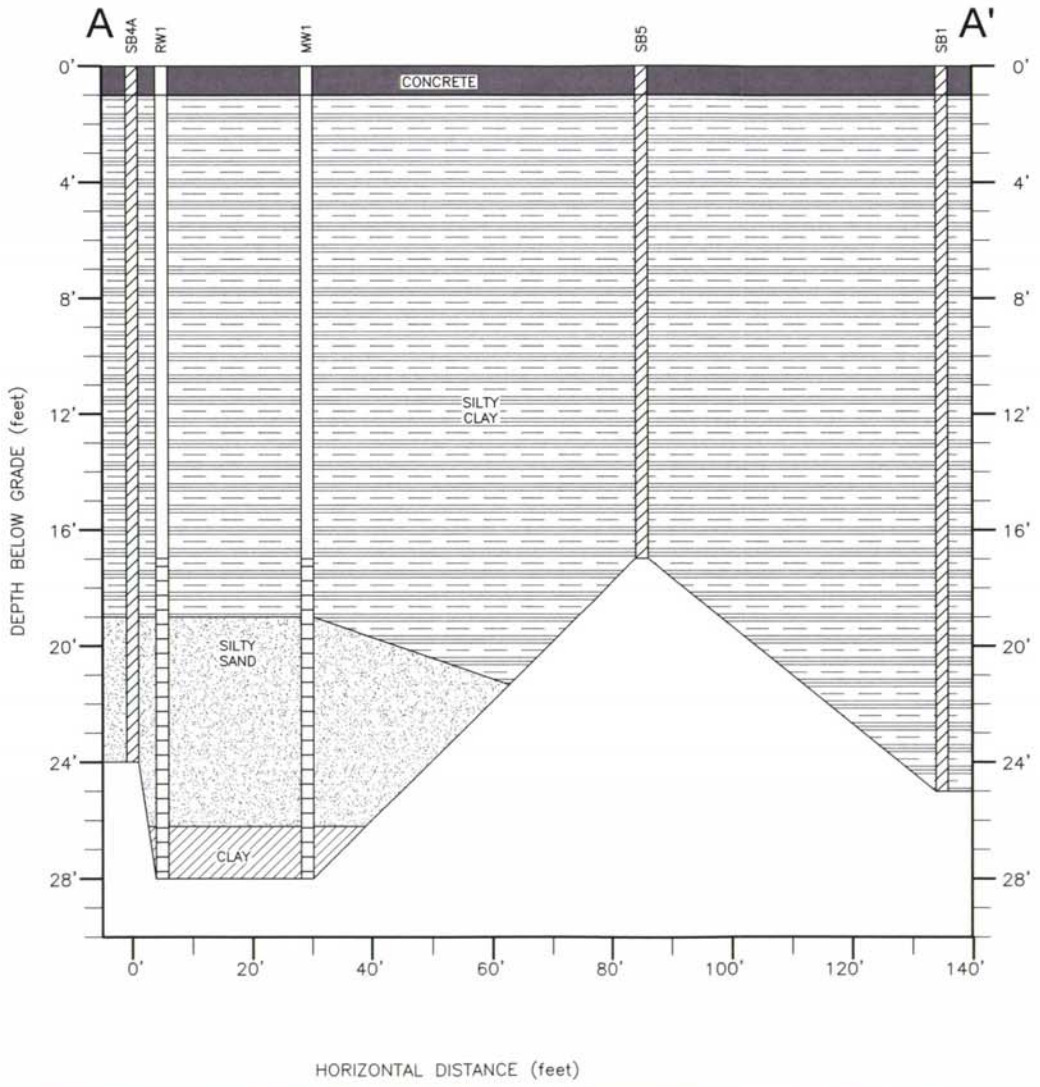


LEGEND

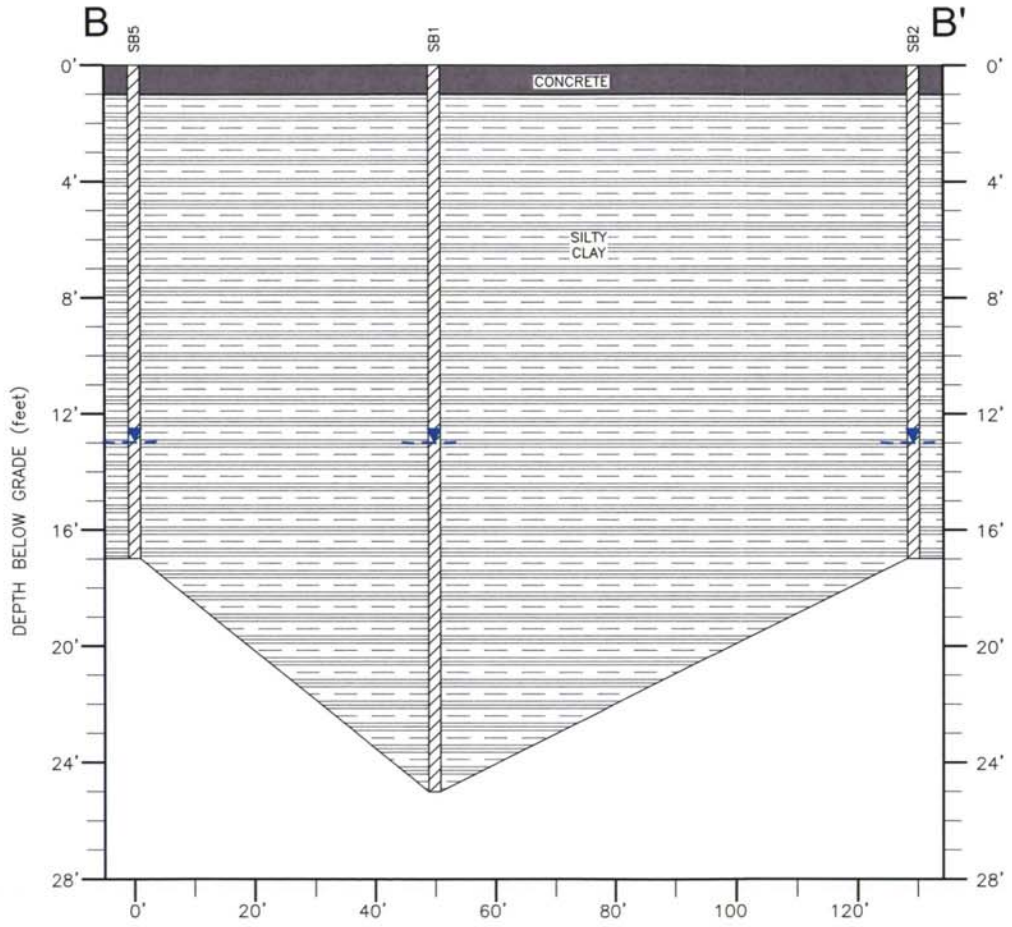
RISER

SCREENED INTERVAL

SOIL BORING

DRAFTED BY: W.G.S. (N.J.)	CROSS-SECTION A-A'
CHECKED BY:	FORMER SHELL STATION 2300 SOUTH ACADIAN THRUWAY BATON ROUGE, LOUISIANA
REVIEWED BY:	Groundwater & Environmental Services, Inc. 307 FRANCE STREET, SUITE B, BATON ROUGE, LOUISIANA 70802

SCALE IN FEET	DATE	FIGURE
HORIZONTAL 1" = 20' VERTICAL 1" = 4'	12-13-10	6



LEGEND

RISER

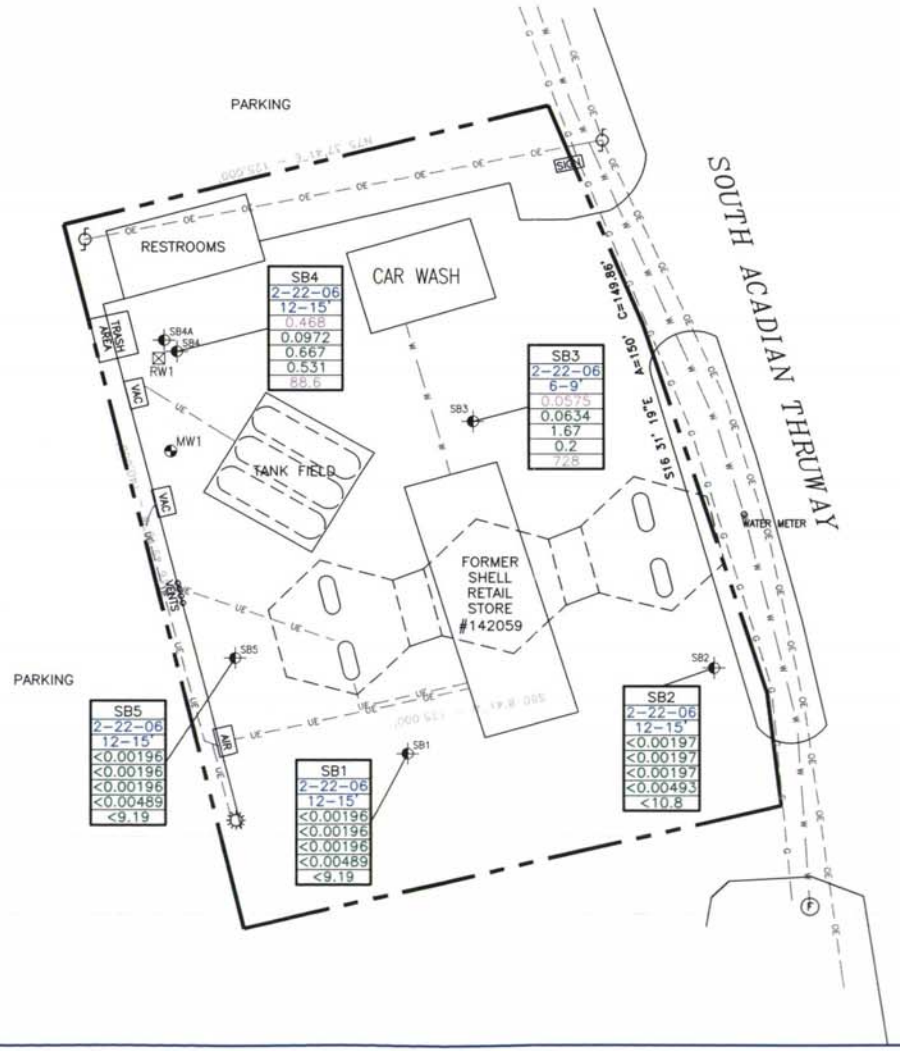
SCREENED INTERVAL

SOIL BORING

STATIC WATER LEVEL (FEBRUARY 22, 2006)

