APPENDIX D – DNR WATER WELL SURVEY

Water Wells By LATITUDE / LONGITUDE Report

Latitude	Longitude	Radius Ft	MSG
30.412777778	-91.096944444	5280	Found 58 records

Well Distance Ft	SECTION	TOWNSHIP	RANGE	PARISH_NAME	PARISH_NUM	LOCAL_WELL_NUM	WELL_USE	DESCRIPTION	WELL_STATUS	OWNERS_NUM	OWNERS_NAME	DRILLERS_NAME	WELL_DEPTH	CASING_DIAMETER	DATE_COMPLETED	WATER_LEVEL	DATE_MEASURED	GEOLOGIC_UNIT	LATITUDE	LONGITUDE
0	040	07S	01E	EAST BATON ROUGE	033	9891Z	W	Piezometer	Active	TW-6	BEAU BOX PROPERTY MANAGEMENT, LLC	QUATERNARY RESOURCE INVESTIGATIONS, LLC	29	1	5/12/14	25		112SESC	302446	910549
0	040	07S	01E	EAST BATON ROUGE	033	9893Z	M	Monitor	Active	MW-1	BEAU BOX PROPERTY MANAGEMENT, LLC	QUATERNARY RESOURCE INVESTIGATIONS, LLC	24	4	5/12/14	11.5	5-12-14	112MRVA	302446	910549
0	040	07S	01E	EAST BATON ROUGE	033	9892Z	W	Piezometer	Active	TW-7	BEAU BOX PROPERTY MANAGEMENT, LLC	QUATERNARY RESOURCE INVESTIGATIONS, LLC	29	1	5/12/14	14	5-12-14	112SESC	302446	910549
1229.3	040	07S	01E	EAST BATON ROUGE	033	144	H	Domestic	Destroyed		WILLIAMS, L R	SUMMERS, D. K.	620	2	09/36	29.25	09/11/36	11204BR	302435	910555
2427.04	040	07S	01E	EAST BATON ROUGE	033	226	H	Domestic	Destroyed		LEONARD, H	EBERHART	1275	4X2.50	01/27	41.00	00/00/27	12112BR	302509	910557
2520.5	039	07S	01E	EAST BATON ROUGE	033	1278	O	Observation	Active		CAPITAL AREA GW	LAMBERT'S	550	2	06/97	37.00	06/11/97	11204BR	302501	910526
2533.24	039	07S	01E	EAST BATON ROUGE	033	621	P	Public Supply	Active	WESTMR	BATON ROUGE WW	EBERHART	1487	12X8	12/56	10.42	01/04/57	12112BR	302500	910525
2541.46	039	07S	01E	EAST BATON ROUGE	033	5349Z	L	Heat Pump	Active		MCELVEEN, JOY	ROUYEA'S	300		11/85	0.00		11200NWM	302445	910520
2598.46	039	07S	01E	EAST BATON ROUGE	033	6041Z	M	Monitor	Active	MW-2	SOUTHLAND CORP	IT CORPORATION	12	4	08/88	2.00	09/28/88	112SESC	302505	910529
2598.46	039	07S	01E	EAST BATON ROUGE	033	6040Z	M	Monitor	Active	MW-1	SOUTHLAND CORP	IT CORPORATION	10	4	08/88	3.00	09/28/88	112SESC	302505	910529
2598.51	041	07S	01E	EAST BATON ROUGE	033	5728Z	M	Monitor	Plugged and Abandoned		KELLER OIL	SUBSURFACE	11	4	07/88	0.00		112SESC	302427	910609
2696.26	041	07S	01E	EAST BATON ROUGE	033	5727Z	M	Monitor	Plugged and Abandoned		KELLER OIL	SUBSURFACE	26	4	07/88	21.00	07/07/88	112SESC	302425	910608
2704.59	024	07S	01E	EAST BATON ROUGE	033	8751Z	M	Monitor	Active	PH1-22	BATON ROUGE, LA	PROFESSIONAL	85	2	09/03	9.50	09/12/03	112PLSC	302459	910616
2740.49	040	07S	01E	EAST BATON ROUGE	033	265	P	Public Supply	Destroyed	1	BR COUNTRY CLUB	EBERHART	1191	4	04/16	47.00	04/22/16	12112BR	302513	910552
2740.49	040	07S	01E	EAST BATON ROUGE	033	445	I	Irrigation	Plugged and Abandoned	2	BR COUNTRY CLUB	CLEMARD	518	8X6X6	01/47	12.11	01/17/47	11204BR	302513	910552
2845.3	041	07S	01E	EAST BATON ROUGE	033	224	H	Domestic	Destroyed		MURPHY, A	SUMMERS, D. K.	638	2X1.50	1936	26.70	08/01/40	11204BR	302422	910606
2862.59	100	07S	01E	EAST BATON ROUGE	033	1136	I	Irrigation	Active	4	BR COUNTRY CLUB	EBERHART	1405	8X6	09/54	101.00	05/25/77	12112BR	302514	910554
2931.25	040	07S	01E	EAST BATON ROUGE	033	227	H	Domestic	Destroyed		KEAN, J	EBERHART	1300	4	1917	0.00		12112BR	302515	910550
2940.72	041	07S	01E	EAST BATON ROUGE	033	8931Z	M	Monitor	Plugged and Abandoned	MW-3	EXXON MOBIL	CRA, INC.	12	2	03/05	2.80	04/04/05	112SESC	302422	910608
2940.72	041	07S	01E	EAST BATON ROUGE	033	8929Z	M	Monitor	Plugged and Abandoned	MW-1	EXXON MOBIL	CRA, INC.	19	2	03/05	0.92	04/04/05	112SESC	302422	910608
2940.72	041	07S	01E	EAST BATON ROUGE	033	8930Z	M	Monitor	Plugged and Abandoned	MW-2	EXXON MOBIL	CRA, INC.	12	2	03/05	0.83	04/04/05	112SESC	302422	910608
2979.22	041	07S	01E	EAST BATON ROUGE	033	8984Z	I	Irrigation	Active		LSU BURDEN CENT	GILL (JACK)	170	2	06/06	35.00	06/20/06	00000000	302426	910614
3094.65	039	07S	01E	EAST BATON ROUGE	033	5919Z	M	Monitor	Plugged and Abandoned	MW-5	EXXON CO USA	ATEC	30	4	01/92	13.80	01/26/92	112SESC	302459	910517
3094.65	039	07S	01E	EAST BATON ROUGE	033	5917Z	M	Monitor	Plugged and Abandoned	MW-3	EXXON CO USA	ATEC	20	4	01/92	7.40	01/26/92	112SESC	302459	910517
3094.65	039	07S	01E	EAST BATON ROUGE	033	5916Z	M	Monitor	Plugged and Abandoned	MW-2	EXXON CO USA	ATEC	30	4	01/92	11.50	01/26/92	112SESC	302459	910517
3094.65	039	07S	01E	EAST BATON ROUGE	033	5918Z	M	Monitor	Plugged and Abandoned	MW-4	EXXON CO USA	ATEC	30	4	01/92	11.70	01/26/92	112SESC	302459	910517
3094.65	039	07S	01E	EAST BATON ROUGE	033	5915Z	M	Monitor	Plugged and Abandoned	MW-1	EXXON CO USA	ATEC	30	4	01/92	11.80	01/26/92	112SESC	302459	910517
3096.87	039	07S	01E	EAST BATON ROUGE	033	145	H	Domestic	Plugged and Abandoned		WEBB, FLETCHER	SUMMERS, D. K.	1210	2X1.50	02/34	25.00	02/01/34	12112BR	302510	910527

3143	040	07S	01E	EAST BATON ROUGE	033	8003Z	B	Borehole/Pilot Hole	Plugged and Abandoned	TEST HOLE	BR COUNTRY CLUB	LAYNE (BR)	210		02/98	0.00		11200NWM	302517	910552
3655.98	052	07S	01E	EAST BATON ROUGE	033	815	O	Observation	Active		LSU BATON ROUGE	SUMMERS BROS	645	8	05/67	13.30	05/11/67	11204BR	302425	910623
3774.94	055	07S	01E	EAST BATON ROUGE	033	8917Z	W	Piezometer	Active	T04-25P	URS CORPORATION	CAPOZZOLI	30	2	02/05	16.00	02/21/05	112SESC	302409	910555
3920.61	100	07S	01E	EAST BATON ROUGE	033	267	H	Domestic	Destroyed		DUCOTE, E	UNKNOWN	490	2.50		0.00		11204BR	302514	910518
4524.08	039	07S	01E	EAST BATON ROUGE	033	271	H	Domestic	Active		BOND, C W	SINGLETARY	650	2.50	1919	0.00		11206BR	302508	910504
4797.17	059	07S	01E	EAST BATON ROUGE	033	272	H	Domestic	Destroyed		FONTENOT ETAL	UNKNOWN	530	2.50	1940	0.00		11204BR	302454	910455
4862.19	062	07S	01E	EAST BATON ROUGE	033	1259	I	Irrigation	Active	5	BR COUNTRY CLUB	LAYNE (BR)	515	16X10	03/94	41.00	03/31/94	11204BR	302534	910545
4862.19	062	07S	01E	EAST BATON ROUGE	033	816	I	Irrigation	Plugged and Abandoned	3	BR COUNTRY CLUB	EBERHART	520	12X9X9	10/63	41.68	02/08/67	11204BR	302534	910545
4952.63	053	07S	01E	EAST BATON ROUGE	033	7471Z	M	Monitor	Plugged and Abandoned	MW-2	CHEVRON	UNKNOWN	13	4	03/90	8.85	11/02/94	112SESC	302405	910620
4952.63	053	07S	01E	EAST BATON ROUGE	033	7470Z	M	Monitor	Plugged and Abandoned	MW-1	CHEVRON	UNKNOWN	12	4	03/90	9.15	11/02/94	112SESC	302405	910620
4952.63	053	07S	01E	EAST BATON ROUGE	033	7473Z	M	Monitor	Plugged and Abandoned	MW-4	CHEVRON	UNKNOWN	13	4	03/90	3.51	11/02/94	112SESC	302405	910620
4952.63	053	07S	01E	EAST BATON ROUGE	033	7472Z	M	Monitor	Plugged and Abandoned	MW-3	CHEVRON	UNKNOWN	13	4	03/90	7.00	11/02/94	112SESC	302405	910620
5016.81	085	01S	06W	EAST BATON ROUGE	033	9354Z	H	Domestic	Plugged and Abandoned		WASHANER, WOLFE		50	2		0.00		00000000	302451	910452
5163.53	083	07S	01E	EAST BATON ROUGE	033	8054Z	W	Piezometer	Plugged and Abandoned	PZ-15	WHITNEY BANK	CRA, INC.	102	4	06/98	13.23	07/17/98	112SESC	302530	910619
5163.53	083	07S	01E	EAST BATON ROUGE	033	7977Z	W	Piezometer	Plugged and Abandoned	PZ-2	WHITNEY BANK	G & E	36	2	12/97	7.79	02/07/98	112SESC	302530	910619
5163.53	083	07S	01E	EAST BATON ROUGE	033	7978Z	W	Piezometer	Plugged and Abandoned	PZ-3	WHITNEY BANK	G & E	31	2	12/97	7.23	02/07/98	112SESC	302530	910619
5163.53	083	07S	01E	EAST BATON ROUGE	033	8052Z	W	Piezometer	Plugged and Abandoned	PZ-13	WHITNEY BANK	CRA, INC.	56	2	06/98	9.59	07/17/98	112SESC	302530	910619
5163.53	083	07S	01E	EAST BATON ROUGE	033	8055Z	W	Piezometer	Plugged and Abandoned	PZ-16	WHITNEY BANK	CRA, INC.	162	2	07/98	13.76	07/17/98	112SESC	302530	910619
5163.53	083	07S	01E	EAST BATON ROUGE	033	8053Z	W	Piezometer	Plugged and Abandoned	PZ-14	WHITNEY BANK	CRA, INC.	75	4	06/98	11.96	07/17/98	112SESC	302530	910619
5178.3	055	07S	01E	EAST BATON ROUGE	033	8916Z	W	Piezometer	Active	T04-24P	URS CORPORATION	CAPOZZOLI	41	2	02/05	4.00	02/24/05	112PLSC	302356	910602
5208.62	083	07S	01E	EAST BATON ROUGE	033	8046Z	W	Piezometer	Plugged and Abandoned	PZ-7	WHITNEY BANK	CRA, INC.	36	2	06/98	10.58	07/17/98	112SESC	302530	910620
5208.62	083	07S	01E	EAST BATON ROUGE	033	8048Z	W	Piezometer	Plugged and Abandoned	PZ-9	WHITNEY BANK	CRA, INC.	36	2	06/98	10.36	07/17/98	112SESC	302530	910620
5208.62	083	07S	01E	EAST BATON ROUGE	033	8050Z	W	Piezometer	Plugged and Abandoned	PZ-11	WHITNEY BANK	CRA, INC.	56	2	06/98	9.87	07/17/98	112SESC	302530	910620
5208.62	083	07S	01E	EAST BATON ROUGE	033	8051Z	W	Piezometer	Destroyed	PZ-12	WHITNEY BANK	CRA, INC.	55	2	06/98	10.19	07/17/98	112SESC	302530	910620
5208.62	083	07S	01E	EAST BATON ROUGE	033	8044Z	W	Piezometer	Destroyed	PZ-5	WHITNEY BANK	CRA, INC.	38	2	06/98	10.68	07/17/98	112SESC	302530	910620
5208.62	083	07S	01E	EAST BATON ROUGE	033	8047Z	W	Piezometer	Plugged and Abandoned	PZ-8	WHITNEY BANK	CRA, INC.	36	2	06/98	9.96	07/17/98	112SESC	302530	910620
5208.62	083	07S	01E	EAST BATON ROUGE	033	8049Z	W	Piezometer	Plugged and Abandoned	PZ-10	WHITNEY BANK	CRA, INC.	36	2	06/98	10.36	07/17/98	112SESC	302530	910620
5208.62	083	07S	01E	EAST BATON ROUGE	033	8045Z	W	Piezometer	Plugged and Abandoned	PZ-6	WHITNEY BANK	CRA, INC.	36	2	06/98	10.13	07/17/98	112SESC	302530	910620
5208.62	083	07S	01E	EAST BATON ROUGE	033	7976Z	W	Piezometer	Plugged and Abandoned	PZ-1	WHITNEY BANK	G & E	34	2	12/97	6.84	02/07/98	112SESC	302530	910620
5254.79	083	07S	01E	EAST BATON ROUGE	033	8043Z	W	Piezometer	Destroyed	PZ-4	WHITNEY BANK	CRA, INC.	35	2	06/98	10.78	07/17/98	112SESC	302530	910621

APPENDIX E – LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Case Narrative for:

PPM CONSULTANTS, INC.

Certificate of Analysis Number:

L0041523

Report To:		Project Name:	503124 LSI
PPM CONSULTANTS, INC.		Site:	LA RETIREMENT SYSTEMS
PETER SMITH		Site Address:	
7936 OFFICE PARK BLVD STE. A			
BATON ROUGE		PO Number:	
LA		State:	Louisiana
70809-		State Cert. No.:	02048
ph: (225) 293-7270	fax: (225) 293-7271	Date Reported:	4/22/2014

NOTE: Method EPH: Samples SB-1(17-19) and SB-3(13-15) were analyzed outside of the recommended 14 day holding time. Client requested EPH analyses on 4/18/14.

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.

This report may contain data results from tests performed in the field by non-laboratory personnel. Such data will be indicated within the report using the method code, FIELD, and analyst initials of FT indicating results obtained by a field technician.

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.

Accutest Gulf Coast is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Rebecca Hebert — 4/22/2014

Rebecca Hebert, Project Manager — Date

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

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

PPM CONSULTANTS, INC.

Certificate of Analysis Number:

L0041523

Report To: PPM CONSULTANTS, INC.
PETER SMITH
7936 OFFICE PARK BLVD STE. A

BATON ROUGE
LA
70809-
ph: (225) 293-7270 fax: (225) 293-7271

Fax To:

Project Name: 503124 LSI
Site: LA RETIREMENT SYSTEMS
Site Address:

PO Number:
State: Louisiana
State Cert. No.: 02048
Date Reported: 4/22/2014

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
SB-1 (17-19)	L0041523-01	Soil	04/03/2014 10:18	4/4/2014 3:55:00 PM		☐
SB-1 (21-24)	L0041523-02	Soil	04/03/2014 10:22	4/4/2014 3:55:00 PM		☐
SB-2 (17-19)	L0041523-03	Soil	04/03/2014 11:42	4/4/2014 3:55:00 PM		☐
SB-2 (21-24)	L0041523-04	Soil	04/03/2014 11:45	4/4/2014 3:55:00 PM		☐
SB-3 (13-15)	L0041523-05	Soil	04/03/2014 13:45	4/4/2014 3:55:00 PM		☐
SB-3 (21-24)	L0041523-06	Soil	04/03/2014 13:50	4/4/2014 3:55:00 PM		☐
SB-4 (17-19)	L0041523-07	Soil	04/03/2014 16:20	4/4/2014 3:55:00 PM		☐
SB-4 (26-29)	L0041523-08	Soil	04/03/2014 16:25	4/4/2014 3:55:00 PM		☐
SB-5 (11-13)	L0041523-09	Soil	04/03/2014 17:20	4/4/2014 3:55:00 PM		☐
SB-5 (17-20)	L0041523-10	Soil	04/03/2014 17:25	4/4/2014 3:55:00 PM		☐
SB-2/TW-2	L0041523-11	Water	04/04/2014 9:10	4/4/2014 3:55:00 PM		☐
SB-3/TW-3	L0041523-12	Water	04/04/2014 9:25	4/4/2014 3:55:00 PM		☐
SB-4/TW-4	L0041523-13	Water	04/04/2014 10:50	4/4/2014 3:55:00 PM		☐
SB-5/TW-5	L0041523-14	Water	04/04/2014 10:30	4/4/2014 3:55:00 PM		☐
TCLP-1	L0041523-15	Soil	04/03/2014 17:20	4/4/2014 3:55:00 PM		☐

Rebecca Hebert
Project Manager

4/22/2014
Date

Ron Benjamin
Laboratory Director

Karen Rodrigue-Varnado
Quality Assurance Officer

Version 2.1 - Modified February 11, 2011

4/22/2014 2:56:36 PM

Date: Tuesday, April 22, 2014

*****CHRONOLOGY REPORT*****

Workorder	Sample_ID	Matrix	Collected	Received	Analyzed	Test Name	Method
L0041523	L0041523-01A	Soil	4/3/2014 10:18:00 A	4/4/2014 3:55:00 PM			
					4/8/2014 2:00:00 PM	RECAP Diesel Range Organics by Method 8015C	SW8015C
					4/8/2014 2:24:00 PM	RECAP Diesel Range Organics by Method 8015C	SW8015C
					4/8/2014 2:48:00 PM	RECAP Diesel Range Organics by Method 8015C	SW8015C
					4/8/2014 3:11:00 PM	RECAP Diesel Range Organics by Method 8015C	SW8015C
					4/8/2014 5:10:00 PM	RECAP Diesel Range Organics by Method 8015C	SW8015C
					4/8/2014 5:30:00 PM	RECAP Diesel Range Organics by Method 8015C	SW8015C
					4/8/2014 5:49:00 PM	RECAP Diesel Range Organics by Method 8015C	SW8015C
					4/8/2014 6:47:00 PM	RECAP Diesel Range Organics by Method 8015C	SW8015C
					4/8/2014 7:07:00 PM	RECAP Diesel Range Organics by Method 8015C	SW8015C
					4/8/2014 7:26:00 PM	RECAP Diesel Range Organics by Method 8015C	SW8015C
					4/8/2014 7:45:00 PM	RECAP Diesel Range Organics by Method 8015C	SW8015C
					4/8/2014 8:05:00 PM	RECAP Diesel Range Organics by Method 8015C	SW8015C
					4/8/2014 11:18:55 PM	Extractable Petroleum Hydrocarbons- RECAP	MA_VPH_EPH
					4/9/2014 9:25:00 AM	RECAP Diesel Range Organics by Method 8015C	SW8015C
					4/9/2014 9:45:00 AM	RECAP Diesel Range Organics by Method 8015C	SW8015C
					4/9/2014 7:31:25 PM	TCLP Purgeable Aromatics (Benzene)	SW8021B
					4/21/2014 6:19:53 PM	Extractable Petroleum Hydrocarbons- RECAP	MA_VPH_EPH
					4/21/2014 6:49:06 PM	Extractable Petroleum Hydrocarbons- RECAP	MA_VPH_EPH

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Date: Tuesday, April 22, 2014

*****SUMMARY REPORT*****

Company: PPM CONSULTANTS, INC. **Project:** 503124 LSI

Site: LA RETIREMENT SYSTEMS

Workorder	Matrix	Client ID	Collected	Compound	Result	Det Limit	Method
L0041523-01A	Soil	SB-1 (17-19)	4/3/2014 10:18:00 AM	C10-C12 Aliphatics	380	1.7 mg/Kg	MA_VPH_EPH
				C10-C12 Aromatics	7.8	1.7 mg/Kg	MA_VPH_EPH
				C12-C16 Aliphatics	1300	3.3 mg/Kg	MA_VPH_EPH
				C12-C16 Aromatics	240	5 mg/Kg	MA_VPH_EPH
				C16-C21 Aromatics	460	8.3 mg/Kg	MA_VPH_EPH
				C16-C35 Aliphatics	1300	10 mg/Kg	MA_VPH_EPH
				C21-C35 Aromatics	80	10 mg/Kg	MA_VPH_EPH
				Diesel Range Organics (C10-C28)	5200	50 mg/Kg	SW8015C
L0041523-02A	Soil	SB-1 (21-24)	4/3/2014 10:22:00 AM	Diesel Range Organics (C10-C28)	1800	50 mg/Kg	SW8015C
L0041523-03A	Soil	SB-2 (17-19)	4/3/2014 11:42:00 AM	Diesel Range Organics (C10-C28)	500	5 mg/Kg	SW8015C
L0041523-04A	Soil	SB-2 (21-24)	4/3/2014 11:45:00 AM	Diesel Range Organics (C10-C28)	70	5 mg/Kg	SW8015C
L0041523-05A	Soil	SB-3 (13-15)	4/3/2014 1:45:00 PM	C10-C12 Aliphatics	6.7	1.7 mg/Kg	MA_VPH_EPH
				C10-C12 Aromatics	ND	1.7 mg/Kg	MA_VPH_EPH
				C12-C16 Aliphatics	35	3.3 mg/Kg	MA_VPH_EPH
				C12-C16 Aromatics	7.7	5 mg/Kg	MA_VPH_EPH
				C16-C21 Aromatics	14	8.3 mg/Kg	MA_VPH_EPH
				C16-C35 Aliphatics	39	10 mg/Kg	MA_VPH_EPH
				C21-C35 Aromatics	ND	10 mg/Kg	MA_VPH_EPH
				Diesel Range Organics (C10-C28)	66	5 mg/Kg	SW8015C
L0041523-06A	Soil	SB-3 (21-24)	4/3/2014 1:50:00 PM	Diesel Range Organics (C10-C28)	ND	5 mg/Kg	SW8015C
L0041523-07A	Soil	SB-4 (17-19)	4/3/2014 4:20:00 PM	Diesel Range Organics (C10-C28)	14	5 mg/Kg	SW8015C
L0041523-08A	Soil	SB-4 (26-29)	4/3/2014 4:25:00 PM	Diesel Range Organics (C10-C28)	ND	5 mg/Kg	SW8015C
L0041523-09A	Soil	SB-5 (11-13)	4/3/2014 5:20:00 PM	Diesel Range Organics (C10-C28)	ND	5 mg/Kg	SW8015C
L0041523-10A	Soil	SB-5 (17-20)	4/3/2014 5:25:00 PM	Diesel Range Organics (C10-C28)	62	5 mg/Kg	SW8015C
L0041523-11A	Water	SB-2/TW-2	4/4/2014 9:10:00 AM	Diesel Range Organics (C10-C28)	4.2	0.15 mg/L	SW8015C
L0041523-12A	Water	SB-3/TW-3	4/4/2014 9:25:00 AM	Diesel Range Organics (C10-C28)	0.51	0.15 mg/L	SW8015C
L0041523-13A	Water	SB-4/TW-4	4/4/2014 10:50:00 AM	Diesel Range Organics (C10-C28)	8.4	0.15 mg/L	SW8015C

Qualifiers:

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

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Date: Tuesday, April 22, 2014

*******SUMMARY REPORT*******

Company: PPM CONSULTANTS, INC. **Project:** 503124 LSI

Site: LA RETIREMENT SYSTEMS

Workorder	Matrix	Client ID	Collected	Compound	Result	Det Limit	Method
L0041523-13C	Water	SB-4/TW-4	4/4/2014 10:50:00 AM	C10-C12 Aliphatics	0.19	0.1 mg/L	MA_VPH_EPH
				C10-C12 Aromatics	ND	0.1 mg/L	MA_VPH_EPH
				C12-C16 Aliphatics	0.24	0.1 mg/L	MA_VPH_EPH
				C12-C16 Aromatics	0.29	0.1 mg/L	MA_VPH_EPH
				C16-C21 Aromatics	0.18	0.1 mg/L	MA_VPH_EPH
				C16-C35 Aliphatics	0.35	0.1 mg/L	MA_VPH_EPH
				C21-C35 Aromatics	0.26	0.1 mg/L	MA_VPH_EPH
L0041523-14A	Water	SB-5/TW-5	4/4/2014 10:30:00 AM	Diesel Range Organics (C10-C28)	ND	0.15 mg/L	SW8015C
L0041523-15A	Soil	TCLP-1	4/3/2014 5:20:00 PM	Benzene	ND	0.01 mg/L	SW8021B

Qualifiers:

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

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Client Sample ID: SB-1 (17-19) **Collected:** 04/03/2014 10:18 **Lab Sample ID:** L0041523-01

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL	Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
EXTRACTABLE PETROLEUM HYDROCARBONS- RECAP				**MCL**	**MA_VPH_EPH**	**Units: mg/Kg**		
C10-C12 Aliphatics	**380**	**>MCL**	**1.7**	**230**	**1**	**04/21/14 18:19**	**E_G**	**5502372**
C10-C12 Aromatics	7.8		1.7	100	1	04/21/14 18:19	E_G	5501984
C12-C16 Aliphatics	**1300**	**>MCL**	**3.3**	**370**	**1**	**04/21/14 18:19**	**E_G**	**5502372**
C12-C16 Aromatics	**240**	**>MCL**	**5**	**180**	**1**	**04/21/14 18:19**	**E_G**	**5501984**
C16-C21 Aromatics	**460**	**>MCL**	**8.3**	**180**	**1**	**04/21/14 18:19**	**E_G**	**5501984**
C16-C35 Aliphatics	1300		10	7100	1	04/21/14 18:19	E_G	5502372
C21-C35 Aromatics	80		10	180	1	04/21/14 18:19	E_G	5501984
Surr: 2-Fluorobiphenyl	112		% 40-140		1	04/21/14 18:19	E_G	5501984
Surr: Chloro-octadecane	51.9		% 40-140		1	04/21/14 18:19	E_G	5502372
Surr: o-Terphenyl	59.5		% 40-140		1	04/21/14 18:19	E_G	5501984

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3546	04/19/2014 9:34	DWB	1.00

RECAP DIESEL RANGE ORGANICS BY METHOD 8015C				MCL	SW8015C	Units: mg/Kg		
Diesel Range Organics (C10-C28)	5200		50		10	04/09/14 9:25	JT1	5478467
Surr: o-Terphenyl	D		% 38-135		10	04/09/14 9:25	JT1	5478467

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3546	04/08/2014 8:30	CT	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

4/22/2014 2:57:47 PM

ACCUTEST GULF COAST
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Client Sample ID: SB-1 (21-24) **Collected:** 04/03/2014 10:22 **Lab Sample ID:** L0041523-02

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
RECAP DIESEL RANGE ORGANICS BY METHOD 8015C			**MCL**	**SW8015C**	**Units: mg/Kg**		
Diesel Range Organics (C10-C28)	1800		50	10	04/09/14 9:45	JT1	5478468
Surr: o-Terphenyl	D		% 38-135	10	04/09/14 9:45	JT1	5478468

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3546	04/08/2014 8:30	CT	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

4/22/2014 2:57:49 PM

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: SB-2 (17-19) **Collected:** 04/03/2014 11:42 **Lab Sample ID:** L0041523-03

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL	Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
RECAP DIESEL RANGE ORGANICS BY METHOD 8015C				**MCL**	**SW8015C**	**Units: mg/Kg**		
Diesel Range Organics (C10-C28)	**500**	**>MCL**	**5**	**65**	**1**	**04/08/14 17:10**	**JT1**	**5478451**
Surr: o-Terphenyl	97.6		% 38-135		1	04/08/14 17:10	JT1	5478451

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3546	04/08/2014 8:30	CT	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

4/22/2014 2:57:54 PM

ACCUTEST GULF COAST
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Client Sample ID: SB-2 (21-24) **Collected:** 04/03/2014 11:45 **Lab Sample ID:** L0041523-04

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL		Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
RECAP DIESEL RANGE ORGANICS BY METHOD 8015C					**MCL**	**SW8015C**	**Units: mg/Kg**		
Diesel Range Organics (C10-C28)	**70**	**>MCL**		**5**	**65**	**1**	**04/08/14 17:30**	**JT1**	**5478452**
Surr: o-Terphenyl	84.7		%	38-135		1	04/08/14 17:30	JT1	5478452

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3546	04/08/2014 8:30	CT	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

4/22/2014 2:57:58 PM

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Client Sample ID: SB-3 (13-15) **Collected:** 04/03/2014 13:45 **Lab Sample ID:** L0041523-05

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL		Rep.Limit	MCL	Dil. Factor	Date Analyzed	Analyst	Seq. #
EXTRACTABLE PETROLEUM HYDROCARBONS- RECAP						**MA_VPH_EPH**	**Units: mg/Kg**		
C10-C12 Aliphatics	6.7			1.7	230	1	04/21/14 18:49	E_G	5502373
C10-C12 Aromatics	ND			1.7	100	1	04/21/14 18:49	E_G	5501985
C12-C16 Aliphatics	35			3.3	370	1	04/21/14 18:49	E_G	5502373
C12-C16 Aromatics	7.7			5	180	1	04/21/14 18:49	E_G	5501985
C16-C21 Aromatics	14			8.3	180	1	04/21/14 18:49	E_G	5501985
C16-C35 Aliphatics	39			10	7100	1	04/21/14 18:49	E_G	5502373
C21-C35 Aromatics	ND			10	180	1	04/21/14 18:49	E_G	5501985
Surr: 2-Fluorobiphenyl	78.5		%	40-140		1	04/21/14 18:49	E_G	5501985
Surr: Chloro-octadecane	75.5		%	40-140		1	04/21/14 18:49	E_G	5502373
Surr: o-Terphenyl	79.5		%	40-140		1	04/21/14 18:49	E_G	5501985

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3546	04/19/2014 9:34	DWB	1.00

RECAP DIESEL RANGE ORGANICS BY METHOD 8015C					MCL		SW8015C	Units: mg/Kg	
Diesel Range Organics (C10-C28)	**66**	**>MCL**		**5**	**65**	**1**	**04/08/14 17:49**	**JT1**	**5478453**
Surr: o-Terphenyl	83.3		%	38-135		1	04/08/14 17:49	JT1	5478453

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3546	04/08/2014 8:30	CT	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

4/22/2014 2:58:02 PM

ACCUTEST GULF COAST
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Client Sample ID: SB-3 (21-24) **Collected:** 04/03/2014 13:50 **Lab Sample ID:** L0041523-06

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL	Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
RECAP DIESEL RANGE ORGANICS BY METHOD 8015C				**MCL**	**SW8015C**	**Units: mg/Kg**		
Diesel Range Organics (C10-C28)	ND		5	65	1	04/08/14 18:47	JT1	5478456
Surr: o-Terphenyl	75.2		% 38-135		1	04/08/14 18:47	JT1	5478456

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3546	04/08/2014 8:30	CT	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

4/22/2014 2:58:05 PM

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
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(337) 237-4775

Client Sample ID: SB-4 (17-19) **Collected:** 04/03/2014 16:20 **Lab Sample ID:** L0041523-07

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL	Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
RECAP DIESEL RANGE ORGANICS BY METHOD 8015C				**MCL**		**SW8015C**	**Units: mg/Kg**	
Diesel Range Organics (C10-C28)	14		5	65	1	04/08/14 19:07	JT1	5478457
Surr: o-Terphenyl	79.9		% 38-135		1	04/08/14 19:07	JT1	5478457

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3546	04/08/2014 8:30	CT	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

4/22/2014 2:58:06 PM

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: SB-4 (26-29) **Collected:** 04/03/2014 16:25 **Lab Sample ID:** L0041523-08

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL	Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
RECAP DIESEL RANGE ORGANICS BY METHOD 8015C				**MCL**	**SW8015C**	**Units: mg/Kg**		
Diesel Range Organics (C10-C28)	ND		5	65	1	04/08/14 19:26	JT1	5478458
Surr: o-Terphenyl	80.1		% 38-135		1	04/08/14 19:26	JT1	5478458

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3546	04/08/2014 8:30	CT	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

4/22/2014 2:58:08 PM

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
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Client Sample ID: SB-5 (11-13) **Collected:** 04/03/2014 17:20 **Lab Sample ID:** L0041523-09

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL		Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
RECAP DIESEL RANGE ORGANICS BY METHOD 8015C					**MCL**		**SW8015C**	**Units: mg/Kg**	
Diesel Range Organics (C10-C28)	ND			5	65	1	04/08/14 19:45	JT1	5478459
Surr: o-Terphenyl	79.1		%	38-135		1	04/08/14 19:45	JT1	5478459

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3546	04/08/2014 8:30	CT	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

4/22/2014 2:58:10 PM

ACCUTEST GULF COAST
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Client Sample ID: SB-5 (17-20) **Collected:** 04/03/2014 17:25 **Lab Sample ID:** L0041523-10

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL	Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
RECAP DIESEL RANGE ORGANICS BY METHOD 8015C				**MCL**	**SW8015C**	**Units: mg/Kg**		
Diesel Range Organics (C10-C28)	62		5	65	1	04/08/14 20:05	JT1	5478460
Surr: o-Terphenyl	78.3		% 38-135		1	04/08/14 20:05	JT1	5478460

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3546	04/08/2014 8:30	CT	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

4/22/2014 2:58:12 PM

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
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Client Sample ID: SB-2/TW-2 **Collected:** 04/04/2014 9:10 **Lab Sample ID:** L0041523-11

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL		Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
RECAP DIESEL RANGE ORGANICS BY METHOD 8015C					**MCL**	**SW8015C**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	**4.2**	**>MCL**		**0.15**	**0.15**	**1**	**04/08/14 14:00**	**E_G**	**5476901**
Surr: o-Terphenyl	77.6		%	47-125		1	04/08/14 14:00	E_G	5476901

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3511	04/08/2014 8:44	DWB	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

4/22/2014 2:58:14 PM

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: SB-3/TW-3 **Collected:** 04/04/2014 9:25 **Lab Sample ID:** L0041523-12

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL	Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
RECAP DIESEL RANGE ORGANICS BY METHOD 8015C				**MCL**	**SW8015C**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	**0.51**	**>MCL**	**0.15**	**0.15**	**1**	**04/08/14 14:24**	**E_G**	**5476902**
Surr: o-Terphenyl	108		% 47-125		1	04/08/14 14:24	E_G	5476902

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3511	04/08/2014 8:44	DWB	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

4/22/2014 2:58:16 PM

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Client Sample ID: SB-4/TW-4 **Collected:** 04/04/2014 10:50 **Lab Sample ID:** L0041523-13

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL		Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
EXTRACTABLE PETROLEUM HYDROCARBONS- RECAP					**MCL**	**MA_VPH_EPH**		**Units: mg/L**	
C10-C12 Aliphatics	**0.19**	**>MCL**		**0.1**	**0.15**	**1**	**04/08/14 23:18**	**DF**	**5478267**
C10-C12 Aromatics	ND			0.1	0.15	1	04/08/14 23:18	DF	5478219
C12-C16 Aliphatics	**0.24**	**>MCL**		**0.1**	**0.15**	**1**	**04/08/14 23:18**	**DF**	**5478267**
C12-C16 Aromatics	**0.29**	**>MCL**		**0.1**	**0.15**	**1**	**04/08/14 23:18**	**DF**	**5478219**
C16-C21 Aromatics	**0.18**	**>MCL**		**0.1**	**0.15**	**1**	**04/08/14 23:18**	**DF**	**5478219**
C16-C35 Aliphatics	0.35			0.1	7.3	1	04/08/14 23:18	DF	5478267
C21-C35 Aromatics	**0.26**	**>MCL**		**0.1**	**0.15**	**1**	**04/08/14 23:18**	**DF**	**5478219**
Surr: 2-Fluorobiphenyl	62.6		%	40-140		1	04/08/14 23:18	DF	5478219
Surr: Chloro-octadecane	57.9		%	40-140		1	04/08/14 23:18	DF	5478267
Surr: o-Terphenyl	64.2		%	40-140		1	04/08/14 23:18	DF	5478219

Prep Method	Prep Date	Prep Initials	Prep Factor
EPH	04/08/2014 11:22	TJH	1.00
SW3511	04/08/2014 8:30	TJH	1.00

RECAP DIESEL RANGE ORGANICS BY METHOD 8015C					MCL	SW8015C		Units: mg/L	
Diesel Range Organics (C10-C28)	**8.4**	**>MCL**		**0.15**	**0.15**	**1**	**04/08/14 14:48**	**E_G**	**5476903**
Surr: o-Terphenyl	74.4		%	47-125		1	04/08/14 14:48	E_G	5476903

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3511	04/08/2014 8:44	DWB	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

4/22/2014 2:58:21 PM

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: SB-5/TW-5 **Collected:** 04/04/2014 10:30 **Lab Sample ID:** L0041523-14

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL	Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
RECAP DIESEL RANGE ORGANICS BY METHOD 8015C				**MCL**	**SW8015C**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	ND		0.15	0.15	1	04/08/14 15:11	E_G	5476904
Surr: o-Terphenyl	78.3		% 47-125		1	04/08/14 15:11	E_G	5476904

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3511	04/08/2014 8:44	DWB	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

4/22/2014 2:58:24 PM

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: TCLP-1 **Collected:** 04/03/2014 17:20 **Lab Sample ID:** L0041523-15

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
TCLP PURGEABLE AROMATICS (BENZENE)				**MCL**	**SW8021B**	**Units: mg/L**		
Benzene	ND			0.01	10	04/09/14 19:31	JMP	5480056
Surr: 1,4-Difluorobenzene	101		%	70-130	10	04/09/14 19:31	JMP	5480056
Surr: 4-Bromofluorobenzene	95.6		%	58-150	10	04/09/14 19:31	JMP	5480056

Leach Method	Leachate Date	Leach Initials
SW1311	04/08/2014	JBW

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

4/22/2014 2:58:27 PM

Quality Control Documentation

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124 LSI

Analysis: Extractable Petroleum Hydrocarbons- RECAP
Method: MA_VPH_EPH
WorkOrder: L0041523
Lab Batch ID: 130311

Method Blank

RunID: TPHA_140408E-5478214 Units: mg/L
Analysis Date: 04/08/2014 20:55 Analyst: DF
Preparation Date: 04/08/2014 8:30 Prep By: TJH Method: SW3511

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0041523-13C	SB-4/TW-4

Analyte	Result	Rep Limit
C10-C12 Aromatics	ND	0.10
C12-C16 Aromatics	ND	0.10
C16-C21 Aromatics	ND	0.10
C21-C35 Aromatics	ND	0.10
Surr: 2-Fluorobiphenyl	67.7	40-140
Surr: o-Terphenyl	60.4	40-140

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

RunID: TPHA_140408E-5478215 Units: mg/L
Analysis Date: 04/08/2014 21:24 Analyst: DF
Preparation Date: 04/08/2014 8:30 Prep By: TJH Method: SW3511

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
C10-C12 Aromatics	0.500	0.265	53.0	0.500	0.268	53.6	1.2	25	40	140
C12-C16 Aromatics	1.50	0.905	60.3	1.50	0.898	59.8	0.8	25	40	140
C16-C21 Aromatics	2.50	1.31	52.4	2.50	1.34	53.8	2.7	25	40	140
C21-C35 Aromatics	4.00	2.24	55.9	4.00	2.26	56.4	0.8	25	40	140
Surr: 2-Fluorobiphenyl	2.00	1.18	59.0	2.00	1.21	60.6	2.8	30	40	140
Surr: o-Terphenyl	0.400	0.202	50.6	0.400	0.204	51.0	0.9	30	40	140

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.

4/22/2014 2:58:58 PM

Version 2.1 - Modified February 11, 2011

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124 LSI

Analysis: RECAP Diesel Range Organics by Method 8015C **WorkOrder:** L0041523
Method: SW8015C **Lab Batch ID:** 130312

Method Blank

RunID: TPHC_140407G-5476898 Units: mg/L
Analysis Date: 04/08/2014 12:50 Analyst: E_G
Preparation Date: 04/08/2014 8:44 Prep By: DW Method: SW3511

Analyte	Result	Rep Limit
Diesel Range Organics (C10-C28)	ND	0.15
Surr: o-Terphenyl	102.6	47-125

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0041523-11A	SB-2/TW-2
L0041523-12A	SB-3/TW-3
L0041523-13A	SB-4/TW-4
L0041523-14A	SB-5/TW-5

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

RunID: TPHC_140407G-5476899 Units: mg/L
Analysis Date: 04/08/2014 13:13 Analyst: E_G
Preparation Date: 04/08/2014 8:44 Prep By: DW Method: SW3511

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Diesel Range Organics (C10-C28)	6.00	4.88	81.3	6.00	4.25	70.9	13.7	26	21	140
Surr: o-Terphenyl	0.100	0.0981	98.1	0.100	0.0797	79.7	20.7	30	47	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.

4/22/2014 2:59:02 PM

Version 2.1 - Modified February 11, 2011

ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124 LSI

Analysis: RECAP Diesel Range Organics by Method 8015C **WorkOrder:** L0041523
Method: SW8015C **Lab Batch ID:** 130314

Method Blank

RunID: TPHB_140409A-5478444 Units: mg/Kg
Analysis Date: 04/08/2014 14:54 Analyst: JT1
Preparation Date: 04/08/2014 8:30 Prep By: CT Method: SW3546

Analyte	Result	Rep Limit
Diesel Range Organics (C10-C28)	ND	5.0
Surr: o-Terphenyl	81.9	38-135

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0041523-01A	SB-1 (17-19)
L0041523-02A	SB-1 (21-24)
L0041523-03A	SB-2 (17-19)
L0041523-04A	SB-2 (21-24)
L0041523-05A	SB-3 (13-15)
L0041523-06A	SB-3 (21-24)
L0041523-07A	SB-4 (17-19)
L0041523-08A	SB-4 (26-29)
L0041523-09A	SB-5 (11-13)
L0041523-10A	SB-5 (17-20)

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

RunID: TPHB_140409A-5478445 Units: mg/Kg
Analysis Date: 04/08/2014 15:13 Analyst: JT1
Preparation Date: 04/08/2014 8:30 Prep By: CT Method: SW3546

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Diesel Range Organics (C10-C28)	150	118	78.7	150	118	79.0	0.4	20	45	102
Surr: o-Terphenyl	2.50	2.05	82.2	2.50	2.06	82.4	0.3	30	38	135

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

Sample Spiked: L0041523-01
RunID: TPHB_140409A-5478465 Units: mg/Kg
Analysis Date: 04/09/2014 8:47 Analyst: JT1
Preparation Date: 04/08/2014 8:30 Prep By: CT Method: SW3546

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Diesel Range Organics (C10-C28)	5170	150	5570	N/C	150	5140	N/C	N/C	20	45	102

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.

4/22/2014 2:59:06 PM

Version 2.1 - Modified February 11, 2011

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124 LSI

Analysis: RECAP Diesel Range Organics by Method 8015C **WorkOrder:** L0041523
Method: SW8015C **Lab Batch ID:** 130314

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

Sample Spiked: L0041523-01
RunID: TPHB_140409A-5478465 Units: mg/Kg
Analysis Date: 04/09/2014 8:47 Analyst: JT1
Preparation Date: 04/08/2014 8:30 Prep By: CT Method: SW3546

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Surr: o-Terphenyl	ND	2.5	D	D	2.5	D	D	D	30	38	135

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.

4/22/2014 2:59:07 PM

Version 2.1 - Modified February 11, 2011

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124 LSI

Analysis: Extractable Petroleum Hydrocarbons- RECAP **WorkOrder:** L0041523
Method: MA_VPH_EPH **Lab Batch ID:** 130331

Method Blank

RunID: TPHA_140408F-5478262 Units: mg/L
Analysis Date: 04/08/2014 20:55 Analyst: DF

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0041523-13C	SB-4/TW-4

Analyte	Result	Rep Limit
C10-C12 Aliphatics	ND	0.10
C12-C16 Aliphatics	ND	0.10
C16-C35 Aliphatics	ND	0.10
Surr: Chloro-octadecane	72.3	40-140

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

RunID: TPHA_140408F-5478263 Units: mg/L
Analysis Date: 04/08/2014 21:24 Analyst: DF

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
C10-C12 Aliphatics	0.500	0.319	63.8	0.500	0.331	66.2	3.6	25	40	140
C12-C16 Aliphatics	1.00	0.587	58.7	1.00	0.597	59.7	1.7	25	40	140
C16-C35 Aliphatics	4.50	2.84	63.2	4.50	2.71	60.3	4.7	25	40	140
Surr: Chloro-octadecane	0.400	0.244	61.1	0.400	0.240	60.1	1.8	30	40	140

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.

4/22/2014 2:59:10 PM

Version 2.1 - Modified February 11, 2011

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124 LSI

Analysis: Extractable Petroleum Hydrocarbons- RECAP
Method: MA_VPH_EPH
WorkOrder: L0041523
Lab Batch ID: 130729

Method Blank

RunID: TPHA_140421B-5502369 Units: mg/Kg
Analysis Date: 04/21/2014 16:50 Analyst: E_G
Preparation Date: 04/19/2014 9:34 Prep By: DW Method: SW3546

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0041523-01A	SB-1 (17-19)
L0041523-05A	SB-3 (13-15)

Analyte	Result	Rep Limit
C10-C12 Aliphatics	ND	1.7
C12-C16 Aliphatics	ND	3.3
C16-C35 Aliphatics	ND	10
Surr: Chloro-octadecane	69.0	40-140

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

RunID: TPHA_140421B-5502370 Units: mg/Kg
Analysis Date: 04/21/2014 17:21 Analyst: E_G
Preparation Date: 04/19/2014 9:34 Prep By: DW Method: SW3546

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
C10-C12 Aliphatics	5.00	2.85	56.9	5.00	2.91	58.2	2.3	25	40	140
C12-C16 Aliphatics	10.0	5.86	58.6	10.0	6.12	61.2	4.3	25	40	140
C16-C35 Aliphatics	45.0	26.4	58.6	45.0	28.3	63.0	7.2	25	40	140
Surr: Chloro-octadecane	5.00	3.56	71.1	5.00	3.77	75.4	5.8	30	40	140

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

Sample Spiked: L0042031-06
RunID: TPHA_140421B-5502380 Units: mg/Kg
Analysis Date: 04/21/2014 22:09 Analyst: E_G
Preparation Date: 04/19/2014 9:34 Prep By: DW Method: SW3546

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
C10-C12 Aliphatics	ND	5	2.46	49.1	5	2.46	49.2	0.269	50	40	140

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.

4/22/2014 2:59:13 PM

Version 2.1 - Modified February 11, 2011

ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124 LSI

Analysis: Extractable Petroleum Hydrocarbons- RECAP **WorkOrder:** L0041523
Method: MA_VPH_EPH **Lab Batch ID:** 130729

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

Sample Spiked: L0042031-06
RunID: TPHA_140421B-5502380 Units: mg/Kg
Analysis Date: 04/21/2014 22:09 Analyst: E_G
Preparation Date: 04/19/2014 9:34 Prep By: DW Method: SW3546

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
C12-C16 Aliphatics	ND	10	5.45	54.5	10	5.54	55.4	1.73	50	40	140
C16-C35 Aliphatics	ND	45	24.1	51.5	45	25.0	53.5	3.75	50	40	140
Surr: Chloro-octadecane	ND	5	3.26	65.2	5	3.31	66.3	1.65	30	40	140

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.

4/22/2014 2:59:14 PM

Version 2.1 - Modified February 11, 2011

ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124 LSI

Analysis: Extractable Petroleum Hydrocarbons- RECAP **WorkOrder:** L0041523
Method: MA_VPH_EPH **Lab Batch ID:** 130729

Method Blank

RunID: TPHA_140421A-5501981 Units: mg/Kg
Analysis Date: 04/21/2014 16:50 Analyst: E_G
Preparation Date: 04/19/2014 9:34 Prep By: DW Method: SW3546

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0041523-01A	SB-1 (17-19)
L0041523-05A	SB-3 (13-15)

Analyte	Result	Rep Limit
C10-C12 Aromatics	ND	1.7
C12-C16 Aromatics	ND	5.0
C16-C21 Aromatics	ND	8.3
C21-C35 Aromatics	ND	10
Surr: 2-Fluorobiphenyl	81.6	40-140
Surr: o-Terphenyl	69.2	40-140

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

RunID: TPHA_140421A-5501982 Units: mg/Kg
Analysis Date: 04/21/2014 17:21 Analyst: E_G
Preparation Date: 04/19/2014 9:34 Prep By: DW Method: SW3546

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
C10-C12 Aromatics	5.00	2.86	57.2	5.00	2.42	48.4	16.6	25	40	140
C12-C16 Aromatics	15.0	9.48	63.2	15.0	8.24	55.0	14.0	25	40	140
C16-C21 Aromatics	25.0	15.5	62.1	25.0	13.8	55.1	12.0	25	40	140
C21-C35 Aromatics	40.0	18.8	47.0	40.0	19.5	48.8	3.8	25	40	140
Surr: 2-Fluorobiphenyl	12.5	9.49	75.9	12.5	8.65	69.2	9.3	30	40	140
Surr: o-Terphenyl	5.00	3.27	65.4	5.00	2.97	59.4	9.7	30	40	140

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

Sample Spiked: L0042031-06
RunID: TPHA_140421A-5501992 Units: mg/Kg
Analysis Date: 04/21/2014 22:09 Analyst: E_G
Preparation Date: 04/19/2014 9:34 Prep By: DW Method: SW3546

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.

4/22/2014 2:59:15 PM

Version 2.1 - Modified February 11, 2011

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124 LSI

Analysis: Extractable Petroleum Hydrocarbons- RECAP **WorkOrder:** L0041523
Method: MA_VPH_EPH **Lab Batch ID:** 130729

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
C10-C12 Aromatics	ND	5	2.29	45.8	5	2.25	45.0	1.94	50	40	140
C12-C16 Aromatics	ND	15	7.77	46.1	15	7.75	46.0	0.258	50	40	140
C16-C21 Aromatics	ND	25	16.5	62.7	25	14.5	54.5	13.2	50	40	140
C21-C35 Aromatics	ND	40	24.7	58.0	40	20.0	46.3	20.9	50	40	140
Surr: 2-Fluorobiphenyl	ND	12.5	9.58	76.7	12.5	9.90	79.2	3.24	30	40	140
Surr: o-Terphenyl	ND	5	2.92	58.5	5	3.03	60.5	3.43	30	40	140

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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4/22/2014 2:59:16 PM

Version 2.1 - Modified February 11, 2011

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124 LSI

Analysis: TCLP Purgeable Aromatics (Benzene) **WorkOrder:** L0041523
Method: SW8021B **Lab Batch ID:** 130335

Method Blank

RunID: GCLC_140409C-5480055 Units: mg/L
Analysis Date: 04/09/2014 19:00 Analyst: JMP

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0041523-15A	TCLP-1

Analyte	Result	Rep Limit
Benzene	ND	0.01
Surr: 1,4-Difluorobenzene	100.8	57-136
Surr: 4-Bromofluorobenzene	95.8	57-136

Leachate Blank

RunID: GCLC_140409C-5480055 Units: mg/L
Analysis Date: 04/09/2014 19:00 Analyst: JMP

Analyte	Result	Rep Limit
Benzene	ND	0.01
Surr: 1,4-Difluorobenzene	100.8	57-136
Surr: 4-Bromofluorobenzene	95.8	57-136

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

RunID: GCLC_140409C-5480053 Units: mg/L
Analysis Date: 04/09/2014 17:59 Analyst: JMP

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	0.500	0.488	97.6	0.500	0.481	96.2	1.4	14	73	126
Surr: 1,4-Difluorobenzene	300	306	102	300	305	102	0.3	30	70	130
Surr: 4-Bromofluorobenzene	300	290	96.5	300	286	95.4	1.2	30	58	150

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

Sample Spiked: L0041523-15
RunID: GCLC_140409C-5480057 Units: mg/L
Analysis Date: 04/09/2014 20:00 Analyst: JMP

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.

4/22/2014 2:59:18 PM

Version 2.1 - Modified February 11, 2011

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124 LSI

Analysis: TCLP Purgeable Aromatics (Benzene) **WorkOrder:** L0041523
Method: SW8021B **Lab Batch ID:** 130335

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	1	0.913	91.3	1	0.953	95.3	4.32	14	73	126
Surr: 1,4-Difluorobenzene	ND	600	611	102	600	610	102	0.162	30	70	130
Surr: 4-Bromofluorobenzene	ND	600	587	97.9	600	585	97.4	0.481	30	58	150

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.

4/22/2014 2:59:19 PM

Version 2.1 - Modified February 11, 2011

Sample Receipt Checklist
And
Chain of Custody

ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Sample Receipt Checklist

Workorder:	**L0041523**	Received By:	**HJC**
Date and Time Received:	**4/4/2014 3:55:00 PM**	Carrier name:	**Accutest-Delivery**
Temperature:	**3.1°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**

Accutest Representative: _____ **Contact Date & Time:** _____

Client Name Contacted: _____

Non Conformance Issues: _____

Client Instructions: _____

CHAIN OF CUSTODY

ACCUTEST LABORATORIES
Accutest Gulf Coast (LA)
500 Ambassador Caffery Pkwy Scott, LA 70583
TEL.337-237-4775 FAX: 337-237-7838
www.accutest.com

FED-EX Tracking # | Bottle Order Control #
Accutest Quote # | Accutest Job # D041523

Client / Reporting Information

Company Name: PPM Consultants, Inc
Street Address: 7396 Office Park Boulevard
City: Baton Rouge State: LA Zip: 70809
Project Contact: Peter Smith E-mail: peter.smith@ppmco.com
Phone #: 225-293-7270 Fax #:
Sampler(s) Name(s): Peter Smith Phone #: 225-293-7270

Project Information

Project Name: LA Retirement Systems
Street: 8401 United Plaza Blvd.
City: Baton Rouge State: LA
Project #: 503124 LSI
Client Purchase Order #:
Project Manager: Peter Smith

Billing Information (If different from Report to)

Company Name: PPM Consultants, Inc
Street Address: 7396 Office Park Boulevard
City: Baton Rouge State: LA Zip: 70809
Attention: Peter Smith

Requested Analyses

RUSH

Accutest Sample #	Field ID / Point of Collection	Collection: Date	Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	ZnAcNaOH	HNO3	H2SO4	NONE	DI Water	MEOH	TSP	NaHSO4	ENCORE	OTHER	DRO	PAHs (Hold)	EPH (ON HOLD)	SPLP (ON HOLD)							Matrix Codes / LAB USE ONLY
	SB-1 (17-19)	4-3-14	1018	AB	SO	2						2							✓	✓	✓	✓							2
	SB-1 (21-24)	4-3-14	1022	AB	SO	2						2							✓	✓	✓	✓							2
	SB-2 (17-19)	4-3-14	1142	AB	SO	3						3							✓	✓	✓	✓							3
	SB-2 (21-24)	4-3-14	1145	AB	SO	3						3							✓	✓	✓	✓							3
	SB-3 (13-15)	4-3-14	1345	AB	SO	3						3							✓	✓	✓	✓							3
	SB-3 (21-24)	4-3-14	1350	AB	SO	3						3							✓	✓	✓	✓							3
	SB-4 (17-19)	4-3-14	1620	AB	SO	3						3							✓	✓	✓	✓							3
	SB-4 (26-29)	4-3-14	1625	AB	SO	3						3							✓	✓	✓	✓							3
	SB-5 (11-13)	4-3-14	1720	AB	SO	3						3							✓	✓	✓	✓							3
	SB-5 (17-20)	4-3-14	1725	AB	SO	3						3							✓	✓	✓	✓							3
	SB-2/TW-2	4-4-14	0910	AB	GW	8	3					5							✓	✓	✓								8
	SB-3/TW-3	4-4-14	0925	AB	GW	8	3					5							✓	✓	✓								8

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Turnaround Time (Business days)

- [x] Standard
- [ ] 6 Day *RUSH*
- [ ] 4 Day *RUSH*
- [ ] 3 Day *RUSH*
- [ ] 2 Day *RUSH*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [x] Commercial "B" (Level 2)
- [ ] FULT1 (Level 3+4)
- [ ] REDT1 (Level 3+4)
- [ ] Commercial "C"
- [ ] TRRP
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC & Surrogate Summary

Comments / Special Instructions

* 6 Day T/A * Accutest driven.
YM-18 (12) LXL-2 (12)
RM-40 (7) RM-39 (11)
BM-10 (11) NCL

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	4/4/14 / 1450	1	2	4/4/14	2
3		3	4		4
5		5	Custody Seal # CSON cust	[ ] Intact [ ] Not Intact	Preserved where applicable [x] On Ice [x] Cooler Temp. (3.1 CF)

CHAIN OF CUSTODY

ACCUTEST LABORATORIES
Accutest Gulf Coast (LA)
500 Ambassador Caffery Pkwy Scott, LA 70583
TEL.337-237-4775 FAX: 337-237-7838
www.accutest.com

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #:

Client / Reporting Information

Company Name: PPM Consultants, Inc
Street Address: 7396 Office Park Boulevard
City: Baton Rouge State: LA Zip: 70809
Project Contact: Peter Smith E-mail: peter.smith@ppmco.com
Phone #: 225-293-7270 Fax #:
Sampler(s) Name(s): Peter Smith Phone #: 225-293-7270

Project Information

Project Name: LA Retirement Systems
Street: 8401 United Plaza Blvd.
City: Baton Rouge State: LA
Project #: 503124 LSI
Client Purchase Order #:
Project Manager: Peter Smith

Billing Information (if different from Report to)

Company Name: PPM Consultants, Inc
Street Address: 7396 Office Park Boulevard
City: Baton Rouge State: LA Zip: 70809
Attention: Peter Smith

Requested Analyses

Accutest Sample #	Field ID / Point of Collection	Collection: Date	Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	ZnAcNaOH	HNO3	H2SO4	NONE	DI Water	MEOH	TSP	NaHSO4	ENCORE	OTHER	DRO	PAHs (Hold)	EPH (ON HOLD)	SPLP (ON HOLD)							LAB USE ONLY
	SB-4/TW-4	4-4-14	1050	AB	GW	8	3					5							✓	✓	✓							8	
	SB-5/TW-5	4-4-14	1030	AB	GW	8	3					5							✓	✓	✓							8	

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Turnaround Time (Business days)

- [x] Standard
- [ ] 5 Day *RUSH*
- [ ] 4 Day *RUSH*
- [ ] 3 Day *RUSH*
- [ ] 2 Day *RUSH*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [x] Commercial "B" (Level 2)
- [ ] FULT1 (Level 3+4)
- [ ] REDT1 (Level 3+4)
- [ ] Commercial "C"
- [ ] TRRP
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC & Surrogate Summary

Comments / Special Instructions

* 6 Day T/A *

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		4-4-14/1550	1	2	4/4/14	2
3			3	4		4
5			5			

Custody Seal # | [ ] Intact [ ] Not intact | Preserved where applicable | On Ice | Cooler Temp. 3.1 CF

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

Accutest Gulf Coast (LA)
500 Ambassador Caffery Pkwy Scott, LA 70583
TEL.337-237-4775 FAX: 337-237-7838
www.accutest.com

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #:

Client / Reporting Information

Company Name: PPM Consultants, Inc
Street Address: 7396 Office Park Boulevard
City: Baton Rouge | State: LA | Zip: 70809
Project Contact: Peter Smith | E-mail: peter.smith@ppmco.com
Phone #: 225-293-7270 | Fax #:
Sampler(s) Name(s): Adrian Bain | Phone #: 225-293-7270

Project Information

Project Name: LA Retirement Systems
Street: 8401 United Plaza Blvd.
City: Baton Rouge | State: LA
Project #: 503124 LSI
Client Purchase Order #:
Project Manager: Peter Smith

Billing Information (if different from Report to)

Company Name: PPM Consultants, Inc
Street Address: 7396 Office Park Boulevard
City: Baton Rouge | State: LA | Zip: 70809
Attention: Peter Smith

Requested Analyses

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	Collection: Date	Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	ZnAcNaOH	HNO3	H2SO4	NONE	DI Water	MEOH	TSP	NaHSO4	ENCORE	OTHER	TCLP Benzene	LAB USE ONLY
	TCLP-1	04/03/14	17:20	AB	SO	4						4							X	4

Turnaround Time (Business days)

- [X] Standard
- [ ] 5 Day *RUSH*
- [ ] 4 Day *RUSH*
- [ ] 3 Day *RUSH*
- [ ] 2 Day *RUSH*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Labiink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [X] Commercial "B" (Level 2)
- [ ] FULT1 (Level 3+4)
- [ ] REDT1 (Level 3+4)
- [ ] Commercial "C"
- [ ] TRRP
- [ ] EDD Format
- [ ] Other _____

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC & Surrogate Summary

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		4-4-14 / 1450	Accutest (RS)	Accutest (RS)	4/4/14 1550	Watch
2						
3						
4						
5						

Custody Seal # CS ON COOLER | [ ] Intact | [ ] Not Intact | Preserved where applicable [X] | On Ice [X] | Cooler Temp. 4.1 (CF)

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Case Narrative for:

PPM CONSULTANTS, INC.

Certificate of Analysis Number:

L0045011

Report To:		Project Name:	503124 LSI
PPM CONSULTANTS, INC.		Site:	LA RETIREMENT SYSTEMS
PETER SMITH		Site Address:	
7936 OFFICE PARK BLVD STE. A			
BATON ROUGE		PO Number:	
LA		State:	Louisiana
70809-		State Cert. No.:	02048
ph: (225) 293-7270	fax: (225) 293-7271	Date Reported:	7/15/2014

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.

This report may contain data results from tests performed in the field by non-laboratory personnel. Such data will be indicated within the report using the method code, FIELD, and analyst initials of FT indicating results obtained by a field technician.

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.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

Accutest Gulf Coast is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Rebecca Hebert — 7/15/2014

Rebecca Hebert
Project Manager

Date

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

Version 2.1 - Modified February 11, 2011

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

PPM CONSULTANTS, INC.

Certificate of Analysis Number:

L0045011

Report To: PPM CONSULTANTS, INC.
PETER SMITH
7936 OFFICE PARK BLVD STE. A

BATON ROUGE
LA
70809-
ph: (225) 293-7270 fax: (225) 293-7271

Fax To:

Project Name: 503124 LSI
Site: LA RETIREMENT SYSTEMS
Site Address:

PO Number:
State: Louisiana
State Cert. No.: 02048
Date Reported: 7/15/2014

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-1	L0045011-01	Water	06/27/2014 12:25	7/1/2014 3:45:00 PM		☐
DUPLCIATE	L0045011-02	Water	06/27/2014 0:00	7/1/2014 3:45:00 PM		☐
FIELD BLANK	L0045011-03	Water	06/27/2014 12:30	7/1/2014 3:45:00 PM		☐
TRIP BLANK	L0045011-04	Water	06/27/2014 0:00	7/1/2014 3:45:00 PM		☐

Rebecca Hebert
Project Manager

7/15/2014
Date

Ron Benjamin
Laboratory Director

Karen Rodrigue-Varnado
Quality Assurance Officer

Version 2.1 - Modified February 11, 2011

7/15/2014 3:15:00 PM

Date: Tuesday, July 15, 2014

*****CHRONOLOGY REPORT*****

Workorder	Sample_ID	Matrix	Collected	Received	Analyzed	Test Name	Method
L0045011	L0045011-01A	Water	6/27/2014	7/1/2014 3:45:00 PM			
					7/2/2014 7:45:59 PM		
						BTEX by Method 8021B	SW8021B
					7/2/2014 8:15:52 PM		
						BTEX by Method 8021B	SW8021B
					7/3/2014 11:12:00 AM		
						RECAP Diesel Range Organics by Method 8015C	SW8015C
					7/3/2014 11:36:00 AM		
						RECAP Diesel Range Organics by Method 8015C	SW8015C
					7/8/2014 1:38:00 PM		
						PAHs by EPA 8270D	SW8270D
					7/8/2014 2:00:00 PM		
						PAHs by EPA 8270D	SW8270D
					7/8/2014 2:22:00 PM		
						PAHs by EPA 8270D	SW8270D
					7/8/2014 2:44:00 PM		
						PAHs by EPA 8270D	SW8270D
					7/14/2014 1:31:43 PM		
						Extractable Petroleum Hydrocarbons- RECAP	MA_VPH_EPH

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Date: Tuesday, July 15, 2014

*****SUMMARY REPORT*****

Company: PPM CONSULTANTS, INC. **Project:** 503124 LSI

Site: LA RETIREMENT SYSTEMS

Workorder	Matrix	Client ID	Collected	Compound	Result	Det Limit	Method
L0045011-01A	Water	MW-1	6/27/2014 12:25:00 PM	Diesel Range Organics (C10-C28)	430	7.5 mg/L	SW8015C
L0045011-01B	Water	MW-1	6/27/2014 12:25:00 PM	2-Methylnaphthalene	1.7	0.036 mg/L	SW8270D
				Acenaphthene	ND	0.018 mg/L	SW8270D
				Acenaphthylene	ND	0.018 mg/L	SW8270D
				Anthracene	ND	0.018 mg/L	SW8270D
				Benz(a)anthracene	ND	0.018 mg/L	SW8270D
				Benzo(a)pyrene	ND	0.018 mg/L	SW8270D
				Benzo(b)fluoranthene	ND	0.018 mg/L	SW8270D
				Benzo(k)fluoranthene	ND	0.018 mg/L	SW8270D
				Chrysene	ND	0.018 mg/L	SW8270D
				Dibenz(a,h)anthracene	ND	0.018 mg/L	SW8270D
				Fluoranthene	ND	0.018 mg/L	SW8270D
				Fluorene	0.23	0.018 mg/L	SW8270D
				Indeno(1,2,3-cd)pyrene	ND	0.018 mg/L	SW8270D
				Naphthalene	0.33	0.018 mg/L	SW8270D
				Phenanthrene	0.4	0.018 mg/L	SW8270D
				Pyrene	0.073	0.018 mg/L	SW8270D
L0045011-01C	Water	MW-1	6/27/2014 12:25:00 PM	C10-C12 Aliphatics	21	0.1 mg/L	MA_VPH_EPH
				C10-C12 Aromatics	0.46	0.1 mg/L	MA_VPH_EPH
				C12-C16 Aliphatics	70	0.1 mg/L	MA_VPH_EPH
				C12-C16 Aromatics	15	0.1 mg/L	MA_VPH_EPH
				C16-C21 Aromatics	23	0.1 mg/L	MA_VPH_EPH
				C16-C35 Aliphatics	69	0.1 mg/L	MA_VPH_EPH
				C21-C35 Aromatics	3.5	0.1 mg/L	MA_VPH_EPH
L0045011-02A	Water	DUPLCIATE	6/27/2014	Diesel Range Organics (C10-C28)	110	3 mg/L	SW8015C

Qualifiers:

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

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Date: Tuesday, July 15, 2014

*******SUMMARY REPORT*******

Company: PPM CONSULTANTS, INC. **Project:** 503124 LSI

Site: LA RETIREMENT SYSTEMS

Workorder	Matrix	Client ID	Collected	Compound	Result	Det Limit	Method
L0045011-02B	Water	DUPLCIATE	6/27/2014	2-Methylnaphthalene	2	0.035 mg/L	SW8270D
				Acenaphthene	ND	0.018 mg/L	SW8270D
				Acenaphthylene	ND	0.018 mg/L	SW8270D
				Anthracene	ND	0.018 mg/L	SW8270D
				Benz(a)anthracene	ND	0.018 mg/L	SW8270D
				Benzo(a)pyrene	ND	0.018 mg/L	SW8270D
				Benzo(b)fluoranthene	ND	0.018 mg/L	SW8270D
				Benzo(k)fluoranthene	ND	0.018 mg/L	SW8270D
				Chrysene	ND	0.018 mg/L	SW8270D
				Dibenz(a,h)anthracene	ND	0.018 mg/L	SW8270D
				Fluoranthene	ND	0.018 mg/L	SW8270D
				Fluorene	0.25	0.018 mg/L	SW8270D
				Indeno(1,2,3-cd)pyrene	ND	0.018 mg/L	SW8270D
				Naphthalene	0.37	0.018 mg/L	SW8270D
				Phenanthrene	0.44	0.018 mg/L	SW8270D
				Pyrene	0.081	0.018 mg/L	SW8270D
L0045011-03A	Water	FIELD BLANK	6/27/2014 12:30:00 PM	Benzene	ND	0.001 mg/L	SW8021B
				Toluene	ND	0.001 mg/L	SW8021B
				Ethylbenzene	ND	0.001 mg/L	SW8021B
				Xylenes,Total	ND	0.003 mg/L	SW8021B
				BTEX, Total	ND	0.001 mg/L	SW8021B
				m,p-Xylene	ND	0.002 mg/L	SW8021B
				o-Xylene	ND	0.001 mg/L	SW8021B
L0045011-04A	Water	TRIP BLANK	6/27/2014	Benzene	ND	0.001 mg/L	SW8021B
				Toluene	ND	0.001 mg/L	SW8021B
				Ethylbenzene	ND	0.001 mg/L	SW8021B
				Xylenes,Total	ND	0.003 mg/L	SW8021B
				BTEX, Total	ND	0.001 mg/L	SW8021B
				m,p-Xylene	ND	0.002 mg/L	SW8021B
				o-Xylene	ND	0.001 mg/L	SW8021B

Qualifiers:

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

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: MW-1 **Collected:** 06/27/2014 12:25 **Lab Sample ID:** L0045011-01

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL		Rep.Limit	MCL	Dil. Factor	Date Analyzed	Analyst	Seq. #
EXTRACTABLE PETROLEUM HYDROCARBONS- RECAP						MA_VPH_EPH	Units: mg/L		
C10-C12 Aliphatics	**21**	**>MCL**		**0.1**	**0.15**	**1**	**07/14/14 13:31**	**E_G**	**5634584**
C10-C12 Aromatics	**0.46**	**>MCL**		**0.1**	**0.15**	**1**	**07/14/14 13:31**	**E_G**	**5634532**
C12-C16 Aliphatics	**70**	**>MCL**		**0.1**	**0.15**	**1**	**07/14/14 13:31**	**E_G**	**5634584**
C12-C16 Aromatics	**15**	**>MCL**		**0.1**	**0.15**	**1**	**07/14/14 13:31**	**E_G**	**5634532**
C16-C21 Aromatics	**23**	**>MCL**		**0.1**	**0.15**	**1**	**07/14/14 13:31**	**E_G**	**5634532**
C16-C35 Aliphatics	**69**	**>MCL**		**0.1**	**7.3**	**1**	**07/14/14 13:31**	**E_G**	**5634584**
C21-C35 Aromatics	**3.5**	**>MCL**		**0.1**	**0.15**	**1**	**07/14/14 13:31**	**E_G**	**5634532**
Surr: 2-Fluorobiphenyl	63.5		%	40-140		1	07/14/14 13:31	E_G	5634532
Surr: Chloro-octadecane	60.6		%	40-140		1	07/14/14 13:31	E_G	5634584
Surr: o-Terphenyl	110		%	40-140		1	07/14/14 13:31	E_G	5634532

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3511	07/03/2014 14:30	CNR	1.00

PAHS BY EPA 8270D					MCL	SW8270D	Units: mg/L		
2-Methylnaphthalene	1.7			0.036	200	07/08/14 14:22	LDD	5626813
Acenaphthene	ND			0.018	100	07/08/14 13:38	LDD	5626811
Acenaphthylene	ND			0.018	100	07/08/14 13:38	LDD	5626811
Anthracene	ND			0.018	100	07/08/14 13:38	LDD	5626811
Benz(a)anthracene	ND			0.018	100	07/08/14 13:38	LDD	5626811
Benzo(a)pyrene	ND			0.018	100	07/08/14 13:38	LDD	5626811
Benzo(b)fluoranthene	ND			0.018	100	07/08/14 13:38	LDD	5626811
Benzo(k)fluoranthene	ND			0.018	100	07/08/14 13:38	LDD	5626811
Chrysene	ND			0.018	100	07/08/14 13:38	LDD	5626811
Dibenz(a,h)anthracene	ND			0.018	100	07/08/14 13:38	LDD	5626811
Fluoranthene	ND			0.018	100	07/08/14 13:38	LDD	5626811
Fluorene	0.23			0.018	100	07/08/14 13:38	LDD	5626811
Indeno(1,2,3-cd)pyrene	ND			0.018	100	07/08/14 13:38	LDD	5626811
Naphthalene	0.33			0.018	100	07/08/14 13:38	LDD	5626811
Phenanthrene	0.4			0.018	100	07/08/14 13:38	LDD	5626811
Pyrene	0.073			0.018	100	07/08/14 13:38	LDD	5626811
Surr: 2-Fluorobiphenyl	D		%	60-128	100	07/08/14 13:38	LDD	5626811
Surr: 2-Fluorobiphenyl	D		%	60-128	200	07/08/14 14:22	LDD	5626813
Surr: 4-Terphenyl-d14	D		%	55-136	100	07/08/14 13:38	LDD	5626811
Surr: 4-Terphenyl-d14	D		%	55-136	200	07/08/14 14:22	LDD	5626813
Surr: Nitrobenzene-d5	D		%	53-152	200	07/08/14 14:22	LDD	5626813
Surr: Nitrobenzene-d5	D		%	53-152	100	07/08/14 13:38	LDD	5626811

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - 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

7/15/2014 3:15:12 PM

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: MW-1 **Collected:** 06/27/2014 12:25 **Lab Sample ID:** L0045011-01

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL	Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
PAHS BY EPA 8270D				**MCL**	**SW8270D**	**Units: mg/L**		

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	07/03/2014 10:08	MFF	0.89

RECAP DIESEL RANGE ORGANICS BY METHOD 8015C					**MCL**	**SW8015C**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	**430**	**>MCL**		**7.5**	**0.15**	**50**	**07/03/14 11:12**	**E_G**	**5623636**
Surr: o-Terphenyl	D		%	47-125		50	07/03/14 11:12	E_G	5623636

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3511	07/02/2014 12:04	CNR	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

7/15/2014 3:15:14 PM

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: DUPLCIATE **Collected:** 06/27/2014 0:00 **Lab Sample ID:** L0045011-02

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
PAHS BY EPA 8270D			**MCL**	**SW8270D**	**Units: mg/L**		
2-Methylnaphthalene	2		0.035	200	07/08/14 14:44	LDD	5626814
Acenaphthene	ND		0.018	100	07/08/14 14:00	LDD	5626812
Acenaphthylene	ND		0.018	100	07/08/14 14:00	LDD	5626812
Anthracene	ND		0.018	100	07/08/14 14:00	LDD	5626812
Benz(a)anthracene	ND		0.018	100	07/08/14 14:00	LDD	5626812
Benzo(a)pyrene	ND		0.018	100	07/08/14 14:00	LDD	5626812
Benzo(b)fluoranthene	ND		0.018	100	07/08/14 14:00	LDD	5626812
Benzo(k)fluoranthene	ND		0.018	100	07/08/14 14:00	LDD	5626812
Chrysene	ND		0.018	100	07/08/14 14:00	LDD	5626812
Dibenz(a,h)anthracene	ND		0.018	100	07/08/14 14:00	LDD	5626812
Fluoranthene	ND		0.018	100	07/08/14 14:00	LDD	5626812
Fluorene	0.25		0.018	100	07/08/14 14:00	LDD	5626812
Indeno(1,2,3-cd)pyrene	ND		0.018	100	07/08/14 14:00	LDD	5626812
Naphthalene	0.37		0.018	100	07/08/14 14:00	LDD	5626812
Phenanthrene	0.44		0.018	100	07/08/14 14:00	LDD	5626812
Pyrene	0.081		0.018	100	07/08/14 14:00	LDD	5626812
Surr: 2-Fluorobiphenyl	D		% 60-128	100	07/08/14 14:00	LDD	5626812
Surr: 2-Fluorobiphenyl	D		% 60-128	200	07/08/14 14:44	LDD	5626814
Surr: 4-Terphenyl-d14	D		% 55-136	100	07/08/14 14:00	LDD	5626812
Surr: 4-Terphenyl-d14	D		% 55-136	200	07/08/14 14:44	LDD	5626814
Surr: Nitrobenzene-d5	D		% 53-152	200	07/08/14 14:44	LDD	5626814
Surr: Nitrobenzene-d5	D		% 53-152	100	07/08/14 14:00	LDD	5626812

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	07/03/2014 10:08	MFF	0.88

RECAP DIESEL RANGE ORGANICS BY METHOD 8015C				MCL	SW8015C	Units: mg/L	
Diesel Range Organics (C10-C28)	**110**	**>MCL**	**3**	**0.15**	**20**	**07/03/14 11:36**	**E_G**	**5623637**
Surr: o-Terphenyl	D		% 47-125		20	07/03/14 11:36	E_G	5623637

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3511	07/02/2014 12:04	CNR	1.00

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - 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

7/15/2014 3:15:16 PM

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: FIELD BLANK **Collected:** 06/27/2014 12:30 **Lab Sample ID:** L0045011-03

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
BTEX BY METHOD 8021B			**MCL**	**SW8021B**	**Units: mg/L**		
Benzene	ND		0.001	1	07/02/14 19:45	MRB	5622938
Ethylbenzene	ND		0.001	1	07/02/14 19:45	MRB	5622938
Toluene	ND		0.001	1	07/02/14 19:45	MRB	5622938
m,p-Xylene	ND		0.002	1	07/02/14 19:45	MRB	5622938
o-Xylene	ND		0.001	1	07/02/14 19:45	MRB	5622938
Xylenes,Total	ND		0.003	1	07/02/14 19:45	MRB	5622938
BTEX, Total	ND		0.001	1	07/02/14 19:45	MRB	5622938
Surr: 1,4-Difluorobenzene	94.5		% 51-157	1	07/02/14 19:45	MRB	5622938
Surr: 4-Bromofluorobenzene	106		% 63-153	1	07/02/14 19:45	MRB	5622938

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

7/15/2014 3:15:17 PM

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: TRIP BLANK **Collected:** 06/27/2014 0:00 **Lab Sample ID:** L0045011-04

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
BTEX BY METHOD 8021B			**MCL**	**SW8021B**	**Units: mg/L**		
Benzene	ND		0.001	1	07/02/14 20:15	MRB	5622939
Ethylbenzene	ND		0.001	1	07/02/14 20:15	MRB	5622939
Toluene	ND		0.001	1	07/02/14 20:15	MRB	5622939
m,p-Xylene	ND		0.002	1	07/02/14 20:15	MRB	5622939
o-Xylene	ND		0.001	1	07/02/14 20:15	MRB	5622939
Xylenes,Total	ND		0.003	1	07/02/14 20:15	MRB	5622939
BTEX, Total	ND		0.001	1	07/02/14 20:15	MRB	5622939
Surr: 1,4-Difluorobenzene	93.8		% 51-157	1	07/02/14 20:15	MRB	5622939
Surr: 4-Bromofluorobenzene	106		% 63-153	1	07/02/14 20:15	MRB	5622939

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

7/15/2014 3:15:18 PM

Quality Control Documentation

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124 LSI

Analysis: RECAP Diesel Range Organics by Method 8015C **WorkOrder:** L0045011
Method: SW8015C **Lab Batch ID:** 133129

Method Blank

RunID: TPHC_140702A-5623278 Units: mg/L
Analysis Date: 07/02/2014 18:34 Analyst: E_G
Preparation Date: 07/02/2014 12:04 Prep By: CNR Method: SW3511

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0045011-01A	MW-1
L0045011-02A	DUPLCIATE

Analyte	Result	Rep Limit
Diesel Range Organics (C10-C28)	ND	0.15
Surr: o-Terphenyl	87.0	47-125

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

RunID: TPHC_140702A-5623279 Units: mg/L
Analysis Date: 07/02/2014 18:58 Analyst: E_G
Preparation Date: 07/02/2014 12:04 Prep By: CNR Method: SW3511

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Diesel Range Organics (C10-C28)	6.00	4.88	81.3	6.00	4.53	75.6	7.3	26	21	140
Surr: o-Terphenyl	0.100	0.120	119	0.100	0.110	110	8.1	30	47	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.

7/15/2014 3:15:30 PM

Version 2.1 - Modified February 11, 2011

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124 LSI

Analysis: Extractable Petroleum Hydrocarbons- RECAP **WorkOrder:** L0045011
Method: MA_VPH_EPH **Lab Batch ID:** 133172

Method Blank

RunID: TPHA_140714D-5634581 Units: mg/L
Analysis Date: 07/14/2014 12:05 Analyst: E_G
Preparation Date: 07/03/2014 14:30 Prep By: CNR Method: SW3511

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0045011-01C	MW-1

Analyte	Result	Rep Limit
C10-C12 Aliphatics	ND	0.10
C12-C16 Aliphatics	ND	0.10
C16-C35 Aliphatics	ND	0.10
Surr: Chloro-octadecane	57.6	40-140

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

RunID: TPHA_140714D-5634582 Units: mg/L
Analysis Date: 07/14/2014 12:34 Analyst: E_G
Preparation Date: 07/03/2014 14:30 Prep By: CNR Method: SW3511

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
C10-C12 Aliphatics	0.500	0.314	62.8	0.500	0.307	61.4	2.3	25	40	140
C12-C16 Aliphatics	1.00	0.629	62.9	1.00	0.624	62.4	0.8	25	40	140
C16-C35 Aliphatics	4.50	2.58	57.4	4.50	2.58	57.4	0.1	25	40	140
Surr: Chloro-octadecane	0.400	0.253	63.3	0.400	0.254	63.6	0.3	30	40	140

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.