DRAFTED BY: W.G.S. (N.J.)	CROSS-SECTION B-B'
CHECKED BY:	FORMER SHELL STATION 2300 SOUTH ACADIAN THRUWAY BATON ROUGE, LOUISIANA
REVIEWED BY:	Groundwater & Environmental Services, Inc. 307 FRANCE STREET, SUITE B, BATON ROUGE, LOUISIANA 70802

SCALE IN FEET	DATE	FIGURE
HORIZONTAL 1" = 20' VERTICAL 1" = 4'	12-13-10	7



LEGEND

- PROPERTY BOUNDARY
- LIGHT POLE
- UTILITY POLE
- DISPENSER ISLAND
- FIRE HYDRANT
- MONITORING WELL
- RECOVERY WELL
- UE — UNDERGROUND ELECTRIC LINE
- W — UNDERGROUND WATER LINE
- G — UNDERGROUND GAS LINE
- OE — OVERHEAD ELECTRIC
- SOIL BORING

SB1	SAMPLE IDENTIFICATION
2-22-06	SAMPLE DATE
12-15'	SAMPLE DEPTH (feet)
<0.00196	BENZENE CONCENTRATION (mg/kg)
<0.00196	TOLUENE CONCENTRATION (mg/kg)
<0.00196	ETHYLBENZENE CONCENTRATION (mg/kg)
<0.00489	XYLENES CONCENTRATION (mg/kg)
<9.19	TPH-GRO CONCENTRATION (mg/kg)

mg/kg	MILIGRAMS PER KILOGRAM
TPH	TOTAL PETROLEUM HYDROCARBONS
GRO	GASOLINE RANGE ORGANICS
<#	WHERE AN ANALYTE IS NOT DETECTED, A METHOD DETECTION LIMIT IS GIVEN

NOTE:

CONCENTRATIONS SHADED PURPLE EXCEED LDEQ SS.

DRAFTED BY: W.G.S. (N.J.)	SOIL COC MAP (BTEX)
CHECKED BY:	FORMER SHELL STATION 2300 SOUTH ACADIAN THRUWAY BATON ROUGE, LOUISIANA
REVIEWED BY:	Groundwater & Environmental Services, Inc. 307 FRANCE STREET, SUITE B, BATON ROUGE, LOUISIANA 70802
NORTH	SCALE IN FEET: 0 APPROXIMATE 30 / DATE: 12-13-10 / FIGURE: 8

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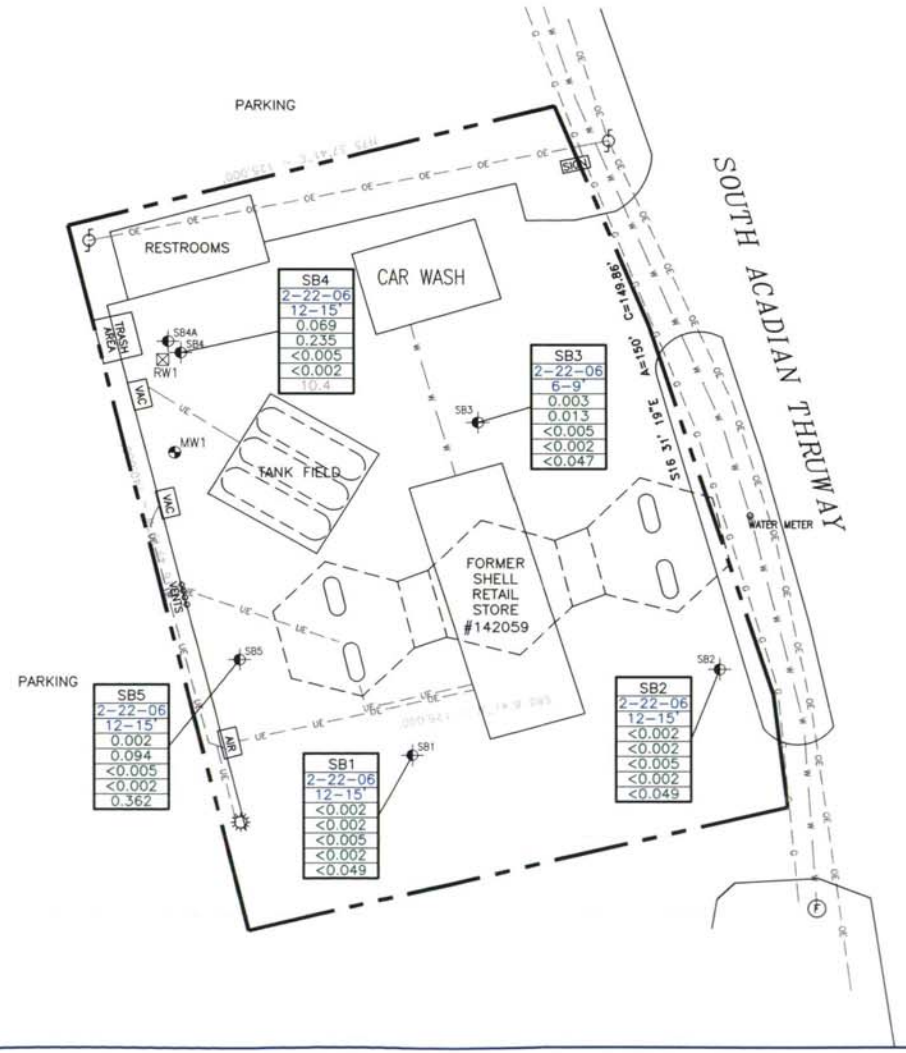

LEGEND

— — —	PROPERTY BOUNDARY
☼	LIGHT POLE
⌀	UTILITY POLE
▭	DISPENSER ISLAND
Ⓕ	FIRE HYDRANT
◉	MONITORING WELL
⊠	RECOVERY WELL
— UE —	UNDERGROUND ELECTRIC LINE
— W —	UNDERGROUND WATER LINE
— G —	UNDERGROUND GAS LINE
— OE —	OVERHEAD ELECTRIC
⊕	SOIL BORING
SB1	SAMPLE IDENTIFICATION
2-22-06	SAMPLE DATE
12-15'	SAMPLE DEPTH (feet)
<0.002	MTBE CONCENTRATION (mg/kg)
<0.002	DIPE CONCENTRATION (mg/kg)
<0.005	ETBE CONCENTRATION (mg/kg)
<0.002	TAME CONCENTRATION (mg/kg)
<0.049	TBA CONCENTRATION (mg/kg)
mg/kg	MILIGRAMS PER KILOGRAM
MTBE	METHYL *tert*-BUTYL ETHER
DIPE	DIISOPROPYL ETHER
ETBE	ETHYL *tert*-BUTYL ETHER
TAME	*tert*-AMYL METHYL ETHER
TBA	*tert*-BUTYL ALCOHOL
<#	WHERE AN ANALYTE IS NOT DETECTED, A METHOD DETECTION LIMIT IS GIVEN

NOTE:

CONCENTRATIONS SHADED PURPLE EXCEED LDEQ SS.

DRAFTED BY: W.G.S. (N.J.)	SOIL COC MAP
CHECKED BY:	FORMER SHELL STATION 2300 SOUTH ACADIAN THRUWAY BATON ROUGE, LOUISIANA
REVIEWED BY:	Groundwater & Environmental Services, Inc. 307 FRANCE STREET, SUITE B, BATON ROUGE, LOUISIANA 70802
NORTH	SCALE IN FEET: 0 APPROXIMATE 30 / DATE: 12-13-10 / FIGURE: 9

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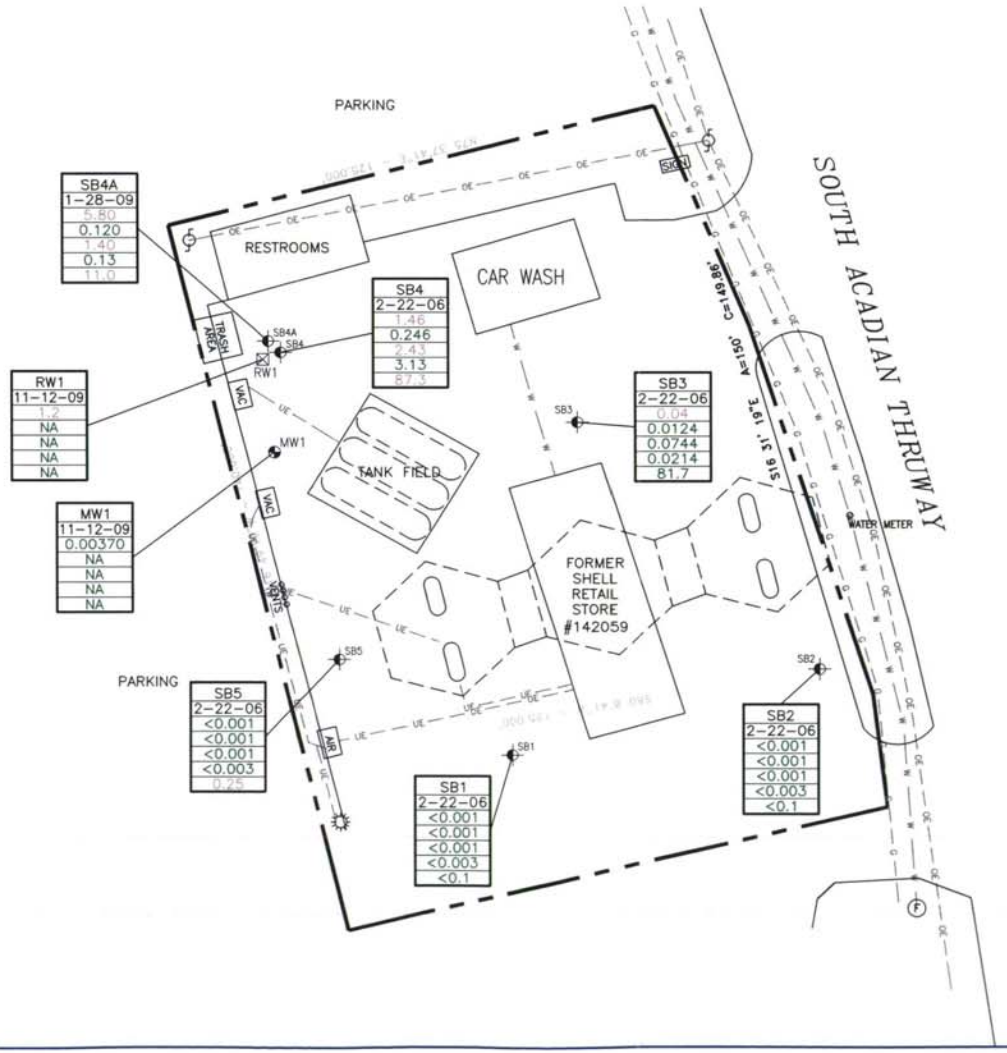

LEGEND

- PROPERTY BOUNDARY
- LIGHT POLE
- UTILITY POLE
- DISPENSER ISLAND
- FIRE HYDRANT
- MONITORING WELL
- RECOVERY WELL
- UE — UNDERGROUND ELECTRIC LINE
- W — UNDERGROUND WATER LINE
- G — UNDERGROUND GAS LINE
- OE — OVERHEAD ELECTRIC
- SOIL BORING

SB1	SAMPLE IDENTIFICATION
2-22-06	SAMPLE DATE
<0.001	BENZENE CONCENTRATION (mg/L)
<0.001	TOLUENE CONCENTRATION (mg/L)
<0.001	ETHYLBENZENE CONCENTRATION (mg/L)
<0.003	XYLENES CONCENTRATION (mg/L)
<0.1	TPH-GRO CONCENTRATION (mg/L)

- mg/L — MILIGRAMS PER LITER
- TPH — TOTAL PETROLEUM HYDROCARBONS
- GRO — GASOLINE RANGE ORGANICS
- <# — WHERE AN ANALYTE IS NOT DETECTED, A METHOD DETECTION LIMIT IS GIVEN

NOTE:

CONCENTRATIONS SHADED PURPLE EXCEED LDEQ SS.