7/15/2014 3:15:31 PM

Version 2.1 - Modified February 11, 2011

ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124 LSI

Analysis: Extractable Petroleum Hydrocarbons- RECAP
Method: MA_VPH_EPH
WorkOrder: L0045011
Lab Batch ID: 133172

Method Blank

RunID: TPHA_140714C-5634529 Units: mg/L
Analysis Date: 07/14/2014 12:05 Analyst: E_G
Preparation Date: 07/03/2014 14:30 Prep By: CNR Method: SW3511

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0045011-01C	MW-1

Analyte	Result	Rep Limit
C10-C12 Aromatics	ND	0.10
C12-C16 Aromatics	ND	0.10
C16-C21 Aromatics	ND	0.10
C21-C35 Aromatics	ND	0.10
Surr: 2-Fluorobiphenyl	59.0	40-140
Surr: o-Terphenyl	66.2	40-140

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

RunID: TPHA_140714C-5634530 Units: mg/L
Analysis Date: 07/14/2014 12:34 Analyst: E_G
Preparation Date: 07/03/2014 14:30 Prep By: CNR Method: SW3511

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
C10-C12 Aromatics	0.500	0.261	52.1	0.500	0.267	53.4	2.4	25	40	140
C12-C16 Aromatics	1.50	0.984	65.6	1.50	0.976	65.0	0.8	25	40	140
C16-C21 Aromatics	2.50	1.30	51.9	2.50	1.30	52.0	0.3	25	40	140
C21-C35 Aromatics	4.00	1.61	40.4	4.00	1.80	45.0	10.7	25	40	140
Surr: 2-Fluorobiphenyl	2.00	1.10	55.0	2.00	1.16	57.9	5.2	30	40	140
Surr: o-Terphenyl	0.400	0.229	57.1	0.400	0.236	59.0	3.2	30	40	140

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.

7/15/2014 3:15:33 PM

Version 2.1 - Modified February 11, 2011

ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124 LSI

Analysis: BTEX by Method 8021B
Method: SW8021B
WorkOrder: L0045011
Lab Batch ID: R337438

Method Blank

RunID: GCLC_140702A-5622927 Units: mg/L
Analysis Date: 07/02/2014 11:51 Analyst: MRB

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0045011-03A	FIELD BLANK
L0045011-04A	TRIP BLANK

Analyte	Result	Rep Limit
Benzene	ND	0.0010
Ethylbenzene	ND	0.0010
Toluene	ND	0.0010
m,p-Xylene	ND	0.0020
o-Xylene	ND	0.0010
BTEX, Total	ND	0.0010
Xylenes,Total	ND	0.0030
Surr: 1,4-Difluorobenzene	95.3	51-157
Surr: 4-Bromofluorobenzene	104.3	63-153

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

RunID: GCLC_140702A-5622925 Units: mg/L
Analysis Date: 07/02/2014 10:52 Analyst: MRB

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	0.0500	0.0530	106	0.0500	0.0503	101	5.1	8	80	121
Ethylbenzene	0.0500	0.0528	106	0.0500	0.0499	99.8	5.6	9	83	119
Toluene	0.0500	0.0542	108	0.0500	0.0514	103	5.4	8	85	118
m,p-Xylene	0.100	0.105	105	0.100	0.0997	99.7	5.4	9	83	117
o-Xylene	0.0500	0.0514	103	0.0500	0.0493	98.5	4.2	9	84	116
Xylenes,Total	0.1500	0.1564	104.4	0.1500	0.1490	99.30	5.0	8	84	116
Surr: 1,4-Difluorobenzene	30.0	29.2	97.3	30.0	28.7	95.6	1.7	30	51	157
Surr: 4-Bromofluorobenzene	30.0	32.3	108	30.0	32.0	107	0.9	30	63	153

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

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.

7/15/2014 3:15:34 PM

Version 2.1 - Modified February 11, 2011

ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124 LSI

Analysis: **BTEX by Method 8021B** **WorkOrder:** **L0045011**
Method: **SW8021B** **Lab Batch ID:** **R337438**

Sample Spiked: L0044909-12
RunID: GCLC_140702A-5622930 Units: mg/L
Analysis Date: 07/02/2014 14:46 Analyst: MRB

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	9.08	25	69.1	240 *	25	69.0	240 *	0.220	8	80	121
Ethylbenzene	2.49	25	36.8	137 *	25	36.5	136 *	0.825	9	83	119
Toluene	10.5	25	77.8	269 *	25	77.0	266 *	1.13	8	85	118
m,p-Xylene	7.85	50	88.3	161 *	50	86.8	158 *	1.70	9	83	117
o-Xylene	3.28	25	40.9	151 *	25	40.2	148 *	1.69	9	84	116
Xylenes,Total	11.13	75	129.2	157.5 *	75	127.0	154.6 *	1.699	8	84	116
Surr: 1,4-Difluorobenzene	ND	15000	17900	119	15000	17800	119	0.373	30	51	157
Surr: 4-Bromofluorobenzene	ND	15000	16500	110	15000	16500	110	0.0558	30	63	153

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.

7/15/2014 3:15:35 PM

Version 2.1 - Modified February 11, 2011

ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124 LSI

Analysis: PAHs by EPA 8270D
Method: SW8270D

WorkOrder: L0045011
Lab Batch ID: 133161

Method Blank

RunID: GCMS1L_140707A-5626186 Units: mg/L
Analysis Date: 07/07/2014 16:50 Analyst: LDD
Preparation Date: 07/03/2014 10:08 Prep By: MFF Method: SW3510C

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0045011-01B	MW-1
L0045011-02B	DUPLCIATE

Analyte	Result	Rep Limit
2-Methylnaphthalene	ND	0.00020
Acenaphthene	ND	0.00020
Acenaphthylene	ND	0.00020
Anthracene	ND	0.00020
Benz(a)anthracene	ND	0.00020
Benzo(a)pyrene	ND	0.00020
Benzo(b)fluoranthene	ND	0.00020
Benzo(k)fluoranthene	ND	0.00020
Chrysene	ND	0.00020
Dibenz(a,h)anthracene	ND	0.00020
Fluoranthene	ND	0.00020
Fluorene	ND	0.00020
Indeno(1,2,3-cd)pyrene	ND	0.00020
Naphthalene	ND	0.00020
Phenanthrene	ND	0.00020
Pyrene	ND	0.00020
Surr: 2-Fluorobiphenyl	87.3	41-124
Surr: 4-Terphenyl-d14	100.0	36-129
Surr: Nitrobenzene-d5	80.1	40-134

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

RunID: GCMS1L_140707A-562618 Units: mg/L
Analysis Date: 07/07/2014 17:12 Analyst: LDD
Preparation Date: 07/03/2014 10:08 Prep By: MFF Method: SW3510C

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
1-Methylnaphthalene	0.00500	0.00452	90.4	0.00500	0.00459	91.9	1.6	16	56	120
2-Methylnaphthalene	0.00500	0.00446	89.3	0.00500	0.00452	90.3	1.1	17	58	119
Acenaphthene	0.00500	0.00468	93.5	0.00500	0.00469	93.9	0.4	15	58	114
Acenaphthylene	0.00500	0.00496	99.2	0.00500	0.00514	103	3.6	14	57	127
Anthracene	0.00500	0.00455	91.0	0.00500	0.00487	97.4	6.8	17	57	117
Benz(a)anthracene	0.00500	0.00428	85.5	0.00500	0.00438	87.6	2.3	27	54	116

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.

7/15/2014 3:15:37 PM

Version 2.1 - Modified February 11, 2011

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124 LSI

Analysis: PAHs by EPA 8270D **WorkOrder:** L0045011
Method: SW8270D **Lab Batch ID:** 133161

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

RunID: GCMS1L_140707A-562618 Units: mg/L
Analysis Date: 07/07/2014 17:12 Analyst: LDD
Preparation Date: 07/03/2014 10:08 Prep By: MFF Method: SW3510C

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Benzo(a)pyrene	0.00500	0.00440	87.9	0.00500	0.00465	93.0	5.6	24	55	126
Benzo(b)fluoranthene	0.00500	0.00469	93.8	0.00500	0.00440	88.0	6.4	31	52	124
Benzo(g,h,i)perylene	0.00500	0.00439	87.8	0.00500	0.00441	88.3	0.5	23	52	127
Benzo(k)fluoranthene	0.00500	0.00435	86.9	0.00500	0.00500	100	14.0	28	54	126
Chrysene	0.00500	0.00463	92.5	0.00500	0.00460	92.0	0.5	22	55	116
Dibenz(a,h)anthracene	0.00500	0.00435	87.0	0.00500	0.00441	88.3	1.4	33	46	129
Fluoranthene	0.00500	0.00483	96.6	0.00500	0.00502	100	3.8	21	56	124
Fluorene	0.00500	0.00483	96.7	0.00500	0.00495	99.0	2.3	16	54	120
Indeno(1,2,3-cd)pyrene	0.00500	0.00441	88.2	0.00500	0.00446	89.1	1.1	24	51	130
Naphthalene	0.00500	0.00428	85.6	0.00500	0.00445	89.1	4.0	14	58	114
Phenanthrene	0.00500	0.00455	91.0	0.00500	0.00460	92.0	1.0	16	56	115
Pyrene	0.00500	0.00491	98.2	0.00500	0.00495	98.9	0.8	21	55	122
Surr: 2-Fluorobiphenyl	5.00	4.38	87.7	5.00	4.45	89.0	1.6	30	41	124
Surr: 4-Terphenyl-d14	5.00	4.66	93.2	5.00	4.66	93.1	0.0	30	36	129
Surr: Nitrobenzene-d5	5.00	4.28	85.5	5.00	4.21	84.2	1.5	30	40	134

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.
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7/15/2014 3:15:37 PM

Version 2.1 - Modified February 11, 2011

Sample Receipt Checklist

And

Chain of Custody

ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Sample Receipt Checklist

Workorder:	**L0045011**	Received By:	**MAR**
Date and Time Received:	**7/1/2014 3:45:00 PM**	Carrier name:	**Accutest-Delivery**
Temperature:	**4.2°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**

Accutest Representative: _____ **Contact Date & Time:** _____

Client Name Contacted: _____

Non Conformance Issues: _____

Client Instructions: _____

CHAIN OF CUSTODY

ACCUTEST LABORATORIES
Accutest Gulf Coast (LA)
500 Ambassador Caffery Pkwy Scott, LA 70583
TEL.337-237-4775 FAX: 337-237-7838
www.accutest.com

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: L004 5011

Client / Reporting Information

Company Name: PPM Consultants, Inc
Street Address: 7396 Office Park Boulevard
City: Baton Rouge State: LA Zip: 70809
Project Contact: Peter Smith E-mail: peter.smith@ppmco.com
Phone #: 225-293-7270 Fax #:
Sampler(s) Name(s): Adrian Bain Phone #: 225-293-7270

Project Information

Project Name: LA Retirement Systems Building
Street: 8401 United Plaza Blvd.
City: Baton Rouge State: LA
Project #: 503124 LSI
Client Purchase Order #:
Project Manager: Peter Smith

Billing Information (if different from Report to)

Company Name: PPM Consultants, Inc
Street Address: 7396 Office Park Boulevard
City: Baton Rouge State: LA Zip: 70809
Attention: Peter Smith

Requested Analyses

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	Collection: Date	Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	ZnAcNaOH	HNO3	H2SO4	NONE	DI Water	MEOH	TSP	NaHSO4	ENCORE	OTHER	TPH-DRO	PAH	EPH (Hold)	BTEX						LAB USE ONLY
	MW-1	06/27/14	1225	AB	GW	8	3					5							X	X	X							8	
	Duplicate	06/27/14	N/A	AB	GW	5						5							X	X								5	
	Field Blank	06/27/14	1230	AB	GW	3																X						3	
	Trip Blank	6/27/2014	LAB	AB	GW	3																X						3	

Turnaround Time (Business days)

- [X] Standard
- [ ] 5 Day *RUSH*
- [ ] 4 Day *RUSH*
- [ ] 3 Day *RUSH*
- [ ] 2 Day *RUSH*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date: RS-24 (11) RS-275 (11)

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [X] Commercial "B" (Level 2)
- [ ] FULT1 (Level 3+4)
- [ ] REDT1 (Level 3+4)
- [ ] Commercial "C"
- [ ] TRRP
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC & Surrogate Summary

Comments / Special Instructions

STANDARD PPM RATES APPLY RS-810 (13)

Received at Baton Rouge Service Center BS-126 (1)

Page 21 of 2

Sample Custody must be documented below each time samples change possession, including courier delivery.

1 Relinquished by Sampler:	Date Time: 7/01/14	Received By: 1	Relinquished By: 2	Date Time: 7/1/14	Received By: 2 Renee Sam
3 Relinquished by Sampler: Renee Sam 7/1/14	Date Time: 1545	Received By: 3 Mark Reed	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by:	Date Time:	Received By:	Custody Seal #	Intact	Preserved where applicable: On Ice, Cooler Temp.

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Case Narrative for:

PPM CONSULTANTS, INC.

Certificate of Analysis Number:

L0041795

Report To:		Project Name:	503124
PPM CONSULTANTS, INC. ADRIAN BAIN 7936 OFFICE PARK BLVD STE. A BATON ROUGE LA 70809- ph: (225) 293-7270 fax: (225) 293-7271		Site:	LA RETIREMENT SYSTEMS
		Site Address:	
		PO Number:	
		State:	Louisiana
		State Cert. No.:	02048
		Date Reported:	4/28/2014

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.

This report may contain data results from tests performed in the field by non-laboratory personnel. Such data will be indicated within the report using the method code, FIELD, and analyst initials of FT indicating results obtained by a field technician.

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.

Accutest Gulf Coast is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

Rebecca Hebert — 4/28/2014

Rebecca Hebert
Project Manager

Date

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

Version 2.1 - Modified February 11, 2011

Date: Monday, April 28, 2014

*****CHRONOLOGY REPORT*****

Workorder	Sample_ID	Matrix	Collected	Received	Analyzed	Test Name	Method
L0041795	L0041795-01A	Soil	4/9/2014 11:48:00 A	4/11/2014 4:03:00 PM			
					4/13/2014 10:12:00 PM	RECAP Diesel Range Organics by Method 8015C	SW8015C
					4/13/2014 10:32:00 PM	RECAP Diesel Range Organics by Method 8015C	SW8015C
					4/13/2014 11:11:00 PM	RECAP Diesel Range Organics by Method 8015C	SW8015C
					4/14/2014 3:46:00 AM	RECAP Diesel Range Organics by Method 8015C	SW8015C
					4/14/2014 5:20:00 AM	RECAP Diesel Range Organics by Method 8015C	SW8015C
					4/14/2014 9:31:00 AM	RECAP Diesel Range Organics by Method 8015C	SW8015C
					4/15/2014 4:08:00 PM	RECAP PAH by EPA 8270D	SW8270D
					4/15/2014 4:33:00 PM	RECAP PAH by EPA 8270D	SW8270D
					4/15/2014 4:57:00 PM	RECAP PAH by EPA 8270D	SW8270D
					4/15/2014 5:21:00 PM	RECAP PAH by EPA 8270D	SW8270D
					4/16/2014 2:19:00 PM	RECAP PAH by EPA 8270D	SW8270D
					4/16/2014 2:44:00 PM	RECAP PAH by EPA 8270D	SW8270D
					4/18/2014 3:23:00 AM	PAHs by EPA 8270D	SW8270D
					4/18/2014 2:52:00 PM	PAHs by EPA 8270D	SW8270D
					4/22/2014 8:14:01 PM	Extractable Petroleum Hydrocarbons- RECAP	MA_VPH_EPH
					4/24/2014 12:56:45 PM	Extractable Petroleum Hydrocarbons- RECAP	MA_VPH_EPH
					4/24/2014 10:56:00 PM	SPLP Semivolatile Organics by EPA 8270D	SW8270D

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Date: Monday, April 28, 2014

*****SUMMARY REPORT*****

Company: PPM CONSULTANTS, INC. **Project:** 503124

Site: LA RETIREMENT SYSTEMS

Workorder	Matrix	Client ID	Collected	Compound	Result	Det Limit	Method
L0041795-01A	Soil	SB-6 (11-13)	4/9/2014 11:48:00 AM	Diesel Range Organics (C10-C28)	710	5 mg/Kg	SW8015C
				2-Methylnaphthalene	6	0.16 mg/Kg	SW8270D
				Acenaphthene	ND	0.033 mg/Kg	SW8270D
				Acenaphthylene	ND	0.033 mg/Kg	SW8270D
				Anthracene	ND	0.033 mg/Kg	SW8270D
				Benz(a)anthracene	ND	0.033 mg/Kg	SW8270D
				Benzo(a)pyrene	ND	0.033 mg/Kg	SW8270D
				Benzo(b)fluoranthene	ND	0.033 mg/Kg	SW8270D
				Benzo(k)fluoranthene	ND	0.033 mg/Kg	SW8270D
				Chrysene	0.037	0.033 mg/Kg	SW8270D
				Dibenz(a,h)anthracene	ND	0.033 mg/Kg	SW8270D
				Fluoranthene	ND	0.033 mg/Kg	SW8270D
				Fluorene	0.69	0.033 mg/Kg	SW8270D
				Indeno(1,2,3-cd)pyrene	ND	0.033 mg/Kg	SW8270D
				Naphthalene	1.2	0.033 mg/Kg	SW8270D
				Phenanthrene	1.9	0.033 mg/Kg	SW8270D
				Pyrene	0.32	0.033 mg/Kg	SW8270D
L0041795-02A	Soil	SB-6 (27-30)	4/9/2014 11:52:00 AM	Diesel Range Organics (C10-C28)	ND	5 mg/Kg	SW8015C
				2-Methylnaphthalene	ND	0.033 mg/Kg	SW8270D
				Acenaphthene	ND	0.033 mg/Kg	SW8270D
				Acenaphthylene	ND	0.033 mg/Kg	SW8270D
				Anthracene	ND	0.033 mg/Kg	SW8270D
				Benz(a)anthracene	ND	0.033 mg/Kg	SW8270D
				Benzo(a)pyrene	ND	0.033 mg/Kg	SW8270D
				Benzo(b)fluoranthene	ND	0.033 mg/Kg	SW8270D
				Benzo(k)fluoranthene	ND	0.033 mg/Kg	SW8270D
				Chrysene	ND	0.033 mg/Kg	SW8270D
				Dibenz(a,h)anthracene	ND	0.033 mg/Kg	SW8270D
				Fluoranthene	ND	0.033 mg/Kg	SW8270D
				Fluorene	ND	0.033 mg/Kg	SW8270D
				Indeno(1,2,3-cd)pyrene	ND	0.033 mg/Kg	SW8270D
				Naphthalene	ND	0.033 mg/Kg	SW8270D
				Phenanthrene	ND	0.033 mg/Kg	SW8270D
				Pyrene	ND	0.033 mg/Kg	SW8270D

Qualifiers:

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

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Date: Monday, April 28, 2014

*******SUMMARY REPORT*******

Company: PPM CONSULTANTS, INC. **Project:** 503124
Site: LA RETIREMENT SYSTEMS

Workorder	Matrix	Client ID	Collected	Compound	Result	Det Limit	Method
L0041795-03A	Soil	SB-7 (11-13)	4/9/2014 3:20:00 PM	C10-C12 Aliphatics	110	1.7 mg/Kg	MA_VPH_EPH
				C10-C12 Aromatics	ND	1.7 mg/Kg	MA_VPH_EPH
				C12-C16 Aliphatics	870	3.3 mg/Kg	MA_VPH_EPH
				C12-C16 Aromatics	45	5 mg/Kg	MA_VPH_EPH
				C16-C21 Aromatics	280	8.3 mg/Kg	MA_VPH_EPH
				C16-C35 Aliphatics	870	10 mg/Kg	MA_VPH_EPH
				C21-C35 Aromatics	53	10 mg/Kg	MA_VPH_EPH
				Diesel Range Organics (C10-C28)	1300	50 mg/Kg	SW8015C
				2-Methylnaphthalene	0.016	0.0054 mg/L	SW8270D
				2-Methylnaphthalene	7.3	0.17 mg/Kg	SW8270D
				Acenaphthene	ND	0.033 mg/Kg	SW8270D
				Acenaphthylene	ND	0.033 mg/Kg	SW8270D
				Anthracene	ND	0.033 mg/Kg	SW8270D
				Benz(a)anthracene	ND	0.033 mg/Kg	SW8270D
				Benzo(a)pyrene	ND	0.033 mg/Kg	SW8270D
				Benzo(b)fluoranthene	ND	0.033 mg/Kg	SW8270D
				Benzo(k)fluoranthene	ND	0.033 mg/Kg	SW8270D
				Chrysene	ND	0.033 mg/Kg	SW8270D
				Dibenz(a,h)anthracene	ND	0.033 mg/Kg	SW8270D
				Fluoranthene	0.11	0.033 mg/Kg	SW8270D
				Fluorene	0.88	0.033 mg/Kg	SW8270D
				Indeno(1,2,3-cd)pyrene	ND	0.033 mg/Kg	SW8270D
				Naphthalene	1.4	0.033 mg/Kg	SW8270D
				Phenanthrene	2.5	0.033 mg/Kg	SW8270D
				Pyrene	0.44	0.033 mg/Kg	SW8270D

Qualifiers:

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

ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Date: Monday, April 28, 2014

*******SUMMARY REPORT*******

Company: PPM CONSULTANTS, INC. **Project:** 503124

Site: LA RETIREMENT SYSTEMS

Workorder	Matrix	Client ID	Collected	Compound	Result	Det Limit	Method
L0041795-04A	Soil	SB-7 (27-30)	4/9/2014 3:24:00 PM	Diesel Range Organics (C10-C28)	ND	5 mg/Kg	SW8015C
				2-Methylnaphthalene	ND	0.033 mg/Kg	SW8270D
				Acenaphthene	ND	0.033 mg/Kg	SW8270D
				Acenaphthylene	ND	0.033 mg/Kg	SW8270D
				Anthracene	ND	0.033 mg/Kg	SW8270D
				Benz(a)anthracene	ND	0.033 mg/Kg	SW8270D
				Benzo(a)pyrene	ND	0.033 mg/Kg	SW8270D
				Benzo(b)fluoranthene	ND	0.033 mg/Kg	SW8270D
				Benzo(k)fluoranthene	ND	0.033 mg/Kg	SW8270D
				Chrysene	ND	0.033 mg/Kg	SW8270D
				Dibenz(a,h)anthracene	ND	0.033 mg/Kg	SW8270D
				Fluoranthene	ND	0.033 mg/Kg	SW8270D
				Fluorene	ND	0.033 mg/Kg	SW8270D
				Indeno(1,2,3-cd)pyrene	ND	0.033 mg/Kg	SW8270D
				Naphthalene	ND	0.033 mg/Kg	SW8270D
				Phenanthrene	ND	0.033 mg/Kg	SW8270D
				Pyrene	ND	0.033 mg/Kg	SW8270D
L0041795-05A	Water	SB-6/TW-6	4/10/2014 9:50:00 AM	Diesel Range Organics (C10-C28)	ND	0.15 mg/L	SW8015C
L0041795-05B	Water	SB-6/TW-6	4/10/2014 9:50:00 AM	2-Methylnaphthalene	0.0072	0.00018 mg/L	SW8270D
				Acenaphthene	0.00051	0.00018 mg/L	SW8270D
				Acenaphthylene	ND	0.00018 mg/L	SW8270D
				Anthracene	ND	0.00018 mg/L	SW8270D
				Benz(a)anthracene	ND	0.00018 mg/L	SW8270D
				Benzo(a)pyrene	ND	0.00018 mg/L	SW8270D
				Benzo(b)fluoranthene	ND	0.00018 mg/L	SW8270D
				Benzo(k)fluoranthene	ND	0.00018 mg/L	SW8270D
				Chrysene	ND	0.00018 mg/L	SW8270D
				Dibenz(a,h)anthracene	ND	0.00018 mg/L	SW8270D
				Fluoranthene	ND	0.00018 mg/L	SW8270D
				Fluorene	0.00062	0.00018 mg/L	SW8270D
				Indeno(1,2,3-cd)pyrene	ND	0.00018 mg/L	SW8270D
				Naphthalene	0.0045	0.00018 mg/L	SW8270D
				Phenanthrene	0.00069	0.00018 mg/L	SW8270D
				Pyrene	ND	0.00018 mg/L	SW8270D
L0041795-06A	Water	SB-7/TW-7	4/10/2014 9:20:00 AM	Diesel Range Organics (C10-C28)	16	0.15 mg/L	SW8015C

Qualifiers:

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>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Date: Monday, April 28, 2014

*******SUMMARY REPORT*******

Company: PPM CONSULTANTS, INC. **Project:** 503124

Site: LA RETIREMENT SYSTEMS

Workorder	Matrix	Client ID	Collected	Compound	Result	Det Limit	Method
L0041795-06B	Water	SB-7/TW-7	4/10/2014 9:20:00 AM	2-Methylnaphthalene	0.25	0.0091 mg/L	SW8270D
				Acenaphthene	ND	0.0091 mg/L	SW8270D
				Acenaphthylene	ND	0.0091 mg/L	SW8270D
				Anthracene	ND	0.0091 mg/L	SW8270D
				Benz(a)anthracene	ND	0.0091 mg/L	SW8270D
				Benzo(a)pyrene	ND	0.0091 mg/L	SW8270D
				Benzo(b)fluoranthene	ND	0.0091 mg/L	SW8270D
				Benzo(k)fluoranthene	ND	0.0091 mg/L	SW8270D
				Chrysene	ND	0.0091 mg/L	SW8270D
				Dibenz(a,h)anthracene	ND	0.0091 mg/L	SW8270D
				Fluoranthene	ND	0.0091 mg/L	SW8270D
				Fluorene	0.021	0.0091 mg/L	SW8270D
				Indeno(1,2,3-cd)pyrene	ND	0.0091 mg/L	SW8270D
				Naphthalene	0.05	0.0091 mg/L	SW8270D
				Phenanthrene	0.044	0.0091 mg/L	SW8270D
				Pyrene	0.011	0.0091 mg/L	SW8270D
L0041795-06C	Water	SB-7/TW-7	4/10/2014 9:20:00 AM	C10-C12 Aliphatics	0.14	0.1 mg/L	MA_VPH_EPH
				C10-C12 Aromatics	ND	0.1 mg/L	MA_VPH_EPH
				C12-C16 Aliphatics	0.1	0.1 mg/L	MA_VPH_EPH
				C12-C16 Aromatics	ND	0.1 mg/L	MA_VPH_EPH
				C16-C21 Aromatics	ND	0.1 mg/L	MA_VPH_EPH
				C16-C35 Aliphatics	ND	0.1 mg/L	MA_VPH_EPH
				C21-C35 Aromatics	ND	0.1 mg/L	MA_VPH_EPH

Qualifiers:

ND/U - Not Detected at the Reporting Limit
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MI - Matrix Interference

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

PPM CONSULTANTS, INC.

Certificate of Analysis Number:

L0041795

Report To: PPM CONSULTANTS, INC.
ADRIAN BAIN
7936 OFFICE PARK BLVD STE. A

BATON ROUGE
LA
70809-
ph: (225) 293-7270 fax: (225) 293-7271

Fax To:

Project Name: 503124
Site: LA RETIREMENT SYSTEMS
Site Address:

PO Number:
State: Louisiana
State Cert. No.: 02048
Date Reported: 4/28/2014

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
SB-6 (11-13)	L0041795-01	Soil	04/09/2014 11:48	4/11/2014 4:03:00 PM		☐
SB-6 (27-30)	L0041795-02	Soil	04/09/2014 11:52	4/11/2014 4:03:00 PM		☐
SB-7 (11-13)	L0041795-03	Soil	04/09/2014 15:20	4/11/2014 4:03:00 PM		☐
SB-7 (27-30)	L0041795-04	Soil	04/09/2014 15:24	4/11/2014 4:03:00 PM		☐
SB-6/TW-6	L0041795-05	Water	04/10/2014 9:50	4/11/2014 4:03:00 PM		☐
SB-7/TW-7	L0041795-06	Water	04/10/2014 9:20	4/11/2014 4:03:00 PM		☐

Rebecca Hebert
Project Manager

4/28/2014
Date

Ron Benjamin
Laboratory Director

Karen Rodrigue-Varnado
Quality Assurance Officer

Version 2.1 - Modified February 11, 2011

4/28/2014 4:48:06 PM

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: SB-6 (11-13) **Collected:** 04/09/2014 11:48 **Lab Sample ID:** L0041795-01

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL		Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
RECAP DIESEL RANGE ORGANICS BY METHOD 8015C					**MCL**	**SW8015C**	**Units: mg/Kg**		
Diesel Range Organics (C10-C28)	**710**	**>MCL**		**5**	**65**	**1**	**04/13/14 22:12**	**JT1**	**5486956**
Surr: o-Terphenyl	92.7		%	38-135		1	04/13/14 22:12	JT1	5486956

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3546	04/12/2014 11:04	CT	1.00

RECAP PAH BY EPA 8270D					MCL	SW8270D	Units: mg/Kg		
2-Methylnaphthalene	**6**	**>MCL**		**0.16**	**1.7**	**5**	**04/16/14 14:19**	**IHK**	**5492336**
Acenaphthene	ND			0.033	220	1	04/15/14 16:08	LDD	5490398
Acenaphthylene	ND			0.033	88	1	04/15/14 16:08	LDD	5490398
Anthracene	ND			0.033	120	1	04/15/14 16:08	LDD	5490398
Benz(a)anthracene	ND			0.033	0.62	1	04/15/14 16:08	LDD	5490398
Benzo(a)pyrene	ND			0.033	0.33	1	04/15/14 16:08	LDD	5490398
Benzo(b)fluoranthene	ND			0.033	0.62	1	04/15/14 16:08	LDD	5490398
Benzo(k)fluoranthene	ND			0.033	6.2	1	04/15/14 16:08	LDD	5490398
Chrysene	0.037			0.033	62	1	04/15/14 16:08	LDD	5490398
Dibenz(a,h)anthracene	ND			0.033	0.33	1	04/15/14 16:08	LDD	5490398
Fluoranthene	ND			0.033	220	1	04/15/14 16:08	LDD	5490398
Fluorene	0.69			0.033	230	1	04/15/14 16:08	LDD	5490398
Indeno(1,2,3-cd)pyrene	ND			0.033	0.62	1	04/15/14 16:08	LDD	5490398
Naphthalene	1.2			0.033	1.5	1	04/15/14 16:08	LDD	5490398
Phenanthrene	1.9			0.033	660	1	04/15/14 16:08	LDD	5490398
Pyrene	0.32			0.033	230	1	04/15/14 16:08	LDD	5490398
Surr: 2-Fluorobiphenyl	82.7		%	43-128		1	04/15/14 16:08	LDD	5490398
Surr: 2-Fluorobiphenyl	80.1		%	43-128		5	04/16/14 14:19	IHK	5492336
Surr: 4-Terphenyl-d14	102		%	51-136		1	04/15/14 16:08	LDD	5490398
Surr: 4-Terphenyl-d14	91.8		%	51-136		5	04/16/14 14:19	IHK	5492336
Surr: Nitrobenzene-d5	82.5		%	47-134		5	04/16/14 14:19	IHK	5492336
Surr: Nitrobenzene-d5	92.1		%	47-134		1	04/15/14 16:08	LDD	5490398

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3546	04/12/2014 11:06	DWB	0.99
SW3546	04/12/2014 11:06	DWB	0.99

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - 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

4/28/2014 4:48:29 PM

ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: SB-6 (27-30) **Collected:** 04/09/2014 11:52 **Lab Sample ID:** L0041795-02

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL	Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
RECAP DIESEL RANGE ORGANICS BY METHOD 8015C				**MCL**	**SW8015C**	**Units: mg/Kg**		
Diesel Range Organics (C10-C28)	ND		5	65	1	04/13/14 22:32	JT1	5486957
Surr: o-Terphenyl	68.6		% 38-135		1	04/13/14 22:32	JT1	5486957

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3546	04/12/2014 11:04	CT	1.00

RECAP PAH BY EPA 8270D				**MCL**	**SW8270D**	**Units: mg/Kg**		
2-Methylnaphthalene	ND		0.033	1.7	1	04/15/14 16:33	LDD	5490399
Acenaphthene	ND		0.033	220	1	04/15/14 16:33	LDD	5490399
Acenaphthylene	ND		0.033	88	1	04/15/14 16:33	LDD	5490399
Anthracene	ND		0.033	120	1	04/15/14 16:33	LDD	5490399
Benz(a)anthracene	ND		0.033	0.62	1	04/15/14 16:33	LDD	5490399
Benzo(a)pyrene	ND		0.033	0.33	1	04/15/14 16:33	LDD	5490399
Benzo(b)fluoranthene	ND		0.033	0.62	1	04/15/14 16:33	LDD	5490399
Benzo(k)fluoranthene	ND		0.033	6.2	1	04/15/14 16:33	LDD	5490399
Chrysene	ND		0.033	62	1	04/15/14 16:33	LDD	5490399
Dibenz(a,h)anthracene	ND		0.033	0.33	1	04/15/14 16:33	LDD	5490399
Fluoranthene	ND		0.033	220	1	04/15/14 16:33	LDD	5490399
Fluorene	ND		0.033	230	1	04/15/14 16:33	LDD	5490399
Indeno(1,2,3-cd)pyrene	ND		0.033	0.62	1	04/15/14 16:33	LDD	5490399
Naphthalene	ND		0.033	1.5	1	04/15/14 16:33	LDD	5490399
Phenanthrene	ND		0.033	660	1	04/15/14 16:33	LDD	5490399
Pyrene	ND		0.033	230	1	04/15/14 16:33	LDD	5490399
Surr: 2-Fluorobiphenyl	88.8		% 43-128		1	04/15/14 16:33	LDD	5490399
Surr: 4-Terphenyl-d14	102		% 51-136		1	04/15/14 16:33	LDD	5490399
Surr: Nitrobenzene-d5	91.1		% 47-134		1	04/15/14 16:33	LDD	5490399

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3546	04/12/2014 11:06	DWB	0.99

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - Analyte Detected In The Associated Method Blank
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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

4/28/2014 4:48:35 PM

ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: SB-7 (11-13) **Collected:** 04/09/2014 15:20 **Lab Sample ID:** L0041795-03

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL	Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
EXTRACTABLE PETROLEUM HYDROCARBONS- RECAP				**MCL**	**MA_VPH_EPH**	**Units: mg/Kg**		
C10-C12 Aliphatics	110		1.7	230	1	04/24/14 12:56	E_G	5507904
C10-C12 Aromatics	ND		1.7	100	1	04/24/14 12:56	E_G	5507866
C12-C16 Aliphatics	**870**	**>MCL**	**3.3**	**370**	**1**	**04/24/14 12:56**	**E_G**	**5507904**
C12-C16 Aromatics	45		5	180	1	04/24/14 12:56	E_G	5507866
C16-C21 Aromatics	**280**	**>MCL**	**8.3**	**180**	**1**	**04/24/14 12:56**	**E_G**	**5507866**
C16-C35 Aliphatics	870		10	7100	1	04/24/14 12:56	E_G	5507904
C21-C35 Aromatics	53		10	180	1	04/24/14 12:56	E_G	5507866
Surr: 2-Fluorobiphenyl	31.3	MI	% 40-140		1	04/24/14 12:56	E_G	5507866
Surr: Chloro-octadecane	56.6		% 40-140		1	04/24/14 12:56	E_G	5507904
Surr: o-Terphenyl	133		% 40-140		1	04/24/14 12:56	E_G	5507866

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3546	04/22/2014 15:00	TJH	1.00

RECAP DIESEL RANGE ORGANICS BY METHOD 8015C				MCL	SW8015C	Units: mg/Kg		
Diesel Range Organics (C10-C28)	1300		50		10	04/14/14 9:31	JT1	5486970
Surr: o-Terphenyl	89.7		% 38-135		10	04/14/14 9:31	JT1	5486970

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3546	04/12/2014 11:04	CT	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

4/28/2014 4:48:39 PM

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: SB-7 (11-13) **Collected:** 04/09/2014 15:20 **Lab Sample ID:** L0041795-03

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL		Rep.Limit	MCL	Dil. Factor	Date Analyzed	Analyst	Seq. #
RECAP PAH BY EPA 8270D					**MCL**	**SW8270D**	**Units: mg/Kg**		
2-Methylnaphthalene	**7.3**	**>MCL**		**0.17**	**1.7**	**5**	**04/16/14 14:44**	**IHK**	**5492337**
Acenaphthene	ND			0.033	220	1	04/15/14 16:57	LDD	5490400
Acenaphthylene	ND			0.033	88	1	04/15/14 16:57	LDD	5490400
Anthracene	ND			0.033	120	1	04/15/14 16:57	LDD	5490400
Benz(a)anthracene	ND			0.033	0.62	1	04/15/14 16:57	LDD	5490400
Benzo(a)pyrene	ND			0.033	0.33	1	04/15/14 16:57	LDD	5490400
Benzo(b)fluoranthene	ND			0.033	0.62	1	04/15/14 16:57	LDD	5490400
Benzo(k)fluoranthene	ND			0.033	6.2	1	04/15/14 16:57	LDD	5490400
Chrysene	ND			0.033	62	1	04/15/14 16:57	LDD	5490400
Dibenz(a,h)anthracene	ND			0.033	0.33	1	04/15/14 16:57	LDD	5490400
Fluoranthene	0.11			0.033	220	1	04/15/14 16:57	LDD	5490400
Fluorene	0.88			0.033	230	1	04/15/14 16:57	LDD	5490400
Indeno(1,2,3-cd)pyrene	ND			0.033	0.62	1	04/15/14 16:57	LDD	5490400
Naphthalene	1.4			0.033	1.5	1	04/15/14 16:57	LDD	5490400
Phenanthrene	2.5			0.033	660	1	04/15/14 16:57	LDD	5490400
Pyrene	0.44			0.033	230	1	04/15/14 16:57	LDD	5490400
Surr: 2-Fluorobiphenyl	83.3		%	43-128		1	04/15/14 16:57	LDD	5490400
Surr: 2-Fluorobiphenyl	80.3		%	43-128		5	04/16/14 14:44	IHK	5492337
Surr: 4-Terphenyl-d14	102		%	51-136		1	04/15/14 16:57	LDD	5490400
Surr: 4-Terphenyl-d14	94.9		%	51-136		5	04/16/14 14:44	IHK	5492337
Surr: Nitrobenzene-d5	78.7		%	47-134		5	04/16/14 14:44	IHK	5492337
Surr: Nitrobenzene-d5	88.5		%	47-134		1	04/15/14 16:57	LDD	5490400

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3546	04/12/2014 11:06	DWB	1.00
SW3546	04/12/2014 11:06	DWB	1.00

SPLP SEMIVOLATILE ORGANICS BY EPA 8270D					MCL	SW8270D	Units: mg/L		
2-Methylnaphthalene	0.016			0.0054		1	04/24/14 22:56	IHK	5509206
Surr: 2-Fluorobiphenyl	77.1		%	50-124		1	04/24/14 22:56	IHK	5509206
Surr: 4-Terphenyl-d14	84.1		%	57-133		1	04/24/14 22:56	IHK	5509206
Surr: Nitrobenzene-d5	74.5		%	51-138		1	04/24/14 22:56	IHK	5509206

Prep Method	Prep Date	Prep Initials	Prep Factor	Leach Method	Leachate Date	Leach Initials
SW3510B	04/22/2014 14:53	CT	1.08	SW1312	04/21/2014	JBW

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

4/28/2014 4:48:43 PM

ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: SB-7 (27-30) **Collected:** 04/09/2014 15:24 **Lab Sample ID:** L0041795-04

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL	Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
RECAP DIESEL RANGE ORGANICS BY METHOD 8015C				**MCL**	**SW8015C**	**Units: mg/Kg**		
Diesel Range Organics (C10-C28)	ND		5	65	1	04/13/14 23:11	JT1	5486959
Surr: o-Terphenyl	77.7		% 38-135		1	04/13/14 23:11	JT1	5486959

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3546	04/12/2014 11:04	CT	1.00

RECAP PAH BY EPA 8270D				MCL	SW8270D	Units: mg/Kg		
2-Methylnaphthalene	ND		0.033	1.7	1	04/15/14 17:21	LDD	5490401
Acenaphthene	ND		0.033	220	1	04/15/14 17:21	LDD	5490401
Acenaphthylene	ND		0.033	88	1	04/15/14 17:21	LDD	5490401
Anthracene	ND		0.033	120	1	04/15/14 17:21	LDD	5490401
Benz(a)anthracene	ND		0.033	0.62	1	04/15/14 17:21	LDD	5490401
Benzo(a)pyrene	ND		0.033	0.33	1	04/15/14 17:21	LDD	5490401
Benzo(b)fluoranthene	ND		0.033	0.62	1	04/15/14 17:21	LDD	5490401
Benzo(k)fluoranthene	ND		0.033	6.2	1	04/15/14 17:21	LDD	5490401
Chrysene	ND		0.033	62	1	04/15/14 17:21	LDD	5490401
Dibenz(a,h)anthracene	ND		0.033	0.33	1	04/15/14 17:21	LDD	5490401
Fluoranthene	ND		0.033	220	1	04/15/14 17:21	LDD	5490401
Fluorene	ND		0.033	230	1	04/15/14 17:21	LDD	5490401
Indeno(1,2,3-cd)pyrene	ND		0.033	0.62	1	04/15/14 17:21	LDD	5490401
Naphthalene	ND		0.033	1.5	1	04/15/14 17:21	LDD	5490401
Phenanthrene	ND		0.033	660	1	04/15/14 17:21	LDD	5490401
Pyrene	ND		0.033	230	1	04/15/14 17:21	LDD	5490401
Surr: 2-Fluorobiphenyl	82.4		% 43-128		1	04/15/14 17:21	LDD	5490401
Surr: 4-Terphenyl-d14	95.3		% 51-136		1	04/15/14 17:21	LDD	5490401
Surr: Nitrobenzene-d5	80.7		% 47-134		1	04/15/14 17:21	LDD	5490401