DRAFTED BY: W.G.S. (N.J.)	GROUNDWATER COC MAP (BTEX)
CHECKED BY:	FORMER SHELL STATION 2300 SOUTH ACADIAN THRUWAY BATON ROUGE, LOUISIANA
REVIEWED BY:	Groundwater & Environmental Services, Inc. 307 FRANCE STREET, SUITE B, BATON ROUGE, LOUISIANA 70802
NORTH	SCALE IN FEET: 0 APPROXIMATE 30 / DATE: 12-9-10 / FIGURE: 10

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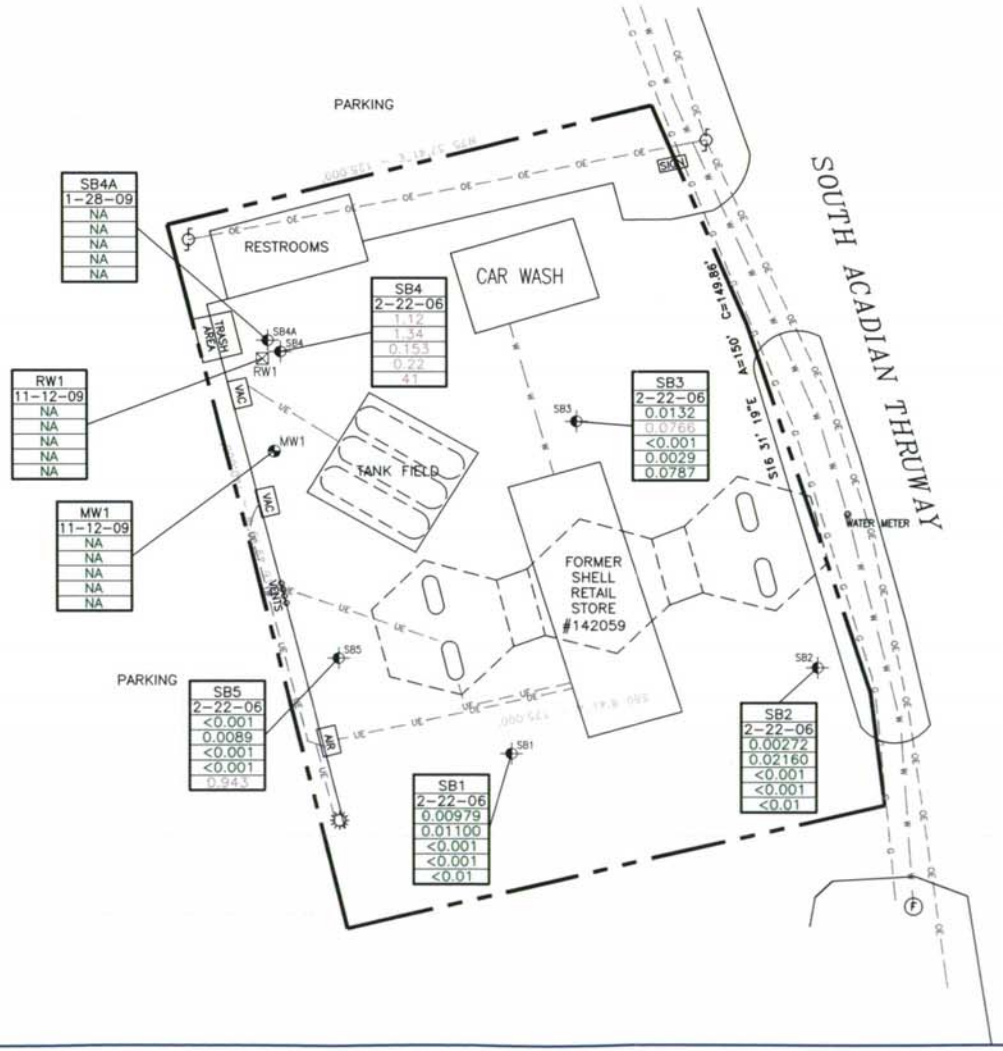

LEGEND

- PROPERTY BOUNDARY
- LIGHT POLE
- UTILITY POLE
- DISPENSER ISLAND
- FIRE HYDRANT
- MONITORING WELL
- RECOVERY WELL
- UE — UNDERGROUND ELECTRIC LINE
- W — UNDERGROUND WATER LINE
- G — UNDERGROUND GAS LINE
- OE — OVERHEAD ELECTRIC
- SOIL BORING

SB1	SAMPLE IDENTIFICATION
2-22-06	SAMPLE DATE
0.00979	MTBE CONCENTRATION (mg/L)
0.01100	DIPE CONCENTRATION (mg/L)
<0.001	ETBE CONCENTRATION (mg/L)
<0.001	TAME CONCENTRATION (mg/L)
<0.01	TBA CONCENTRATION (mg/L)

mg/L	MILIGRAMS PER LITER
MTBE	METHYL *tert*-BUTYL ETHER
DIPE	DIISOPROPYL ETHER
ETBE	ETHYL *tert*-BUTYL ETHER
TAME	*tert*-AMYL METHYL ETHER
TBA	*tert*-BUTYL ALCOHOL
<#	WHERE AN ANALYTE IS NOT DETECTED, A METHOD DETECTION LIMIT IS GIVEN

NOTE:

CONCENTRATIONS SHADED PURPLE EXCEED LDEQ SS.

DRAFTED BY: W.G.S. (N.J.)	GROUNDWATER COC MAP
CHECKED BY:	FORMER SHELL STATION 2300 SOUTH ACADIAN THRUWAY BATON ROUGE, LOUISIANA
REVIEWED BY:	Groundwater & Environmental Services, Inc. 307 FRANCE STREET, SUITE B, BATON ROUGE, LOUISIANA 70802
NORTH	SCALE IN FEET: 0 APPROXIMATE 30 / DATE: 12-9-10 / FIGURE: 11

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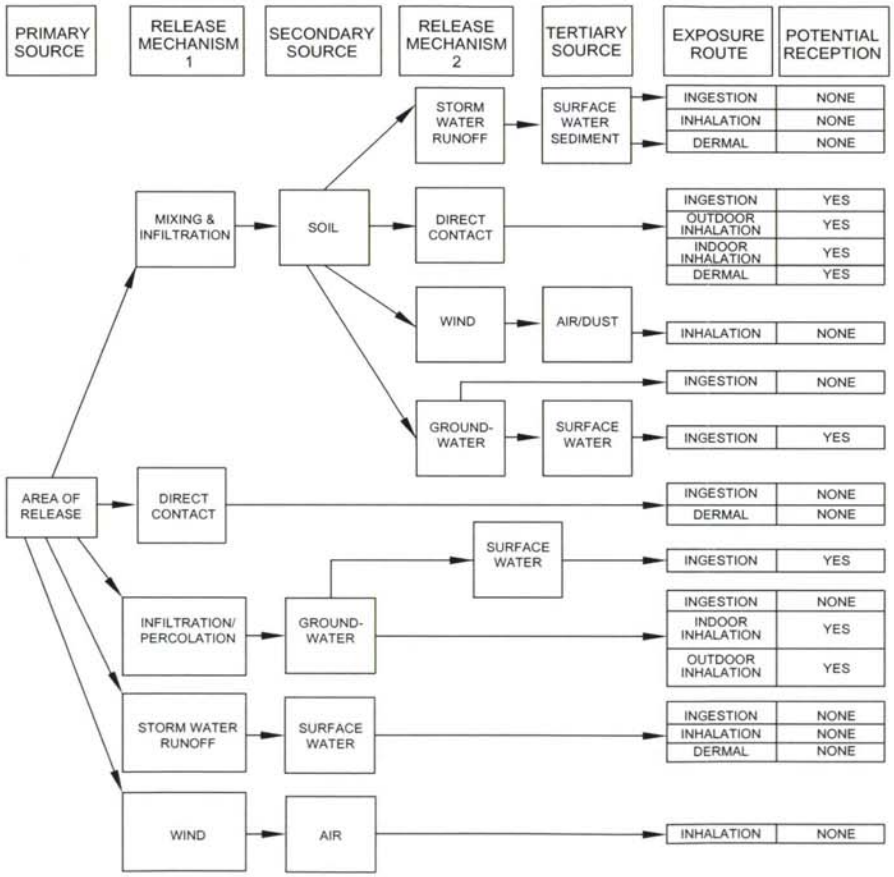

DRAFTED BY: W.G.S. (N.J.)	CONCEPTUAL SITE MODEL
CHECKED BY:	FORMER SHELL STATION 2300 SOUTH ACADIAN THRUWAY BATON ROUGE, LOUISIANA
REVIEWED BY:	Groundwater & Environmental Services, Inc. 13003 SW FREEWAY, SUITE 190, STAFFORD, TEXAS 77477
NORTH	DATE: 12-9-10 / FIGURE: 12

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APPENDIX B

TABLES

TABLE 1

SOIL ANALYTICAL LABORATORY DATA [1]
FORMER SHELL RETAIL STORE NO. 142059
2300 SOUTH ACADIAN THRUWAY
BATON ROUGE, EAST BATON ROUGE PARISH, LOUISIANA
AI NO.: 71560