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3546	04/12/2014 11:06	DWB	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

4/28/2014 4:48:46 PM

ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: SB-6/TW-6 **Collected:** 04/10/2014 9:50 **Lab Sample ID:** L0041795-05

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
PAHS BY EPA 8270D			**MCL**	**SW8270D**	**Units: mg/L**		
2-Methylnaphthalene	0.0072		0.00018	1	04/18/14 3:23	LDD	5495188
Acenaphthene	0.00051		0.00018	1	04/18/14 3:23	LDD	5495188
Acenaphthylene	ND		0.00018	1	04/18/14 3:23	LDD	5495188
Anthracene	ND		0.00018	1	04/18/14 3:23	LDD	5495188
Benz(a)anthracene	ND		0.00018	1	04/18/14 3:23	LDD	5495188
Benzo(a)pyrene	ND		0.00018	1	04/18/14 3:23	LDD	5495188
Benzo(b)fluoranthene	ND		0.00018	1	04/18/14 3:23	LDD	5495188
Benzo(k)fluoranthene	ND		0.00018	1	04/18/14 3:23	LDD	5495188
Chrysene	ND		0.00018	1	04/18/14 3:23	LDD	5495188
Dibenz(a,h)anthracene	ND		0.00018	1	04/18/14 3:23	LDD	5495188
Fluoranthene	ND		0.00018	1	04/18/14 3:23	LDD	5495188
Fluorene	0.00062		0.00018	1	04/18/14 3:23	LDD	5495188
Indeno(1,2,3-cd)pyrene	ND		0.00018	1	04/18/14 3:23	LDD	5495188
Naphthalene	0.0045		0.00018	1	04/18/14 3:23	LDD	5495188
Phenanthrene	0.00069		0.00018	1	04/18/14 3:23	LDD	5495188
Pyrene	ND		0.00018	1	04/18/14 3:23	LDD	5495188
Surr: 2-Fluorobiphenyl	58.1		% 41-124	1	04/18/14 3:23	LDD	5495188
Surr: 4-Terphenyl-d14	62.8		% 36-129	1	04/18/14 3:23	LDD	5495188
Surr: Nitrobenzene-d5	72.9		% 40-134	1	04/18/14 3:23	LDD	5495188

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	04/15/2014 12:00	CT	0.91

RECAP DIESEL RANGE ORGANICS BY METHOD 8015C				MCL	SW8015C	Units: mg/L	
Diesel Range Organics (C10-C28)	ND		0.15	0.15	1	04/14/14 3:46	DF	5489728
Surr: o-Terphenyl	58.0		% 47-125		1	04/14/14 3:46	DF	5489728

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3511	04/12/2014 11:26	CNR	1.00

Qualifiers:
ND/U - Not Detected at the Reporting Limit
B - 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

4/28/2014 4:48:50 PM

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: SB-7/TW-7 **Collected:** 04/10/2014 9:20 **Lab Sample ID:** L0041795-06

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL	Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
EXTRACTABLE PETROLEUM HYDROCARBONS- RECAP				**MCL**	**MA_VPH_EPH**		**Units: mg/L**	
C10-C12 Aliphatics	0.14		0.1	0.15	1	04/22/14 20:14	E_G	5504512
C10-C12 Aromatics	ND		0.1	0.15	1	04/22/14 20:14	E_G	5504503
C12-C16 Aliphatics	0.1		0.1	0.15	1	04/22/14 20:14	E_G	5504512
C12-C16 Aromatics	ND		0.1	0.15	1	04/22/14 20:14	E_G	5504503
C16-C21 Aromatics	ND		0.1	0.15	1	04/22/14 20:14	E_G	5504503
C16-C35 Aliphatics	ND		0.1	7.3	1	04/22/14 20:14	E_G	5504512
C21-C35 Aromatics	ND		0.1	0.15	1	04/22/14 20:14	E_G	5504503
Surr: 2-Fluorobiphenyl	62.0		% 40-140		1	04/22/14 20:14	E_G	5504503
Surr: Chloro-octadecane	69.1		% 40-140		1	04/22/14 20:14	E_G	5504512
Surr: o-Terphenyl	62.5		% 40-140		1	04/22/14 20:14	E_G	5504503

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3511	04/12/2014 10:55	TJH	1.00

PAHS BY EPA 8270D				**MCL**	**SW8270D**		**Units: mg/L**	
2-Methylnaphthalene	0.25		0.0091		50	04/18/14 14:52	LDD	5496565
Acenaphthene	ND		0.0091		50	04/18/14 14:52	LDD	5496565
Acenaphthylene	ND		0.0091		50	04/18/14 14:52	LDD	5496565
Anthracene	ND		0.0091		50	04/18/14 14:52	LDD	5496565
Benz(a)anthracene	ND		0.0091		50	04/18/14 14:52	LDD	5496565
Benzo(a)pyrene	ND		0.0091		50	04/18/14 14:52	LDD	5496565
Benzo(b)fluoranthene	ND		0.0091		50	04/18/14 14:52	LDD	5496565
Benzo(k)fluoranthene	ND		0.0091		50	04/18/14 14:52	LDD	5496565
Chrysene	ND		0.0091		50	04/18/14 14:52	LDD	5496565
Dibenz(a,h)anthracene	ND		0.0091		50	04/18/14 14:52	LDD	5496565
Fluoranthene	ND		0.0091		50	04/18/14 14:52	LDD	5496565
Fluorene	0.021		0.0091		50	04/18/14 14:52	LDD	5496565
Indeno(1,2,3-cd)pyrene	ND		0.0091		50	04/18/14 14:52	LDD	5496565
Naphthalene	0.05		0.0091		50	04/18/14 14:52	LDD	5496565
Phenanthrene	0.044		0.0091		50	04/18/14 14:52	LDD	5496565
Pyrene	0.011		0.0091		50	04/18/14 14:52	LDD	5496565
Surr: 2-Fluorobiphenyl	41.9		% 41-124		50	04/18/14 14:52	LDD	5496565
Surr: 4-Terphenyl-d14	66.0		% 36-129		50	04/18/14 14:52	LDD	5496565
Surr: Nitrobenzene-d5	99.6		% 40-134		50	04/18/14 14:52	LDD	5496565

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3510C	04/15/2014 12:00	CT	0.91

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

4/28/2014 4:48:53 PM

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: SB-7/TW-7 **Collected:** 04/10/2014 9:20 **Lab Sample ID:** L0041795-06

Site: LA RETIREMENT SYSTEMS

Analyses/Method	Result	QUAL		Rep.Limit		Dil. Factor	Date Analyzed	Analyst	Seq. #
RECAP DIESEL RANGE ORGANICS BY METHOD 8015C					**MCL**	**SW8015C**	**Units: mg/L**		
Diesel Range Organics (C10-C28)	**16**	**>MCL**		**0.15**	**0.15**	**1**	**04/14/14 5:20**	**DF**	**5493031**
Surr: o-Terphenyl	284	MI	%	47-125		1	04/14/14 5:20	DF	5493031

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3511	04/12/2014 11:26	CNR	1.00

Qualifiers:

ND/U - Not Detected at the Reporting Limit
B - 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

4/28/2014 4:48:56 PM

Quality Control Documentation

ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124

Analysis: Extractable Petroleum Hydrocarbons- RECAP
Method: MA_VPH_EPH
WorkOrder: L0041795
Lab Batch ID: 130497

Method Blank

RunID: TPHA_140422D-5504509 Units: mg/L
Analysis Date: 04/22/2014 18:47 Analyst: E_G
Preparation Date: 04/12/2014 10:55 Prep By: TJH Method: SW3511

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0041795-06C	SB-7/TW-7

Analyte	Result	Rep Limit
C10-C12 Aliphatics	ND	0.10
C12-C16 Aliphatics	ND	0.10
C16-C35 Aliphatics	ND	0.10
Surr: Chloro-octadecane	69.9	40-140

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

RunID: TPHA_140422D-5504510 Units: mg/L
Analysis Date: 04/22/2014 19:16 Analyst: E_G
Preparation Date: 04/12/2014 10:55 Prep By: TJH Method: SW3511

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
C10-C12 Aliphatics	0.500	0.349	69.8	0.500	0.358	71.6	2.5	25	40	140
C12-C16 Aliphatics	1.00	0.619	61.9	1.00	0.501	50.1	21.0	25	40	140
C16-C35 Aliphatics	4.50	2.64	58.8	4.50	2.25	49.9	16.3	25	40	140
Surr: Chloro-octadecane	0.400	0.280	70.0	0.400	0.233	58.3	18.2	30	40	140

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.

4/28/2014 4:49:23 PM

Version 2.1 - Modified February 11, 2011

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124

Analysis: Extractable Petroleum Hydrocarbons- RECAP
Method: MA_VPH_EPH
WorkOrder: L0041795
Lab Batch ID: 130497

Method Blank

RunID: TPHA_140422C-5504498 Units: mg/L
Analysis Date: 04/22/2014 18:47 Analyst: E_G
Preparation Date: 04/12/2014 10:55 Prep By: TJH Method: SW3511

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0041795-06C	SB-7/TW-7

Analyte	Result	Rep Limit
C10-C12 Aromatics	ND	0.10
C12-C16 Aromatics	ND	0.10
C16-C21 Aromatics	ND	0.10
C21-C35 Aromatics	ND	0.10
Surr: 2-Fluorobiphenyl	61.6	40-140
Surr: o-Terphenyl	63.7	40-140

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

RunID: TPHA_140422C-5504499 Units: mg/L
Analysis Date: 04/22/2014 19:16 Analyst: E_G
Preparation Date: 04/12/2014 10:55 Prep By: TJH Method: SW3511

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
C10-C12 Aromatics	0.500	0.263	52.7	0.500	0.223	44.6	16.5	25	40	140
C12-C16 Aromatics	1.50	0.878	58.6	1.50	0.801	53.4	9.3	25	40	140
C16-C21 Aromatics	2.50	1.34	53.6	2.50	1.08	43.3	21.2	25	40	140
C21-C35 Aromatics	4.00	1.74	43.5	4.00	1.75	43.8	0.8	25	40	140
Surr: 2-Fluorobiphenyl	2.00	1.18	59.1	2.00	1.28	64.1	8.1	30	40	140
Surr: o-Terphenyl	0.400	0.221	55.1	0.400	0.210	52.5	4.9	30	40	140

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.

4/28/2014 4:49:25 PM

Version 2.1 - Modified February 11, 2011

ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124

Analysis: RECAP Diesel Range Organics by Method 8015C **WorkOrder:** L0041795
Method: SW8015C **Lab Batch ID:** 130502

Method Blank

RunID: TPHC_140413A-5489724 Units: mg/L
Analysis Date: 04/14/2014 0:15 Analyst: DF
Preparation Date: 04/12/2014 11:26 Prep By: CNR Method: SW3511

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0041795-05A	SB-6/TW-6
L0041795-06A	SB-7/TW-7

Analyte	Result	Rep Limit
Diesel Range Organics (C10-C28)	ND	0.15
Surr: o-Terphenyl	70.5	47-125

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

RunID: TPHC_140413A-5489725 Units: mg/L
Analysis Date: 04/14/2014 0:39 Analyst: DF
Preparation Date: 04/12/2014 11:26 Prep By: CNR Method: SW3511

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Diesel Range Organics (C10-C28)	6.00	4.57	76.2	6.00	3.97	66.1	14.2	26	21	140
Surr: o-Terphenyl	0.100	0.0892	89.2	0.100	0.0824	82.4	7.9	30	47	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.

4/28/2014 4:49:28 PM

Version 2.1 - Modified February 11, 2011

ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124

Analysis: RECAP Diesel Range Organics by Method 8015C **WorkOrder:** L0041795
Method: SW8015C **Lab Batch ID:** 130510

Method Blank

RunID: TPHB_140414A-5486943 Units: mg/Kg
Analysis Date: 04/13/2014 16:21 Analyst: JT1
Preparation Date: 04/12/2014 11:04 Prep By: CT Method: SW3546

Analyte	Result	Rep Limit
Diesel Range Organics (C10-C28)	ND	5.0
Surr: o-Terphenyl	80.9	38-135

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0041795-01A	SB-6 (11-13)
L0041795-02A	SB-6 (27-30)
L0041795-03A	SB-7 (11-13)
L0041795-04A	SB-7 (27-30)

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

RunID: TPHB_140414A-5486944 Units: mg/Kg
Analysis Date: 04/13/2014 16:41 Analyst: JT1
Preparation Date: 04/12/2014 11:04 Prep By: CT Method: SW3546

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Diesel Range Organics (C10-C28)	150	132	87.9	150	132	87.8	0.1	20	45	102
Surr: o-Terphenyl	2.50	2.14	85.7	2.50	2.13	85.3	0.5	30	38	135

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

Sample Spiked: L0041772-02
RunID: TPHB_140414A-5486946 Units: mg/Kg
Analysis Date: 04/13/2014 17:58 Analyst: JT1
Preparation Date: 04/12/2014 11:04 Prep By: CT Method: SW3546

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Diesel Range Organics (C10-C28)	ND	150	128	85.5	150	127	84.5	1.25	20	45	102
Surr: o-Terphenyl	ND	2.5	2.16	86.6	2.5	2.15	86.1	0.533	30	38	135

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.

4/28/2014 4:49:30 PM

Version 2.1 - Modified February 11, 2011

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124

Analysis: Extractable Petroleum Hydrocarbons- RECAP
Method: MA_VPH_EPH
WorkOrder: L0041795
Lab Batch ID: 130863

Method Blank

RunID: TPHA_140424B-5507901 Units: mg/Kg
Analysis Date: 04/24/2014 10:56 Analyst: E_G
Preparation Date: 04/22/2014 15:00 Prep By: TJH Method: SW3546

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0041795-03A	SB-7 (11-13)

Analyte	Result	Rep Limit
C10-C12 Aliphatics	ND	1.7
C12-C16 Aliphatics	ND	3.3
C16-C35 Aliphatics	ND	10
Surr: Chloro-octadecane	65.5	40-140

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

RunID: TPHA_140424B-5507902 Units: mg/Kg
Analysis Date: 04/24/2014 11:26 Analyst: E_G
Preparation Date: 04/22/2014 15:00 Prep By: TJH Method: SW3546

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
C10-C12 Aliphatics	5.00	2.60	52.0	5.00	2.86	57.2	9.5	25	40	140
C12-C16 Aliphatics	10.0	6.39	63.9	10.0	6.61	66.1	3.4	25	40	140
C16-C35 Aliphatics	45.0	32.1	71.4	45.0	33.2	73.7	3.2	25	40	140
Surr: Chloro-octadecane	5.00	4.19	83.8	5.00	4.33	86.5	3.1	30	40	140

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

Sample Spiked: L0041795-03
RunID: TPHA_140424B-5507905 Units: mg/Kg
Analysis Date: 04/24/2014 13:27 Analyst: E_G
Preparation Date: 04/22/2014 15:00 Prep By: TJH Method: SW3546

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
C10-C12 Aliphatics	114	4.95	97.1	N/C	4.93	1.66	N/C	N/C	50	40	140

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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Version 2.1 - Modified February 11, 2011

ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124

Analysis: Extractable Petroleum Hydrocarbons- RECAP
Method: MA_VPH_EPH
WorkOrder: L0041795
Lab Batch ID: 130863

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

Sample Spiked: L0041795-03
RunID: TPHA_140424B-5507905 Units: mg/Kg
Analysis Date: 04/24/2014 13:27 Analyst: E_G
Preparation Date: 04/22/2014 15:00 Prep By: TJH Method: SW3546

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
C12-C16 Aliphatics	867	9.9	520	N/C	9.85	627	N/C	N/C	50	40	140
C16-C35 Aliphatics	874	44.6	524	N/C	44.3	1010	N/C	N/C	50	40	140
Surr: Chloro-octadecane	ND	4.95	2.58	52.1	4.93	3.01	61.1	15.2	30	40	140

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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ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124

Analysis: Extractable Petroleum Hydrocarbons- RECAP **WorkOrder:** L0041795
Method: MA_VPH_EPH **Lab Batch ID:** 130863

Method Blank

RunID: TPHA_140424A-5507863 Units: mg/Kg
Analysis Date: 04/24/2014 10:56 Analyst: E_G
Preparation Date: 04/22/2014 15:00 Prep By: TJH Method: SW3546

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0041795-03A	SB-7 (11-13)

Analyte	Result	Rep Limit
C10-C12 Aromatics	ND	1.7
C12-C16 Aromatics	ND	5.0
C16-C21 Aromatics	ND	8.3
C21-C35 Aromatics	ND	10
Surr: 2-Fluorobiphenyl	92.9	40-140
Surr: o-Terphenyl	69.0	40-140

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

RunID: TPHA_140424A-5507864 Units: mg/Kg
Analysis Date: 04/24/2014 11:26 Analyst: E_G
Preparation Date: 04/22/2014 15:00 Prep By: TJH Method: SW3546

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
C10-C12 Aromatics	5.00	2.20	44.0	5.00	2.18	43.7	0.8	25	40	140
C12-C16 Aromatics	15.0	8.37	55.8	15.0	8.15	54.3	2.6	25	40	140
C16-C21 Aromatics	25.0	15.9	63.7	25.0	15.3	61.4	3.8	25	40	140
C21-C35 Aromatics	40.0	17.1	42.8	40.0	17.0	42.5	0.7	25	40	140
Surr: 2-Fluorobiphenyl	12.5	9.00	72.0	12.5	8.77	70.2	2.6	30	40	140
Surr: o-Terphenyl	5.00	3.72	74.4	5.00	3.64	72.7	2.3	30	40	140

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

Sample Spiked: L0041795-03
RunID: TPHA_140424A-5507872 Units: mg/Kg
Analysis Date: 04/24/2014 13:27 Analyst: E_G
Preparation Date: 04/22/2014 15:00 Prep By: TJH Method: SW3546

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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ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124

Analysis: Extractable Petroleum Hydrocarbons- RECAP **WorkOrder:** L0041795
Method: MA_VPH_EPH **Lab Batch ID:** 130863

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
C10-C12 Aromatics	ND	4.95	1.15	23.3 *	4.93	0.589	12.0 *	64.7 *	50	40	140
C12-C16 Aromatics	45.0	14.9	1.89	-290 *	14.8	72.4	186 *	190 *	50	40	140
C16-C21 Aromatics	282	24.8	128	N/C	24.6	281	N/C	N/C	50	40	140
C21-C35 Aromatics	52.8	39.6	43.9	-22.5 *	39.4	60.7	20.1 *	32.2	50	40	140
Surr: 2-Fluorobiphenyl	ND	12.4	2.98	24.1 *	12.3	4.82	39.1 *	47.1 *	30	40	140
Surr: o-Terphenyl	ND	4.95	4.76	96.2	4.93	5.66	115	17.2	30	40	140

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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500 AMBASSADOR CAFFERY PARKWAY
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Quality Control Report

PPM CONSULTANTS, INC.

503124

Analysis: RECAP PAH by EPA 8270D
Method: SW8270D
WorkOrder: L0041795
Lab Batch ID: 130499

Method Blank

RunID: A_140415A-5490402 Units: mg/Kg
Analysis Date: 04/15/2014 11:18 Analyst: LDD
Preparation Date: 04/12/2014 11:06 Prep By: DW Method: SW3546

Analyte	Result	Rep Limit
2-Methylnaphthalene	ND	0.033
Acenaphthene	ND	0.033
Acenaphthylene	ND	0.033
Anthracene	ND	0.033
Benz(a)anthracene	ND	0.033
Benzo(a)pyrene	ND	0.033
Benzo(b)fluoranthene	ND	0.033
Benzo(k)fluoranthene	ND	0.033
Chrysene	ND	0.033
Dibenz(a,h)anthracene	ND	0.033
Fluoranthene	ND	0.033
Fluorene	ND	0.033
Indeno(1,2,3-cd)pyrene	ND	0.033
Naphthalene	ND	0.033
Phenanthrene	ND	0.033
Pyrene	ND	0.033
Surr: 2-Fluorobiphenyl	94.9	43-128
Surr: 4-Terphenyl-d14	106.2	51-136
Surr: Nitrobenzene-d5	94.9	47-134

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0041795-01A	SB-6 (11-13)
L0041795-02A	SB-6 (27-30)
L0041795-03A	SB-7 (11-13)
L0041795-04A	SB-7 (27-30)

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

RunID: A_140415A-5490403 Units: mg/Kg
Analysis Date: 04/15/2014 11:42 Analyst: LDD
Preparation Date: 04/12/2014 11:06 Prep By: DW Method: SW3546

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
2-Methylnaphthalene	2.50	2.07	82.7	2.50	2.20	88.0	6.3	26	57	112
Acenaphthene	2.50	2.08	83.1	2.50	2.20	87.9	5.6	26	56	115
Acenaphthylene	2.50	2.20	87.8	2.50	2.32	92.6	5.3	27	55	120
Anthracene	2.50	2.16	86.4	2.50	2.25	90.2	4.3	27	55	115
Benz(a)anthracene	2.50	2.17	86.9	2.50	2.28	91.1	4.7	22	60	109
Benzo(a)pyrene	2.50	2.25	90.1	2.50	2.36	94.3	4.5	27	59	115

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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ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124

Analysis: **RECAP PAH by EPA 8270D** **WorkOrder:** **L0041795**
Method: **SW8270D** **Lab Batch ID:** **130499**

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

RunID: A_140415A-5490403 Units: mg/Kg
Analysis Date: 04/15/2014 11:42 Analyst: LDD
Preparation Date: 04/12/2014 11:06 Prep By: DW Method: SW3546

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Benzo(b)fluoranthene	2.50	2.25	89.9	2.50	2.40	96.1	6.6	28	56	115
Benzo(k)fluoranthene	2.50	2.34	93.7	2.50	2.43	97.4	3.9	35	46	131
Chrysene	2.50	2.15	86.0	2.50	2.26	90.2	4.8	24	54	116
Dibenz(a,h)anthracene	2.50	2.27	90.8	2.50	2.43	97.0	6.7	20	56	121
Fluoranthene	2.50	2.13	85.2	2.50	2.26	90.3	5.8	28	55	118
Fluorene	2.50	2.07	82.6	2.50	2.21	88.6	6.9	27	51	123
Indeno(1,2,3-cd)pyrene	2.50	2.23	89.1	2.50	2.38	95.1	6.5	29	50	125
Naphthalene	2.50	2.05	82.2	2.50	2.19	87.7	6.5	27	51	118
Phenanthrene	2.50	2.23	89.0	2.50	2.35	93.8	5.3	27	55	118
Pyrene	2.50	2.27	91.0	2.50	2.37	94.8	4.1	27	57	115
Surr: 2-Fluorobiphenyl	2500	2160	86.5	2500	2310	92.4	6.6	30	43	128
Surr: 4-Terphenyl-d14	2500	2370	94.6	2500	2550	102	7.6	30	51	136
Surr: Nitrobenzene-d5	2500	2240	89.4	2500	2420	96.6	7.7	30	47	134

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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ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124

Analysis: PAHs by EPA 8270D
Method: SW8270D
WorkOrder: L0041795
Lab Batch ID: 130579

Method Blank

RunID: GCMS1C_140417A-5493443 Units: mg/L
Analysis Date: 04/17/2014 12:47 Analyst: LDD
Preparation Date: 04/15/2014 12:00 Prep By: CT Method: SW3510C

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0041795-05B	SB-6/TW-6
L0041795-06B	SB-7/TW-7

Analyte	Result	Rep Limit
2-Methylnaphthalene	ND	0.00020
Acenaphthene	ND	0.00020
Acenaphthylene	ND	0.00020
Anthracene	ND	0.00020
Benz(a)anthracene	ND	0.00020
Benzo(a)pyrene	ND	0.00020
Benzo(b)fluoranthene	ND	0.00020
Benzo(k)fluoranthene	ND	0.00020
Chrysene	ND	0.00020
Dibenz(a,h)anthracene	ND	0.00020
Fluoranthene	ND	0.00020
Fluorene	ND	0.00020
Indeno(1,2,3-cd)pyrene	ND	0.00020
Naphthalene	ND	0.00020
Phenanthrene	ND	0.00020
Pyrene	ND	0.00020
Surr: 2-Fluorobiphenyl	89.1	41-124
Surr: 4-Terphenyl-d14	98.8	36-129
Surr: Nitrobenzene-d5	78.5	40-134

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

RunID: GCMS1C_140417A-549368 Units: mg/L
Analysis Date: 04/17/2014 15:06 Analyst: LDD
Preparation Date: 04/15/2014 12:00 Prep By: CT Method: SW3510C

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
1-Methylnaphthalene	0.00455	0.00365	80.3	0.00455	0.00367	80.6	0.4	27	56	120
2-Methylnaphthalene	0.00455	0.00345	76.0	0.00455	0.00356	78.3	3.1	26	58	119
Acenaphthene	0.00455	0.00394	86.6	0.00455	0.00414	91.1	5.1	25	58	114
Acenaphthylene	0.00455	0.00421	92.7	0.00455	0.00433	95.3	2.7	32	57	127
Anthracene	0.00455	0.00419	92.1	0.00455	0.00412	90.7	1.6	27	57	117
Benz(a)anthracene	0.00455	0.00422	92.9	0.00455	0.00427	93.9	1.0	27	54	116

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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(337) 237-4775

Quality Control Report

PPM CONSULTANTS, INC.

503124

Analysis: PAHs by EPA 8270D **WorkOrder:** L0041795
Method: SW8270D **Lab Batch ID:** 130579

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

RunID: GCMS1C_140417A-549368 Units: mg/L
Analysis Date: 04/17/2014 15:06 Analyst: LDD
Preparation Date: 04/15/2014 12:00 Prep By: CT Method: SW3510C

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Benzo(a)pyrene	0.00455	0.00383	84.2	0.00455	0.00378	83.2	1.2	27	55	126
Benzo(b)fluoranthene	0.00455	0.00420	92.4	0.00455	0.00413	90.8	1.8	31	52	124
Benzo(g,h,i)perylene	0.00455	0.00380	83.6	0.00455	0.00379	83.5	0.2	29	52	127
Benzo(k)fluoranthene	0.00455	0.00408	89.7	0.00455	0.00412	90.6	1.0	31	54	126
Chrysene	0.00455	0.00405	89.0	0.00455	0.00414	91.0	2.2	26	55	116
Dibenz(a,h)anthracene	0.00455	0.00353	77.6	0.00455	0.00358	78.7	1.4	33	46	129
Fluoranthene	0.00455	0.00430	94.6	0.00455	0.00427	94.0	0.6	27	56	124
Fluorene	0.00455	0.00387	85.1	0.00455	0.00411	90.3	6.0	28	54	120
Indeno(1,2,3-cd)pyrene	0.00455	0.00396	87.0	0.00455	0.00393	86.4	0.7	31	51	130
Naphthalene	0.00455	0.00359	79.0	0.00455	0.00370	81.4	2.9	25	58	114
Phenanthrene	0.00455	0.00383	84.3	0.00455	0.00387	85.2	1.1	25	56	115
Pyrene	0.00455	0.00408	89.7	0.00455	0.00408	89.7	0.0	29	55	122
Surr: 2-Fluorobiphenyl	4.55	3.85	84.6	4.55	4.12	90.6	6.9	30	41	124
Surr: 4-Terphenyl-d14	4.55	4.36	95.9	4.55	4.36	96.0	0.1	30	36	129
Surr: Nitrobenzene-d5	4.55	3.44	75.6	4.55	3.56	78.4	3.6	30	40	134

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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500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
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Quality Control Report

PPM CONSULTANTS, INC.

503124

Analysis: SPLP Semivolatile Organics by EPA 8270D **WorkOrder:** L0041795
Method: SW8270D **Lab Batch ID:** 130840

Method Blank

RunID: A_140424A-5507938 Units: mg/L
Analysis Date: 04/24/2014 15:21 Analyst: IHK
Preparation Date: 04/22/2014 14:53 Prep By: CT Method: SW3510B

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
L0041795-03A	SB-7 (11-13)

Analyte	Result	Rep Limit
2-Methylnaphthalene	ND	0.0050
Surr: 2-Fluorobiphenyl	77.1	50-124
Surr: 4-Terphenyl-d14	89.7	57-133
Surr: Nitrobenzene-d5	72.3	51-138

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

RunID: A_140424A-5507939 Units: mg/L
Analysis Date: 04/24/2014 15:47 Analyst: IHK
Preparation Date: 04/22/2014 14:53 Prep By: CT Method: SW3510B

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
2-Methylnaphthalene	0.0500	0.0398	79.6	0.0500	0.0417	83.3	4.6	18	53	118
Surr: 2-Fluorobiphenyl	50.0	40.9	81.9	50.0	43.5	87.0	6.1	30	50	124
Surr: 4-Terphenyl-d14	50.0	45.5	90.9	50.0	49.2	98.5	8.0	30	57	133
Surr: Nitrobenzene-d5	50.0	38.7	77.3	50.0	40.5	81.1	4.7	30	51	138

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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Sample Receipt Checklist

And

Chain of Custody

ACCUTEST LABORATORIES

ACCUTEST GULF COAST
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Sample Receipt Checklist

Workorder:	**L0041795**	Received By:	**HJC**
Date and Time Received:	**4/11/2014 4:03:00 PM**	Carrier name:	**Accutest-Delivery**
Temperature:	**2.5°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**

Accutest Representative: _____ **Contact Date & Time:** _____

Client Name Contacted: _____

Non Conformance Issues: _____

Client Instructions: _____

CHAIN OF CUSTODY

ACCUTEST LABORATORIES

Accutest Gulf Coast/SPL Environmental
500 Ambassador Caffery Pkwy Scott, LA 70583
TEL 337-237-4775 FAX: 337-237-7837
www.accutest.com/www.spl-inc.com

PAGE 1 OF 1

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: L00 41795

Client / Reporting Information

Company Name: PPM Consultants, Inc
Street Address: 7936 Office Park Blvd, Suite A
City: Baton Rouge | State: LA | Zip: 70809
Project Contact: Adrian Bain | E-mail:
Phone #: 225-293-7270 | Fax #:
Sampler(s) Name(s): Adrian Bain | Phone #: 225-293-7220

Project Information

Project Name: LA Retirement Systems
Street: 8401 United Plaza
City: Baton Rouge | State: LA
Project #: 503124
Client Purchase Order #:
Project Manager: Peter Smith

Billing Information (if different from Report to)

Company Name:
Street Address:
City: | State: | Zip:
Attention:

Requested Analyses

Accutest Sample #	Field ID / Point of Collection	Collection: Date	Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	ZA/NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	TSP	NaHSO4	ENCORE	OTHER	DRO	PAH BY 8270	EPH (Hold)	SPLP (Hold)						LAB USE ONLY
	SB-6 (11-13)	4-9-14	1148	AB	SO	2						2							✓	✓	✓	✓					2	
	SB-6 (27-30)	4-9-14	1152	AB	SO	2						2							✓	✓	✓	✓					2	
	SB-7 (11-13)	4-9-14	1520	AB	SO	2						2							✓	✓	✓	✓					2	
	SB-7 (27-30)	4-9-14	1524	AB	SO	2						2							✓	✓	✓	✓					2	
	SB-6 / TW-6	4-10-14	0950	AB	GW	8	3					5							✓	✓	✓						8	
	SB-7 / TW-7	4-10-14	0920	AB	GW	8	3					5							✓	✓	✓						8	

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank

Turnaround Time (Business days)

- [X] Standard
- [ ] 5 Day *RUSH*
- [ ] 4 Day *RUSH*
- [ ] 3 Day *RUSH*
- [ ] 2 Day *RUSH*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [X] Commercial "B" (Level 2)
- [ ] FULT1 (Level 3+4)
- [ ] REDT1 (Level 3+4)
- [ ] Commercial "C"
- [ ] TRRP
- [ ] EDD Format
- [ ] Other _____

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC & Surrogate Summary

Comments / Special Instructions

Standard PPM Rates will apply RU-105 (2)
Accutest Baton Rouge
Received at Baton Rouge
Service Center

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler: 1	Date Time: 4-11-14/1110	Received By: 1	Relinquished By: 2	Date Time: 4/11/14 1258	Received By: 2 Renee Sam		
Relinquished by Sampler: 3 Renee Sam 4/11/14	Date Time: 1603	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4		
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	[ ] Intact [✓] Not Intact	Preserved where applicable [ ]	On Ice [✓]	Cooler Temp. 2.5 (2.5) CF 4-11-14

APPENDIX F – RECAP FORMS

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: Louisiana Retirement Systems Building Partnership
2. AI#: 79956
3. Name of Area of Investigation: AOI No. 1 – Industrial Soil 0-15; AOI No. 2 – Industrial Soil >15 Feet BGS; AOI No. 3 – Groundwater ; AOI No. 4 – Industrial Soil BES; AOI No. 5 – Groundwater BES
4. Facility Owner Name: Beau Box Property Management
5. Facility Owner Mailing Address: P.O. Box 66865
Baton Rouge, LA 70896
6. Facility Operator Name: Beau Box Property Management
7. Facility Operator Mailing Address: P.O. Box 66865
Baton Rouge, LA 70896
8. Facility Physical Address: 8401 United Plaza Boulevard
Baton Rouge, LA
9. Parish: East Baton Rouge Parish
10. Latitude/Longitude of Primary Facility Entrance: 30° 24'46.5"/91° 05' 49.3"
11. Latitude/Longitude Method: MAP
12. Facility Contact Person: Mr. Layne Roberts
13. Facility Contact Person's Phone Number: (225) 237-3343
14. Facility Contact Person's Mailing Address: P.O. Box 66865
Baton Rouge, LA 70896
15. Facility Contact Person's E-mail Address:
16. Area of Investigation Location: Baton Rouge, Louisiana
17. Area of Investigation Size: 0.02066 acres
18. Horizontal and Vertical Extent of the Area of Investigation has been identified: ☒ 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 and historically, utilized as a professional office building. The diesel UST is used to fuel the building's emergency generator.
20. Indicate How Release Occurred (if known): UST release
21. List Constituents Released (if known): TPH-D, PAHs

22. RECAP Submittal Date: June 30, 215

23. RECAP Submittal Prepared by: Chasity H. Reed

24. RECAP Submittal Preparer's Employer: PPM Consultants, Inc.

25. RECAP Submittal Preparer's Phone Number: 318-323-7270

26. Site Ranking: ☐ Class 1 ☐ Class 2 ☐ Class 3 ☒ Class 4

27. Media Impacted:
☐ Surface Soil
☒ Potential Surface Soil
☒ Subsurface Soil
☐ Groundwater 1A
☐ Groundwater 1B
☐ Groundwater 2A
☐ Groundwater 2B
☐ Groundwater 2C
☒ Groundwater 3A
☐ Groundwater 3B
☐ Groundwater Classification Unknown
☐ Surface Water
☐ Sediment
☐ Biota

28. Is soil present at 0-3 feet BGS impacted? ☐ Yes ☒ No

29. Release Volume: Unknown

30. Is NAPL Present: ☐ Yes ☒ No

31. Aquifer: Southeast LA Aquifer System Surficial Confining Unit

(a) Distance from AOC/AOI to the nearest downgradient property boundary: 50 ft

(b) Distance from AOC/AOI to the nearest downgradient surface water body: 1,300 ft

(c) Depth from known contamination to the nearest Groundwater Classification 1 aquifer: 1,191 ft

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

32. Distance from known contamination to nearest enclosed occupied structure: NA

33. Depth Groundwater First Encountered: 12 ft

34. Distance from POC to POE: 1,300 ft

35. Dilution Factor Applied: 1902

36. Fractional Organic Carbon Content: 0.006 (default)

37. Current Land Use: ☐ Non-Industrial ☒ Industrial NAICS:

38. Potential Future Land Use: ☐ Non-Industrial ☒ Industrial NAICS:

39. Is there Offsite Contamination? ☐ Yes ☐ 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: ☒ SO ☒ MO-1 ☒ MO-2 ☐ MO-3

41. Provide documentation that the AOI meets the criteria for the Option implemented:
The AOIs meet the criteria listed in the RECAP Document for the Options used.

42. Current Status of the AOI:

(a) The AOIs will be further evaluated under: ☐ MO-1 ☒ MO-2 ☐ MO-3

(b) Medium for further evaluation: Groundwater

(c) Exceedances:

AOI No. 5 – Groundwater

☐ LSS ☒ AOIC ☐ MO-1 LRS ☐ CC ☒ MO-2 LRS Constituent of Concern	Soil Concentration (mg/kg)	Soil RECAP Standards (mg/kg)	Groundwater Concentration (mg/l)	Groundwater RECAP Standards (mg/l)
Aliphatics C10-C12	--	--	FP	349
Aliphatics C12-C16	--	--	FP	82
Aliphatics C16-C35	--	--	FP	1,913
Aromatics C10-C12	--	--	FP	1,913
Aromatics C12-C16	--	--	FP	1,913
Aromatics C16-C21	--	--	FP	1,913
Aromatics C21-C35	--	--	FP	1,913
Acenaphthene	--	--	FP	4.2
Acenaphthylene	--	--	FP	16
Anthracene	--	--	FP	0.043
Benz(a)anthracene	--	--	FP	0.0078
Benzo(a)pyrene	--	--	FP	0.0016
Benzo(b)fluoranthene	--	--	FP	0.0048
Benzo(k)fluoranthene	--	--	FP	0.0025
Chrysene	--	--	FP	0.0016
Dibenz(a,h)anthracene	--	--	FP	0.0025
Fluoranthene	--	--	FP	0.21
Fluorene	--	--	FP	2
Indeno(1,2,3-cd)pyrene	--	--	FP	0.0037
2-Methylnaphthalene	--	--	FP	25
Naphthalene	--	--	FP	12
Phenanthrene	--	--	FP	1.2
Pyrene	--	--	FP	0.14

43. The AOI will be remediated under: ☐ SO ☐ MO-1 ☒ MO-2 ☐ MO-3

(a) Medium requiring: Groundwater

(b) Corrective Action Standards: ☐ Non-Industrial: ☒ Industrial

(c) Institutional Controls are Proposed? ☐ Yes ☒ No ☐ Institutional Controls Already Present

(d) Interim Corrective Actions Have Been Performed: ☒ Yes ☐ No ☐ Not Applicable

If Yes, explain:

(e) PPM and Gator Environmental visited the site on April 10, 2014, May 29, 2014, June 2, 2014, June 24, 2014, and February 5, 2015, to conduct mobile dual-phase vacuum extraction (MDPVE) events on monitor well MW-1. Additionally, PPM hand-bailed free product from monitor well MW-1 and temporary monitor well TW-7 several times during the course of this investigation and a skimmer was installed in monitor well MW-1 on August 21, 2014, to recover free product. A total of approximately 156 gallons of free product were recovered during the hand-bailing and MDPVE events. Free product was not observed in temporary monitor wells TW-4, TW-5, or TW-6 during the course of this investigation. Temporary monitor wells TW-2 and TW-3 were destroyed during removal of the UST on April 23, 2014.