Sample Location (Depth, ft)	*Sample Date*	*Benzene (mg/kg)*	*Toluene (mg/kg)*	*Ethylbenzene (mg/kg)*	*Xylenes (mg/kg)*	*MTBE (mg/kg)*	*DIPE (mg/kg)*	*ETBE (mg/kg)*	*TAME (mg/kg)*	*TBA (mg/kg)*	*TPH-GRO (mg/kg)*
SOIL_Ssni:		*1.5**	*68**	*160**	*18**	*650**	*15*	*650*	*21*	*1,400*	*65**
SOIL_SSi:		*3.1**	*470**	*230**	*120**	*4,700**	*100*	*4,700*	*140*	*12,000*	*510**
SOIL_SSGW:		*0.051**	*20**	*19**	*150**	*0.077**	*2.7*	*0.077*	*4.8*	*9.0*	*65**
SOIL_SAT:		*900**	*520**	*230**	*150**	*9,800**	*4,600*	*9,800*	*1,900*	*140,000*	--
SB-1 (12'-15')	2/22/2006	<0.00196	<0.00196	<0.00196	<0.00489	<0.002	0.002	<0.005	<0.002	<0.049	<9.19
SB-2 (12'-15')	2/22/2006	<0.00197	<0.00197	<0.00197	<0.00493	<0.002	<0.002	<0.005	<0.002	<0.049	<10.8
SB-3 (6'-9')	2/22/2006	**0.0575**	0.0634	1.67	0.2	0.003	0.013	<0.005	<0.002	<0.047	**728**
SB-4 (12'-15')	2/22/2006	**0.468**	0.0972	0.667	0.531	0.069	0.235	<0.005	<0.002	**10.4**	**88.6**
SB-5 (12'-15')	2/22/2006	<0.00196	<0.00196	<0.00196	<0.00489	0.002	0.094	<0.005	<0.002	0.362	<9.58

mg/kg = Milligrams per kilogram
MTBE = Methyl tertiery butyl ether
DIPE = Diisopropyl ether, standards obtained from LDEQ
ETBE = Ethyl tert-butyl ether, per LDEQ MTBE is used as a surrogate compound
TAME = tert-Amyl methyl ether, standards obtained from LDEQ
TBA = tert-Butyl alcohol, standards obtained from LDEQ
TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics

* Screening standards (SS) specified in LDEQ's October 20, 2003, RECAP Table 1 - Screening Option Screening Standards for Soil and Groundwater.

Notes: [1] All soil data collected by previous consultant for the site - Conestoga-Rovers & Associates.
Highlighted SS are the limiting SS from LDEQ's October 20, 2003, RECAP Table 1 - Screening Option Screening Standards for Soil and Groundwater.
Bold and highlighted sample concentrations are those that exceed the LDEQ SS.

TABLE 2

MONITOR WELL CONSTRUCTION DATA
FORMER SHELL RETAIL STORE NO. 142059
2300 SOUTH ACADIAN THRUWAY
BATON ROUGE, EAST BATON ROUGE PARISH, LOUISIANA
AI NO.: 71560

Monitor Well ID	Installation Date	Well Construction Material	Casing Slot Size	Total Depth (ft bgs)[1]	Top of Casing Elevation (ft MSL)[2]	Ground Surface Elevation (ft MSL)	Screen Interval (ft bgs)
MW-1	11/11/2009	2" PVC	0.010"	27	28.28	28.68	17-27
RW-1	11/10/2009	4" PVC	0.010"	27	28.35	28.64	17-27

Notes:
[1] ft bgs = feet below ground surface
[2] ft MSL = Mean Sea Level, NAVD SS

TABLE 3

GROUNDWATER ANALYTICAL LABORATORY DATA [1]
FORMER SHELL RETAIL STORE NO. 142059
2300 SOUTH ACADIAN THRUWAY
BATON ROUGE, EAST BATON ROUGE PARISH, LOUISIANA
AI NO.: 71560

Sample ID	Sample Date	Parameter									
		Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylenes (mg/L)	MTBE (mg/L)	DIPE (mg/L)	ETBE (mg/L)	TAME (mg/L)	TBA (mg/L)	TPH-GRO (mg/L)
GW_SS:		***0.005****	***1****	***0.7****	***10****	***0.02****	***0.069***	***0.02***	***0.079***	***0.33***	***0.15****
SB-1	2/22/2006	<0.001	<0.001	<0.001	<0.003	0.00979	0.01100	<0.001	<0.001	<0.01	<0.1
SB-2	2/22/2006	<0.001	<0.001	<0.001	<0.003	0.00272	0.02160	<0.001	<0.001	<0.01	<0.1
SB-3	2/22/2006	**0.04**	0.0124	0.0744	0.0214	0.0132	**0.0766**	<0.001	0.0029	0.0787	**81.7**
SB-4†	2/22/2006	**1.46**	0.246	**2.43**	3.13	**1.12**	**1.34**	**0.153**	**0.22**	**41**	**87.3**
SB-4A†	1/28/2009	**5.80**	0.120	**1.40**	0.13	NA	NA	NA	NA	NA	**11.0**
RW-1†	11/12/2009	**1.2**	NA	NA	NA	NA	NA	NA	NA	NA	NA
RW-1†	5/16/2011	**0.800**	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-5	2/22/2006	<0.001	<0.001	<0.001	<0.003	<0.001	0.0089	<0.001	<0.001	**0.943**	**0.25**
MW-1	11/12/2009	0.00370	NA	NA	NA	NA	NA	NA	NA	NA	NA

mg/L = Miligrams per liter
NA = Not Applicable; Not Available
MTBE = Methyl tertiery butyl ether
DIPE = Diisopropyl ether, standards obtained from LDEQ
ETBE = Ethyl tert-butyl ether, per LDEQ MTBE is used as a surrogate compound
TAME = tert-Amyl methyl ether, standards obtained from LDEQ
TBA = tert-Butyl alcohol, standards obtained from LDEQ
TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics
* LDEQ's October 20, 2003, RECAP Table 1 - Screening Option Screening Standards
† Monitoring wells SB-4, SB-4A and RW-1 are co-located

Notes: [1] Data collected by previous environmental consultants for the site - Conestoga-Rovers & Associates and URS.
Bold and highlighted sample concentrations are those that exceed the LDEQ SS.

TABLE 4

LISTING OF SOIL AOIC AND GROUNDWATER CC
WITH A COMPARISON TO TABLE 1 LIMITING SCREENING STANDARDS
FORMER SHELL RETAIL STORE NO. 142059
2300 SOUTH ACADIAN THRUWAY
BATON ROUGE, EAST BATON ROUGE PARISH, LOUISIANA
AI NO.: 71560

Constituent of Concern	*RECAP Limiting Screening Standard* [1]	*Area of Investigation Concentrations* [2] *(mg/kg) Depth Interval in Feet 0 - 15*	*RECAP Limiting Screening Standard* [1]	*Groundwater Compliance Concentrations* [2] *(mg/L)*
Benzene	0.051	**0.468**	0.005	**1.2**
Toluene	20	0.0972	1.0	0.246
Ethylbenzene	19	1.67	0.7	**2.43**
Xylenes	18	0.531	10	3.13
MTBE	0.077	0.069	0.02	**1.12**
TPH-GRO	65	**728**	0.15	**87.3**
DIPE	2.7	0.235	0.069	**1.34**
ETBE	0.077	<0.005	0.02	**0.153**
TAME	4.8	<0.002	0.079	**0.22**
TBA	9	**10.4**	0.33	**41**

mg/kg = Milligrams per kilogram
mg/L = Milligrams per liter
MTBE = Methyl tertiery butyl ether
DIPE = Diisopropyl ether, standards obtained from LDEQ
ETBE = Ethyl tert-butyl ether, per LDEQ MTBE is used as a surrogate compound
TAME = tert-Amyl methyl ether, standards obtained from LDEQ
TBA = tert-Butyl alcohol, standards obtained from LDEQ
TPH-GRO = Total Petroleum Hydrocarbons-Gasoline Range Organics
NA = Not analyzed

Notes: [1] Screening Standards (SS) specified in the LDEQ's October 20, 2003, RECAP Table 1 - Screening Option, Screening Standards for Soil and Groundwater.

[2] The reported soil Area of Investigation concentrations (AOIC) and groundwater Compliance Concentrations are the maximum concentrations encountered for each constituent of concern from samples collected during the site investigations.
Bold and highlighted sample concentrations are those that exceed the LDEQ SS.

TABLE 5

LIST OF MANAGEMENT OPTION-1 NON-INDUSTRIAL RECAP STANDARDS FOR SOIL
AOI-1
FORMER SHELL RETAIL STORE NO. 142059
2300 SOUTH ACADIAN THRUWAY
BATON ROUGE, EAST BATON ROUGE PARISH, LOUISIANA
AI NO.: 71560

Constituents of Concern (refer to Table 4A)	*MO-1 Soil RECAP Standards (mg/kg)*									
	Soil $_{ni}$	*AOIC*	*Target Organ(s)*	*Additivity Factors*	*Adjusted Soil $_{ni}$*	*Soil $_{GW3NDW}$*	*Dilution Factor*	*Adjusted Soil $_{GW3NDW}$*	*Soil $_{sat}$*	*Limiting RECAP Standard*
	A			B	C=A/B	D	E	F=D*E	G	MIN(C,F,G)
Benzene	1.5	0.468	NA	NA	3.1	0.13	4.1	0.53	900	0.53
TPH-GRO	650	728	L,K,DBW,H	2	325	6,100	4.1	25,010	NA	325
TBA	14,000	10.4	L,K,CNS	2	7,000	680	4.1	2,788	140,000,000	2,788

mg/kg = Milligrams per kilogram

NA = Not Applicable; Not Available

TBA = tert-Butyl alcohol, standards developed by GES

TPH-GRO = Total Petroleum Hydrocarbons-Gasoline Range Organics

NA=Not available

Soil level is based on soil saturation.