44. Exceedences and Corrective Action Standards to be applied:

AOI No. 5 – Groundwater

☐ LSS ☒ AOIC ☐ MO-1 LRS ☐ CC ☒ MO-2 LRS Constituent of Concern	Soil Concentration (mg/kg)	Soil RECAP Standards (mg/kg)	Groundwater Concentration (mg/l)	Groundwater RECAP Standards (mg/l)
Aliphatics C10-C12	--	--	FP	349
Aliphatics C12-C16	--	--	FP	82
Aliphatics C16-C35	--	--	FP	1,913
Aromatics C10-C12	--	--	FP	1,913
Aromatics C12-C16	--	--	FP	1,913
Aromatics C16-C21	--	--	FP	1,913
Aromatics C21-C35	--	--	FP	1,913
Acenaphthene	--	--	FP	4.2
Acenaphthylene	--	--	FP	16
Anthracene	--	--	FP	0.043
Benz(a)anthracene	--	--	FP	0.0078
Benzo(a)pyrene	--	--	FP	0.0016
Benzo(b)fluoranthene	--	--	FP	0.0048
Benzo(k)fluoranthene	--	--	FP	0.0025
Chrysene	--	--	FP	0.0016
Dibenz(a,h)anthracene	--	--	FP	0.0025
Fluoranthene	--	--	FP	0.21
Fluorene	--	--	FP	2
Indeno(1,2,3-cd)pyrene	--	--	FP	0.0037
2-Methylnaphthalene	--	--	FP	25
Naphthalene	--	--	FP	12
Phenanthrene	--	--	FP	1.2
Pyrene	--	--	FP	0.14

45. All constituent concentrations in all impacted media:

☒ 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: Soil and groundwater

AOI No. 1 – Industrial Soil 0-15 Feet BGS

☒ LSS ☒ AOIC ☐ MO-1 LRS ☐ CC ☐ MO-2 LRS Constituent of Concern	Soil Concentration (mg/kg)	Soil RECAP Standards (mg/kg)	Groundwater Concentration (mg/l)	Groundwater RECAP Standards (mg/l)
Aliphatics C10-C12	6.7	1,955	--	--
Aliphatics C12-C16	35	3,772	--	--
Aliphatics C16-C35	39	10,000	--	--
Aromatics C10-C12	<1.7	102	--	--
Aromatics C12-C16	7.7	203	--	--
Aromatics C16-C21	14	1,746	--	--
Aromatics C21-C35	<10	2,518	--	--

AOI No. 2 – Industrial Soil >15 Feet BGS

☐ LSS ☒ AOIC ☒ MO-1 LRS ☐ CC ☐ MO-2 LRS Constituent of Concern	Soil Concentration (mg/kg)	Soil RECAP Standards (mg/kg)	Groundwater Concentration (mg/l)	Groundwater RECAP Standards (mg/l)
Aromatics C12-C16	240	10,000	--	--

AOI No. 3 – Groundwater

☐ LSS ☒ AOIC ☒ MO-1 LRS ☐ CC ☐ MO-2 LRS Constituent of Concern	Soil Concentration (mg/kg)	Soil RECAP Standards (mg/kg)	Groundwater Concentration (mg/l)	Groundwater RECAP Standards (mg/l)
Aliphatics C10-C12	--	--	0.19	698
Aliphatics C12-C16	--	--	0.24	165
Aromatics C12-C16	--	--	0.29	3,045
Aromatics C16-C21	--	--	0.18	3,045
Aromatics C21-C35	--	--	0.26	3,045

AOI No. 4 – Industrial Soil BES

☐ LSS ☒ AOIC ☐ MO-1 LRS ☐ CC ☒ MO-2 LRS Constituent of Concern	Soil Concentration (mg/kg)	Soil RECAP Standards (mg/kg)	Groundwater Concentration (mg/l)	Groundwater RECAP Standards (mg/l)
Aliphatics C10-C12	1,300	1,428	--	--
Aliphatics C12-C16	1,300	1,428	--	--
Aliphatics C16-C35	1,300	1,428	--	--
Aromatics C10-C12	1,300	1,428	--	--
Aromatics C12-C16	1,300	1,428	--	--
Aromatics C16-C21	1,300	1,428	--	--
Aromatics C21-C35	1,300	1,428	--	--
Acenaphthene	<0.033	15,311	--	--
Acenaphthylene	<0.033	46,135	--	--
Anthracene	<0.033	30,068	--	--
Benz(a)anthracene	<0.033	2.9	--	--
Benzo(a)pyrene	<0.033	0.33	--	--
Benzo(b)fluoranthene	<0.033	2.9	--	--
Benzo(k)fluoranthene	<0.033	29	--	--
Chrysene	0.037	286	--	--
Dibenz(a,h)anthracene	<0.033	0.33	--	--
Fluoranthene	0.11	7,213	--	--
Fluorene	0.88	17,832	--	--
Indeno(1,2,3-cd)pyrene	<0.033	2.9	--	--
2-Methylnaphthalene	7.3	551	--	--
Naphthalene	1.4	54	--	--
Phenanthrene	2.5	29,480	--	--
Pyrene	0.44	18,689	--	--

AOI No. 5 – Groundwater

☐ LSS ☒ AOIC ☐ MO-1 LRS ☐ CC ☒ MO-2 LRS Constituent of Concern	Soil Concentration (mg/kg)	Soil RECAP Standards (mg/kg)	Groundwater Concentration (mg/l)	Groundwater RECAP Standards (mg/l)
Aliphatics C10-C12	--	--	FP	349
Aliphatics C12-C16	--	--	FP	82
Aliphatics C16-C35	--	--	FP	1,913
Aromatics C10-C12	--	--	FP	1,913
Aromatics C12-C16	--	--	FP	1,913
Aromatics C16-C21	--	--	FP	1,913
Aromatics C21-C35	--	--	FP	1,913
Acenaphthene	--	--	FP	4.2
Acenaphthylene	--	--	FP	16
Anthracene	--	--	FP	0.043
Benz(a)anthracene	--	--	FP	0.0078
Benzo(a)pyrene	--	--	FP	0.0016
Benzo(b)fluoranthene	--	--	FP	0.0048
Benzo(k)fluoranthene	--	--	FP	0.0025
Chrysene	--	--	FP	0.0016
Dibenz(a,h)anthracene	--	--	FP	0.0025
Fluoranthene	--	--	FP	0.21
Fluorene	--	--	FP	2

Indeno(1,2,3-cd)pyrene	--	--	FP	0.0037
2-Methylnaphthalene	--	--	FP	25
Naphthalene	--	--	FP	12
Phenanthrene	--	--	FP	1.2
Pyrene	--	--	FP	0.14

47. Provide documentation that the AOIC and/or CC will continue to comply with the applicable standard:
Standards developed in the attached RECAP Report shall be designated as the target remediation levels for impacted soil and groundwater and remedial actions shall be conducted to reach these levels.

48. If groundwater was impacted, provide a description of aquifer use and list the locations and depths of the nearest drinking water supply wells:
The nearest drinking water well (DNR No. 144) is located approximately 1230 feet from the site and is installed to a depth of 620 feet into the "400-Foot" Sand of Baton Rouge Area.

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. Standards developed in the attached RECAP Report shall be designated as the target remediation levels for soil and groundwater and remedial actions will be conducted to reach these levels.

50. If applicable, discuss monitoring well plugging and abandonment:
Not applicable

51. Is there a Current or Potential Ecological Impact? ☐ Yes ☒ No

RECAP FORM 3
ANALYTICAL DATA EVALUATION

Date:	June 12, 2015
Facility Name:	Louisiana Retirement Systems Building Partnership
Agency Interest (AI#):	79956
Physical Site Location:	8401 United Plaza Boulevard, Baton Rouge, LA
Operation Address:	8401 United Plaza Boulevard, Baton Rouge, LA
Owner/Responsible Party Address:	P.O. Box 66865, Baton Rouge, LA 70896

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). [X] 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. [ ] 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

3. All data with a qualifier of "J" (estimated concentrations) have been included as positive results. [ ] Yes [ ] No

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). [ ] 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. [ ] 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

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.

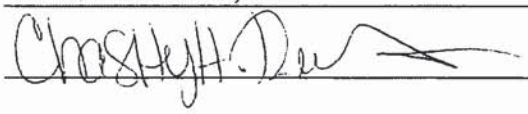
3.B All methods used in all analysis have produced tangible raw data (e.g. chromatograms, spectra, digital values), and are available to the Department upon request.
[X] Yes [ ] No

1. Representative data is included in documentation as examples of method procedures. [ ] 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.). [ ] 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 12, 2015
Name of Person submitting this evaluation:	Chasity H. Reed
Affiliation:	PPM Consultants, Inc.
Signature:	
Additional Preparers:	

RECAP FORM 10A
SCREENING OPTION SUBMITTAL FOR SOIL AOI NO. 1 - INDUSTRIAL SOIL 0-15 FEET BGS

SOIL – Identification of the Limiting SO SS:

COC	SoilSSi	$Soil_{SSGW}$	Limiting SS
Aliphatics >C10-C12	1955	10000	1955
Aliphatics >C12-C16	3772	10000	3772
Aliphatics >C16-C35	10000	10000	10000
Aromatics >C10-C12	1097	102	102
Aromatics >C12-C16	2140	203	203
Aromatics >C16-C21	1746	2083	1746
Aromatics >C21-C35	2518	10000	2518

SOIL – Identification of the AOIC:

COC	Maximum Concentration
Aliphatics >C10-C12	6.7
Aliphatics >C12-C16	35
Aliphatics >C16-C35	39
Aromatics >C10-C12	< 1.7
Aromatics >C12-C16	7.7
Aromatics >C16-C21	14
Aromatics >C21-C35	< 10

SO SOIL RECAP ASSESSMENT:

COC	Limiting SS	Maximum Concentration	AOIC Exceeds LSS?
Aliphatics >C10-C12	**1955**	**6.7**	**No**
Aliphatics >C12-C16	**3772**	**35**	**No**
Aliphatics >C16-C35	**10000**	**39**	**No**
Aromatics >C10-C12	**102**	**< 1.7**	**No**
Aromatics >C12-C16	**203**	**7.7**	**No**
Aromatics >C16-C21	**1746**	**14**	**No**
Aromatics >C21-C35	**2518**	**< 10**	**No**

RECAP FORM 10B
SCREENING OPTION SUBMITTAL FOR SOIL AOI NO. 2 - INDUSTRIAL SOIL >15 FEET BGS

SOIL – Identification of the Limiting SO SS:

COC	SoilSSi	$Soil_{SSGW}$	Limiting SS
Aliphatics >C10-C12	1955	10000	1955
Aliphatics >C12-C16	3772	10000	3772
Aliphatics >C16-C35	10000	10000	10000
Aromatics >C10-C12	1097	102	102
Aromatics >C12-C16	2140	203	203
Aromatics >C16-C21	1746	2083	1746
Aromatics >C21-C35	2518	10000	2518
Acenaphthene	6124	215	215
Acenaphthylene	5141	88	88
Anthracene	47808	121	121
Benz(a)anthracene	2.9	335	2.9
Benzo(a)pyrene	0.33	23	0.33
Benzo(b)fluoranthene	2.9	221	2.9
Benzo(k)fluoranthene	29	118	29
Chrysene	286	76	76
Dibenz(a,h)anthracene	0.33	536	0.33
Fluoranthene	2885	1213	1213
Fluorene	5407	226	226
Indeno(1,2,3-cd)pyrene	2.9	9	2.9
Methylnaphthalene,2-	165	1.7	1.7
Naphthalene	43	1.5	1.5
Phenanthrene	42533	665	665
Pyrene	5607	1101	1101

SOIL – Identification of the AOIC:

COC	Maximum Concentration
Aliphatics >C10-C12	380
Aliphatics >C12-C16	1300
Aliphatics >C16-C35	1300
Aromatics >C10-C12	7.8
Aromatics >C12-C16	240
Aromatics >C16-C21	460
Aromatics >C21-C35	80
Acenaphthene	< 0.033
Acenaphthylene	< 0.033
Anthracene	< 0.033
Benz(a)anthracene	< 0.033
Benzo(a)pyrene	< 0.033
Benzo(b)fluoranthene	< 0.033
Benzo(k)fluoranthene	< 0.033
Chrysene	< 0.033
Dibenz(a,h)anthracene	< 0.033
Fluoranthene	< 0.033
Fluorene	< 0.033

Indeno(1,2,3-cd)pyrene	< 0.033
Methylnaphthalene,2-	< 0.033
Naphthalene	< 0.033
Phenanthrene	< 0.033
Pyrene	< 0.033

SO SOIL RECAP ASSESSMENT:

COC	Limiting SS	Maximum Concentration	AOIC Exceeds LSS?
Aliphatics >C10-C12	1955	380	No
Aliphatics >C12-C16	3772	1300	No
Aliphatics >C16-C35	10000	1300	No
Aromatics >C10-C12	102	7.8	No
Aromatics >C12-C16	203	240	Yes
Aromatics >C16-C21	1746	460	No
Aromatics >C21-C35	2518	80	No
Acenaphthene	215	< 0.033	No
Acenaphthylene	88	< 0.033	No
Anthracene	121	< 0.033	No
Benz(a)anthracene	2.9	< 0.033	No
Benzo(a)pyrene	0.33	< 0.033	No
Benzo(b)fluoranthene	2.9	< 0.033	No
Benzo(k)fluoranthene	29	< 0.033	No
Chrysene	76	< 0.033	No
Dibenz(a,h)anthracene	0.33	< 0.033	No
Fluoranthene	1213	< 0.033	No
Fluorene	226	< 0.033	No
Indeno(1,2,3-cd)pyrene	2.9	< 0.033	No
Methylnaphthalene,2-	1.7	< 0.033	No
Naphthalene	1.5	< 0.033	No
Phenanthrene	665	< 0.033	No
Pyrene	1101	< 0.033	No

RECAP FORM 11

MANAGEMENT OPTION 1 SUBMITTAL FOR SOIL AOI NO. 4 - INDUSTRIAL SOIL BES

SOIL 0-15 ft bgs - Identification of the Limiting MO-1RS:

COC	Soili	Additivity Divisor	Final Soili	SoilGW3NDW	DF3	Final $Soil_{GW}$	Soilesi	Additivity Divisor	Final $Soil_{es}$	$Soil_{sat}$	Limiting MO-1 RS
Aliphatics >C10-C12	10,000	4	**2500**	10000	248	**2480000**	NA	NA	**NA**	**NA**	**1,428***
Aliphatics >C12-C16	10,000	4	**2500**	10000	248	**2480000**	NA	NA	**NA**	**NA**	**1,428***
Aliphatics >C16-C35	10,000	3	**3,333**	10000	248	**2480000**	NA	NA	**NA**	**NA**	**1,428***
Aromatics >C10-C12	10,000	3	**3,333**	9559	248	**2,370,592**	NA	NA	**NA**	**NA**	**1,428***
Aromatics >C12-C16	10,000	3	**3,333**	10000	248	**2480000**	NA	NA	**NA**	**NA**	**1,428***
Aromatics >C16-C21	10,000	1	**10,000**	10000	248	**2480000**	NA	NA	**NA**	**NA**	**1,428***
Aromatics >C21-C35	10,000	1	**10,000**	10000	248	**2480000**	NA	NA	**NA**	**NA**	**1,428***
Acenaphthene	61,244	4	**15,311**	316	248	**78480**	252137	2	**126068**	**NA**	**15311**
Acenaphthylene	51,405	1	**51,405**	186	248	**46135**	131953	2	**65977**	**NA**	**46135**
Anthracene	478,084	1	**478,084**	121	248	**30068**	1000000	2	**500000**	**NA**	**30068**
Benz(a)anthracene	2.9	1	**2.9**	0.016	248	**4**	NA	NA	**NA**	**NA**	**2.9**
Benzo(a)pyrene	0.33	1	**0.33**	23	248	**5762**	NA	NA	**NA**	**NA**	**0.33**
Benzo(b)fluoranthene	2.9	1	**2.9**	13	248	**3324**	NA	NA	**NA**	**NA**	**2.9**
Benzo(k)fluoranthene	29	1	**29**	118	248	**29255**	NA	NA	**NA**	**NA**	**29**
Chrysene	286	1	**286**	1.8	248	**450**	NA	NA	**NA**	**NA**	**286**
Dibenz(a,h)anthracene	0.33	1	**0.33**	2	248	**484**	NA	NA	**NA**	**NA**	**0.33**
Fluoranthene	28,854	4	**7,213**	186	248	**46105**	NA	NA	**NA**	**NA**	**7213**
Fluorene	54,072	2	**27,036**	72	248	**17832**	644348	2	**322174**	**NA**	**17832**
Indeno(1,2,3-cd)pyrene	2.9	1	**2.9**	9.2	248	**2270**	NA	NA	**NA**	**NA**	**2.9**
Methylnaphthalene,2-	1,653	3	**551**	7.3	248	**1806**	3487	4	**872**	**NA**	**551**
Naphthalene	426	3	**142**	32	248	**8014**	218	4	**54**	**NA**	**54**
Phenanthrene	425,334	1	**425,334**	119	248	**29480**	1000000	2	**500000**	**NA**	**29480**
Pyrene	56,067	3	**18,689**	1101	248	**273002**	1000000	2	**500000**	**NA**	**18689**

*Total Petroleum Hydrocarbons shall not exceed 10,000 ppm based on aesthetics.

SOIL 0-15 ft bgs – Identification of the AOIC:

COC	Maximum Concentration	95% UCL-AM Concentration	AOI Concentration
Aliphatics >C10-C12	1300	-	1300
Aliphatics >C12-C16	1300	-	1300
Aliphatics >C16-C35	1300	-	1300
Aromatics >C10-C12	1300	-	1300
Aromatics >C12-C16	1300	-	1300
Aromatics >C16-C21	1300	-	1300
Aromatics >C21-C35	1300	-	1300
Acenaphthene	< 0.033	-	< 0.033
Acenaphthylene	< 0.033	-	< 0.033
Anthracene	< 0.033	-	< 0.033
Benz(a)anthracene	< 0.033	-	< 0.033
Benzo(a)pyrene	< 0.033	-	< 0.033

Benzo(b)fluoranthene	< 0.033	-	< 0.033
Benzo(k)fluoranthene	< 0.033	-	< 0.033
Chrysene	0.037	-	0.037
Dibenz(a,h)anthracene	< 0.033	-	< 0.033
Fluoranthene	0.11	-	0.11
Fluorene	0.88	-	0.88
Indeno(1,2,3-cd)pyrene	< 0.033	-	< 0.033
Methylnaphthalene,2-	7.3	-	7.3
Naphthalene	1.4	-	1.4
Phenanthrene	2.5	-	2.5
Pyrene	0.44	-	0.44

MO-1 SOIL 0-15 ft bgs RECAP ASSESSMENT:

COC	Limiting MO-1 RS	AOI Concentration	AOIC Exceeds MO-1 LRS?
Aliphatics >C10-C12	1,428*	1300	No
Aliphatics >C12-C16	1,428*	1300	No
Aliphatics >C16-C35	1,428*	1300	No
Aromatics >C10-C12	1,428*	1300	No
Aromatics >C12-C16	1,428*	1300	No
Aromatics >C16-C21	1,428*	1300	No
Aromatics >C21-C35	1,428*	1300	No
Acenaphthene	15,311	< 0.033	No
Acenaphthylene	46,135	< 0.033	No
Anthracene	30,068	< 0.033	No
Benz(a)anthracene	2.9	< 0.033	No
Benzo(a)pyrene	0.33	< 0.033	No
Benzo(b)fluoranthene	2.9	< 0.033	No
Benzo(k)fluoranthene	29	< 0.033	No
Chrysene	286	0.037	No
Dibenz(a,h)anthracene	0.33	< 0.033	No
Fluoranthene	7,213	0.11	No
Fluorene	17,832	0.88	No
Indeno(1,2,3-cd)pyrene	2.9	< 0.033	No
Methylnaphthalene,2-	551	7.3	No
Naphthalene	54	1.4	No
Phenanthrene	29,480	2.5	No
Pyrene	18,689	0.44	No

*Total Petroleum Hydrocarbons shall not exceed 10,000 ppm based on aesthetics.

RECAP FORM 12
MANAGEMENT OPTION 1 SUBMITTAL FOR SOIL AOI NO. 2 - INDUSTRIAL SOIL >15 FEET BGS

SOIL >15 ft bgs - Identification of the Limiting MO-1RS:

COC	SoilGW3NDW	DF3	Final $Soil_{GW}$	$Soil_{sat}$	Limiting MO-1 RS
Aromatics >C12-C16	10,000	248	**2,480,000**	**NA**	**10000***

SOIL >15 ft bgs – Identification of the AOIC:

COC	Maximum Concentration	95% UCL-AM Concentration	AOI Concentration
Aromatics >C12-C16	240	-	240

MO-1 SOIL >15 ft bgs RECAP ASSESSMENT:

COC	Limiting MO-1 RS	AOI Concentration	AOIC Exceeds MO-1 LRS?
Aromatics >C12-C16	10000*	240	No

*Total Petroleum Hydrocarbons shall not exceed 10,000 ppm based on aesthetics.

RECAP FORM 15
SCREENING OPTION SUBMITTAL FOR GROUNDWATER AOI NO. 3 - GROUNDWATER

GROUNDWATER - Identification of the SO SS

COC	GW_{SS}
Aliphatics >C10-C12	0.15
Aliphatics >C12-C16	0.15
Aliphatics >C16-C35	7.3
Aromatics >C10-C12	0.15
Aromatics >C12-C16	0.15
Aromatics >C16-C21	0.15
Aromatics >C21-C35	0.15

GROUNDWATER - Compliance Concentration:

COC	Compliance Concentration
Aliphatics >C10-C12	0.19
Aliphatics >C12-C16	0.24
Aliphatics >C16-C35	0.35
Aromatics >C10-C12	< 0.1
Aromatics >C12-C16	0.29
Aromatics >C16-C21	0.18
Aromatics >C21-C35	0.26

SO GROUNDWATER RECAP ASSESSMENT:

COC	GW_{SS}	Compliance Concentration	CC Exceeds SS?
Aliphatics >C10-C12	0.15	0.19	Yes
Aliphatics >C12-C16	0.15	0.24	Yes
Aliphatics >C16-C35	7.3	0.35	No
Aromatics >C10-C12	0.15	< 0.1	No
Aromatics >C12-C16	0.15	0.29	Yes
Aromatics >C16-C21	0.15	0.18	Yes
Aromatics >C21-C35	0.15	0.26	Yes

RECAP FORM 16
MANAGEMENT OPTION 1 SUBMITTAL FOR GROUNDWATER AOI NO. 3 - GROUNDWATER

GROUNDWATER - Identification of the Limiting MO-1RS:

COC	GW3NDW	DF3	Final GW3NDW	NO GWes	Additivity Divisor	Final GW_{es}	GWairi	Additivity Divisor	Final GW_{air}	$Water_{SOL}$	Limiting MO-1 RS
Aliphatics >C10-C12	79	248	**19,506**	NA	NA	**NA**	698	1	**698**	**NA**	**698**
Aliphatics >C12-C16	79	248	**19,506**	NA	NA	**NA**	165	1	**165**	**NA**	**165**
Aromatics >C12-C16	31	248	**7,802**	NA	NA	**NA**	13,745	1	**13,745**	**NA**	**7,802**
Aromatics >C16-C21	24	248	**5,852**	NA	NA	**NA**	NA	NA	**NA**	**NA**	**5,852**
Aromatics >C21-C35	24	248	**5,852**	NA	NA	**NA**	NA	NA	**NA**	**NA**	**5,852**

GROUNDWATER - Compliance Concentration:

COC	Compliance Concentration
Aliphatics >C10-C12	0.19
Aliphatics >C12-C16	0.24
Aromatics >C12-C16	0.29
Aromatics >C16-C21	0.18
Aromatics >C21-C35	0.26

MO-1 GROUNDWATER RECAP ASSESSMENT:

COC	Limiting MO-1 RS	Compliance Concentration	CC Exceeds MO-1 LRS?
Aliphatics >C10-C12	**698**	**0.19**	**No**
Aliphatics >C12-C16	**165**	**0.24**	**No**
Aromatics >C12-C16	**7,802**	**0.29**	**No**
Aromatics >C16-C21	**5,852**	**0.18**	**No**
Aromatics >C21-C35	**5,852**	**0.26**	**No**

RECAP FORM 17

MANAGEMENT OPTION 2 SUBMITTAL FOR GROUNDWATER AOI NO. 5 - GROUNDWATER BES

GROUNDWATER - Identification of the Limiting RS:

COC	GW3NDW	DF3	Final GW3NDW	GWesi	Additivity Divisor	Final GW_{es}	GWairi	Additivity Divisor	Final GW_{air}	$Water_{sol}$	Limiting RS
Aliphatics >C10-C12	79	1902	**149596**	NA	NA	**NA**	698	2	**349**	**NA**	**349**
Aliphatics >C12-C16	79	1902	**149596**	NA	NA	**NA**	165	2	**82**	**NA**	**82**
Aliphatics >C16-C35	1,573	1902	**2991910**	NA	NA	**NA**	NA	NA	**NA**	**NA**	**1,913***
Aromatics >C10-C12	31	1902	**59838**	NA	NA	**NA**	8093	3	**2698**	**NA**	**1,913***
Aromatics >C12-C16	31	1902	**59838**	NA	NA	**NA**	13745	3	**4582**	**NA**	**1,913***
Aromatics >C16-C21	24	1902	**44879**	NA	NA	**NA**	NA	NA	**NA**	**NA**	**1,913***
Aromatics >C21-C35	24	1902	**44879**	NA	NA	**NA**	NA	NA	**NA**	**NA**	**1,913***
Acenaphthene	0.54	1902	**1020**	9642	1	**9642**	236549	1	**236549**	**4.2**	**4.2**
Acenaphthylene	0.77	1902	**1461**	12273	1	**12273**	299212	1	**299212**	**16**	**16**
Anthracene	0.11	1902	**217**	126419	1	**126419**	3040708	1	**3040708**	**0.043**	**0.043**
Benz(a)anthracene	0.00000038	1902	**0.001**	NA	NA	**NA**	NA	NA	**NA**	**0.009**	**0.0078****
Benzo(a)pyrene	0.0002	1902	**0.38**	NA	NA	**NA**	NA	NA	**NA**	**0.0016**	**0.0016**
Benzo(b)fluoranthene	0.00000016	1902	**0.0003**	NA	NA	**NA**	NA	NA	**NA**	**0.0015**	**0.0048****
Benzo(k)fluoranthene	0.0000016	1902	**0.0030**	NA	NA	**NA**	NA	NA	**NA**	**0.0008**	**0.0025****
Chrysene	0.000038	1902	**0.07**	NA	NA	**NA**	NA	NA	**NA**	**0.0016**	**0.0016**
Dibenz(a,h)anthracene	0.000000007	1902	**0.00001**	NA	NA	**NA**	NA	NA	**NA**	**0.0025**	**0.0025****
Fluoranthene	0.032	1902	**60**	NA	NA	**NA**	NA	NA	**NA**	**0.21**	**0.21**
Fluorene	0.078	1902	**148**	15625	1	**15625**	376092	1	**376092**	**2**	**2**
Indeno(1,2,3-cd)pyrene	0.00000007	1902	**0.00013**	NA	NA	**NA**	NA	NA	**NA**	**0.00002**	**0.0037****
Methylnaphthalene,2-	0.027	1902	**51**	289	2	**145**	6978	2	**3489**	**25**	**25**
Naphthalene	0.22	1902	**423**	35	2	**17**	929	2	**465**	**31**	**17**
Phenanthrene	0.21	1902	**391**	252297	1	**252297**	6031579	1	**6031579**	**1.2**	**1.2**
Pyrene	1.43	1902	**2,719**	39732	1	**39732**	947980	1	**947980**	**0.14**	**0.14**

*Total Petroleum Hydrocarbons shall not exceed 10,000 ppm based on aesthetics

**RECAP standard based on Quantitation Limits.

GROUNDWATER - Compliance Concentration:

COC	Compliance Concentration
Aliphatics >C10-C12	FP
Aliphatics >C12-C16	FP
Aliphatics >C16-C35	FP
Aromatics >C10-C12	FP
Aromatics >C12-C16	FP
Aromatics >C16-C21	FP
Aromatics >C21-C35	FP
Acenaphthene	FP
Acenaphthylene	FP
Anthracene	FP
Benz(a)anthracene	FP

Benzo(a)pyrene	FP
Benzo(b)fluoranthene	FP
Benzo(k)fluoranthene	FP
Chrysene	FP
Dibenz(a,h)anthracene	FP
Fluoranthene	FP
Fluorene	FP
Indeno(1,2,3-cd)pyrene	FP
Methylnaphthalene,2-	FP
Naphthalene	FP
Phenanthrene	FP
Pyrene	FP

MO-2 GROUNDWATER RECAP ASSESSMENT:

COC	Limiting RS	Compliance Concentration	CC Exceeds LRS?
Aliphatics >C10-C12	349	FP	Yes
Aliphatics >C12-C16	82	FP	Yes
Aliphatics >C16-C35	1,913*	FP	Yes
Aromatics >C10-C12	1,913*	FP	Yes
Aromatics >C12-C16	1,913*	FP	Yes
Aromatics >C16-C21	1,913*	FP	Yes
Aromatics >C21-C35	1,913*	FP	Yes
Acenaphthene	4.2	FP	Yes
Acenaphthylene	16	FP	Yes
Anthracene	0.043	FP	Yes
Benz(a)anthracene	0.0078**	FP	Yes
Benzo(a)pyrene	0.0016	FP	Yes
Benzo(b)fluoranthene	0.0048**	FP	Yes
Benzo(k)fluoranthene	0.0025**	FP	Yes
Chrysene	0.0016	FP	Yes
Dibenz(a,h)anthracene	0.0025**	FP	Yes
Fluoranthene	0.21	FP	Yes
Fluorene	2	FP	Yes
Indeno(1,2,3-cd)pyrene	0.0037**	FP	Yes
Methylnaphthalene,2-	25	FP	Yes
Naphthalene	17	FP	Yes
Phenanthrene	1.2	FP	Yes
Pyrene	0.14	FP	Yes

*Total Petroleum Hydrocarbons shall not exceed 10,000 ppm based on aesthetics

**RECAP standard based on Quantitation Limits.

RECAP FORM 18
ECOLOGICAL CHECKLIST

Section 1 - Facility Information

1. Name of facility: Louisiana Retirement Systems Building Partnership

2. Location of facility: 8401 United Plaza Boulevard, Baton Rouge, LA

   Parish: East Baton Rouge Parish

3. Mailing address: 8401 United Plaza Boulevard, Baton Rouge, LA

4. Type of facility and/or operations associated with AOC: Diesel UST used to fuel the building's emergency generator

5. Name of AOC or AOI: Louisiana Retirement Systems Building Partnership

6. If available, attach a USGS topographic map of the facility and/or aerial or other photographs of the release site and surrounding areas.

Section 2 - Land Use Information

1. Describe land use at and in the vicinity of the AOC/AOI: Commercial

2. Describe land use adjacent to the facility: Commercial

3. Provide the following information regarding the nearest surface water body which has been impacted or has the potential to be impacted by COC migrating from the AOC/AOI:

a) Name of the surface water body: North Branch of Wards Creek

b) Type of surface water body:

[ ] freshwater river or stream
[ ] freshwater swamp/marsh/wetland
[ ] saltwater or brackish swamp/marsh/wetland
[ ] lake or pond
[ ] bayou or estuary
[ ] drainage ditch
[X] other: Creek

c) Designated use of the segment/subsegment of the surface water body (LAC 33:IX): Non-Drinking Water

d) Distance from the AOC/AOI to nearest surface water body: 1,300 feet

4. Do any potentially sensitive environmental areas exist adjacent to or in proximity to the site, e.g., federal and state parks, national and state monuments, wetlands, etc? [ ] Yes [X] No

If yes, explain:

Section 3 - Release Information

1. Nature of the release: UST release

2. Location of the release (within the facility): UST pit

3. Location of the release with respect to the facility property boundaries:

North of United Plaza Boulevard and east of Essen Lane

4. Constituents known or suspected to have been released: TPH-D, PAHs

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5. Indicate which media are known or suspected to be impacted and if sampling data are available:

[ ] soil 0-3 feet BGS	[ ] yes [ ] no
[X] soil 0-15 feet BGS	[X] yes [ ] no
[X] soil >15 feet BGS	[X] yes [ ] no
[X] groundwater	[X] yes [ ] no
[ ] surface water/sediment	[ ] yes [ ] no

6. Has migration occurred outside the facility property boundaries? [ ] yes [X] no

If yes, describe the designated use of the offsite land impacted:

Section 4 - Criteria for Further Assessment

If the AOI meets **all** of the criteria presented below, then typically no further ecological evaluation shall be required. If the AOI **does not** meet **all** of the criteria, then a screening level ecological risk shall be conducted. The Submitter should make the initial decision regarding whether or not a screening level ecological risk assessment is warranted based on compliance of the AOI with criteria listed below. After review of the ecological checklist and other available site information, the Department will make a final determination on the need for a screening level ecological risk assessment. If site conditions at the AOI change such that one or more of the criteria are not met, then a screening level ecological risk assessment shall be conducted. Answers shall be based on current site conditions (i.e., shall not consider future remedial actions or institutional or engineering controls).

Indicate if the AOI meets the following criteria:

(1) The area of impacted soil is approximately 5 acres or less in size (based on the AOI identified for the human health assessment) and it is not expected that the COC will migrate such that the soil AOI becomes greater than 5 acres in size. [X] yes [ ] no

(2) There is no current release or demonstrable long-term threat of release (via runoff or groundwater discharge) of COC from the AOI to a surface water body. [X] yes [ ] no

(3) Recreational species, commercial species, threatened or endangered species, and/or their habitats are not currently being exposed, or expected to be exposed, to COC present at or migrating from the AOI.
[X] yes [ ] no

(4) There are no obvious impacts to ecological receptors or their habitats and none are expected in the future.
[X] yes [ ] no

Is further ecological evaluation required at this AOI? [ ] yes [X] no
This determination is subject to Department concurrence.

Section 5 - Site Summary

The ecological checklist submittal shall include a site summary that presents sufficient information to verify that the AOI meets or does not meet the criteria for further assessment.

Section 6 - Submitter Information

Date:	June 12, 2015
Name of person submitting this checklist:	Chasity H. Reed
Affiliation:	PPM Consultants, Inc.
Signature:	Chasity H. Reed
Additional Preparers:	

APPENDIX G – RECAP CALCULATIONS

Soil properties		Management Option 2							
Revision Date: 08/04/2003									
Run date:	6/10/2015								
*****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						
30	(ft) = L = length of the source at the water table								
30	(ft) = W = width of impacted area perpendicular to flow direction of aquifer								
0.0	Acres		AOI site area - input into Q/C equation below						
143.5317	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			

LDEQ RECAP
WORKSHEET 2
GW 3NDW
(mg/l)

Derivation of Management Option 1, 2, & 3 **Groundwater Classification 3-Non-Drinking Water**
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C (mg/l) GW3NDW = (TR*BWa) / (SFo*(IRWndw+BCF*IRF))
N (mg/l) GW3NDW = (THQ*RfDo*BWa) / (IRWndw+BCF*IRF)

	LAC 33:IX.	LAC 33:IX.					LAC(NDW) or max	
	1113(HHNDW)	1113(HHDW)	MCL	BCF			(LAC,MCL, (MIN C, N))	
COMPOUND	(mg/L)	(mg/L)	(mg/l)	(l/kg)	C (mg/l)	N (mg/l)	(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)

LDEQ RECAP
WORKSHEET 2
GW 3NDW
(mg/l)

Derivation of Management Option 1, 2, & 3 **Groundwater Classification 3-Non-Drinking Water**
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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
Chlorodibromomethane	5.08E-03	3.90E-04	1.00E-01				5.1E-03	(*1)LAC(NDW)
Chloroethane (Ethylchloride)				6.82E+00	NA	1.24E+02	1.2E+02	(*2)N
Chloroform	7.00E-02	5.30E-03	1.00E-01				7.0E-02	(*1)LAC(NDW)
Chloromethane				2.89E+00	3.67E-02	NA	3.7E-02	(*2)C
Chloronaphthalene,2-				7.69E+02	NA	3.62E-01	3.6E-01	(*2)N
Chlorophenol,2-	1.26E-01	1.00E-04					1.3E-01	(*1)LAC(NDW)
Chromium(III)		5.00E-02	1.00E-01	1.00E+00	NA	9.63E+02	9.6E+02	(*2)N
Chromium(VI)		5.00E-02	1.00E-01	1.00E+00	NA	1.93E+00	1.9E+00	(*2)N
Chrysene				1.26E+04	3.80E-05	NA	3.8E-05	(*2)C
Cobalt				1.00E+00	NA	3.85E+01	3.9E+01	(*2)N
Copper		1.00E+00	1.30E+00	2.26E+04	NA	6.19E-03	1.3E+00	MCL
Cyanide (free)	1.28E+01	6.64E-01	2.00E-01				1.3E+01	(*1)LAC(NDW)
DDD	2.70E-07	2.70E-07					2.7E-07	(*1)LAC(NDW)
DDE	1.90E-07	1.90E-07					1.9E-07	(*1)LAC(NDW)
DDT	1.90E-07	1.90E-07					1.9E-07	(*1)LAC(NDW)
Dibenz(a,h)anthracene				7.28E+04	6.59E-09	NA	6.6E-09	(*2)C
Dibenzofuran				9.16E+02	NA	1.52E-02	1.5E-02	(*2)N
Dibromo-3-chloropropane,1,2-			2.00E-04	3.30E+01	6.68E-05	5.34E-03	2.0E-04	MCL
Dichlorobenzene,1,2-			6.00E-01	8.90E+01	NA	3.37E+00	3.4E+00	(*2)N
Dichlorobenzene,1,3-				6.60E+01	NA	4.47E-02	4.5E-02	(*2)N
Dichlorobenzene,1,4-			7.50E-02	6.00E+01	2.26E-03	1.63E+00	7.5E-02	MCL
Dichlorobenzidine,3,3-				5.07E+02	1.52E-05	NA	1.5E-05	(*2)C
Dichloroethane,1,1-				1.37E+01	NA	1.93E+01	1.9E+01	(*2)N
Dichloroethane,1,2-	6.80E-03	3.60E-04	5.00E-03				6.8E-03	(*1)LAC(NDW)
Dichloroethene,1,1-	5.80E-04	5.00E-05	7.00E-03				5.8E-04	(*1)LAC(NDW)
Dichloroethene,cis,1,2-			7.00E-02	1.64E+01	NA	1.68E+00	1.7E+00	(*2)N
Dichloroethene,trans,1,2-			1.00E-01	2.32E+01	NA	2.53E+00	2.5E+00	(*2)N
Dichlorophenol,2,4-	2.33E-01	3.00E-04					2.3E-01	(*1)LAC(NDW)
Dichloropropane,1,2-			5.00E-03	1.95E+01	2.15E-03	1.67E-01	5.0E-03	MCL
Dichloropropene,1,3-	1.63E-01	9.86E-03					1.6E-01	(*1)LAC(NDW)
Dieldrin	5.00E-08	5.00E-08					5.0E-08	(*1)LAC(NDW)

LDEQ RECAP
WORKSHEET 2
GW 3NDW
(mg/l)

Derivation of Management Option 1, 2, & 3 **Groundwater Classification 3-Non-Drinking Water**
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Diethylphthalate				1.17E+02	NA	2.31E+01	2.3E+01	(*2)N
Dimethylphenol,2,4-				1.50E+02	NA	4.53E-01	4.5E-01	(*2)N
Dimethylphthalate				5.70E+01	NA	5.70E+02	5.7E+02	(*2)N
Di-n-octylphthalate				1.13E+02	NA	1.19E+00	1.2E+00	(*2)N
Dinitrobenzene,1,3-				8.13E+00	NA	2.78E-02	2.8E-02	(*2)N
Dinitrophenol,2,4-				9.68E+00	NA	4.95E-01	5.0E-01	(*2)N
Dinitrotoluene,2,6-				1.64E+01	NA	1.68E-01	1.7E-01	(*2)N
Dinitrotoluene,2,4-				1.95E+01	NA	2.92E-01	2.9E-01	(*2)N
Dinoseb			7.00E-03	1.34E+02	NA	2.53E-02	2.5E-02	(*2)N
Endosulfan	6.40E-04	4.70E-04					6.4E-04	(*1)LAC(NDW)
Endrin	2.60E-04	2.60E-04	2.00E-03				2.6E-04	(*1)LAC(NDW)
Ethyl benzene	8.10E+00	2.39E+00	7.00E-01				8.1E+00	(*1)LAC(NDW)
Fluoranthene				4.43E+03	NA	3.16E-02	3.2E-02	(*2)N
Fluorene				1.80E+03	NA	7.76E-02	7.8E-02	(*2)N
Heptachlor	7.00E-08	7.00E-08	4.00E-04				7.0E-08	(*1)LAC(NDW)
Heptachlor epoxide			2.00E-04	2.33E+00	5.67E-05	6.71E-03	2.0E-04	MCL
Hexachlorobenzene	2.50E-07	2.50E-07	1.00E-03				2.5E-07	(*1)LAC(NDW)
Hexachlorobutadiene	1.10E-04	9.00E-05					1.1E-04	(*1)LAC(NDW)
Hexachlorocyclohexane,alpha				2.12E+02	2.57E-06	NA	2.6E-06	(*2)C
Hexachlorocyclohexane,beta				2.93E+02	6.54E-06	NA	6.5E-06	(*2)C
Hexachlorocyclohexane,gamma	2.00E-04	1.10E-04	2.00E-04				2.0E-04	(*1)LAC(NDW)
Hexachlorocyclopentadiene			5.00E-02	7.48E+03	NA	2.81E-03	5.0E-02	MCL
Hexachloroethane				1.39E+02	1.74E-03	2.44E-02	1.7E-03	(*2)C
Indeno(1,2,3-cd)pyrene				7.28E+04	6.59E-08	NA	6.6E-08	(*2)C
Isobutyl alcohol				2.19E+00	NA	1.58E+02	1.6E+02	(*2)N
Isophorone				7.00E+00	3.22E-01	6.11E+01	3.2E-01	(*2)C
Lead (inorganic)		5.00E-02	1.50E-02		NA	NA	5.0E-02	LAC(DW)
Mercury (inorganic)		2.00E-03	2.00E-03	8.57E+04	NA	1.23E-05	2.0E-03	LAC(DW)
Methoxychlor			4.00E-02	7.07E+04	NA	2.48E-04	4.0E-02	MCL
Methylene chloride	8.70E-02	4.40E-03	5.00E-03				8.7E-02	(*1)LAC(NDW)
Methyl ethyl ketone				9.61E-01	NA	3.88E+02	3.9E+02	(*2)N
Methyl isobutyl ketone				4.81E+00	NA	3.02E+01	3.0E+01	(*2)N
Methylnaphthalene,2-				2.60E+03	NA	2.69E-02	2.7E-02	(*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: 6/10/2015

MTBE (methyl tert-butyl ether)			2.00E-02	1.00E+00	NA	5.50E+02	5.5E+02	(*2)N
Naphthalene				3.10E+02	NA	2.23E-01	2.2E-01	(*2)N
Nickel				8.00E-01	NA	1.33E+01	1.3E+01	(*2)N
Nitrate			1.00E+01	1.00E+00	NA	1.03E+03	1.0E+03	(*2)N
Nitrite			1.00E+00	1.00E+00	NA	6.42E+01	6.4E+01	(*2)N
Nitroaniline,2-				1.64E+01	NA	5.04E-01	5.0E-01	(*2)N
Nitroaniline,3-				6.82E+00	NA	9.32E-01	9.3E-01	(*2)N
Nitroaniline,4-				6.82E+00	NA	9.32E-01	9.3E-01	(*2)N
Nitrobenzene				1.37E+01	NA	9.64E-02	9.6E-02	(*2)N
Nitrophenol,4-				1.64E+01	NA	1.34E+00	1.3E+00	(*2)N
Nitrosodi-n-propylamine,n-				6.82E+00	4.44E-05	NA	4.4E-05	(*2)C
N-nitrosodiphenylamine				2.17E+02	3.23E-03	NA	3.2E-03	(*2)C
Pentachlorophenol			1.00E-03	6.40E+02	4.53E-05	1.63E-01	1.0E-03	MCL
Phenanthrene				5.10E+03	NA	2.06E-01	2.1E-01	(*2)N
Phenol				8.13E+00	NA	8.35E+01	8.3E+01	(*2)N
Polychlorinated biphenyls	1.00E-08	1.00E-08	5.00E-04				1.0E-08	(*1)LAC(NDW)
Pyrene				6.90E+01	NA	1.43E+00	1.4E+00	(*2)N
Selenium			5.00E-02	5.69E+03	NA	3.07E-03	5.0E-02	MCL
Silver				2.80E+01	NA	5.39E-01	5.4E-01	(*2)N
Styrene			1.00E-01	9.42E+01	NA	7.10E+00	7.1E+00	(*2)N
Tetrachlorobenzene,1,2,4,5-				1.85E+03	NA	5.66E-04	5.7E-04	(*2)N
Tetrachloroethane,1,1,1,2-				5.57E+01	2.24E-03	1.75E+00	2.2E-03	(*2)C
Tetrachloroethane,1,1,2,2-	1.80E-03	1.60E-04					1.8E-03	(*1)LAC(NDW)
Tetrachloroethylene	2.50E-03	6.50E-04	5.00E-03				2.5E-03	(*1)LAC(NDW)
Tetrachlorophenol,2,3,4,6-				5.88E+02	NA	1.77E-01	1.8E-01	(*2)N
Thallium			2.00E-03	1.30E+02	NA	1.82E-03	2.0E-03	MCL
Toluene	4.62E+01	6.10E+00	1.00E+00				4.6E+01	(*1)LAC(NDW)
Toxaphene	2.40E-07	2.40E-07	3.00E-03				2.4E-07	(*1)LAC(NDW)
Trichlorobenzene,1,2,4-			7.00E-02	1.82E+02	NA	1.88E-01	1.9E-01	(*2)N
Trichloroethane,1,1,1-		2.00E-01	2.00E-01	9.00E+00	NA	9.11E+00	9.1E+00	(*2)N
Trichloroethane,1,1,2-	6.90E-03	5.60E-04	5.00E-03				6.9E-03	(*1)LAC(NDW)
Trichloroethene	2.10E-02	2.80E-03	5.00E-03				2.1E-02	(*1)LAC(NDW)
Trichlorofluoromethane				4.68E+01	NA	2.05E+01	2.0E+01	(*2)N

LDEQ RECAP
WORKSHEET 2
GW 3NDW
(mg/l)

Derivation of Management Option 1, 2, & 3 **Groundwater Classification 3-Non-Drinking Water**
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Trichlorophenol,2,4,5-				5.42E+02	NA	6.40E-01	6.4E-01	(*2)N
Trichlorophenol,2,4,6-				3.82E+02	8.23E-04	NA	8.2E-04	(*2)C
Vanadium				1.00E+00	NA	4.50E+00	4.5E+00	(*2)N
Vinyl chloride	3.58E-02	1.90E-03	2.00E-03				3.6E-02	(*1)LAC(NDW)
Xylene(mixed)			1.00E+01	1.59E+02	NA	4.28E+00	1.0E+01	MCL
Zinc		5.00E+00		1.26E+02	NA	8.05E+00	8.0E+00	(*2)N
Aliphatics C6-C8				0.00E+00	NA	3.93E+03	3.9E+03	(*2)N
Aliphatics >C8-C10				0.00E+00	NA	7.87E+01	7.9E+01	(*2)N
Aliphatics >C10-C12				0.00E+00	NA	7.87E+01	7.9E+01	(*2)N
Aliphatics >C12-C16				0.00E+00	NA	7.87E+01	7.9E+01	(*2)N
Aliphatics >C16-C35				0.00E+00	NA	1.57E+03	1.6E+03	(*2)N
Aromatics >C8-C10				0.00E+00	NA	3.15E+01	3.1E+01	(*2)N
Aromatics >C10-C12				0.00E+00	NA	3.15E+01	3.1E+01	(*2)N
Aromatics >C12-C16				0.00E+00	NA	3.15E+01	3.1E+01	(*2)N
Aromatics >C16-C21				0.00E+00	NA	2.36E+01	2.4E+01	(*2)N
Aromatics >C21-C35				0.00E+00	NA	2.36E+01	2.4E+01	(*2)N
TPH-GRO (C6-C10)							3.1E+01	
TPH-DRO (C10-C28)							2.4E+01	
TPH-ORO (>C28)							2.4E+01	

References: Data hierarchy is based on (*1) then (*2).

(*1) Louisiana Administrative Code 33.IX.1113, Table 1 (HHNDW)

(*2) The maximum value of LAC 33.IX1113 (DW), MCL, or the minimum of
human health non-drinking water criteria calculated in accordance with "Human Health Numerical Criteria Derivations for Toxic Substances", LDEQ-OWR, June 23, 1994; (N=non-carcinogen, C=carcinogen)

Notes:

* BCF values from the Superfund Chemical Data Matrix, June 1996

* BCF values not found in the Superfund Chemical Data Matrix are estimated below

*MTBE - The value listed in the MCL column is the EPA taste/odor advisory value.

LDEQ RECAP
WORKSHEET 5
SOILi
(mg/kg)

Derivation of Management Option 1 & 2 **Soil-Industrial**
Revision Date: 08/04/2003 Run date: 6/10/2015

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)))

	DA	VFi	Soili	Soili	Soili	Soili	min value	Soili	
COMPOUND	**(cm2/s)**	**(m3/kg)**	**C-O (mg/kg)**	**C-I (mg/kg)**	**N-O (mg/kg)**	**N-I (mg/kg)**	**(C or N)**	**(mg/kg)**	
Tetrachloroethane,1,1,2,2-	1.36E-05	5.69E+04	3.52E+00		1.53E+04		3.5E+00	3.5E+00	C
Tetrachloroethylene	2.42E-04	1.35E+04	5.10E+01		5.54E+03		5.1E+01	5.1E+01	C
Tetrachlorophenol,2,3,4,6-	1.50E-07	5.43E+05	NA		2.01E+04		2.0E+04	2.0E+04	N
Thallium	NA	NA		NA		1.43E+02	1.4E+02	1.4E+02	N
Toluene	1.91E-04	1.52E+04	NA		8.68E+03		8.7E+03	8.7E+03	N
Toxaphene	2.30E-10	1.39E+07	2.21E+00		NA		2.2E+00	2.2E+00	C
Trichlorobenzene,1,2,4-	1.39E-06	1.78E+05	NA		1.47E+04		1.5E+04	1.5E+04	N
Trichloroethane,1,1,1-	4.39E-04	1.00E+04	NA		1.22E+04		1.2E+04	1.2E+04	N
Trichloroethane,1,1,2-	4.06E-05	3.30E+04	7.78E+00		6.23E+02		7.8E+00	7.8E+00	C
Trichloroethene	3.65E-04	1.10E+04	3.83E-01		3.13E+02		3.8E-01	3.8E-01	C
Trichlorofluoromethane	1.93E-03	4.79E+03	NA		4.86E+03		4.9E+03	4.9E+03	N
Trichlorophenol,2,4,5-	4.99E-08	9.41E+05	NA		7.45E+04		7.4E+04	7.4E+04	N
Trichlorophenol,2,4,6-	3.64E-08	1.10E+06	1.94E+02		NA		1.9E+02	1.9E+02	C
Vanadium	NA	NA		NA		1.43E+04	1.4E+04	1.4E+04	N
Vinyl chloride	2.81E-03	3.97E+03	1.26E+00		NA		1.3E+00	1.3E+00	C
Xylene(mixed)	1.87E-04	1.54E+04	NA		2.26E+03		2.3E+03	2.3E+03	N
Zinc	NA	NA		NA		6.13E+05	6.1E+05	6.1E+05	N
Aliphatics C6-C8	1.40E-03	5.62E+03	NA		1.50E+05		1.5E+05	1.0E+04	O,T
Aliphatics >C8-C10	3.22E-04	1.17E+04	NA		1.60E+04		1.6E+04	1.0E+04	O,T
Aliphatics >C10-C12	6.28E-05	2.65E+04	NA		3.39E+04		3.4E+04	1.0E+04	O,T
Aliphatics >C12-C16	1.37E-05	5.68E+04	NA		6.10E+04		6.1E+04	1.0E+04	O,T
Aliphatics >C16-C35	1.03E-06	2.07E+05	NA		9.62E+05		9.6E+05	1.0E+04	O,T
Aromatics >C8-C10	3.94E-05	3.35E+04	NA		9.13E+03		9.1E+03	9.1E+03	N

LDEQ RECAP
WORKSHEET 5
SOILi
(mg/kg)

Derivation of Management Option 1 & 2 **Soil-Industrial**
Revision Date: 08/04/2003 Run date: 6/10/2015

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)))

	DA	VFi	Soili	Soili	Soili	Soili	min value	Soili	
COMPOUND	**(cm2/s)**	**(m3/kg)**	**C-O (mg/kg)**	**C-I (mg/kg)**	**N-O (mg/kg)**	**N-I (mg/kg)**	**(C or N)**	**(mg/kg)**	
Aromatics >C10-C12	7.31E-06	7.78E+04	NA		1.85E+04		1.8E+04	1.0E+04	O,T
Aromatics >C12-C16	1.40E-06	1.78E+05	NA		3.27E+04		3.3E+04	1.0E+04	O,T
Aromatics >C16-C21	1.11E-07	6.31E+05	NA		2.08E+04		2.1E+04	1.0E+04	O,T
Aromatics >C21-C35	1.04E-09	6.53E+06	NA		2.58E+04		2.6E+04	1.0E+04	O,T
TPH-GRO (C6-C10)							9.1E+03	9.1E+03	
TPH-DRO (C10-C28)							9.1E+03	9.1E+03	
TPH-ORO (>C28)							2.6E+04	1.0E+04	

LDEQ RECAP
WORKSHEET 6
SOILGW and SOILsat
(mg/kg)

Derivation of Management Option 1 & 2 **SoilGW & Soilsat**
Revision Date: 08/04/2003 Run date: 6/10/2015

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)
Toxaphene	3.4E+01	3.4E+01	3.4E+01	3.4E+01	NA
Trichlorobenzene,1,2,4-	1.4E+01	1.4E+01	1.4E+01	3.8E+01	NA
Trichloroethane,1,1,1-	4.0E+00	4.0E+00	4.0E+00	1.8E+02	1.3E+03
Trichloroethane,1,1,2-	5.8E-02	5.8E-02	6.5E-03	8.0E-02	2.5E+03
Trichloroethene	7.3E-02	7.3E-02	4.1E-02	3.0E-01	8.0E+02
Trichlorofluoromethane	3.7E+01	3.7E+01	2.0E+02	5.8E+02	1.6E+03
Trichlorophenol,2,4,5-	3.2E+02	3.2E+02	4.7E+01	5.6E+01	NA
Trichlorophenol,2,4,6-	1.3E+00	7.9E-01	8.6E-02	1.1E-01	NA
Vanadium	NA	NA	NA	NA	NA
Vinyl chloride	1.3E-02	1.3E-02	1.3E-02	2.4E-01	9.2E+02
Xylene(mixed)	1.8E+02	1.8E+02	1.8E+02	1.8E+02	1.5E+02
Zinc	NA	NA	NA	NA	NA
Aliphatics C6-C8	1.8E+04	1.8E+04	9.5E+04	2.2E+06	NA
Aliphatics >C8-C10	5.3E+03	5.3E+03	1.3E+04	3.1E+05	NA
Aliphatics >C10-C12	4.2E+04	4.2E+04	1.0E+05	2.4E+06	NA
Aliphatics >C12-C16	8.2E+05	8.2E+05	2.0E+06	4.7E+07	NA
Aliphatics >C16-C35	5.5E+09	5.5E+09	5.1E+09	1.2E+11	NA
Aromatics >C8-C10	6.5E+01	6.5E+01	2.6E+02	6.1E+03	NA
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	

LDEQ RECAP
WORKSHEET 12
SOILesi
(mg/kg)

Subsurface soil located beneath enclosed structure-Industrial					Derivation of Management Option 2 RS				
Revision Date: 08/04/2003					Run date:	6/10/2015			
INPUTS TO SUBSURFACE SOIL BENEATH ENCLOSED-STRUCTURE MODEL-INDUSTRIAL						Site-Specific			
volumetric air content in foundation/wall cracks					nacrack =	0.14849057	cm3-air/cm3-total vol		
volumetric water content in foundation/wall cracks					nwcrack =	0.21	cm3-water/cm3-total vol		
total porosity of foundation/wall cracks					nf =	0.35849057	cm3/cm3		
bgs depth to contaminated subsurface soils					Ls =	100	cm		
enclosed-structure air exahnge rate					ER =	0.00023	1/s		
enclosed-structure volume/infiltration area ratio					Lb =	300	cm		
enclosed-structure foundation or wall thickness					Lcrack =	15	cm		
areal fraction of cracks in foundation/walls					FC =	0.01	cm2-cracks/cm2-total area		
Ds = Da*na^3.33/n^2+Dw*1/(H*41)*nw^3.33/n^2									
Dcrack = Da*nacrack^3.33/nf^2+Dw*1/(H*41)*nwcrack^3.33/nf^2									
VFsoilesi = [(H*41*pb/(nw+Koc*foc*pb+H*41*na))*(Ds/Ls)/(ER*Lb)]/[1+(Ds/Ls)/(ER*Lb)+(Ds/Ls)/((Dcrack/Lcrack)*FC)]*1000									
Cai C-O = (TR*BWa*ATc*365*1000)/(SFi*IRAa*EFi*EDi)									
Cai N-O = (THQ*RfDi*BWa*ATni*365*1000)/(IRAa*EFi*EDi)									
Soilesi = Cai*0.001/VFsoilesi									
	Ds	Dcrack	VFsoilesi	Cai	Cai	Soilesi	Soilesi	min value	Note
COMPOUND	(cm2/s)	(cm2/s)	(mg/m3/mg/kg	C-O (ug/m3)	N-O (ug/m3)	C-O(mg/kg)	N-O(mg/kg)	(C or N)	
Vanadium									
Vinyl chloride	1.44E-03	1.44E-03	4.35E-02	1.20E+00		2.76E-02		2.8E-02	K
Xylene(mixed)	9.51E-04	9.51E-04	2.90E-03	#VALUE!	1.48E+02	#VALUE!	5.10E+01	5.1E+01	J
Zinc									
Aliphatics C6-C8	1.36E-03	1.36E-03	2.17E-02		1.93E+04		8.92E+02	8.9E+02	J
Aliphatics >C8-C10	1.36E-03	1.36E-03	4.99E-03		1.06E+03		2.12E+02	2.1E+02	J
Aliphatics >C10-C12	1.36E-03	1.36E-03	9.73E-04		1.10E+03		1.12E+03	1.1E+03	J
Aliphatics >C12-C16	1.36E-03	1.36E-03	2.13E-04		1.10E+03		5.15E+03	5.2E+03	J
Aliphatics >C16-C35									
Aromatics >C8-C10	1.36E-03	1.36E-03	6.10E-04		2.19E+02		3.59E+02	3.6E+02	J
Aromatics >C10-C12	1.36E-03	1.36E-03	1.13E-04		2.19E+02		1.93E+03	1.9E+03	J
Aromatics >C12-C16	1.37E-03	1.37E-03	2.17E-05		2.19E+02		1.01E+04	1.0E+04	J
Aromatics >C16-C21									
Aromatics >C21-C35									
TPH-GRO (C6-C10)					2.19E+02			2.1E+02	
TPH-DRO (C10-C28)									
TPH-ORO (>C28)									
J - Risk-based value calculated with one of the equations EQ 56 thru 59.									
K - Louisiana Toxic Air Pollutant Ambient Air Standards (LAC 33:III.5112 Table 51.2).									

LDEQ RECAP
WORKSHEET 14
GWesi
(mg/l)

Groundwater located beneath enclosed structure-Industrial					Derivation of Management Option 2 RS						
Revision Date: 08/04/2003					Run date:	6/10/2015					
INPUTS TO GROUNDWATER BENEATH ENCLOSED-STRUCTURE MODEL-INDUSTRIAL						Site-Specific					
volumetric air content in foundation/wall cracks					nacrack =	0.14849057	cm3-air/cm3-total vol				
volumetric water content in foundation/wall cracks					nwcrack =	0.21	cm3-water/cm3-total vol				
total porosity of foundation/wall cracks					nf =	0.35849057	cm3/cm3				
volumetric air content in capillary fringe					nacap =	0.015	cm3-air/cm3-soil				
volumetric water content in capillary fringe					nwcap =	0.345	cm3-water/cm3-soil				
total porosity of capillary fringe soil					nc =	0.36	cm3/cm3				
thickness of capillary fringe					hcap =	5	cm				
thickness of vadose zone					hv =	295	cm				
depth to groundwater					Lgw =	300	cm				
enclosed-structure air exchange rate					ER =	0.00023	1/s				
enclosed-structure volume/infiltration area ratio					Lb =	300	cm				
areal fraction of cracks in foundation/walls					FC =	0.01	cm2-cracks/cm2-total area				
enclosed-structure foundation or wall thickness					Lcrack =	15	cm				
Ds = Da*na^3.33/n^2+Dw*1/(H*41)*nw^3.33/n^2											
Dcrack = Da*nacrack^3.33/nf^2+Dw*1/(H*41)*nwcrack^3.33/nf^2											
Dcap = Da*nacap^3.33/nc^2+Dw*1/(H*41)*nwcap^3.33/nc^2											
Dws = (hcap+hv)/(hcap/Dcap+hv/Ds)											
VFgwesi = [H*41*(Dws/Lgw)/(ER*Lb)]/[1+(Dws/Lgw)/(ER*Lb)+(Dws/Lgw)/((Dcrack/Lcrack)*FC)]*1000											
Cai C-O = (TR*BWa*ATc*365*1000)/(SFi*IRAa*EFi*EDi)											
Cai N-O = (THQ*RfDi*BWa*ATni*365*1000)/(IRAa*EFi*EDi)											
GWesi = Cai*0.001/VFgwesi											
	Ds	Dcrack	Dcap	Dws	VFgwesi	Cai	Cai	GWesi	GWesi	min value	Note
COMPOUND	(cm2/s)	(cm2/s)	(cm2/s)	(cm2/s)	(mg/m3/mg/l)	C-O (ug/m3)	N-O (ug/m3)	C-O(mg/l)	N-O(mg/l)	(C or N)	
Acenaphthene	6.24E-04	6.24E-04	2.70E-04	6.10E-04	3.18E-05	#VALUE!	3.07E+02	#VALUE!	9.64E+03	9.6E+03	J
Acenaphthylene	6.65E-04	6.65E-04	3.60E-04	6.56E-04	2.50E-05	#VALUE!	3.07E+02	#VALUE!	1.23E+04	1.2E+04	J
Acetone	1.99E-03	1.99E-03	1.60E-03	1.98E-03	2.55E-05	#VALUE!	5.11E+02	#VALUE!	2.00E+04	2.0E+04	J
Aldrin											
Aniline											
Anthracene	5.65E-04	5.65E-04	6.48E-04	5.66E-04	1.21E-05	#VALUE!	1.53E+03	#VALUE!	1.26E+05	1.3E+05	J
Antimony											
Arsenic											
Barium											
Benzene	1.20E-03	1.20E-03	1.02E-05	4.07E-04	1.66E-03	1.20E+01		7.25E+00		7.2E+00	K
Benz(a)anthracene											
Benzo(a)pyrene											
Benzo(b)fluoranthene											
Benzo(k)fluoranthene											
Beryllium											
Biphenyl,1,1-	5.77E-04	5.77E-04	1.48E-04	5.50E-04	5.67E-05		2.38E+01		4.20E+02	4.2E+02	K
Bis(2-chloroethyl)ether	1.38E-03	1.38E-03	2.28E-03	1.39E-03	8.20E-06	3.00E-01		3.66E+01		3.7E+01	K
Bis(2-chloroisopropyl)ether	8.69E-04	8.69E-04	3.19E-04	8.45E-04	3.23E-05	4.09E-01	2.04E+02	1.27E+01	6.33E+03	1.3E+01	J
Bis(2-ethyl-hexyl)phthalate											
Bromodichloromethane	4.12E-04	4.12E-04	3.62E-05	3.51E-04	2.11E-04	2.31E-01	1.02E+02	1.09E+00	4.84E+02	1.1E+00	J
Bromoform	2.23E-04	2.23E-04	1.05E-04	2.18E-04	3.92E-05	3.72E+00	1.02E+02	9.49E+01	2.61E+03	9.5E+01	J
Bromomethane	9.90E-04	9.90E-04	1.11E-05	4.01E-04	1.63E-03	#VALUE!	7.31E+00	#VALUE!	4.49E+00	4.5E+00	J
Butyl benzyl phthalate											
Cadmium											
Carbon Disulfide	1.41E-03	1.41E-03	2.47E-06	1.34E-04	5.47E-03		7.14E+01		1.31E+01	1.3E+01	K
Carbon Tetrachloride	1.06E-03	1.06E-03	2.08E-06	1.12E-04	4.41E-03	6.67E+00		1.51E+00		1.5E+00	K
Chlordane											
Chloroaniline,p-											
Chlorobenzene	9.94E-04	9.94E-04	1.33E-05	4.45E-04	1.01E-03		1.10E+03		1.09E+03	1.1E+03	K
Chlorodibromomethane	2.80E-04	2.80E-04	7.31E-05	2.68E-04	7.19E-05	1.70E-01	1.02E+02	2.37E+00	1.42E+03	2.4E+00	J
Chloroethane (Ethylchloride)	3.68E-03	3.68E-03	8.87E-06	4.66E-04	4.97E-03		6.29E+04		1.26E+04	1.3E+04	K
Chloroform	1.41E-03	1.41E-03	1.55E-05	5.65E-04	1.37E-03	4.30E+00		3.14E+00		3.1E+00	K
Chloromethane	1.71E-03	1.71E-03	4.84E-06	2.49E-04	2.51E-03	5.56E+01		2.21E+01		2.2E+01	K
Chloronaphthalene,2-	5.01E-04	5.01E-04	1.55E-04	4.83E-04	5.09E-05	#VALUE!	4.09E+02	#VALUE!	8.02E+03	8.0E+03	J
Chlorophenol,2-	7.06E-04	7.06E-04	1.32E-04	6.58E-04	9.00E-05	#VALUE!	2.56E+01	#VALUE!	2.84E+02	2.8E+02	J
Chromium(III)											
Chromium(VI)											

LDEQ RECAP
WORKSHEET 14
GWesi
(mg/l)

Groundwater located beneath enclosed structure-Industrial					Derivation of Management Option 2 RS						
Revision Date: 08/04/2003					Run date:	6/10/2015					
INPUTS TO GROUNDWATER BENEATH ENCLOSED-STRUCTURE MODEL-INDUSTRIAL						Site-Specific					
volumetric air content in foundation/wall cracks					nacrack =	0.14849057	cm3-air/cm3-total vol				
volumetric water content in foundation/wall cracks					nwcrack =	0.21	cm3-water/cm3-total vol				
total porosity of foundation/wall cracks					nf =	0.35849057	cm3/cm3				
volumetric air content in capillary fringe					nacap =	0.015	cm3-air/cm3-soil				
volumetric water content in capillary fringe					nwcap =	0.345	cm3-water/cm3-soil				
total porosity of capillary fringe soil					nc =	0.36	cm3/cm3				
thickness of capillary fringe					hcap =	5	cm				
thickness of vadose zone					hv =	295	cm				
depth to groundwater					Lgw =	300	cm				
enclosed-structure air exchange rate					ER =	0.00023	1/s				
enclosed-structure volume/infiltration area ratio					Lb =	300	cm				
areal fraction of cracks in foundation/walls					FC =	0.01	cm2-cracks/cm2-total area				
enclosed-structure foundation or wall thickness					Lcrack =	15	cm				
Ds = Da*na^3.33/n^2+Dw*1/(H*41)*nw^3.33/n^2											
Dcrack = Da*nacrack^3.33/nf^2+Dw*1/(H*41)*nwcrack^3.33/nf^2											
Dcap = Da*nacap^3.33/nc^2+Dw*1/(H*41)*nwcap^3.33/nc^2											
Dws = (hcap+hv)/(hcap/Dcap+hv/Ds)											
VFgwesi = [H*41*(Dws/Lgw)/(ER*Lb)]/[1+(Dws/Lgw)/(ER*Lb)+(Dws/Lgw)/((Dcrack/Lcrack)*FC)]*1000											
Cai C-O = (TR*BWa*ATc*365*1000)/(SFi*IRAa*EFi*EDi)											
Cai N-O = (THQ*RfDi*BWa*ATni*365*1000)/(IRAa*EFi*EDi)											
GWesi = Cai*0.001/VFgwesi											
	Ds	Dcrack	Dcap	Dws	VFgwesi	Cai	Cai	GWesi	GWesi	min value	Note
COMPOUND	(cm2/s)	(cm2/s)	(cm2/s)	(cm2/s)	(mg/m3/mg/l)	C-O (ug/m3)	N-O (ug/m3)	C-O(mg/l)	N-O(mg/l)	(C or N)	
Chrysene											
Cobalt											
Copper											
Cyanide (free)											
DDD											
DDE											
DDT											
Dibenz(a,h)anthracene											
Dibenzofuran	8.47E-04	8.47E-04	2.51E-03	8.57E-04	3.64E-06	#VALUE!	2.04E+01	#VALUE!	5.61E+03	5.6E+03	J
Dibromo-3-chloropropane,1,2-											
Dichlorobenzene,1,2-	9.41E-04	9.41E-04	2.31E-05	5.66E-04	5.32E-04	#VALUE!	2.91E+02	#VALUE!	5.48E+02	5.5E+02	J
Dichlorobenzene,1,3-	8.74E-04	8.74E-04	1.21E-05	4.00E-04	7.95E-04	#VALUE!	4.60E+00	#VALUE!	5.78E+00	5.8E+00	J
Dichlorobenzene,1,4-	9.40E-04	9.40E-04	1.81E-05	5.09E-04	6.61E-04		1.43E+03		2.16E+03	2.2E+03	K
Dichlorobenzidine,3,3-											
Dichloroethane,1,1-	1.01E-03	1.01E-03	1.06E-05	3.94E-04	1.49E-03	#VALUE!	7.31E+02	#VALUE!	4.92E+02	4.9E+02	J
Dichloroethane,1,2-	1.42E-03	1.42E-03	5.57E-05	1.01E-03	4.30E-04	3.85E+00		8.95E+00		8.9E+00	K
Dichloroethene,1,1-	1.22E-03	1.22E-03	2.75E-06	1.46E-04	4.72E-03	#VALUE!	2.91E+02	#VALUE!	6.17E+01	6.2E+01	J
Dichloroethene,cis,1,2-	1.00E-03	1.00E-03	1.55E-05	4.87E-04	1.15E-03	#VALUE!	5.11E+01	#VALUE!	4.45E+01	4.5E+01	J
Dichloroethene,trans,1,2-	9.61E-04	9.61E-04	7.36E-06	3.04E-04	2.19E-03	#VALUE!	1.02E+02	#VALUE!	4.67E+01	4.7E+01	J
Dichlorophenol,2,4-											
Dichloropropane,1,2-	1.06E-03	1.06E-03	1.75E-05	5.33E-04	8.44E-04		8.26E+03		9.79E+03	9.8E+03	K
Dichloropropene,1,3-	8.56E-04	8.56E-04	3.11E-05	5.94E-04	4.66E-04		1.07E+02		2.30E+02	2.3E+02	K
Dieldrin											
Diethylphthalate											
Dimethylphenol,2,4-											
Dimethylphthalate											
Di-n-octylphthalate											
Dinitrobenzene,1,3-											
Dinitrophenol,2,4-											
Dinitrotoluene,2,6-											
Dinitrotoluene,2,4-											
Dinoseb											
Endosulfan											
Endrin											
Ethyl benzene	1.02E-03	1.02E-03	5.87E-06	2.63E-04	1.79E-03		1.03E+04		5.75E+03	5.7E+03	K
Fluoranthene											
Fluorene	6.23E-04	6.23E-04	6.74E-04	6.24E-04	1.31E-05	#VALUE!	2.04E+02	#VALUE!	1.56E+04	1.6E+04	J

LDEQ RECAP
WORKSHEET 14
GWesi
(mg/l)

Groundwater located beneath enclosed structure-Industrial					Derivation of Management Option 2 RS						
Revision Date: 08/04/2003					Run date:	6/10/2015					
INPUTS TO GROUNDWATER BENEATH ENCLOSED-STRUCTURE MODEL-INDUSTRIAL						Site-Specific					
volumetric air content in foundation/wall cracks					nacrack =	0.14849057	cm3-air/cm3-total vol				
volumetric water content in foundation/wall cracks					nwcrack =	0.21	cm3-water/cm3-total vol				
total porosity of foundation/wall cracks					nf =	0.35849057	cm3/cm3				
volumetric air content in capillary fringe					nacap =	0.015	cm3-air/cm3-soil				
volumetric water content in capillary fringe					nwcap =	0.345	cm3-water/cm3-soil				
total porosity of capillary fringe soil					nc =	0.36	cm3/cm3				
thickness of capillary fringe					hcap =	5	cm				
thickness of vadose zone					hv =	295	cm				
depth to groundwater					Lgw =	300	cm				
enclosed-structure air exchange rate					ER =	0.00023	1/s				
enclosed-structure volume/infiltration area ratio					Lb =	300	cm				
areal fraction of cracks in foundation/walls					FC =	0.01	cm2-cracks/cm2-total area				
enclosed-structure foundation or wall thickness					Lcrack =	15	cm				
Ds = Da*na^3.33/n^2+Dw*1/(H*41)*nw^3.33/n^2											
Dcrack = Da*nacrack^3.33/nf^2+Dw*1/(H*41)*nwcrack^3.33/nf^2											
Dcap = Da*nacap^3.33/nc^2+Dw*1/(H*41)*nwcap^3.33/nc^2											
Dws = (hcap+hv)/(hcap/Dcap+hv/Ds)											
VFgwesi = [H*41*(Dws/Lgw)/(ER*Lb)]/[1+(Dws/Lgw)/(ER*Lb)+(Dws/Lgw)/((Dcrack/Lcrack)*FC)]*1000											
Cai C-O = (TR*BWa*ATc*365*1000)/(SFi*IRAa*EFi*EDi)											
Cai N-O = (THQ*RfDi*BWa*ATni*365*1000)/(IRAa*EFi*EDi)											
GWesi = Cai*0.001/VFgwesi											
	Ds	Dcrack	Dcap	Dws	VFgwesi	Cai	Cai	GWesi	GWesi	min value	Note
COMPOUND	(cm2/s)	(cm2/s)	(cm2/s)	(cm2/s)	(mg/m3/mg/l)	C-O (ug/m3)	N-O (ug/m3)	C-O(mg/l)	N-O(mg/l)	(C or N)	
Heptachlor											
Heptachlor epoxide											
Hexachlorobenzene	7.41E-04	7.41E-04	2.47E-05	4.99E-04	2.99E-04	2.00E-01		6.70E-01		6.7E-01	K
Hexachlorobutadiene											
Hexachlorocyclohexane,alpha											
Hexachlorocyclohexane,beta											
Hexachlorocyclohexane,gamma											
Hexachlorocyclopentadiene	2.19E-04	2.19E-04	1.56E-06	6.58E-05	1.41E-03	#VALUE!	2.91E-01	#VALUE!	2.07E-01	2.1E-01	J
Hexachloroethane	3.58E-05	3.58E-05	9.52E-06	3.42E-05	4.56E-05	2.50E+01		5.48E+02		5.5E+02	K
Indeno(1,2,3-cd)pyrene											
Isobutyl alcohol											
Isophorone											
Lead (inorganic)											
Mercury (inorganic)											
Methoxychlor											
Methylene chloride	1.38E-03	1.38E-03	2.97E-05	7.84E-04	8.84E-04	2.13E+02		2.41E+02		2.4E+02	K
Methyl ethyl ketone	1.28E-03	1.28E-03	9.52E-04	1.27E-03	2.37E-05		1.40E+04		5.92E+05	5.9E+05	K
Methyl isobutyl ketone	1.08E-03	1.08E-03	3.04E-04	1.03E-03	4.94E-05		4.88E+03		9.88E+04	9.9E+04	K
Methylnaphthalene,2-	7.94E-04	7.94E-04	7.36E-04	7.93E-04	1.52E-05	#VALUE!	4.39E+00	#VALUE!	2.89E+02	2.9E+02	J
MTBE (methyl tert-butyl ether)	1.40E-03	1.40E-03	9.80E-05	1.15E-03	2.62E-04	#VALUE!	4.38E+03	#VALUE!	1.67E+04	1.7E+04	J
Naphthalene	8.17E-04	8.17E-04	8.48E-05	7.15E-04	1.27E-04	#VALUE!	4.39E+00	#VALUE!	3.45E+01	3.5E+01	J
Nickel											
Nitrate											
Nitrite											
Nitroaniline,2-	9.76E-04	9.76E-04	4.15E-04	9.54E-04	3.12E-05	#VALUE!	1.48E-01	#VALUE!	4.75E+00	4.7E+00	J
Nitroaniline,3-	5.38E-02	5.38E-02	2.74E-01	5.45E-02	2.61E-06	#VALUE!	1.53E+01	#VALUE!	5.87E+03	5.9E+03	J
Nitroaniline,4-											
Nitrobenzene	1.41E-03	1.41E-03	1.95E-03	1.41E-03	1.12E-05		1.19E+02		1.07E+04	1.1E+04	K
Nitrophenol,4-											
Nitrosodi-n-propylamine,n-											
N-nitrosodiphenylamine											
Pentachlorophenol											
Phenanthrene	7.89E-04	7.89E-04	1.81E-03	7.96E-04	6.08E-06	#VALUE!	1.53E+03	#VALUE!	2.52E+05	2.5E+05	J
Phenol	2.52E-02	2.52E-02	1.25E-01	2.55E-02	3.31E-06	#VALUE!	1.53E+03	#VALUE!	4.64E+05	4.6E+05	J
Polychlorinated biphenyls											
Pyrene	1.06E-03	1.06E-03	3.58E-03	1.07E-03	3.86E-06	#VALUE!	1.53E+02	#VALUE!	3.97E+04	4.0E+04	J
Selenium											

LDEQ RECAP
WORKSHEET 14
GWesi
(mg/l)

Groundwater located beneath enclosed structure-Industrial					Derivation of Management Option 2 RS						
Revision Date: 08/04/2003					Run date:	6/10/2015					
INPUTS TO GROUNDWATER BENEATH ENCLOSED-STRUCTURE MODEL-INDUSTRIAL						Site-Specific					
volumetric air content in foundation/wall cracks					nacrack =	0.14849057	cm3-air/cm3-total vol				
volumetric water content in foundation/wall cracks					nwcrack =	0.21	cm3-water/cm3-total vol				
total porosity of foundation/wall cracks					nf =	0.35849057	cm3/cm3				
volumetric air content in capillary fringe					nacap =	0.015	cm3-air/cm3-soil				
volumetric water content in capillary fringe					nwcap =	0.345	cm3-water/cm3-soil				
total porosity of capillary fringe soil					nc =	0.36	cm3/cm3				
thickness of capillary fringe					hcap =	5	cm				
thickness of vadose zone					hv =	295	cm				
depth to groundwater					Lgw =	300	cm				
enclosed-structure air exchange rate					ER =	0.00023	1/s				
enclosed-structure volume/infiltration area ratio					Lb =	300	cm				
areal fraction of cracks in foundation/walls					FC =	0.01	cm2-cracks/cm2-total area				
enclosed-structure foundation or wall thickness					Lcrack =	15	cm				
Ds = Da*na^3.33/n^2+Dw*1/(H*41)*nw^3.33/n^2											
Dcrack = Da*nacrack^3.33/nf^2+Dw*1/(H*41)*nwcrack^3.33/nf^2											
Dcap = Da*nacap^3.33/nc^2+Dw*1/(H*41)*nwcap^3.33/nc^2											
Dws = (hcap+hv)/(hcap/Dcap+hv/Ds)											
VFgwesi = [H*41*(Dws/Lgw)/(ER*Lb)]/[1+(Dws/Lgw)/(ER*Lb)+(Dws/Lgw)/((Dcrack/Lcrack)*FC)]*1000											
Cai C-O = (TR*BWa*ATc*365*1000)/(SFi*IRAa*EFi*EDi)											
Cai N-O = (THQ*RfDi*BWa*ATni*365*1000)/(IRAa*EFi*EDi)											
GWesi = Cai*0.001/VFgwesi											
	Ds	Dcrack	Dcap	Dws	VFgwesi	Cai	Cai	GWesi	GWesi	min value	Note
COMPOUND	(cm2/s)	(cm2/s)	(cm2/s)	(cm2/s)	(mg/m3/mg/l)	C-O (ug/m3)	N-O (ug/m3)	C-O(mg/l)	N-O(mg/l)	(C or N)	
Silver											
Styrene	9.67E-04	9.67E-04	1.63E-05	4.90E-04	7.55E-04		1.00E+03		1.32E+03	1.3E+03	K
Tetrachlorobenzene,1,2,4,5-											
Tetrachloroethane,1,1,1,2-	8.18E-04	8.18E-04	1.56E-05	4.40E-04	5.67E-04	1.00E-01		1.76E-01		1.8E-01	K
Tetrachloroethane,1,1,2,2-	9.88E-04	9.88E-04	1.25E-04	8.86E-04	1.10E-04	1.70E+00		1.54E+01		1.5E+01	K
Tetrachloroethylene	9.78E-04	9.78E-04	2.89E-06	1.48E-04	3.07E-03	1.10E+02		3.59E+01		3.6E+01	K
Tetrachlorophenol,2,3,4,6-											
Thallium											
Toluene	1.18E-03	1.18E-03	7.61E-06	3.31E-04	1.81E-03		4.00E+02		2.20E+02	2.2E+02	K
Toxaphene											
Trichlorobenzene,1,2,4-	4.13E-04	4.13E-04	3.17E-05	3.44E-04	1.88E-04	#VALUE!	2.91E+02	#VALUE!	1.55E+03	1.6E+03	J
Trichloroethane,1,1,1-	1.06E-03	1.06E-03	3.29E-06	1.67E-04	3.18E-03	#VALUE!	1.46E+03	#VALUE!	4.60E+02	4.6E+02	J
Trichloroethane,1,1,2-	1.07E-03	1.07E-03	5.29E-05	8.10E-04	3.06E-04	6.30E+00		2.06E+01		2.1E+01	K
Trichloroethene	1.07E-03	1.07E-03	5.32E-06	2.47E-04	2.34E-03	5.90E+01		2.52E+01		2.5E+01	K
Trichlorofluoromethane	1.18E-03	1.18E-03	1.11E-06	6.31E-05	9.57E-03	#VALUE!	1.02E+03	#VALUE!	1.07E+02	1.1E+02	J
Trichlorophenol,2,4,5-											
Trichlorophenol,2,4,6-											
Vanadium											
Vinyl chloride	1.44E-03	1.44E-03	9.38E-07	5.42E-05	2.44E-03	1.20E+00		4.92E-01		4.9E-01	K
Xylene(mixed)	9.51E-04	9.51E-04	6.04E-06	2.64E-04	1.66E-03	#VALUE!	1.48E+02	#VALUE!	8.91E+01	8.9E+01	J
Zinc											
Aliphatics C6-C8	1.36E-03	1.36E-03	6.96E-07	4.05E-05	8.52E-02		1.93E+04		2.27E+02	2.3E+02	J
Aliphatics >C8-C10	1.36E-03	1.36E-03	6.79E-07	3.96E-05	1.33E-01		1.06E+03		7.93E+00	7.9E+00	J
Aliphatics >C10-C12	1.36E-03	1.36E-03	6.70E-07	3.91E-05	1.98E-01		1.10E+03		5.53E+00	5.5E+00	J
Aliphatics >C12-C16	1.36E-03	1.36E-03	6.56E-07	3.82E-05	8.43E-01		1.10E+03		1.30E+00	1.3E+00	J
Aliphatics >C16-C35											
Aromatics >C8-C10	1.36E-03	1.36E-03	5.30E-06	2.59E-04	3.07E-03		2.19E+02		7.13E+01	7.1E+01	J
Aromatics >C10-C12	1.36E-03	1.36E-03	1.66E-05	5.79E-04	1.25E-03		2.19E+02		1.75E+02	1.8E+02	J
Aromatics >C12-C16	1.37E-03	1.37E-03	4.28E-05	9.02E-04	5.36E-04		2.19E+02		4.09E+02	4.1E+02	J
Aromatics >C16-C21											
Aromatics >C21-C35											

LDEQ RECAP
WORKSHEET 14
GWesi
(mg/l)

Groundwater located beneath enclosed structure-Industrial					Derivation of Management Option 2 RS						
Revision Date: 08/04/2003					Run date:	6/10/2015					
INPUTS TO GROUNDWATER BENEATH ENCLOSED-STRUCTURE MODEL-INDUSTRIAL						Site-Specific					
volumetric air content in foundation/wall cracks					nacrack =	0.14849057	cm3-air/cm3-total vol				
volumetric water content in foundation/wall cracks					nwcrack =	0.21	cm3-water/cm3-total vol				
total porosity of foundation/wall cracks					nf =	0.35849057	cm3/cm3				
volumetric air content in capillary fringe					nacap =	0.015	cm3-air/cm3-soil				
volumetric water content in capillary fringe					nwcap =	0.345	cm3-water/cm3-soil				
total porosity of capillary fringe soil					nc =	0.36	cm3/cm3				
thickness of capillary fringe					hcap =	5	cm				
thickness of vadose zone					hv =	295	cm				
depth to groundwater					Lgw =	300	cm				
enclosed-structure air exchange rate					ER =	0.00023	1/s				
enclosed-structure volume/infiltration area ratio					Lb =	300	cm				
areal fraction of cracks in foundation/walls					FC =	0.01	cm2-cracks/cm2-total area				
enclosed-structure foundation or wall thickness					Lcrack =	15	cm				
Ds = Da*na^3.33/n^2+Dw*1/(H*41)*nw^3.33/n^2											
Dcrack = Da*nacrack^3.33/nf^2+Dw*1/(H*41)*nwcrack^3.33/nf^2											
Dcap = Da*nacap^3.33/nc^2+Dw*1/(H*41)*nwcap^3.33/nc^2											
Dws = (hcap+hv)/(hcap/Dcap+hv/Ds)											
VFgwesi = [H*41*(Dws/Lgw)/(ER*Lb)]/[1+(Dws/Lgw)/(ER*Lb)+(Dws/Lgw)/((Dcrack/Lcrack)*FC)]*1000											
Cai C-O = (TR*BWa*ATc*365*1000)/(SFi*IRAa*EFi*EDi)											
Cai N-O = (THQ*RfDi*BWa*ATni*365*1000)/(IRAa*EFi*EDi)											
GWesi = Cai*0.001/VFgwesi											
	Ds	Dcrack	Dcap	Dws	VFgwesi	Cai	Cai	GWesi	GWesi	min value	Note
COMPOUND	(cm2/s)	(cm2/s)	(cm2/s)	(cm2/s)	(mg/m3/mg/l)	C-O (ug/m3)	N-O (ug/m3)	C-O(mg/l)	N-O(mg/l)	(C or N)	
TPH-GRO (C6-C10)							2.19E+02			7.9E+00	
TPH-DRO (C10-C28)											
TPH-ORO (>C28)											
J - Risk-based value calculated with one of the equations EQ 56 thru 59.											
K - Louisiana Toxic Air Pollutant Ambient Air Standards (LAC 33:III.5112 Table 51.2).											