L=Liver, K=Kidney, CNS=Central Nervous System, N=Nasal, D=Development, DBW=Decreased Body Weight, O=Ocular

TABLE 6

LIST OF MANAGEMENT OPTION-1 NON-INDUSTRIAL RECAP STANDARDS FOR GROUNDWATER
AOI-1
FORMER SHELL RETAIL STORE NO. 142059
2300 SOUTH ACADIAN THRUWAY
BATON ROUGE, EAST BATON ROUGE PARISH, LOUISIANA
AI NO.: 71560

Constituents of Concern (refer to Table 4A)	*MO-1 Groundwater RECAP Standards (mg/L)*									
	GW_{airni}	*GW CC*	*Target Organs*	*Additivity Factors*	*Adjusted GW_{airni} after Additivity*	*GW_{3NDW}*	*Dilution Factor*	*Adjusted GW_{3NDW}*	*Solubility*	*Limiting RECAP Standard*
	A			B	C=A/B	D	E	F=D*E	G	MIN(C,F,G)
Benzene	390	1.2	N/A	N/A	390	0.013	4.1	0.0533	1,800	0.0533
Ethylbenzene	360,000	2.43	L,K,D	5	72000	8.1	4.1	33.21	170	33.21
MTBE	470,000	1.12	L,K,O	5	94000	550	4.1	2255	51,000	2,255
TPH-GRO	1,000	87.3	L,K,DBW,H	5	200	31	4.1	127.1	NA	127.1
DIPE	1,200	1.34	O,CNS	3	400	1.9	4.1	7.79	8,040	7.79
ETBE	23,000	0.153	L,K	5	4,600	0.33	4.1	1.353	5,630,000	1.353
TAME	25,000	0.22	CNS	3	8,333	53	4.1	217.3	2,640,000	217.3
TBA	6,800,000	41	L,K,CNS	5	1,360,000	250	4.1	1025	1,000,000,000	1,025

mg/L = Milligrams per liter
NA = Not Available; Not Applicable
MTBE = Methyl tert-butyl ether
DIPE = Diisopropyl ether, standards developed by GES
ETBE = Ethyl tert-butyl ether, standards developed by GES
TAME = tert-Amyl methyl ether, standards developed by GES
TBA = tert-Butyl alcohol, standards developed by GES
TPH-GRO = Total Petroleum Hydrocarbons-Gasoline Range Organics
Target Organs: L=Liver, K=Kidney, CNS=Central Nervous System, N=Nasal, D=Development, DBW=Decreased Body Weight, O=Ocular, H=Hematological

TABLE 7

LIST OF MANAGEMENT OPTION-2 NON-INDUSTRIAL RECAP STANDARDS FOR SOIL
AOI-1
FORMER SHELL RETAIL STORE NO. 142059
2300 SOUTH ACADIAN THRUWAY
BATON ROUGE, EAST BATON ROUGE PARISH, LOUISIANA
AI NO.: 71560

Constituents of Concern (refer to Table 4A)	*MO-1 Soil RECAP Standards (mg/kg)*									
	Soil $_{ni}$	*AOIC*	*Target Organ(s)*	*Additivity Factors*	*Adjusted Soil $_{i}$*	*Soil $_{GW3NDW}$*	*Dilution Factor*	*Adjusted Soil $_{GW3NDW}$*	*Soil $_{sat}$*	*Limiting RECAP Standard*
	A			B	C=A/B	D	E	F=D*E	G	MIN(C,F,G)
TPH-GRO	1,000	728	L,K,DBW,H	1	1,000	6,100	440	10,000	NA	1,000

mg/kg = Milligrams per kilogram
NA = Not Applicable; Not Available
TBA = tert-Butyl alcohol, standards developed by GES
TPH-GRO = Total Petroleum Hydrocarbons-Gasoline Range Organics
NA=Not available
Soil level is based on soil saturation.
L=Liver, K=Kidney, CNS=Central Nervous System, N=Nasal, D=Development, DBW=Decreased Body Weight, O=Ocular

TABLE 8

LIST OF MANAGEMENT OPTION-2 NON-INDUSTRIAL RECAP STANDARDS FOR GROUNDWATER
AOI-1
FORMER SHELL RETAIL STORE NO. 142059
2300 SOUTH ACADIAN THRUWAY
BATON ROUGE, EAST BATON ROUGE PARISH, LOUISIANA
AI NO.: 71560

Constituents of Concern (refer to Table 4A)	*Appendix I MO-2 Groundwater RECAP Standards (mg/L)*									
	GW_{airni}	*GW CC*	*Target Organs*	*Additivity Factors*	*Adjusted GW_{airni} after Additivity*	*GW_{3NDW}*	*Dilution Factor*	*Adjusted GW_{3NDW}*	*Solubility*	*Limiting RECAP Standard*
	A			B	C=A/B	D	E	F=D*E	G	MIN(C,F,G)
Benzene	390	1.2	NA	NA	390	0.013	440	5.72	1,800	5.72

mg/L = Milligrams per liter
NA = Not Available; Not Applicable

TABLE 9

ADDITIVITY FACTORS
FORMER SHELL RETAIL STORE NO. 142059
2300 SOUTH ACADIAN THRUWAY
BATON ROUGE, EAST BATON ROUGE PARISH, LOUISIANA
AI NO.: 71560

LIST OF COMPOUNDS & AFFECTED TARGET ORGANS

Compound	*Target Organ/System*
Ethylbenzene	Liver, Kidney, Development
MTBE	Liver, Kidney, Ocular
TPH-GRO	Liver, Kidney, Decreased Body Weight, Hematological System
DIPE	Ocular, Central Nervous System
ETBE	Liver, Kidney
TAME	Central Nervous System
TBA	Liver, Kidney, Central Nervous System

LIST OF TARGET ORGAN/SYSTEM & AFFECTING COMPOUNDS

Target Organ/System	*Compound*
Liver	Ethylbenzene, MTBE, TPH-GRO, ETBE, or TBA
Kidney	Ethylbenzene, MTBE, TPH-GRO, ETBE, or TBA
Central Nervous System	DIPE, TAME, or TBA
Decreased Body Weight	TPH-GRO
Development	Ethylbenzene
Hematological System	TPH-GRO
Ocular	MTBE or DIPE

MTBE = Methyl tert-butyl ether
DIPE = Diisopropyl ether
ETBE = Ethyl tert-butyl ether
TAME = tert-Amyl methyl ether
TBA = tert-Butyl alcohol
TPH-GRO = Total Petroleum Hydrocarbons-Gasoline Range Organics

Note: Toxicity information taken from LDEQ Table "Target Organ(s)/Critical Effect(s) for the Assessment of Additivity for Noncarcinogenic Health Effects."

TABLE 10A

COMPARISON OF LIMITING NON-INDUSTRIAL RS WITH SOIL AOI CONCENTRATIONS AND GROUNDWATER COMPLIANCE CONCENTRATIONS
AOI-1
FORMER SHELL RETAIL STORE NO. 142059
2300 SOUTH ACADIAN THRUWAY
BATON ROUGE, EAST BATON ROUGE PARISH, LOUISIANA
AI NO.: 71560

Constituent of Concern	*Non-Industrial Surface Soil Limiting RS (mg/kg)*	*Industrial Surface Soil Limiting RS (mg/kg)*	*Soil AOI Concentrations (mg/kg) AOC-1 0 - 15 feet bgs*	*Exceeds Limiting RS?*
Benzene	0.53	0.53	0.468	No
TPH-GRO	1000*	2,550	728	No
TBA	2,788	2,788	10.4	No
Constituent of Concern	*Non-Industrial Groundwater Limiting RS (mg/L)*	*Industrial Groundwater Limiting RS (mg/L)*	*Compliance Concentrations (mg/L) AOC-1*	*Exceeds Limiting RS?*
Benzene	5.72*	5.72*	1.2	No
Ethylbenzene	33.21	33.21	2.43	No
MTBE	2,255	2,255	1.12	No
TPH-GRO	127.1	127.1	87.3	No
DIPE	7.79	7.79	1.34	No
ETBE	1.353	1.353	0.153	No
TAME	217.3	217.3	0.22	No
TBA	1,025	1,025	41	No

mg/kg = Milligrams per kilogram
mg/L = Milligrams per liter
MTBE = Methyl tert-butyl ether
DIPE = Diisopropyl ether
ETBE = Ethyl tert-butyl ether
TAME = tert-Amyl methyl ether
TBA = tert-Butyl alcohol
TPH-GRO = Total Petroleum Hydrocarbons-Gasoline Range Organics
*= MO-2 RECAP Standard (RS), all others MO-1 RS

APPENDIX C

ANALYTICAL DATA EVALUATION – RECAP FORM 3

RECAP FORM 3
ANALYTICAL DATA EVALUATION

Date June 26, 2011

Facility Name Former Shell Retail Station No. 142059

Agency Interest (AI #) 71560

Physical Site Location 2300 South Acadian Thruway, Baton Rouge, LA

Operation Address 2300 South Acadian Thruway, Baton Rouge, LA

Property Owner Circle K
Property Owner Address 25 W. Cedar Street, Pensacola, FL 32502
Responsible Party Shell Oil Products U.S.
Reponsible Party Address P.O. Box 1087, Huffman, Texas 77336

1. Data Generation

1.A All sample collection was done in accordance to applicable RECAP collection guidelines. [X] Yes [ ] No

1.B All generated data was obtained using EPA Methodology, RECAP approved methodology (as found in text), or methodology pre-approved by the Department. Any modifications to methodology have been noted, explained and pre-approved by the Department. [X] Yes [ ] No

1.C All Data are analyte-specific and the identity and concentration are confirmed. [X] Yes [ ] No

1.D All data were generated by a LDEQ certified laboratory. [X] Yes [ ] No

2. Data Evaluation and Usability

2.A Methods used are appropriate for analyzed constituents:

1. Analysis used is specific for COCs. [X] Yes [ ] No

2. Results are produced with the most appropriate sensitive method. (e.g. not using portable field analytical instruments). [X] Yes [ ] No

2.B Sample Quantitation Limits (SQL)

Note: The SQL is not synonymous with the IDL (instrument detection limit) or the MDL (minimum detection limit). The SQL is derived after considering the effects of dilutions, loss of instrument sensitivity, matrix interferences, and other interferences effecting the lower-end accuracy of analysis, and therefore resulting in the elevation of the method detection limit. The SQL will be the only detection limit considered for comparison to limiting standards.

1. All SQLs are less than reference concentrations (RS or SS). [X] Yes [ ] No (If yes, proceed to Section 2C, Qualifiers and Codes).

2. Samples with SQLs greater than the limiting standard are not being reported as non-detected. (If yes, proceed to Item # 3 of this section). [ ] Yes [ ] No

   If the SQL is higher than the limiting standard, and a non-detect is being reported, data may still be considered by the Department if all the below conditions are met:

   (a) The non-detect results make up less than 5-10 percent of a sample set for a considered individual COC.

   (b) The ND is not classified as being from a key sampling location (e.g. drinking water well).

   (c) Documentation provided by a LDEQ accredited laboratory (with supporting evidence) is included in the document demonstrating that a practical quantitation limit was not achievable due to site or sample-specific conditions.

   Have the above three conditions been met? [ ] Yes [ ] No

   Note: If one or more of the above conditions cannot be met, the total (100%) value of the PQL may be reported as a positive detected result.

   Will this option be used and annotated in the Report? [ ] Yes [ ] No

   Note: If all answers in this item are "no," analytical results will be rejected and re-sampling will be required.

3. Are sample results higher than both the PQL and the limiting standard? [ ] Yes [ ] No (If so, results may be used despite elevated PQL).

2.C Qualifiers and Codes

1. All qualifiers and codes for flagged data have been noted on form 3 and supporting documentation has been included in the laboratory information package. [X] Yes [ ] No

2. All data with a qualifier of "R" (unusable data) do not come from critical sample points (if so, resample will be required). [ ] Yes [ ] No [X] N/A

3. All data with a qualifier of "J" (estimated concentrations) have been included as positive results. [ ] Yes [ ] No [X] N/A

2.D Blank Samples

1. Field and laboratory blanks showed no signs of contamination, and no constituents were detected in blanks. (If no constituents or contaminants were detected, proceed to 2E, Tentatively Identified Compounds). [X] Yes [ ] No

2. Contaminants or constituents found in blanks can be considered common laboratory contaminants as defined by EPA (acetone, 2-butanone, methylene chloride, toluene, or phthalates); and the same contaminants found in site samples are present at quantities less than 10 times the levels found in blanks. (If no, constituents are to be reported as detected COCs). [ ] Yes [ ] No

3. Contaminants or constituents found in blanks are not considered common laboratory contaminants as defined by EPA; and the same contaminants found in site samples are present at quantities less than 5 times the levels found in blanks (If no, constituents are to be reported as detected COCs). [ ] Yes [ ] No

2.E Tentatively Identified Compounds (TIC)

All possible TIC have been identified, evaluation is supported with documentation in the text, and information conforms to the requirements as listed in Section 2.5 of the RECAP. [ ] Yes [ ] No

2.F Historical Data

1. All quantitative historical data has been reviewed by current QA/QC guidelines, and all applicable supporting information is justified and included in the report. [X] Yes [ ] No

2. All qualitative historical data is verifiable, has not been used quantitatively, and has only been used in the development of a conceptual model. [ ] Yes [ ] No [X] N/A

3. Documentation

3.A Laboratory information package assembled as follows [X] Yes [ ] No:

1. Sample documentation (chains of custody, preparation time, time of analysis).
2. Sample and analyte identification and quantification.
3. Determination and documentation of sample quantitation limits (SQLs).
4. Initial and continuing calibration.
5. Performance evaluation samples (external QA or laboratory control samples)
6. Matrix spike recoveries.
7. Analytical error determination (determined with replicate samples).
8. Total measurement error determination summary. (Evaluates overall precision of measurement system from sample acquisition through analysis. Determined with field duplicate and matrix spike with matrix spike duplicate).
9. Explanation and supporting documentation for flagged data.

3.B All methods used in all analysis have produced tangible raw data (e.g. chromatograms, spectra, digital values), and are available to the Department upon request. [X] Yes [ ] No

1. Representative data is included in documentation as examples of method procedures. [X] Yes [ ] No

2. All flagged data is supported with complete associated tangible raw data. (e.g. depiction of matrix interferences, spiked recoveries reported outside of control limits, evidence for need for dilution etc.). [X] Yes [ ] No

Note: Any "no" answer must be explained at the conclusion of this form. Items not applicable should be left unmarked.

4. Submitter Information

Date June 26, 2011

Name of Person submitting this evaluation Larry Braud, P.G.

Affiliation Groundwater & Environmental Services, Inc.

Signature _____

Date 6/26/2011

Additional Preparers Ryan Francis

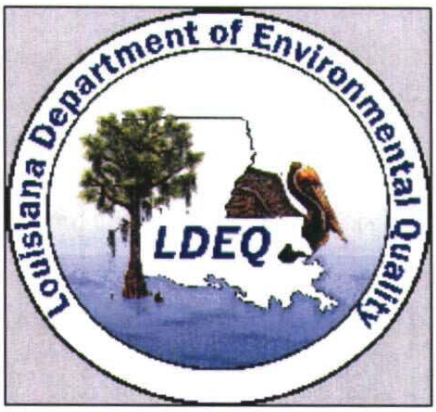
APPENDIX D

RECAP APPENDIX H SPREADSHEETS

1. For Development of MO-1 Standards for ETBE, DIPE, TAME and TBA

2. For Development of Site-Specific RECAP MO-2 Standards

Risk Evaluation/ Corrective Action Program (RECAP)



Prepared by:
Louisiana Department of Environmental Quality
Corrective Action Group
August 4, 2003

Welcome to the **Louisiana Department of Environmental Quality's Risk Evaluation/Corrective Action Program (RECAP) workbook**. This workbook contains all of the Management Option 2 (MO-2) equations, except for the Domenico model. There is a spreadsheet for each of the MO-2 exposure pathways. Each spreadsheet lists the equations used to calculate a RECAP Standard and contains the calculations of the RECAP Standards for all of the chemicals listed in the document for that exposure pathway. Within the spreadsheets are comment boxes for each equation. The comment box contains the parameter definitions and the default values for that equation. (Point the mouse at the cell and rick click into that cell that contains the red triangle in the upper right corner and click show comment. Click the comment box to highlight the box drag the edge of the box to enlarge the cell to read the contents.)

The spreadsheets are linked together for data that is common to most of the equations (e.g., the Slope Factor (SF) and Reference dose (RfD) values are contained in one spreadsheet, "SF&RfD"). Site-specific data that can be entered under MO-2 is highlighted in blue. Site-specific input values related to a specific exposure pathway are listed in that exposure pathway spreadsheet. Site-specific values are found in the "Soil properties", "Sd & DAF Summers", "Soil-PEF", "Soiles", "GWes", and "GWair" spreadsheets. The soil properties spreadsheet is the only spreadsheet that contains site-specific input values that can be changed that will effect many of the equations. Site size can be entered as the length and width.

At the bottom of each spreadsheet are several rows highlighted in blue for additional chemicals.

LDEQ RECAP
APPENDIX H: TABLE H1
CANCER SLOPE FACTORS AND REFERENCE DOSES

COMPOUND	CAS #	SF_o	REF	SF_i	REF	RfD_o	REF	RfD_i	REF	ABS
		$(mg/kg\text{-}day)^{-1}$		$(mg/kg\text{-}day)^{-1}$		mg/kg-day		mg/kg-day		unitless
Aliphatics C6-C8	NA	*******		*******		5.00E+00	T	5.30E+00	T	0
Aliphatics >C8-C10	NA	*******		*******		1.00E-01	T	2.90E-01	T	0
Aliphatics >C10-C12	NA	*******		*******		1.00E-01	T	3.00E-01	T	0
Aliphatics >C12-C16	NA	*******		*******		1.00E-01	T	3.00E-01	T	0
Aliphatics >C16-C35	NA	*******		*******		2.00E+00	T	2.00E+00	*	0.1
Aromatics >C8-C10	NA	*******		*******		4.00E-02	T	6.00E-02	T	0
Aromatics >C10-C12	NA	*******		*******		4.00E-02	T	6.00E-02	T	0
Aromatics >C12-C16	NA	*******		*******		4.00E-02	T	6.00E-02	T	0
Aromatics >C16-C21	NA	*******		*******		3.00E-02	T	3.00E-02	*	0.1
Aromatics >C21-C35	NA	*******		*******		3.00E-02	T	3.00E-02	*	0.1

I = Integrated Risk Information System (IRIS), EPA.
H = Health Effects Assessment Summary Tables (HEAST), EPA.
A = Health Effects Assessment Summary Tables Alternative, EPA Region III Risk-Based Concentration Table.
E = EPA-NCEA Regional Support provisional value, EPA Region III Risk-Based Concentration Table.
* = Inhalation toxicity not available, oral toxicity value used to assess inhalation exposure.
# = Oral toxicity value not available, inhalation toxicity value used to assess oral exposure.
O = EPA Region III Risk-Based Concentration Table.
W = Withdrawn from IRIS or HEAST.
T = TPH Criteria Working Group, 1997.
IEUBK = refer to IEUBK model guidelines.
D= Dermal RfD for cadmium is 2.5E-05 mg/kg-d (based on an oral absorption efficiency of 5%; RAGS-E, EPA 1999).
S = Surrogate (Acenaphthene for Acenaphthylene; Naphthalene for Methylnaphthalene, 2-; Anthracene for Phenanthrene) .

ADDITIONAL COMPOUNDS

ORGANIC COMPOUNDS										
Bis(2-chloroisopropyl)ether	108-60-1	7.00E-02	H	3.50E-02	H	4.00E-02	I	4.00E-02	*	0
DIPE	108203		#		*	4.10E-03	E	4.10E-03	I	0.1
ETBE	637923		#		*	1.00E-03	TCEQ	8.60E-02	TCEQ	0.1

NOTE: See end of Table for designation of letters and symbols.

LDEQ RECAP
APPENDIX H: TABLE H1
CANCER SLOPE FACTORS AND REFERENCE DOSES

COMPOUND	CAS #	SF_o	REF	SF_i	REF	RfD_o	REF	RfD_i	REF	ABS
		$(mg/kg\text{-}day)^{-1}$		$(mg/kg\text{-}day)^{-1}$		mg/kg-day		mg/kg-day		unitless
TAME	994058		#		*	1.30E-01	E	1.30E-01	I	0.1
TBA	75-65-0		#		*	5.40E-01	E	5.40E-01	*	0.1
Benzene	71-43-2	2.90E-02	I	2.90E-02	I	4.00E-03	I	8.60E-03	I	0
Formaldehyde	50-00-0	4.60E-02	*	4.60E-02	I	2.00E-01	I	2.00E-01	*	0.1
INORGANIC COMPOUNDS										
Antimony	7440-36-0	*******		*******		4.00E-04	I	4.00E-04	*	0.01
Antimony	7440-36-0	*******		*******		4.00E-04	I	4.00E-04	*	0.01
Antimony	7440-36-0	*******		*******		4.00E-04	I	4.00E-04	*	0.01

NOTE: See end of Table for designation of letters and symbols.

LDEQ RECAP
APPENDIX H: TABLE H2
CHEMICAL AND PHYSICAL PARAMETERS

COMPOUND	CAS #	MOL. WT	Koc	REF	H	REF	Da	REF	Dw	REF	S	REF
		g/g-mole	cm3/g		atm-m3/mol		cm2/s		cm2/s		mg/L	
Aliphatics >C16-C35	NA	270	6.31E+08	10	1.20E+02	10	1.00E-01	10	1.00E-05	10	********	*******
Aromatics >C8-C10	NA	120	1.58E+03	10	1.17E-02	10	1.00E-01	10	1.00E-05	10	********	*******
Aromatics >C10-C12	NA	130	2.51E+03	10	3.41E-03	10	1.00E-01	10	1.00E-05	10	********	*******
Aromatics >C12-C16	NA	150	5.01E+03	10	1.29E-03	10	1.00E-01	10	1.00E-05	10	********	*******
Aromatics >C16-C21	NA	190	1.58E+04	10	3.17E-04	10	1.00E-01	10	1.00E-05	10	********	*******
Aromatics >C21-C35	NA	240	1.26E+05	10	1.63E-05	10	1.00E-01	10	1.00E-05	10	********	*******

* If data on more than one isomer is available; then used most protective. If data available on only one isomer; then used that data.