LDEQ RECAP
WORKSHEET 16
GWairi
(mg/l)

Volatile releases from groundwater to ambient air-Industrial					Derivation of Management Option 2 RS					
Revision Date: 08/04/2003					Run date:	6/10/2015				
INPUTS TO GROUNDWATER TO AMBIENT AIR MODEL-INDUSTRIAL					Site-Specific					
volumetric air content in capillary fringe				nacap =	0.015	cm3-air/cm3-soil				
volumetric water content in capillary fringe				nwcap =	0.345	cm3-water/cm3-soil				
total porosity of capillary fringe soil				nc =	0.36	cm3/cm3				
thickness of capillary fringe				hcap =	5	cm				
thickness of vadose zone				hv =	295	cm				
depth to groundwater				Lgw =	300	cm				
wind speed above ground surface in ambient mixing zone				Uair =	225	cm/s				
width of source area parallel to wind				W =	4511	cm				
ambient air mixing zone height				dair =	200	cm				
Ds = Da*na^3.33/n^2+Dw*1/(H*41)*nw^3.33/n^2										
Dcap = Da*nacap^3.33/nc^2+Dw*1/(H*41)*nwcap^3.33/nc^2										
Dws = (hcap+hv)/(hcap/Dcap+hv/Ds)										
VFgwairi = (H*41*1000)/[1+(Uair*dair*Lgw)/(W*Dws)]										
Cai C-O = (TR*BWa*ATc*365*1000)/(SFi*IRAa*EFi*EDi)										
Cai N-O = (THQ*RfDi*BWa*ATni*365*1000)/(IRAa*EFi*EDi)										
GWairi = Cai*0.001/VFgwairi										
	Ds	Dcap	Dws	VFgwairi	Cai	Cai	GWairi	GWairi	min value	Note
COMPOUND	(cm2/s)	(cm2/s)	(cm2/s)	(mg/m3/mg/l)	C-O (ug/m3)	N-O (ug/m3)	C-O(mg/l)	N-O(mg/l)	(C or N)	
Acenaphthene	6.24E-04	2.70E-04	6.10E-04	1.30E-06	#VALUE!	3.07E+02	#VALUE!	2.37E+05	2.4E+05	J
Acenaphthylene	6.65E-04	3.60E-04	6.56E-04	1.02E-06	#VALUE!	3.07E+02	#VALUE!	2.99E+05	3.0E+05	J
Acetone	1.99E-03	1.60E-03	1.98E-03	1.05E-06	#VALUE!	5.11E+02	#VALUE!	4.85E+05	4.8E+05	J
Aldrin										
Aniline										
Anthracene	5.65E-04	6.48E-04	5.66E-04	5.04E-07	#VALUE!	1.53E+03	#VALUE!	3.04E+06	3.0E+06	J
Antimony										
Arsenic										
Barium										
Benzene	1.20E-03	1.02E-05	4.07E-04	3.09E-05	1.20E+01		3.88E+02		3.9E+02	K
Benz(a)anthracene										
Benzo(a)pyrene										
Benzo(b)fluoranthene										
Benzo(k)fluoranthene										
Beryllium										
Biphenyl,1,1-	5.77E-04	1.48E-04	5.50E-04	2.26E-06		2.38E+01		1.05E+04	1.1E+04	K
Bis(2-chloroethyl)ether	1.38E-03	2.28E-03	1.39E-03	3.42E-07	3.00E-01		8.76E+02		8.8E+02	K
Bis(2-chloroisopropyl)ether	8.69E-04	3.19E-04	8.45E-04	1.31E-06	4.09E-01	2.04E+02	3.12E+02	1.56E+05	3.1E+02	J
Bis(2-ethyl-hexyl)phthalate										
Bromodichloromethane	4.12E-04	3.62E-05	3.51E-04	7.69E-06	2.31E-01	1.02E+02	3.00E+01	1.33E+04	3.0E+01	J
Bromoform	2.23E-04	1.05E-04	2.18E-04	1.60E-06	3.72E+00	1.02E+02	2.32E+03	6.38E+04	2.3E+03	J
Bromomethane	9.90E-04	1.11E-05	4.01E-04	3.40E-05	#VALUE!	7.31E+00	#VALUE!	2.15E+02	2.1E+02	J
Butyl benzyl phthalate										
Cadmium										
Carbon Disulfide	1.41E-03	2.47E-06	1.34E-04	5.58E-05		7.14E+01		1.28E+03	1.3E+03	K
Carbon Tetrachloride	1.06E-03	2.08E-06	1.12E-04	4.66E-05	6.67E+00		1.43E+02		1.4E+02	K
Chlordane										
Chloroaniline,p-										
Chlorobenzene	9.94E-04	1.33E-05	4.45E-04	2.26E-05		1.10E+03		4.87E+04	4.9E+04	K
Chlorodibromomethane	2.80E-04	7.31E-05	2.68E-04	2.87E-06	1.70E-01	1.02E+02	5.93E+01	3.56E+04	5.9E+01	J
Chloroethane (Ethylchloride)	3.68E-03	8.87E-06	4.66E-04	5.62E-05		6.29E+04		1.12E+06	1.1E+06	K
Chloroform	1.41E-03	1.55E-05	5.65E-04	2.84E-05	4.30E+00		1.51E+02		1.5E+02	K
Chloromethane	1.71E-03	4.84E-06	2.49E-04	3.00E-05	5.56E+01		1.85E+03		1.9E+03	K

LDEQ RECAP
WORKSHEET 16
GWairi
(mg/l)

Volatile releases from groundwater to ambient air-Industrial					Derivation of Management Option 2 RS					
Revision Date: 08/04/2003					Run date:	6/10/2015				
INPUTS TO GROUNDWATER TO AMBIENT AIR MODEL-INDUSTRIAL					Site-Specific					
volumetric air content in capillary fringe				nacap =	0.015	cm3-air/cm3-soil				
volumetric water content in capillary fringe				nwcap =	0.345	cm3-water/cm3-soil				
total porosity of capillary fringe soil				nc =	0.36	cm3/cm3				
thickness of capillary fringe				hcap =	5	cm				
thickness of vadose zone				hv =	295	cm				
depth to groundwater				Lgw =	300	cm				
wind speed above ground surface in ambient mixing zone				Uair =	225	cm/s				
width of source area parallel to wind				W =	4511	cm				
ambient air mixing zone height				dair =	200	cm				
Ds = Da*na^3.33/n^2+Dw*1/(H*41)*nw^3.33/n^2										
Dcap = Da*nacap^3.33/nc^2+Dw*1/(H*41)*nwcap^3.33/nc^2										
Dws = (hcap+hv)/(hcap/Dcap+hv/Ds)										
VFgwairi = (H*41*1000)/[1+(Uair*dair*Lgw)/(W*Dws)]										
Cai C-O = (TR*BWa*ATc*365*1000)/(SFi*IRAa*EFi*EDi)										
Cai N-O = (THQ*RfDi*BWa*ATni*365*1000)/(IRAa*EFi*EDi)										
GWairi = Cai*0.001/VFgwairi										
	Ds	Dcap	Dws	VFgwairi	Cai	Cai	GWairi	GWairi	min value	Note
COMPOUND	(cm2/s)	(cm2/s)	(cm2/s)	(mg/m3/mg/l)	C-O (ug/m3)	N-O (ug/m3)	C-O(mg/l)	N-O(mg/l)	(C or N)	
Chloronaphthalene,2-	5.01E-04	1.55E-04	4.83E-04	2.05E-06	#VALUE!	4.09E+02	#VALUE!	1.99E+05	2.0E+05	J
Chlorophenol,2-	7.06E-04	1.32E-04	6.58E-04	3.52E-06	#VALUE!	2.56E+01	#VALUE!	7.25E+03	7.2E+03	J
Chromium(III)										
Chromium(VI)										
Chrysene										
Cobalt										
Copper										
Cyanide (free)										
DDD										
DDE										
DDT										
Dibenz(a,h)anthracene										
Dibenzofuran	8.47E-04	2.51E-03	8.57E-04	1.53E-07	#VALUE!	2.04E+01	#VALUE!	1.34E+05	1.3E+05	J
Dibromo-3-chloropropane,1,2-										
Dichlorobenzene,1,2-	9.41E-04	2.31E-05	5.66E-04	1.47E-05	#VALUE!	2.91E+02	#VALUE!	1.98E+04	2.0E+04	J
Dichlorobenzene,1,3-	8.74E-04	1.21E-05	4.00E-04	1.81E-05	#VALUE!	4.60E+00	#VALUE!	2.54E+02	2.5E+02	J
Dichlorobenzene,1,4-	9.40E-04	1.81E-05	5.09E-04	1.69E-05		1.43E+03		8.44E+04	8.4E+04	K
Dichlorobenzidine,3,3-										
Dichloroethane,1,1-	1.01E-03	1.06E-05	3.94E-04	3.03E-05	#VALUE!	7.31E+02	#VALUE!	2.41E+04	2.4E+04	J
Dichloroethane,1,2-	1.42E-03	5.57E-05	1.01E-03	1.35E-05	3.85E+00		2.84E+02		2.8E+02	K
Dichloroethene,1,1-	1.22E-03	2.75E-06	1.46E-04	5.21E-05	#VALUE!	2.91E+02	#VALUE!	5.59E+03	5.6E+03	J
Dichloroethene,cis,1,2-	1.00E-03	1.55E-05	4.87E-04	2.72E-05	#VALUE!	5.11E+01	#VALUE!	1.88E+03	1.9E+03	J
Dichloroethene,trans,1,2-	9.61E-04	7.36E-06	3.04E-04	3.91E-05	#VALUE!	1.02E+02	#VALUE!	2.61E+03	2.6E+03	J
Dichlorophenol,2,4-										
Dichloropropane,1,2-	1.06E-03	1.75E-05	5.33E-04	2.04E-05		8.26E+03		4.04E+05	4.0E+05	K
Dichloropropene,1,3-	8.56E-04	3.11E-05	5.94E-04	1.44E-05		1.07E+02		7.43E+03	7.4E+03	K
Dieldrin										
Diethylphthalate										
Dimethylphenol,2,4-										
Dimethylphthalate										
Di-n-octylphthalate										
Dinitrobenzene,1,3-										
Dinitrophenol,2,4-										

LDEQ RECAP
WORKSHEET 16
GWairi
(mg/l)

Volatile releases from groundwater to ambient air-Industrial					Derivation of Management Option 2 RS					
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Dcap = Da*nacap^3.33/nc^2+Dw*1/(H*41)*nwcap^3.33/nc^2										
Dws = (hcap+hv)/(hcap/Dcap+hv/Ds)										
VFgwairi = (H*41*1000)/[1+(Uair*dair*Lgw)/(W*Dws)]										
Cai C-O = (TR*BWa*ATc*365*1000)/(SFi*IRAa*EFi*EDi)										
Cai N-O = (THQ*RfDi*BWa*ATni*365*1000)/(IRAa*EFi*EDi)										
GWairi = Cai*0.001/VFgwairi										
	Ds	Dcap	Dws	VFgwairi	Cai	Cai	GWairi	GWairi	min value	Note
COMPOUND	(cm2/s)	(cm2/s)	(cm2/s)	(mg/m3/mg/l)	C-O (ug/m3)	N-O (ug/m3)	C-O(mg/l)	N-O(mg/l)	(C or N)	
Dinitrotoluene,2,6-										
Dinitrotoluene,2,4-										
Dinoseb										
Endosulfan										
Endrin										
Ethyl benzene	1.02E-03	5.87E-06	2.63E-04	2.84E-05		1.03E+04		3.63E+05	3.6E+05	K
Fluoranthene										
Fluorene	6.23E-04	6.74E-04	6.24E-04	5.43E-07	#VALUE!	2.04E+02	#VALUE!	3.76E+05	3.8E+05	J
Heptachlor										
Heptachlor epoxide										
Hexachlorobenzene	7.41E-04	2.47E-05	4.99E-04	9.03E-06	2.00E-01		2.21E+01		2.2E+01	K
Hexachlorobutadiene										
Hexachlorocyclohexane,alpha										
Hexachlorocyclohexane,beta										
Hexachlorocyclohexane,gamma										
Hexachlorocyclopentadiene	2.19E-04	1.56E-06	6.58E-05	2.43E-05	#VALUE!	2.91E-01	#VALUE!	1.20E+01	1.2E+01	J
Hexachloroethane	3.58E-05	9.52E-06	3.42E-05	1.82E-06	2.50E+01		1.37E+04		1.4E+04	K
Indeno(1,2,3-cd)pyrene										
Isobutyl alcohol										
Isophorone										
Lead (inorganic)										
Mercury (inorganic)										
Methoxychlor										
Methylene chloride	1.38E-03	2.97E-05	7.84E-04	2.35E-05	2.13E+02		9.04E+03		9.0E+03	K
Methyl ethyl ketone	1.28E-03	9.52E-04	1.27E-03	9.77E-07		1.40E+04		1.43E+07	1.4E+07	K
Methyl isobutyl ketone	1.08E-03	3.04E-04	1.03E-03	1.98E-06		4.88E+03		2.46E+06	2.5E+06	K
Methylnaphthalene,2-	7.94E-04	7.36E-04	7.93E-04	6.30E-07	#VALUE!	4.39E+00	#VALUE!	6.98E+03	7.0E+03	J
MTBE (methyl tert-butyl ether)	1.40E-03	9.80E-05	1.15E-03	9.24E-06	#VALUE!	4.38E+03	#VALUE!	4.74E+05	4.7E+05	J
Naphthalene	8.17E-04	8.48E-05	7.15E-04	4.73E-06	#VALUE!	4.39E+00	#VALUE!	9.29E+02	9.3E+02	J
Nickel										
Nitrate										
Nitrite										
Nitroaniline,2-	9.76E-04	4.15E-04	9.54E-04	1.27E-06	#VALUE!	1.48E-01	#VALUE!	1.17E+02	1.2E+02	J

LDEQ RECAP
WORKSHEET 16
GWairi
(mg/l)

Volatile releases from groundwater to ambient air-Industrial					Derivation of Management Option 2 RS					
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volumetric air content in capillary fringe				nacap =	0.015	cm3-air/cm3-soil				
volumetric water content in capillary fringe				nwcap =	0.345	cm3-water/cm3-soil				
total porosity of capillary fringe soil				nc =	0.36	cm3/cm3				
thickness of capillary fringe				hcap =	5	cm				
thickness of vadose zone				hv =	295	cm				
depth to groundwater				Lgw =	300	cm				
wind speed above ground surface in ambient mixing zone				Uair =	225	cm/s				
width of source area parallel to wind				W =	4511	cm				
ambient air mixing zone height				dair =	200	cm				
Ds = Da*na^3.33/n^2+Dw*1/(H*41)*nw^3.33/n^2										
Dcap = Da*nacap^3.33/nc^2+Dw*1/(H*41)*nwcap^3.33/nc^2										
Dws = (hcap+hv)/(hcap/Dcap+hv/Ds)										
VFgwairi = (H*41*1000)/[1+(Uair*dair*Lgw)/(W*Dws)]										
Cai C-O = (TR*BWa*ATc*365*1000)/(SFi*IRAa*EFi*EDi)										
Cai N-O = (THQ*RfDi*BWa*ATni*365*1000)/(IRAa*EFi*EDi)										
GWairi = Cai*0.001/VFgwairi										
	Ds	Dcap	Dws	VFgwairi	Cai	Cai	GWairi	GWairi	min value	Note
COMPOUND	(cm2/s)	(cm2/s)	(cm2/s)	(mg/m3/mg/l)	C-O (ug/m3)	N-O (ug/m3)	C-O(mg/l)	N-O(mg/l)	(C or N)	
Nitroaniline,3-	5.38E-02	2.74E-01	5.45E-02	1.10E-07	#VALUE!	1.53E+01	#VALUE!	1.40E+05	1.4E+05	J
Nitroaniline,4-										
Nitrobenzene	1.41E-03	1.95E-03	1.41E-03	4.65E-07		1.19E+02		2.56E+05	2.6E+05	K
Nitrophenol,4-										
Nitrosodi-n-propylamine,n-										
N-nitrosodiphenylamine										
Pentachlorophenol										
Phenanthrene	7.89E-04	1.81E-03	7.96E-04	2.54E-07	#VALUE!	1.53E+03	#VALUE!	6.03E+06	6.0E+06	J
Phenol	2.52E-02	1.25E-01	2.55E-02	1.39E-07	#VALUE!	1.53E+03	#VALUE!	1.10E+07	1.1E+07	J
Polychlorinated biphenyls										
Pyrene	1.06E-03	3.58E-03	1.07E-03	1.62E-07	#VALUE!	1.53E+02	#VALUE!	9.48E+05	9.5E+05	J
Selenium										
Silver										
Styrene	9.67E-04	1.63E-05	4.90E-04	1.85E-05		1.00E+03		5.42E+04	5.4E+04	K
Tetrachlorobenzene,1,2,4,5-										
Tetrachloroethane,1,1,1,2-	8.18E-04	1.56E-05	4.40E-04	1.45E-05	1.00E-01		6.91E+00		6.9E+00	K
Tetrachloroethane,1,1,2,2-	9.88E-04	1.25E-04	8.86E-04	4.19E-06	1.70E+00		4.06E+02		4.1E+02	K
Tetrachloroethylene	9.78E-04	2.89E-06	1.48E-04	3.73E-05	1.10E+02		2.95E+03		3.0E+03	K
Tetrachlorophenol,2,3,4,6-										
Thallium										
Toluene	1.18E-03	7.61E-06	3.31E-04	3.01E-05		4.00E+02		1.33E+04	1.3E+04	K
Toxaphene										
Trichlorobenzene,1,2,4-	4.13E-04	3.17E-05	3.44E-04	6.70E-06	#VALUE!	2.91E+02	#VALUE!	4.35E+04	4.3E+04	J
Trichloroethane,1,1,1-	1.06E-03	3.29E-06	1.67E-04	3.93E-05	#VALUE!	1.46E+03	#VALUE!	3.72E+04	3.7E+04	J
Trichloroethane,1,1,2-	1.07E-03	5.29E-05	8.10E-04	1.01E-05	6.30E+00		6.22E+02		6.2E+02	K
Trichloroethene	1.07E-03	5.32E-06	2.47E-04	3.49E-05	5.90E+01		1.69E+03		1.7E+03	K
Trichlorofluoromethane	1.18E-03	1.11E-06	6.31E-05	8.39E-05	#VALUE!	1.02E+03	#VALUE!	1.22E+04	1.2E+04	J
Trichlorophenol,2,4,5-										
Trichlorophenol,2,4,6-										
Vanadium										
Vinyl chloride	1.44E-03	9.38E-07	5.42E-05	2.01E-05	1.20E+00		5.98E+01		6.0E+01	K
Xylene(mixed)	9.51E-04	6.04E-06	2.64E-04	2.74E-05	#VALUE!	1.48E+02	#VALUE!	5.40E+03	5.4E+03	J
Zinc										

LDEQ RECAP
WORKSHEET 16
GWairi
(mg/l)

Volatile releases from groundwater to ambient air-Industrial					Derivation of Management Option 2 RS					
Revision Date: 08/04/2003					Run date:	6/10/2015				
INPUTS TO GROUNDWATER TO AMBIENT AIR MODEL-INDUSTRIAL					Site-Specific					
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Dcap = Da*nacap^3.33/nc^2+Dw*1/(H*41)*nwcap^3.33/nc^2										
Dws = (hcap+hv)/(hcap/Dcap+hv/Ds)										
VFgwairi = (H*41*1000)/[1+(Uair*dair*Lgw)/(W*Dws)]										
Cai C-O = (TR*BWa*ATc*365*1000)/(SFi*IRAa*EFi*EDi)										
Cai N-O = (THQ*RfDi*BWa*ATni*365*1000)/(IRAa*EFi*EDi)										
GWairi = Cai*0.001/VFgwairi										
	Ds	Dcap	Dws	VFgwairi	Cai	Cai	GWairi	GWairi	min value	Note
COMPOUND	(cm2/s)	(cm2/s)	(cm2/s)	(mg/m3/mg/l)	C-O (ug/m3)	N-O (ug/m3)	C-O(mg/l)	N-O(mg/l)	(C or N)	
Aliphatics C6-C8	1.36E-03	6.96E-07	4.05E-05	6.77E-04		1.93E+04		2.86E+04	2.9E+04	J
Aliphatics >C8-C10	1.36E-03	6.79E-07	3.96E-05	1.06E-03		1.06E+03		1.00E+03	1.0E+03	J
Aliphatics >C10-C12	1.36E-03	6.70E-07	3.91E-05	1.57E-03		1.10E+03		6.98E+02	7.0E+02	J
Aliphatics >C12-C16	1.36E-03	6.56E-07	3.82E-05	6.65E-03		1.10E+03		1.65E+02	1.6E+02	J
Aliphatics >C16-C35										
Aromatics >C8-C10	1.36E-03	5.30E-06	2.59E-04	4.14E-05		2.19E+02		5.29E+03	5.3E+03	J
Aromatics >C10-C12	1.36E-03	1.66E-05	5.79E-04	2.71E-05		2.19E+02		8.09E+03	8.1E+03	J
Aromatics >C12-C16	1.37E-03	4.28E-05	9.02E-04	1.59E-05		2.19E+02		1.37E+04	1.4E+04	J
Aromatics >C16-C21										
Aromatics >C21-C35										
TPH-GRO (C6-C10)						2.19E+02			1.0E+03	
TPH-DRO (C10-C28)										
TPH-ORO (>C28)										
J - Risk-based value calculated with one of the equations EQ 56 thru 59.										
K - Louisiana Toxic Air Pollutant Ambient Air Standards (LAC 33:III.5112 Table 51.2).										

INTERNATIONAL TECHNOLOGY CORPORATION

July 17, 1992

Project No. 318005-060-40

Mr. Mark Schutt
MAPCO Petroleum, Inc.
Post Office Box 645
Tulsa, Oklahoma 74101-0645

Site Assessment
Delta Express Store No. 3060
123 Lobdell Highway @ I-10
Port Allen, Louisiana ipl-000212

Dear Mr. Schutt:

IT Corporation is pleased to present data collected during a recent environmental site assessment conducted at the above referenced facility. The purpose of the assessment was to determine if the site had been impacted by hydrocarbons due to operation of an underground storage tank system. IT Corporation subcontracted Layne Environmental Services to perform drilling services which were conducted on July 2, 1992. The following paragraphs describe drilling activities, soil and groundwater sampling, and analytical testing.

Soil Borings and Sampling

On July 2, 1992, six soil borings were advanced to a total depth of 20 feet below ground surface using hollow stem auger equipment with 3.25 inch I.D. augers. Soil samples were recovered using Shelby tube samplers at five foot intervals and placed in separate air tight containers to allow for volatilization of possible hydrocarbon vapors. Hydrocarbon vapor concentrations were monitored using a photoionization detector (PID). Soil boring logs showing visual classification of soils and PID readings were constructed by an on-site IT Geologist for each individual soil boring and are included as Attachment A. All drilling equipment (augers, rods, etc.) was steam-cleaned between each soil boring.

Soil Analytical Results

The soil samples exhibiting the highest PID reading from soil borings B-1, B-2, B-3, and B-4 were retained, placed on ice, and shipped by overnight freight to the IT Corporation Analytical Laboratory in Austin, Texas. These soil samples were analyzed for benzene, toluene, ethylbenzene, xylene (BTEX, Method 8020) and total petroleum hydrocarbons-

1150 LeBlanc Road ▪ Port Allen, LA 70767 ▪ (504) 344-8530

gasoline (TPH-G, Method 8015) as requested. Also, the selected soil sample from soil borings B-3, B-5, and B-6 were analyzed for total petroleum hydrocarbons-diesel (TPH-D, Method 8015). The Certificate of Analysis is included in Attachment B with the data summarized in Table 1. As shown in Table 1, total BTEX concentrations in the soil range from 0.002 parts per million (ppm) in boring B-2 to 188.8 ppm in B-4. Soil borings B-1 and B-3 exhibited BTEX concentrations of 0.373 and 0.453 ppm, respectively. TPH-G concentrations in the soil range from below detectable limits in borings B-1 and B-2 to 1700 ppm in B-4. Soil boring B-3 exhibited a TPH-G concentration of 16.0 ppm. TPH-D concentrations of 25, 4.4, and 1.4 ppm were reported in the soil samples analyzed from soil borings B-3, B-5, and B-6.

Groundwater Sampling

Upon completion of all soil borings, groundwater samples were collected using a new nylon rope and polyethylene disposable bailer for each sample. Samples to be analyzed for BTEX and TPH-G were placed in HCl preserved containers and samples to be analyzed for TPH-D were placed in containers preserved with H_2SO_4. The groundwater samples were shipped (on ice) to the IT Analytical Laboratory along with the soil samples. After completion of sampling activities, each boring was grouted to the surface and topped with a six inch layer of concrete to restore the site to its original condition.

Groundwater Analytical Results

The four groundwater samples collected from soil borings B-1, B-2, B-3, and B-4 were analyzed for BTEX (Method 8020) and TPH-G (Method 8015). Groundwater samples collected from soil borings B-3 and B-5 were analyzed for TPH-D (Method 8015). Groundwater was not sampled from soil boring B-6 due to the presence of phase separated hydrocarbons (approximately 0.5 inches). The Certificate of Analysis is included in Attachment B with the data summarized in Table 2. As shown in Table 2, total BTEX concentrations in groundwater range from 0.288 ppm in soil boring B-2 to 33.5 ppm in boring B-4. Soil borings B-1 and B-3 exhibited groundwater BTEX concentrations of 24.1 ppm and 8.81 ppm, respectively. TPH-G concentrations range from 4.2 ppm in groundwater analyzed from soil boring B-2 to 180 ppm in B-4. Groundwater analyzed from soil borings B-1 and B-3 exhibited TPH-G concentrations of 130 ppm and 46 ppm, respectively. TPH-D concentrations of 2500 and 0.21 ppm were reported for groundwater samples analyzed from soil borings B-3 and B-5, respectively.

Conclusions

The following conclusions are made based on the data presented previously:

- Phase separated hydrocarbons (approximately 0.5 inch) were detected in one of the six soil borings (B-6) installed on July 2, 1992.

- Hydrocarbons have impacted the soil and groundwater beneath Delta Express Store No. 3060 as indicated by data presented on this report. The concentrations reported are above levels typically accepted by the Louisiana Department of Environmental Quality (LDEQ) for no further action or "Termination of Remediation".

- The LDEQ should be notified of current site conditions and the results presented herein, since the constituents detected during this assessment do not occur naturally.

IT Corporation appreciates the opportunity to be of service to MAPCO Petroleum and will be happy to assist in reporting, if desired. Should you have any questions or comments, or require any additional information, please contact us at 800-321-5479.

Sincerely,
IT CORPORATION

Richard W. Lee
Project Manager

Todd M. Browning
Office Manager
Groundwater Field Services

RWL/TMB:hm
Attachments

TABLES

TABLE 1
SOIL ANALYTICAL RESULTS
DELTA EXPRESS STORE NO. 3060
123 LOBDELL HIGHWAY @ I-10
PORT ALLEN, LOUISIANA

Boring No./ Depth	Sample Date	Benzene	Toluene	Ethyl-benzene	Xylenes	Total BTEX	TPH-G	TPH-D
B-1 (3-5)	07/02/92	0.016	0.028	0.079	0.250	0.373	ND	NA
B-2 (3-5)	07/02/92	ND	ND	ND	0.002	0.002	ND	NA
B-3 (3-5)	07/02/92	0.140	0.006	0.220	0.087	0.453	16.0	25
B-4 (3-5)	07/02/92	4.80	54.0	20.0	110.0	188.8	1700.0	NA
B-5 (3-5)	07/02/92	NA	NA	NA	NA	NA	NA	4.4
B-6 (3-5)	07/02/92	NA	NA	NA	NA	NA	NA	1.4

ND - Not Detected
NA - Not Analyzed
All results in milligrams per kilogram (ppm).

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
DELTA EXPRESS STORE NO. 3060
123 LOBDELL HIGHWAY @ I-10
PORT ALLEN, LOUISIANA

Boring No.	Sample Date	Benzene	Toluene	Ethyl-benzene	Xylenes	Total BTEX	TPH-G	TPH-D
B-1	07/02/92	1.10	5.90	3.10	14.0	24.1	130	NA
B-2	07/02/92	0.140	0.044	0.022	0.082	0.288	4.2	NA
B-3	07/02/92	1.500	0.910	1.400	5.00	8.810	46	2500
B-4	07/02/92	3.40	12.00	3.10	15.00	33.50	180	NA
B-5	07/02/92	NA	NA	NA	NA	NA	NA	0.21
B-6	07/02/92	NS	NS	NS	NS	NS	NS	NS

ND - Not Detected
NA - Not Analyzed
All results in milligrams per liter (ppm)
Soil Boring B-6 was not sampled due to presence of free product (approx. 0.5 inch).

FIGURES

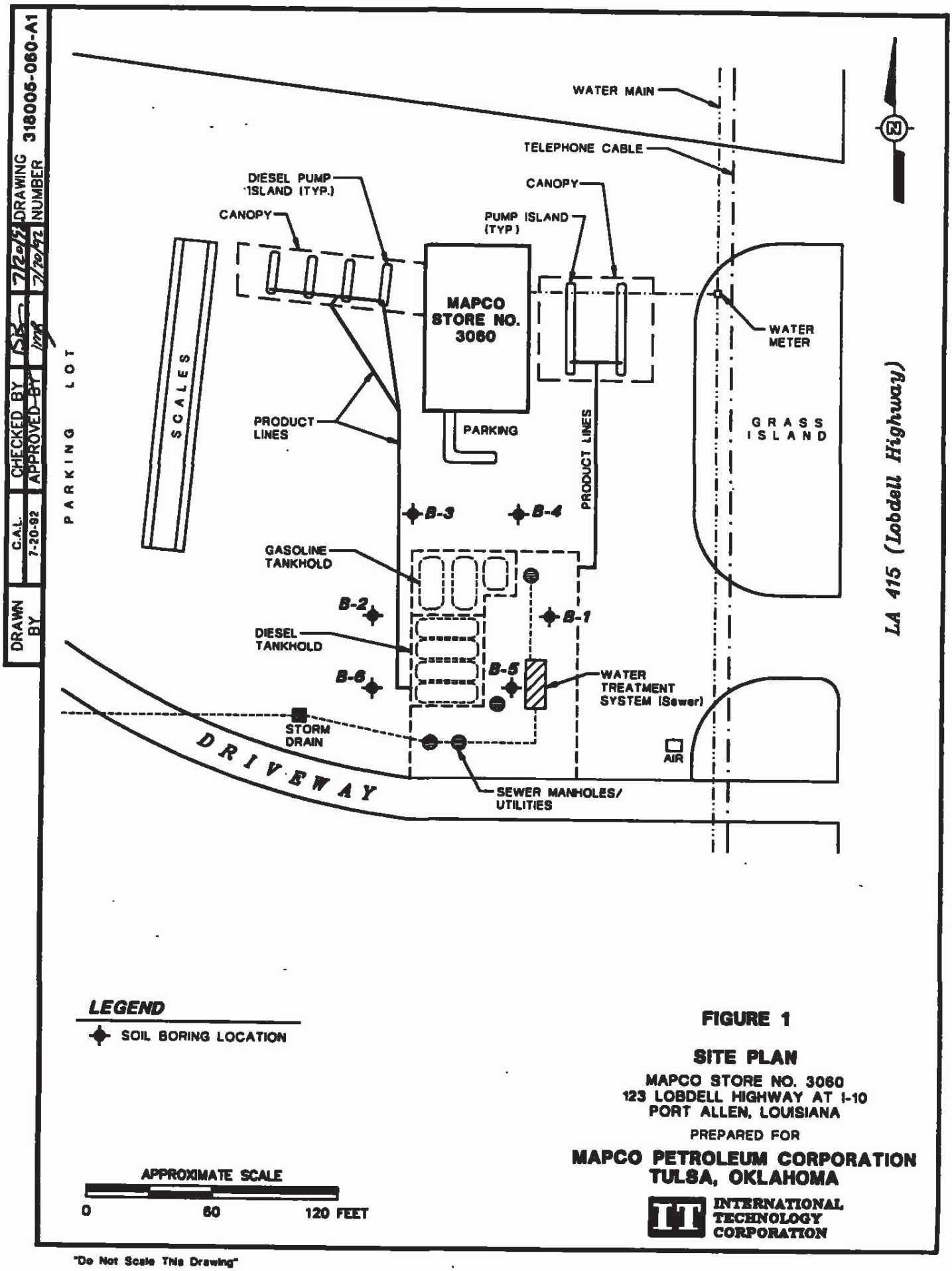

FIGURE 1

SITE PLAN

MAPCO STORE NO. 3060
123 LOBDELL HIGHWAY AT I-10
PORT ALLEN, LOUISIANA

PREPARED FOR

MAPCO PETROLEUM CORPORATION
TULSA, OKLAHOMA

INTERNATIONAL TECHNOLOGY CORPORATION

"Do Not Scale This Drawing"

ATTACHMENT A

SOIL BORING LOGS

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: *318005-060*	PROJECT NAME: *MAPCO – Port Allen, LA*	
BORING NUMBER: *B-1*	COORDINATES: *N/A*	DATE: *7/02/92*
ELEVATION: *N/A*	GWL: DEPTH: *3.0 ft.* TIME: *10:00*	DATE STARTED: *7/02/92*
ENGINEER/GEOLOGIST: *Andy Wheeler*	DEPTH: TIME:	DATE COMPLETED: *7/02/92*
DRILLING METHOD: *Hollow Stem Auger*		PAGE 1 OF 1

DEPTH FEET	SAMPLE TYPE & NO	SAMPLE TIME & RECOVERY	DESCRIPTION	HNU (ppm)	HNU TIME MEASURED	REMARKS
2	Auger	08:10	Soft, gray, sandy CLAY, moist, rootlets.	12	09:45	Slight odor
4	ST 1	08:15 1.5	Soft, brown and gray mottled, sandy CLAY, moist	30	09:46	Slight odor Sample selected for analysis
6						
8						
10	ST 2	08:20 1.75	Soft, gray, silty CLAY, moist to wet.	9	09:48	Slight odor
12						
14	ST 3	08:25 2.0	Stiff, brown and gray mottled, silty CLAY, moist.	5	09:49	No odor
16						
18	ST 4	08:30	Stiff, brown and gray mottled, silty CLAY, moist.	1	09:50	No odor
20			TD = 20 ft.			

NOTES: *All times military*
TD = Total Depth
SS = Split Spoon
ST = Shelby Tube

QA Approval by: Richard W. Lee 7-14-92

INTERNATIONAL TECHNOLOGY CORPORATION

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: *318005-060*	**PROJECT NAME:** *MAPCO – Port Allen, LA*				
BORING NUMBER: *B-2*	**COORDINATES:** *N/A*			**DATE:** *7/02/92*	
ELEVATION: *N/A*	**GWL: DEPTH:** *3.0 ft.*	**TIME:** *10:00*		**DATE STARTED:** *7/02/92*	
ENGINEER/GEOLOGIST: *Andy Wheeler*	**DEPTH:**	**TIME:**		**DATE COMPLETED:** *7/02/92*	
DRILLING METHOD: *Hollow Stem Auger*				**PAGE 1 OF 1**	

DEPTH FEET	SAMPLE TYPE & NO	SAMPLE TIME & RECOVERY	DESCRIPTION	HNU (ppm)	HNU TIME MEASURED	REMARKS
–	*Auger*	*09:00*	*0–6" asphalt* *Soft, gray, silty CLAY, moist.*	*13*	*10:00*	*Slight odor*
-- 2						
–						
-- 4	*ST*	*09:05*	*Soft, brown and gray mottled, silty CLAY,*	*38*	*10:01*	*Slight odor*
–	*1*	*2.0*	*moist*			*Sample selected for analysis*
-- 6						
–						
-- 8						
–	*ST*	*09:10*	*Very fine to fine, brown and gray mottled,*	*10*	*10:02*	*Slight odor*
-- 10	*2*	*2.0*	*silty SAND, wet.*			
–						
-- 12						
–						
-- 14	*ST*	*09:15*	*Stiff, gray, silty CLAY, moist, rootlets.*	*15*	*10:03*	*No odor*
–	*3*	*2.0*				
-- 16						
–						
-- 18	*ST*	*09:20*	*Stiff, gray, silty CLAY, moist, rootlets.*	*4*	*10:04*	*No odor*
–	*4*	*2.0*				
-- 20						
–			*TD = 20 ft.*			
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--						
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NOTES: *All times military*
TD = Total Depth
SS = Split Spoon
ST = Shelby Tube

QA Approval by: Richard W. Lee 7-14-92

INTERNATIONAL TECHNOLOGY CORPORATION

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 318005-060	PROJECT NAME: MAPCO – Port Allen, LA		
BORING NUMBER: B-3	COORDINATES: N/A		DATE: 7/02/92
ELEVATION: N/A	GWL: DEPTH: 3.5 ft.	TIME: 12:00	DATE STARTED: 7/02/92
ENGINEER/GEOLOGIST: Andy Wheeler	DEPTH:	TIME:	DATE COMPLETED: 7/02/92
DRILLING METHOD: Hollow Stem Auger			PAGE 1 OF 1

DEPTH FEET	SAMPLE TYPE & NO	SAMPLE TIME & RECOVERY	DESCRIPTION	HNU (ppm)	HNU TIME MEASURED	REMARKS
			0–6" asphalt			
– 2	Auger	10:25	Soft, gray, silty CLAY, moist.	5	11:30	Slight odor
– 4	ST 1	10:30 2.0	Soft, brown and gray mottled, silty CLAY, moist	30	11:31	Moderate odor Sample selected for analysis
– 6						
– 8	ST 2	10:35 2.0	Very fine to fine, brown and gray mottled, silty CLAY, wet.	15	11:32	Slight odor
– 10						
– 12						
– 14	ST 3	10:40 2.0	Stiff, gray, silty CLAY, moist, rootlets.	3	11:33	No odor
– 16						
– 18	ST 4	10:45 2.0	Stiff, gray, silty CLAY, moist, rootlets.	1	11:34	No odor
– 20			TD = 20 ft.			