1. Soil Screening Guidance, 1996.
2. Superfund Chemical Data Matrix, June 1996.
3. Air Emissions Models for Waste and Wastewater, EPA-453/R-94-080A, 1994.
4. Groundwater Chemicals Desk Reference, Montgomery, J. H., et.al., 1990.
5. Groundwater Chemicals Desk Reference, vol. II, Montgomery, J. H., et.al., 1991.
6. Handbook of Environmental Fate and Exposure Data for Organic Chemicals, vol. IV, 1991.
7. Handbook of Environmental Fate and Exposure Data for Organic Chemicals, vol. II, 1991.
8. Soil Chemistry of Hazardous Materials, 1988.
9. CHEMDAT 8, November, 1994.
10. Total Petroleum Hydrocarbon Criteria Workgroup, 1996.

E - Estimated.

ADDITIONAL COMPOUNDS

ORGANIC COUMPOUNDS												
Bis(2-chloroisopropyl)ether	108-60-1	171.04	6.17E+01	4	1.13E-04	4	5.95E-02	E	6.62E-06	E	1.70E+03	4
DIPE	108203	102.18	2.52E+01	MDEQ	1.30E-03	MDEQ	8.00E-02	MDEQ	8.00E-06	MDEQ	8.04E+03	MDEQ
ETBE	637923	102.18	3.97E+00	MDEQ	1.39E-03	MDEQ	8.00E-02	MDEQ	8.00E-06	MDEQ	5.63E+06	MDEQ
TAME	994058	102.18	2.81E+01	MDEQ	2.68E-03	MDEQ	8.00E-02	MDEQ	8.00E-06	MDEQ	2.64E+06	MDEQ
TBA	75-65-0	74.12	2.27E+00	MDEQ	1.17E-05	MDEQ	8.00E-02	MDEQ	8.00E-06	MDEQ	1.00E+09	MDEQ
Benzene	71-43-2	78.11	6.17E+01	1	5.55E-03	1	8.80E-02	1	9.80E-06	1	1.75E+03	1
Formaldehyde	50-00-0	30.03	3.63E+00	5	3.40E-07	2	1.80E-01	3	2.00E-05	3	5.50E+05	2

NOTE: See end of Table for designation of numbers and letter.

LDEQ RECAP
APPENDIX H: TABLE H2
CHEMICAL AND PHYSICAL PARAMETERS

COMPOUND	CAS #	MOL. WT	Koc	REF	H	REF	Da	REF	Dw	REF	S	REF
		g/g-mole	cm3/g		atm-m3/mol		cm2/s		cm2/s		mg/L	
INORGANIC COMPOUNDS												
Antimony	7440-36-0	121.75	********	********	********	********	********	********	********	********	********	********
Antimony	7440-36-0	121.75	********	********	********	********	********	********	********	********	********	********
Antimony	7440-36-0	121.75	********	********	********	********	********	********	********	********	********	********

NOTE: See end of Table for designation of numbers and letter.

LDEQ RECAP
APPENDIX H
TABLE H-4
QUANTITATION LIMITS USED IN RECAP

COMPOUND	Soil	GW
	mg/kg	mg/l
ADDITIONAL COMPOUNDS		
ORGANIC COUMPOUNDS		
Bis(2-chloroisopropyl)ether	8.0E-01	5.7E-03
DIPE	1.0E-02	5.0E-03
ETBE	1.0E-02	5.0E-03
TAME	1.0E-02	5.0E-03
TBA	2.1E-02	1.0E-02
Benzene		
Formaldehyde		
INORGANIC COMPOUNDS		
Antimony		
Antimony		
Antimony		

Soil properties		Management Option 2							
Revision Date: 08/04/2003									
Run date:	6/28/2011								
*****calculation inputs*****									
1.7	g/cm3		pb = dry soil bulk density						
0.358491	Lpore/Lsoil		n = total soil porosity						
0.21	Lwater/Lsoil		nw = water-filled soil porosity						
0.148491	Lair/Lsoil		na = air-filled soil porosity						
2.65	g/cm3		ps = soil particle density						
0.006	g/g		foc = fractional organic carbon in soil						
148	(ft) = L = length of the source at the water table								
148	(ft) = W = width of impacted area perpendicular to flow direction of aquifer								
0.5	Acres		AOI site area - input into Q/C equation below						
76.30616	g/m2-s per kg/m3		Q/C = inverse of mean concentration at center of square source						
Q/C Table									
site size	148*148	209*209	295*295	467*467	660*660	1143*1143			
site size	0.5 acre	1 acre	2 acre	5 acre	10 acre	30 acre			
Q/C value	76.3062	67.4304	59.872	51.4648	46.1707	39.2329			

Sd eqn & Summer's Model DAF							
Revision Date: 08/04/2003							
Run date:	6/28/2011						
Sd = hadv + hdisp = thickness of the mixing zone							
15.6	(ft)						
hadv = B*[1 - exp((-I*L)/(B*Dv))]							
0.81	(ft) = hadv = advective component of the plume depth						
0.33	(ft/ft) = I = infiltration rate						
60.00	(ft/yr) = Dv = horizontal Darcy velocity						
20.00	(ft) = B = thickness of the shallow water bearing zone						
148.00	(ft) = L = length of the source at the water table						
hdisp = (2*Az*L)							
14.80	(ft) = hdisp = dispersive component of the plume depth						
0.74	(ft) = Az = vertical dispersivity						
148.00	(ft) = L = length of the source at the water table						
Summer's Model DAF							
DAF = Cl/Cgw = (Qa+Qp)/Qp							
20.0	unitless						
Qa = Dv*Sd*W							
138577	(ft3/yr) = Qa = volumetric flow rate of groundwater						
60.00	(ft/yr) = Dv = horizontal Darcy velocity						
15.61	(ft) = Sd = hadv + hdisp = thickness of the mixing zone						
148.00	(ft) = W = width of impacted area perpendicular to flow direction of aquifer						
Qp = I*A							
7301.33	(ft3/yr) = Qp = volumetric flow rate of infiltration (soil pore water) into the aquifer						
0.33	(ft/yr) = I = infiltration rate						
21904.00	(ft2) = A = area of the source						
Max DF Domenico		440					
(for use with SoilGW and GW values)							

LDEQ RECAP
WORKSHEET 2
GW 3NDW
(mg/l)

Derivation of Management Option 1, 2, & 3 **Groundwater Classification 3-Non-Drinking Water**
Revision Date: 08/04/2003 Run date: 6/28/2011

C (mg/l) GW3NDW = (TR*BWa) / (SFo*(IRWndw+BCF*IRF))
N (mg/l) GW3NDW = (THQ*RfDo*BWa) / (IRWndw+BCF*IRF)

COMPOUND	LAC 33:IX. 1113(HHNDW) (mg/L)	LAC 33:IX. 1113(HHDW) (mg/L)	MCL (mg/l)	BCF (l/kg)	C (mg/l)	N (mg/l)	LAC(NDW) or max (LAC,MCL, (MIN C, N)) (mg/l)	
Acenaphthene				3.87E+02	NA	5.36E-01	5.4E-01	(*2)N
Acenaphthylene				2.69E+02	NA	7.68E-01	7.7E-01	(*2)N
Acetone				3.87E-01	NA	7.24E+01	7.2E+01	(*2)N
Aldrin	4.00E-08	4.00E-08					4.0E-08	(*1)LAC(NDW)
Aniline				3.27E+00	7.95E-02	3.17E+00	8.0E-02	(*2)C
Anthracene				9.20E+03	NA	1.14E-01	1.1E-01	(*2)N
Antimony			6.00E-03	9.00E-01	NA	2.62E-01	2.6E-01	(*2)N
Arsenic		5.00E-02	1.00E-02	4.00E+00	2.76E-04	1.24E-01	5.0E-02	LAC(DW)
Barium			2.00E+00	1.00E+00	NA	4.50E+01	4.5E+01	(*2)N
Benzene	1.25E-02	1.10E-03	5.00E-03				1.3E-02	(*1)LAC(NDW)
Benz(a)anthracene				1.26E+04	3.80E-07	NA	3.8E-07	(*2)C
Benzo(a)pyrene			2.00E-04	8.29E+04	5.78E-09	NA	2.0E-04	MCL
Benzo(b)fluoranthene				3.03E+04	1.58E-07	NA	1.6E-07	(*2)C
Benzo(k)fluoranthene				3.03E+04	1.58E-06	NA	1.6E-06	(*2)C
Beryllium			4.00E-03	1.90E+01	NA	2.99E-01	3.0E-01	(*2)N
Biphenyl,1,1-				6.46E+02	NA	2.69E-01	2.7E-01	(*2)N
Bis(2-chloroethyl)ether				1.10E+01	2.06E-04	NA	2.1E-04	(*2)C
Bis(2-chloroisopropyl)ether				5.57E+01	8.31E-04	2.33E+00	8.3E-04	(*2)C
Bis(2-ethyl-hexyl)phthalate			6.00E-03	2.15E+04	1.16E-05	3.26E-03	6.0E-03	MCL
Bromodichloromethane	3.30E-03	2.00E-04	1.00E-01				3.3E-03	(*1)LAC(NDW)
Bromoform	3.47E-02	3.90E-03	1.00E-01				3.5E-02	(*1)LAC(NDW)
Bromomethane				4.81E+00	NA	5.29E-01	5.3E-01	(*2)N
Butyl benzyl phthalate				6.63E+02	NA	1.05E+00	1.0E+00	(*2)N
Cadmium		1.00E-02	5.00E-03	3.77E+03	NA	4.64E-04	1.0E-02	LAC(DW)
Carbon Disulfide				1.95E+01	NA	1.46E+01	1.5E+01	(*2)N
Carbon Tetrachloride	1.20E-03	2.20E-04	5.00E-03				1.2E-03	(*1)LAC(NDW)
Chlordane	1.90E-07	1.90E-07	2.00E-03				1.9E-07	(*1)LAC(NDW)
Chloroaniline,p-				1.64E+01	NA	6.71E-01	6.7E-01	(*2)N
Chlorobenzene			1.00E-01	9.42E+01	NA	7.10E-01	7.1E-01	(*2)N

LDEQ RECAP
WORKSHEET 2
GW 3NDW
(mg/l)

Derivation of Management Option 1, 2, & 3 **Groundwater Classification 3-Non-Drinking Water**
Revision Date: 08/04/2003 Run date: 6/28/2011

Aliphatics >C16-C35							0.00E+00	(2)
Aromatics >C8-C10							0.00E+00	(2)
Aromatics >C10-C12							0.00E+00	(2)
Aromatics >C12-C16							0.00E+00	(2)
Aromatics >C16-C21							0.00E+00	(2)
Aromatics >C21-C35							0.00E+00	(2)

Notes:
log Kow values from the Superfund Data Matrix, June 1996
(1) Data on this chemical could not be found. Therefore, assume BCF = 1
Xylene (mixed) Kow is the highest value of m,o,p xylene Kow values.
(2) Research has shown that this chemical does not bioconcentrate.

Estimation of Kow from Koc:
log Koc = 0.0784 + (0.7919 * log Kow)
(p 141 Soil Screening Guidance: Technical Background Document, May 1996)

ADDITIONAL COMPOUNDS

ORGANIC COUMPOUNDS					
Bis(2-chloroisopropyl)ether	5.57E+01	8.31E-04	2.33E+00	8.3E-04	(*2)C
DIPE	2.95E+00	NA	1.94E+00	1.9E+00	(*2)N
ETBE	6.00E+00	NA	3.35E-01	3.3E-01	(*2)N
TAME	4.14E+00	NA	5.30E+01	5.3E+01	(*2)N
TBA	3.16E+00	NA	2.48E+02	2.5E+02	(*2)N
Benzene		2.71E-02	3.15E+00	2.7E-02	(*2)C
Formaldehyde	5.40E-01	1.52E-02	1.40E+02	1.5E-02	(*2)C
INORGANIC COMPOUNDS					
Antimony		#VALUE!	3.15E-01	#VALUE!	#VALUE!
Antimony		#VALUE!	3.15E-01	#VALUE!	#VALUE!
Antimony		#VALUE!	3.15E-01	#VALUE!	#VALUE!

LDEQ RECAP
WORKSHEET 4
SOILni
(mg/kg)

Derivation of Management Option 1 & 2 **Soil-Nonindustrial**
Revision Date: 08/04/2003 Run date: 6/28/2011

DA = ((na^(10/3)*Da*H*41+nw^(10/3)*Dw)/n^2)/(pb*Koc*foc+nw+na*H*41)
VFnic = (Q\C*1e-4*(3.14*DA*Tnic)^0.5)/(2*pb*DA)
VFnia = (Q\C*1e-4*(3.14*DA*Tnia)^0.5)/(2*pb*DA)

Soilni-C-O = (TR*ATc*365)/(EFni*(SFo*1e-6*IRSadj+SFi*(IRAadj/VFnia)+SFo*1e-6*ABS*IRDadj))
Soilni-C-I = (TR*ATc*365)/(EFni*(SFo*1e-6*IRSadj+SFo*1e-6*ABS*IRDadj))
Soilni-N-O = (THQ*BWc*ATnc*365)/(EFni*EDc*((IRSc/RfDo)*1e-6+(IRAc/RfDi)*(1/VFnic)+(SAc/RfDo)*AFc*ABS*1e-6))
Soilni-N-I = (THQ*BWc*ATnc*365)/(EFni*EDc*((IRSc/RfDo)*1e-6+(SAc/RfDo)*AFc*ABS*1e-6)))

COMPOUND	DA (cm2/s)	VFnic (m3/kg)	VFnia (m3/kg)	Soilni C-O (mg/kg)	Soilni C-I (mg/kg)	Soilni N-O (mg/kg)	Soilni N-I (mg/kg)	min value (C or N)	Soilni (mg/kg)	
ADDITIONAL COMPOUNDS										
ORGANIC COUMPOUNDS										
Bis(2-chloroisopropyl)ether	4.76E-06	2.51E+04	5.62E+04	4.92E+00		1.04E+03		4.9E+00	4.9E+00	C
DIPE	1.22E-04	4.96E+03	1.11E+04	NA		2.82E+01		2.8E+01	2.8E+01	N
ETBE	2.39E-04	3.54E+03	7.93E+03	NA		5.42E+01		5.4E+01	5.4E+01	N
TAME	2.32E-04	3.59E+03	8.05E+03	NA		6.69E+02		6.7E+02	6.7E+02	N
TBA	3.69E-06	2.85E+04	6.38E+04	NA		1.39E+04		1.4E+04	1.4E+04	N
Benzene	3.10E-04	3.11E+03	6.96E+03	1.49E+00		3.69E+01		1.5E+00	1.5E+00	C
Formaldehyde	3.60E-06	2.88E+04	6.46E+04	4.95E+00		5.19E+03		5.0E+00	5.0E+00	C
INORGANIC COMPOUNDS										
Antimony	NA	NA			#VALUE!		3.04E+01	#VALUE!	#VALUE!	###
Antimony	NA	NA			#VALUE!		3.04E+01	#VALUE!	#VALUE!	###
Antimony	NA	NA			#VALUE!		3.04E+01	#VALUE!	#VALUE!	###

LDEQ RECAP
WORKSHEET 5
SOILi
(mg/kg)

Derivation of Management Option 1 & 2 **Soil-Industrial**
Revision Date: 08/04/2003 Run date: 6/28/2011

DA = ((na^(10/3)*Da*H*41+nw^(10/3)*Dw)/n^2)/(pb*Koc*foc+nw+na*H*41)
VFi = (Q\C*1e-4*(3.14*DA*Ti)^0.5)/(2*pb*DA)

Soili-C-O = (TR*BWa*ATc*365)/(EFi*EDi*(SFo*1e-6*IRSi+SFi*(IRAa/VFi)+SFo*SAai*AFai*ABS*1e-6))
Soili-C-I = (TR*BWa*ATc*365)/(EFi*EDi*(SFo*1e-6*IRSi+SFo*SAai*AFai*ABS*1e-6))
Soili-N-O = (THQ*BWa*ATni*365)/(EFi*EDi*((IRSi/RfDo)*1e-6+(IRAa/RfDi)*(1/VFi)+(SAai/RfDo)*AFai*ABS*1e-6))
Soili-N-I = (THQ*BWa*ATni*365)/(EFi*EDi*((IRSi/RfDo)*1e-6+(SAai/RfDo)*AFai*ABS*1e-6)))

COMPOUND	DA (cm2/s)	VFi (m3/kg)	Soili C-O (mg/kg)	Soili C-I (mg/kg)	Soili N-O (mg/kg)	Soili N-I (mg/kg)	min value (C or N)	Soili (mg/kg)	
TPH-GRO (C6-C10)							5.1E+03	5.1E+03	
TPH-DRO (C10-C28)							5.1E+03	5.1E+03	
TPH-ORO (>C28)							2.5E+04	1.0E+04	

ADDITIONAL COMPOUNDS

ORGANIC COUMPOUNDS								
Bis(2-chloroisopropyl)ether	4.76E-06	5.12E+04	1.67E+01		9.28E+03	1.7E+01	1.7E+01	C
DIPE	1.22E-04	1.01E+04	NA		2.00E+02	2.0E+02	2.0E+02	N
ETBE	2.39E-04	7.24E+03	NA		6.90E+02	6.9E+02	6.9E+02	N
TAME	2.32E-04	7.34E+03	NA		4.68E+03	4.7E+03	4.7E+03	N
TBA	3.69E-06	5.82E+04	NA		1.20E+05	1.2E+05	1.2E+05	N
Benzene	3.10E-04	6.35E+03	3.08E+00		2.70E+02	3.1E+00	3.1E+00	C
Formaldehyde	3.60E-06	5.89E+04	1.37E+01		4.49E+04	1.4E+01	1.4E+01	C
INORGANIC COMPOUNDS								
Antimony	NA	NA		#VALUE!	7.22E+02	#VALUE!	#VALUE!	###
Antimony	NA	NA		#VALUE!	7.22E+02	#VALUE!	#VALUE!	###
Antimony	NA	NA		#VALUE!	7.22E+02	#VALUE!	#VALUE!	###

LDEQ RECAP
WORKSHEET 6
SOILGW and SOILsat
(mg/kg)

Derivation of Management Option 1 & 2 **SoilGW & Soilsat**
Revision Date: 08/04/2003 Run date: 6/28/2011

SoilGW1 = DFsummers*(GW1*(pb*Koc*foc+nw+na*H*41))/(pb)
SoilGW2 = DFsummers*(GW2*(pb*Koc*foc+nw+na*H*41))/(pb)
SoilGW3NDW =DFsummers* (GW3NDW*(pb*Koc*foc+nw+na*H*41))/(pb)
SoilGW3DW =DFsummers* (GW3DW*(pb*Koc*foc+nw+na*H*41))/(pb)

Soilsat = S*(Koc*foc*pb+nw+H*41*na)/pb

COMPOUND	SoilGW1 (mg/kg)	SoilGW2 (mg/kg)	SoilGW3DW (mg/kg)	SoilGW3NDW (mg/kg)	Soilsat (mg/kg)
Aromatics >C10-C12	1.0E+02	1.0E+02	4.1E+02	9.6E+03	NA
Aromatics >C12-C16	2.0E+02	2.0E+02	8.1E+02	1.9E+04	NA
Aromatics >C16-C21	2.1E+03	2.1E+03	1.9E+03	4.5E+04	NA
Aromatics >C21-C35	1.7E+04	1.7E+04	1.5E+04	3.6E+05	NA
TPH-GRO (C6-C10)	6.5E+01	6.5E+01	2.6E+02	6.1E+03	
TPH-DRO (C10-C28)	6.5E+01	6.5E+01	2.6E+02	6.1E+03	
TPH-ORO (>C28)	1.7E+04	1.7E+04	1.5E+04	3.6E+05	

ADDITIONAL COMPOUNDS

ORGANIC COUMPOUNDS					
Bis(2-chloroisopropyl)ether	5.6E-02	2.7E-03	3.1E-03	8.2E-03	8.4E+02
DIPE	2.8E-02	2.8E-02	6.1E-03	1.1E+01	2.2E+03
ETBE	1.0E-01	1.0E-01	#DIV/0!	1.0E+00	8.6E+05
TAME	4.8E+00	4.8E+00	#DIV/0!	3.2E+02	8.0E+05
TBA	9.0E+00	9.0E+00	#DIV/0!	6.8E+02	1.4E+08
Benzene	3.9E-03	3.9E-03	1.2E-02	2.8E-01	9.0E+02
Formaldehyde	4.2E-03	4.2E-03	2.1E-03	4.4E-02	8.0E+04