NOTES: All times military
TD = Total Depth
SS = Split Spoon
ST = Shelby Tube

QA Approval by: Richard W. Lee 7-14-92

INTERNATIONAL TECHNOLOGY CORPORATION

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: 318005-060	PROJECT NAME: MAPCO – Port Allen, LA	
BORING NUMBER: B-4	COORDINATES: N/A	DATE: 7/02/92
ELEVATION: N/A	GWL: DEPTH: 3.5 ft. TIME: 14:00	DATE STARTED: 7/02/92
ENGINEER/GEOLOGIST: Andy Wheeler	DEPTH: TIME:	DATE COMPLETED: 7/02/92
DRILLING METHOD: Hollow Stem Auger		PAGE 1 OF 1

DEPTH FEET	SAMPLE TYPE & NO	SAMPLE TIME & RECOVERY	DESCRIPTION	HNU (ppm)	HNU TIME MEASURED	REMARKS
			0–6" asphalt			
– 2	Auger	12:20	Soft, gray, silty CLAY, moist.	18	14:20	Slight odor
– 4	ST 1	12:25 2.0	Soft, brown and gray mottled, silty CLAY, moist	110	14:21	Strong odor Sample selected for analysis
– 6						
– 8						
– 10	ST 2	12:30 1.75	Very fine to fine, brown and gray mottled, silty SAND, wet.	25	14:22	Slight odor
– 12						
– 14	ST 3	12:35 2.0	Stiff, gray, silty CLAY, moist, rootlets.	5	14:23	No odor
– 16						
– 18	ST 4	12:40 2.0	Stiff, gray, silty CLAY, moist, rootlets.	2	14:24	No odor
– 20			TD = 20 ft.			

NOTES: All times military
TD = Total Depth
SS = Split Spoon
ST = Shelby Tube

QA Approval by: Richard W. Lee 7-14-92

INTERNATIONAL TECHNOLOGY CORPORATION

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: *318005-060*	PROJECT NAME: *MAPCO – Port Allen, LA*	
BORING NUMBER: *B-5*	COORDINATES: *N/A*	DATE: *7/02/92*
ELEVATION: *N/A*	GWL: DEPTH: *5.0 ft.* TIME: *14:45*	DATE STARTED: *7/02/92*
ENGINEER/GEOLOGIST: *Andy Wheeler*	DEPTH: TIME:	DATE COMPLETED: *7/02/92*
DRILLING METHOD: *Hollow Stem Auger*		PAGE 1 OF 1

DEPTH FEET	SAMPLE TYPE & NO	SAMPLE TIME & RECOVERY	DESCRIPTION	HNU (ppm)	HNU TIME MEASURED	REMARKS
– 2	Auger	13:30	Soft, gray, silty CLAY, moist.	0	14:30	Slight odor
– 4 – 6	ST 1	13:35 2.0	Soft, brown and gray mottled, silty CLAY, wet.	2	14:31	Slight odor Sample selected for analysis
– 8 – 10	ST 2	13:40 2.0	Very fine to fine, gray mottled, silty SAND, wet.	1	14:32	No odor
– 12 – 14	ST 3	13:45 2.0	Brown and gray mottled, silty CLAY, moist.	0	14:33	No odor
– 16 – 18	ST 4	13:50 2.0	Soft, gray, silty CLAY, moist.	0	14:34	No odor
– 20			TD = 20 ft.			

NOTES: *All times military*
TD = Total Depth
SS = Split Spoon
ST = Shelby Tube

QA Approval by: Richard W. Lee 7-14-92

INTERNATIONAL TECHNOLOGY CORPORATION

VISUAL CLASSIFICATION OF SOILS

PROJECT NUMBER: *318005-060*	PROJECT NAME: *MAPCO – Port Allen, LA*		
BORING NUMBER: *B-6*	COORDINATES: *N/A*		DATE: *7/02/92*
ELEVATION: *N/A*	GWL: DEPTH: *4.0 ft.* TIME: *16:00*		DATE STARTED: *7/02/92*
ENGINEER/GEOLOGIST: *Andy Wheeler*	DEPTH: TIME:		DATE COMPLETED: *7/02/92*
DRILLING METHOD: *Hollow Stem Auger*			PAGE 1 OF 1

DEPTH FEET	SAMPLE TYPE & NO	SAMPLE TIME & RECOVERY	DESCRIPTION	HNU (ppm)	HNU TIME MEASURED	REMARKS
–			*0–6" asphalt*			
– 2	*Auger*	*14:45*	*Soft, gray, silty CLAY, moist.*	*5*	*16:44*	*Slight odor*
– 4	*ST 1*	*14:50 2.0*	*Soft, brown and gray mottled, silty CLAY, moist.*	*15*	*16:45*	*Stong odor Sample selected for analysis*
– 6						
– 8						
– 10	*ST 2*	*14:55 1.75*	*Soft, brown and gray, mottled, silty CLAY, wet.*	*3*	*16:46*	*Slight odor*
– 12						
– 14	*ST 3*	*15:00 2.0*	*Soft, brown and gray, mottled, silty CLAY, wet.*	*0*	*16:47*	*No odor*
– 16						
– 18	*ST 4*	*15:05 2.0*	*Soft, gray, silty CLAY, moist.*	*0*	*16:48*	*No odor*
– 20			*TD = 20 ft.*			
–						
–						
–						
–						
–						
–						
–						
–						
–						
–						
–						

NOTES: *All times military*
TD = Total Depth
SS = Split Spoon
ST = Shelby Tube

QA Approval by: Richard W. Lee

INTERNATIONAL TECHNOLOGY CORPORATION

ATTACHMENT B

CERTIFICATE OF ANALYSIS
SOIL AND GROUNDWATER SAMPLES

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

MAPCO PETROLEUM
IT CORPORATION
1150 LE BLANC RD.
PORT ALLEN, LA 70767
ANDY WHEELER

Date: 07/13/92

Work Order: B2-07-023

This is the Certificate of Analysis for the following samples:

Client Work ID: B1-6 318005-060-40
Date Received: 07/03/92
Number of Samples: 6
Sample Type: SOIL

I. Introduction

Samples were labeled as follows:

SAMPLE IDENTIFICATION	LABORATORY #
B-1 (3-5)	B2-07-023-01
B-2 (3-5)	B2-07-023-02
B-3 (3-5)	B2-07-023-03
B-4 (3-5)	B2-07-023-04
B-5 (3-5)	B2-07-023-05
B-6 (3-5)	B2-07-023-06

Reviewed and Approved:

Jon Bartell
Laboratory Director

IT ANALYTICAL SERVICES
AUSTIN, TX

Company: MAPCO PETROLEUM
Date: 07/13/92
Client Work ID: B1-6 318005-060-40 Work Order: B2-07-023

II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

IT ANALYTICAL SERVICES
AUSTIN, TX

Company: MAPCO PETROLEUM
Date: 07/13/92
Client Work ID: B1-6 318005-060-40 Work Order: B2-07-023

TEST NAME: BTEX+Gasoline - Purge+Trap
METHOD REFERENCE: EPA8020

SAMPLE ID: B-1 (3-5)
SAMPLE DATE: 07/02/92
SAMPLE MATRIX: SOIL
ANALYSIS DATE: 07/07/92
FIRST ANALYSIS: 07/06/92
DILUTION FACTOR: 1.0
UNITS: ug/kg

	Result	Reporting Limit
Benzene	16	1.0
Ethylbenzene	79	1.0
Toluene	28	1.0
Xylenes (total)	250	1.0

Surrogates	% Recovery
o-Chlorofluorobenzene	100

Total BTEX concentration: 373 ug/kg

ANALYSIS DATE: 07/06/92

TPH - Low boilers

	Results in mg/kg	Reporting Limit
Gasoline	ND	5.0

IT ANALYTICAL SERVICES
AUSTIN, TX

Company: MAPCO PETROLEUM
Date: 07/13/92
Client Work ID: B1-6 318005-060-40 Work Order: B2-07-023

TEST NAME: BTEX+Gasoline - Purge+Trap
METHOD REFERENCE: EPA8020

SAMPLE ID: B-2 (3-5)
SAMPLE DATE: 07/02/92
SAMPLE MATRIX: SOIL
ANALYSIS DATE: 07/06/92
FIRST ANALYSIS: 07/06/92
DILUTION FACTOR: 7.0
UNITS: ug/kg

	Result	Reporting Limit
Benzene	ND	7.0
Ethylbenzene	ND	7.0
Toluene	ND	7.0
Xylenes (total)	1.8	7.0

Surrogates	% Recovery
o-Chlorofluorobenzene	89

Total BTEX concentration: 1.8 ug/kg

TPH - Low boilers

Results in mg/kg		Reporting Limit
Gasoline	ND	5.0

IT ANALYTICAL SERVICES
AUSTIN, TX

Company: MAPCO PETROLEUM
Date: 07/13/92
Client Work ID: B1-6 318005-060-40 Work Order: B2-07-023

TEST NAME: BTEX+Gasoline - Purge+Trap
METHOD REFERENCE: EPA8020

SAMPLE ID: B-3 (3-5)
SAMPLE DATE: 07/02/92
SAMPLE MATRIX: SOIL
ANALYSIS DATE: 07/06/92
FIRST ANALYSIS: 07/06/92
DILUTION FACTOR: 1.0
UNITS: ug/kg

	Result	Reporting Limit
Benzene	140	1.0
Ethylbenzene	220	1.0
Toluene	6.4	1.0
Xylenes (total)	87	1.0

Surrogates	% Recovery
o-Chlorofluorobenzene	96

Total BTEX concentration: 453.4 ug/kg

ANALYSIS DATE: 07/08/92

TPH - Low boilers

	Results in mg/kg	Reporting Limit
Gasoline	16	5.0

IT ANALYTICAL SERVICES
AUSTIN, TX

Company: MAPCO PETROLEUM
Date: 07/13/92
Client Work ID: B1-6 318005-060-40 Work Order: B2-07-023

TEST NAME: TPH by GC (mod EPA 8015)
METHOD REFERENCE: CALIFORNIA

SAMPLE ID: B-3 (3-5)
SAMPLE DATE: 07/02/92
SAMPLE MATRIX: SOIL
EXTRACTION DATE: 07/06/92
EXTRACTION METHOD: 3540
ANALYSIS DATE: 07/10/92
UNITS: mg/L

	Result	Reporting Limit
Diesel	25	1.4

Surrogates	% Recovery
C-32	83

IT ANALYTICAL SERVICES
AUSTIN, TX

Company: MAPCO PETROLEUM
Date: 07/13/92
Client Work ID: B1-6 318005-060-40 Work Order: B2-07-023

TEST NAME: BTEX+Gasoline - Purge+Trap
METHOD REFERENCE: EPA8020

SAMPLE ID: B-4 (3-5)
SAMPLE DATE: 07/02/92
SAMPLE MATRIX: SOIL
ANALYSIS DATE: 07/09/92
FIRST ANALYSIS: 07/07/92
DILUTION FACTOR: 500
UNITS: ug/kg

	Result	Reporting Limit
Benzene	4800	500
Ethylbenzene	20000	500
Toluene	54000	500
Xylenes (total)	110000	500

Surrogates	% Recovery
1,4-Difluorobenzene	93

Total BTEX concentration: 188800 ug/kg

TPH - Low boilers

	Results in mg/kg	Reporting Limit
Gasoline	1700	50

IT ANALYTICAL SERVICES
AUSTIN, TX

Company: MAPCO PETROLEUM
Date: 07/13/92
Client Work ID: B1-6

318005-060-40 Work Order: B2-07-023

TEST NAME: TPH by GC (mod EPA 8015)
METHOD REFERENCE: CALIFORNIA

SAMPLE ID: B-5 (3-5)
SAMPLE DATE: 07/02/92
SAMPLE MATRIX: SOIL
EXTRACTION DATE: 07/06/92
EXTRACTION METHOD: 3540
ANALYSIS DATE: 07/10/92
UNITS: mg/L

	Result	Reporting Limit
Diesel	4.4	1.3

Surrogates	% Recovery
C-32	119

IT ANALYTICAL SERVICES
AUSTIN, TX

Company: MAPCO PETROLEUM
Date: 07/13/92
Client Work ID: B1-6 318005-060-40 Work Order: B2-07-023

TEST NAME: TPH by GC (mod EPA 8015)
METHOD REFERENCE: CALIFORNIA

SAMPLE ID: B-6 (3-5)
SAMPLE DATE: 07/02/92
SAMPLE MATRIX: SOIL
EXTRACTION DATE: 07/06/92
EXTRACTION METHOD: 3540
ANALYSIS DATE: 07/10/92
UNITS: mg/L

	Result	Reporting Limit
Diesel	1400	140

Referenced notes for these results:

Surrogate was diluted out.

IT ANALYTICAL SERVICES
AUSTIN, TX

Company: MAPCO PETROLEUM
Date: 07/13/92
Client Work ID: B1-6 318005-060-40 Work Order: B2-07-023

IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME BTEX+Gasoline - Purge+Trap TEST CODE BTEX_G

BTEX	Method 8020, SW-846, Test Methods for Evaluating Solid Wastes, 3rd Edition. This technique uses a purge and trap with gas chromatography (GC) and photo ionization detection (PID) with a five point curve. This method exceeds the requirement of Method 602.
TPH-Extractable Petroleum Hydrocarbons	Modified Method 8015 by purge-and-trap GC with FID detection. Quantitation of sample components as gasoline.

TEST NAME TPH by GC (mod EPA 8015) TEST CODE TPH_D

TPH-Extractable Petroleum Hydrocarbon	EPA Methods 3510 for extraction of samples and modified EPA Method 8015 for GC/FID analysis of extracts run against Diesel standard.

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYTICAL SERVICES

CERTIFICATE OF ANALYSIS

MAPCO PETROLEUM
IT CORPORATION
1150 LE BLANC RD.
PORT ALLEN, LA 70767
ANDY WHEELER

Date: 07/13/92

Work Order: B2-07-022

This is the Certificate of Analysis for the following samples:

Client Work ID: B1-5 318005-060-40
Date Received: 07/03/92
Number of Samples: 5
Sample Type: WATER

I. Introduction

Samples were labeled as follows:

SAMPLE IDENTIFICATION	LABORATORY #
B-1	B2-07-022-01
B-2	B2-07-022-02
B-3	B2-07-022-03
B-4	B2-07-022-04
B-5	B2-07-022-05

Reviewed and Approved:

Jon Bartell
Laboratory Director

IT ANALYTICAL SERVICES
AUSTIN, TX
(512) 892-6684

Company: MAPCO PETROLEUM
Date: 07/13/92
Client Work ID: B1-5

318005-060-40 Work Order: B2-07-022

II. QA/QC

The results presented in this report meet the statement of work requirements in accordance with Quality Control and Quality Assurance protocol except as noted in Section IV or in an optional sample narrative at the end of Section III.

In the presented analytical data, 'ND' or '<' indicates that the compound is not detected at the specified limit.

III. Analytical Data

The following page(s) supply results for requested analyses performed on the samples listed above.

The test results relate to tested items only. ITAS-Austin reserves the right to control report production except in whole.

IT ANALYTICAL SERVICES
AUSTIN, TX
(512) 892-6684

Company: MAPCO PETROLEUM
Date: 07/13/92
Client Work ID: B1-5

318005-060-40 Work Order: B2-07-022

TEST NAME: BTEX+Gasoline - Purge+Trap
METHOD REFERENCE: EPA8020

SAMPLE ID: B-1
SAMPLE DATE: 07/02/92
SAMPLE MATRIX: WATER
ANALYSIS DATE: 07/07/92
FIRST ANALYSIS: 07/07/92
DILUTION FACTOR: 100
UNITS: ug/L

	Result	Reporting Limit
Benzene	1100	100
Ethylbenzene	3100	100
Toluene	5900	100
Xylenes (total)	14000	100

Surrogates	% Recovery
1,4-Difluorobenzene	93

Total BTEX concentration: 24100 ug/L

TPH - Low boilers

	Results in mg/L	Reporting Limit
Gasoline	130	10

IT ANALYTICAL SERVICES
AUSTIN, TX
(512) 892-6684

Company: MAPCO PETROLEUM
Date: 07/13/92
Client Work ID: B1-5

318005-060-40 Work Order: B2-07-022

TEST NAME: BTEX+Gasoline - Purge+Trap
METHOD REFERENCE: EPA8020

SAMPLE ID: B-2
SAMPLE DATE: 07/02/92
SAMPLE MATRIX: WATER
ANALYSIS DATE: 07/08/92
FIRST ANALYSIS: 07/06/92
DILUTION FACTOR: 1.0
UNITS: ug/L

	Result	Reporting Limit
Benzene	140	1.0
Ethylbenzene	22	1.0
Toluene	44	1.0
Xylenes (total)	82	1.0

Surrogates	% Recovery
1,4-Difluorobenzene	88

Total BTEX concentration: 288 ug/L

ANALYSIS DATE: 07/06/92

TPH - Low boilers

Results in mg/L		Reporting Limit
Gasoline	4.2	0.5

IT ANALYTICAL SERVICES
AUSTIN, TX
(512) 892-6684

Company: MAPCO PETROLEUM
Date: 07/13/92
Client Work ID: B1-5 318005-060-40 Work Order: B2-07-022

TEST NAME: BTEX+Gasoline - Purge+Trap
METHOD REFERENCE: EPA8020

SAMPLE ID: B-3
SAMPLE DATE: 07/02/92
SAMPLE MATRIX: WATER
ANALYSIS DATE: 07/08/92
FIRST ANALYSIS: 07/07/92
DILUTION FACTOR: 25
UNITS: ug/L

	Result	Reporting Limit
Benzene	1500	25
Ethylbenzene	1400	25
Toluene	910	25
Xylenes (total)	5000	25

Surrogates	% Recovery
1,4-Difluorobenzene	107

Total BTEX concentration: 8810 ug/L

TPH - Low boilers

	Results in mg/L	Reporting Limit
Gasoline	46	2.5

Company: MAPCO PETROLEUM
Date: 07/13/92
Client Work ID: B1-5

IT ANALYTICAL SERVICES
AUSTIN, TX
(512) 892-6684

318005-060-40 Work Order: B2-07-022

TEST NAME: TPH by GC (mod EPA 8015)
METHOD REFERENCE: CALIFORNIA

SAMPLE ID: B-3
SAMPLE DATE: 07/02/92
SAMPLE MATRIX: WATER
EXTRACTION DATE: 07/06/92
EXTRACTION METHOD: 3520
ANALYSIS DATE: 07/10/92
UNITS: mg/L

	Result	Reporting Limit
Diesel	2500	9.7

Referenced notes for these results:

Surrogate was diluted out.

IT ANALYTICAL SERVICES
AUSTIN, TX
(512) 892-6684

Company: MAPCO PETROLEUM
Date: 07/13/92
Client Work ID: B1-5 318005-060-40 Work Order: B2-07-022

TEST NAME: BTEX+Gasoline - Purge+Trap
METHOD REFERENCE: EPA8020

SAMPLE ID: B-6
SAMPLE DATE: 07/02/92
SAMPLE MATRIX: WATER
ANALYSIS DATE: 07/07/92
FIRST ANALYSIS: 07/07/92
DILUTION FACTOR: 200
UNITS: ug/L

	Result	Reporting Limit
Benzene	3400	200
Ethylbenzene	3100	200
Toluene	12000	200
Xylenes (total)	15000	200

Surrogates	% Recovery
1,4-Difluorobenzene	98

Total BTEX concentration: 33500 ug/L

TPH - Low boilers

	Results in mg/L	Reporting Limit
Gasoline	180	20

IT ANALYTICAL SERVICES
AUSTIN, TX
(512) 892-6684

Company: MAPCO PETROLEUM
Date: 07/13/92
Client Work ID: B1-5

318005-060-40 Work Order: B2-07-022

TEST NAME: TPH by GC (mod EPA 8015)
METHOD REFERENCE: CALIFORNIA

SAMPLE ID: B-5
SAMPLE DATE: 07/02/92
SAMPLE MATRIX: WATER
EXTRACTION DATE: 07/06/92
EXTRACTION METHOD: 3520
ANALYSIS DATE: 07/10/92
UNITS: mg/L

	Result	Reporting Limit
Diesel	0.21	0.049

Surrogates	% Recovery
C-32	116

Company: MAPCO PETROLEUM
Date: 07/13/92
Client Work ID: B1-5

IT ANALYTICAL SERVICES
AUSTIN, TX
(512) 892-6684

318005-060-40 Work Order: B2-07-022

IV. Methodology

Requested analyses were performed according to the following methods.

TEST NAME BTEX+Gasoline - Purge+Trap TEST CODE BTEX_G

BTEX	Method 8020, SW-846, Test Methods for Evaluating Solid Wastes, 3rd Edition. This technique uses a purge and trap with gas chromatography (GC) and photo ionization detection (PID) with a five point curve. This method exceeds the requirement of Method 602.
TPH-Extractable Petroleum Hydrocarbons	Modified Method 8015 by purge-and-trap GC with FID detection. Quantitation of sample components as gasoline.

TEST NAME TPH by GC (mod EPA 8015) TEST CODE TPH_D

TPH-Extractable Petroleum Hydrocarbon	EPA Methods 3510 for extraction of samples and modified EPA Method 8015 for GC/FID analysis of extracts run against Diesel standard.

520102

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)*

Reference Document No.[30] 423270

Page 2 of 2

Project Name Mapco

Project No. 318005-060

Samples Shipment Date

ONE CONTAINER PER LINE

Sample[14] Number	Sample[15] Description/Type	Date/Time[16] Collected	Container[17] Type	Sample[18] Volume	Pre-[19] servative	Requested Testing[20] Program	Condition on[21] Receipt	Disposal[22] Record No.
B-1 (3-5)	Soil	7-2-92 08:15	1-40z Glass	4 oz.	None	BTEX 8020 TPH-Gasoline	Good 1°C	
B-2 (3-5)	↓	7-2-92 09:05	↓	↓	↓	↓	FOR LAB USE ONLY	
B-3 (3-5)		7-2-92 10:30						
B-4 (3-5)		7-2-92				↓		
B-3 (3-5)	↓	7-2-92 10:30	↓	↓	↓	TPH-Diesel	FOR LAB USE ONLY	
[redacted]								
							FOR LAB USE ONLY	

White: To accompany samples Yellow: Field copy

*See back of form for special instructions.

MCA 3/15/91

B201022

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 423270
Page 1 of 2

Project Name/No. [1] Mapco/318005-060-40
Sample Team Members [2] Andy Wheeler
Profit Center No. [3] 2261
Project Manager [4] Steve Burnham
Purchase Order No. [6] —
Required Report Date [11] 5 day turnaround

Samples Shipment Date [7] 7-2-92
Lab Destination [8] IT AS Austin
Lab Contact [9] Karmen Deans
Project Contact/Phone [12] Andy Wheeler/504-314-8530
Carrier/Waybill No. [13] Fed-X 173 0208772 7/3/92

Bill to: [5] IT Corp
1150 LeBlanc Rd.
Port Allen, LA 70767
Attn: Andy Wheeler

Report to: [10] Same As Above

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Preservative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
B-1	Water	7-2-92 15:15	2-40ml VOA's	80ml	HCl	BTEX 8020 TPH-Gasoline	Good/OC 7/3/92	Lot # B1296020A
B-2	↓	7-2-92 15:30	↓	"	↓	BTEX 8020 TPH-Gasoline	That's 7/3/92	↓
B-3		7-2-92 15:45	↓	"	↓	"		
B-3		7-2-92 15:45	2-1 Hr. Amber	2 1/2 oz	H_2SO_4	TPH-Diesel		
B-4		7-2-92 16:00	2-40ml VOA's	80ml	HCl	BTEX 8020 TPH-Gasoline		↓
B-5	↓	7-2-92 16:15	2-1 Hr Amber	2 1/2 oz	H_2SO_4	TPH-Diesel		
B-5 (3-5)	Soil	7-2-92 13:35	1-4 oz Glass	4 oz	—			
B-6 (3-5)	Soil	7-2-92 14:50	"	"	—	↓	↓	

Special Instructions: [23] 5 day Turnaround

Possible Hazard Identification: [24]
Non-hazard [Y] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown [ ]

Sample Disposal: [25]
Return to Client [ ] Disposal by Lab [Y] Archive ____ (mos.)

Turnaround Time Required: [26] 5 days
Normal [ ] Rush [ ]

QC Level: [27]
I. [Y] II. [ ] III. [ ] Project Specific (specify): ____

1. Relinquished by [28] (Signature/Affiliation) Andy Wheeler/IT	Date: 7-2-92 Time: 18:00	1. Received by [28] (Signature/Affiliation) IT	Date: 7/3/92 Time: 0902
2. Relinquished by (Signature/Affiliation)	Date: Time:	2. Received by (Signature/Affiliation)	Date: Time:
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: [29]

White: To accompany samples
Yellow: Field copy
*See back of form for special instructions

MCA 3/15/91

State of Louisiana

Department of Environmental Quality

Edwin W. Edwards
Governor

May 31, 1995

William A. Kucharski
Secretary

Mr. Mark Schutt
MAPCO Petroleum, Inc.
1101 Kermit Drive, Suite 600
Nashville, Tennessee 37217-2120

Re: Corrective Action Plan Approval
MAPCO Facility No. 3060
123 Lobdell Highway at I-10
Port Allen, Louisiana
(West Baton Rouge Parish)
Facility ID No. 61-006212
Incident No. UE-92-2=0174

Dear Mr. Schutt:

The Underground Storage Tank Division has received and reviewed Energy Associates Inc.'s April 1, 1995, correspondence submitting two corrective action plans for the above-referenced facility. Remedial option No. 1, which consists of vacuum enhanced pumping to recover soil vapors, free-phase product, and groundwater simultaneously utilizing a single pump system, is considered an acceptable plan for remediating the site. The cost estimate of $146,238 is noted for future reference. Final cost approval is pending the receipt and review of a request for reimbursement by the Motor Fuel Trust Fund. In order to insure maximum potential eligibility under the UST Trust Fund, all site activities relevant to this incident must be conducted in accordance with UST Motor Fuels Trust Fund Cost Control Guidance Document, as revised January 7, 1994.

You may begin implementing this plan after all appropriate permits have been received.

Thank you for your cooperation in this matter. If you have any questions, please call Charles J. Melchior at (504) 295-8583.

Sincerely,

Harold F. Ethridge, Jr.
Administrator

HFE:CJM
c: Stephen J. Burnham, Engineering Associates, Inc.
Capital Regional Office
Trust Fund Section

State of Louisiana

Department of Environmental Quality

Edwin W. Edwards
Governor

May 31, 1995

William A. Kucharski
Secretary

Mr. Mark Schutt
MAPCO Petroleum, Inc.
1101 Kermit Drive, Suite 600
Nashville, Tennessee 37217-2120

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MAPCO Facility No. 3060
123 Lobdell Highway at I-10
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Sincerely,

Harold F. Ethridge, Jr.
Administrator

HFE:CJM
c: Stephen J. Burnham, Engineering Associates, Inc.
Capital Regional Office
Trust Fund Section

ENGINEERING
ASSOCIATES, INC.
CONSULTING ENGINEERS
CIVIL • ENVIRONMENTAL • LAND SURVEYING

June 10, 2002

Project No. 94100-060

Mr. Keith Casanova, Administrator
Louisiana Department of Environmental Quality
P.O. Box 82178
Baton Rouge, LA 70884-2178

Product Line Repair
Williams TravelCenter No. 3060
123 Lobdell Highway @ I-10
Port Allen, LA
Facility ID No. 61-006212
Agency Interest No. ~~72689~~

Dear Mr. Casanova:

This correspondence is intended to provide you with details concerning a product line repair recently performed at the captioned site. This submittal is on behalf of our client, Williams TravelCenters, Inc (Williams).

On May 29, 2002, Williams maintenance personnel observed a small quantity of diesel fuel seeping through pavement joints near the diesel fuel dispensers. Internal compliance records were confirmed by Williams compliance personnel to indicate no problems. However, Williams' standard operating procedure indicated that a line test was the warranted course of action. Williams subcontracted SEMS, Inc. to perform the line tightness tests at the site. Ms. Laurie Peacock of your office was also contacted verbally by our office.

On May 30, 2002 line tightness tests were performed and one line did not pass. The line was taken out of service and a helium test was conducted on May 31, 2002 in an effort to locate the line leak. Removal of concrete pavement and excavation was performed in the vicinity of the suspected leak. A leak was confirmed to be present in one of the diesel fuel product lines, the location of which is shown on the attached map. The leak appeared to have been the result of abrasion between the fiberglass product line and an electrical conduit located immediately below the line. The abrasion caused a small rupture in the 3-inch diameter secondary containment line as well as the internal 2-inch diameter product line.

D:\06-02\94100\casanovaportallen.0606

Both the 3-inch secondary containment line and the 2-inch product line were repaired. A subsequent tightness test was performed on June 1, 2002 and the line was confirmed to pass the test, at which time it was placed back into service.

Approximately two cubic yards of impacted soil were removed from the excavation area and were covered with plastic on the site. Excavation of additional soils was not possible due to the presence of multiple conduits/lines in the excavation area. Approximately 10 gallons of diesel fuel/water mixture was also recovered from the excavation area. The mixture was placed in the on-site oil/water separator.

Two soil samples were collected from the bottom of the excavation area. The samples were forwarded to Southern Petroleum Laboratories, Inc. for analysis of TPH-DRO and PAH concentrations. We are currently awaiting the results of the sample analyses. It should be noted, however, that the extent of impacts to the site was unable to be confirmed during performance of line repair activities.

We appreciate your assistance in this matter and will forward sample analysis results to your office upon receipt by our office. Should you have any questions or require additional information, please give me a call or Mr. Brian Parnell of Williams at 615-346-3100.

Sincerely,

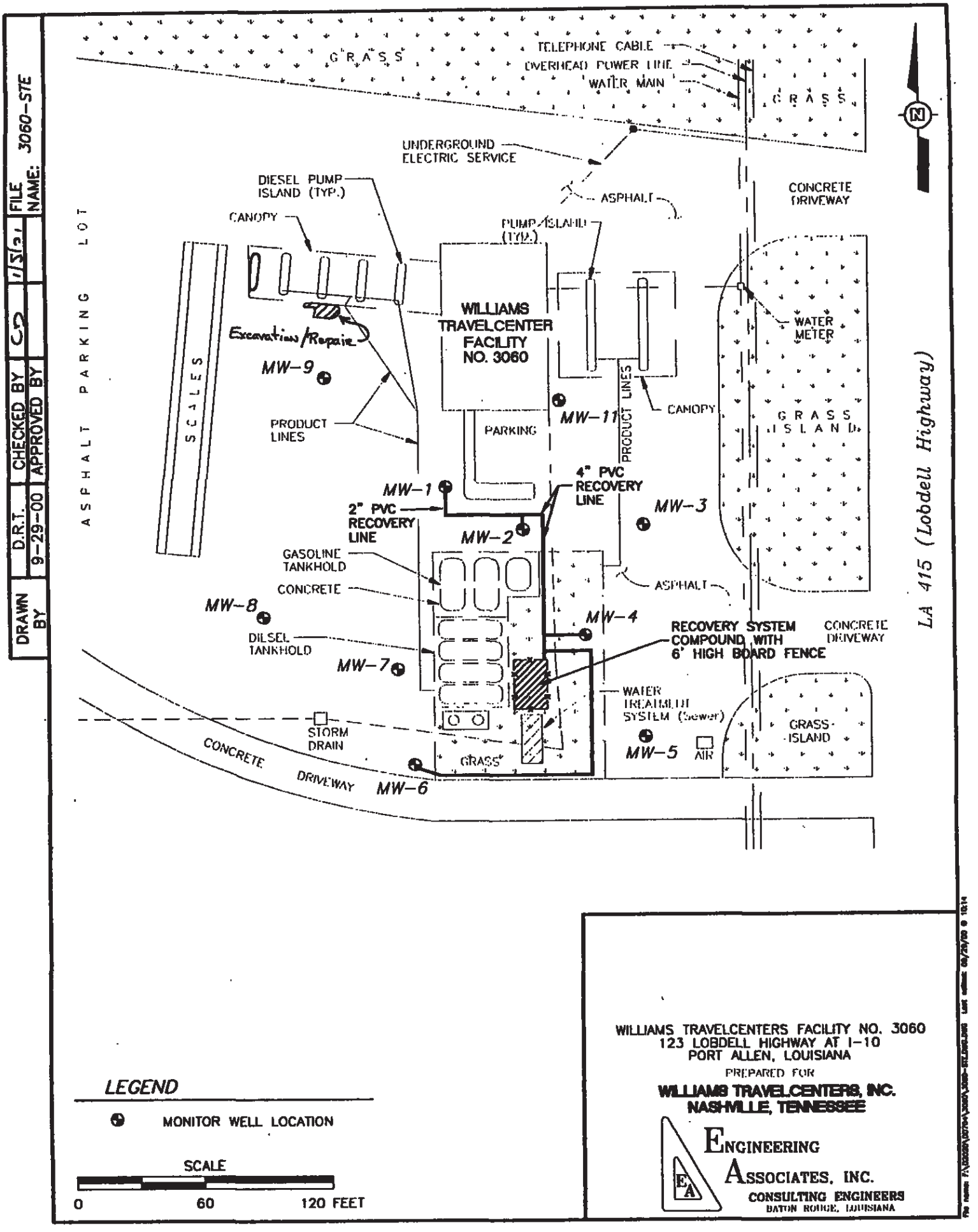
ENGINEERING ASSOCIATES, INC.

Stephen J. Burnham, P.E.
President

SJB:dbc

c w/encl Mr. Brian Parnell, Williams TravelCenters, Inc.
Ms. Laurie Peacock, Louisiana Department of Environmental Quality

D:\06-02\94100\casanovaportallen.0606


DRAWN BY
D.R.T.
9-29-00
CHECKED BY
APPROVED BY
FILE NAME: 3060-STE
C2
1/5/21
GRASS
TELEPHONE CABLE
OVERHEAD POWER LINE
WATER MAIN
GRASS
UNDERGROUND ELECTRIC SERVICE
DIESEL PUMP ISLAND (TYP.)
CANOPY
ASPHALT
PUMP ISLAND (TYP.)
CONCRETE DRIVEWAY
ASPHALT PARKING LOT
SCALES
Excavation/Repair
MW-9
WILLIAMS TRAVELCENTER FACILITY NO. 3060
WATER METER
PRODUCT LINES
MW-11
PRODUCT LINES
CANOPY
PARKING
GRASS ISLAND
MW-1
4" PVC RECOVERY LINE
2" PVC RECOVERY LINE
MW-2
MW-3
GASOLINE TANKHOLD
CONCRETE
ASPHALT
MW-8
MW-4
DILSEL TANKHOLD
RECOVERY SYSTEM COMPOUND WITH 6' HIGH BOARD FENCE
CONCRETE DRIVEWAY
MW-7
WATER TREATMENT SYSTEM (Sewer)
STORM DRAIN
GRASS ISLAND
MW-5
AIR
CONCRETE DRIVEWAY
GRASS
MW-6
LA 415 (Lobdell Highway)
N
LEGEND
MONITOR WELL LOCATION
SCALE
0
60
120 FEET
WILLIAMS TRAVELCENTERS FACILITY NO. 3060
123 LOBDELL HIGHWAY AT I-10
PORT ALLEN, LOUISIANA
PREPARED FOR
WILLIAMS TRAVELCENTERS, INC.
NASHVILLE, TENNESSEE
ENGINEERING ASSOCIATES, INC.
CONSULTING ENGINEERS
BATON ROUGE, LOUISIANA

State of Louisiana

Department of Environmental Quality

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

J. DALE GIVENS
SECRETARY

September 6, 2002

CERTIFIED MAIL - RETURN RECEIPT REQUESTED (7099 3400 0007 7060 7324)

Mr. Brian Parnell
Williams TravelCenters, Inc.
1101 Kermit Drive, Suite 800
Nashville, TN 37217

Re: Further Investigation, Diesel Fuel Line Leak
Williams TravelCenters, Inc., Facility No: 3060
123 Lobdell Highway @ I-10
Port Allen, LA, West Baton Rouge Parish
Agency Interest # 31055, UST Facility # 61-006212, Incident # 54738

Dear Mr. Parnell:

We have received the Line Trench Sample Analysis dated July 19, 2002 submitted on your behalf by Engineering Associates, Inc. This information confirmed a release from the UST system at the above-referenced facility. Thank you for the notification.

It is required that you conduct a remedial investigation at this facility. Within twenty days following receipt of this letter, please provide an abbreviated work plan and cost estimate to perform the investigation in accordance with the latest edition of the LDEQ's Risk Evaluation/Corrective Action Program (RECAP), Appendix B.

Following LDEQ approval of the investigation work plan/cost estimate, field activities should be completed. Following completion of the field investigation, please provide a proposal and cost estimate to complete a RECAP Appendix K risk evaluation. The proposal must include the input parameters identified during the field investigation. If contaminants have migrated under an enclosed structure, the proposal must also include a RECAP Management Option II evaluation for enclosed space. The risk evaluation may proceed following LDEQ approval of the RECAP work plan/cost estimate.

Within one hundred twenty days, you must submit a combined site investigation/risk evaluation report for this facility. If the information contained within the report does not meet the data and format requirements specified in RECAP, the report shall be deemed inadequate and will be returned for revision. If the facility is eligible for the Louisiana Motor Fuels Underground Storage Tank Trust Fund and you wish to ensure maximum potential eligibility under the fund, all site activities relevant to this incident must be conducted in accordance with the latest edition of the *Louisiana Motor Fuels Underground Storage Tank Cost*

Control Guidance Document. Following receipt and review of the investigation report, you will be contacted in writing regarding further requirements.

If you have any questions, please contact me at 225-765-2585. All correspondence must include the **AI number** and be submitted in triplicate to:

Keith L. Casanova, Administrator
LA Department of Environmental Quality
Remediation Services Division
P. O. Box 82178
Baton Rouge, LA 70884-2178

Thank you for your cooperation.

Sincerely,

Laurie K. Peacock

Laurie K. Peacock, Geologist
Environmental Technology Division, Geological Services Group 3

/lkp

c: LDEQ File Scanning Room 1400-UST
Trust Fund Section
Douglas Bradford, Geologist Supervisor, GSG-3
Mr. Steve Burnham
Engineering Associates, Inc.
1415 DelPlaza Drive, Suite B
Baton Rouge, LA 70815

OFFICE OF ENVIRONMENTAL ASSESSMENT
ENVIRONMENTAL TECHNOLOGY DIVISION

SECTION: 663 PROJECT: Wlms Trav. Ctr AI # 31055
ORIGINATOR: Peacock DATE: 5 Sept 02 Other # Inc. #

	Req'd.	Signature	Date	Comments
Immediate Supervisor	✓	John Bendley	9/5/02	
Section Mgr./Supvr.	✓	Debra Craft	9/5/02	Corrections
Section Secretary	✓	Wendy Wright	9/9/02	
Executive Secretary				
Administrator				
Legal				
Assistant Secretary				
Deputy Secretary				
Secretary				

03/27/2002

OFFICE OF ENVIRONMENTAL ASSESSMENT
ENVIRONMENTAL TECHNOLOGY DIVISION

SECTION: 663 PROJECT: Wlms Trav. Ctr AI # 31055
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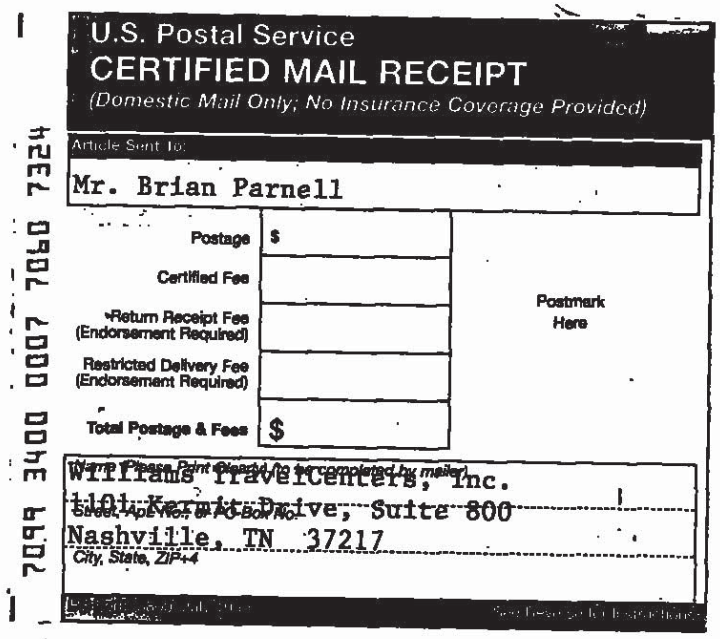
Section Secretary	✓	Wendy Wright	9/9/02	
Executive Secretary				
Administrator				
Legal				
Assistant Secretary				
Deputy Secretary				
Secretary				

03/27/2002



U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

Article Sent To:
Mr. Brian Parnell

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

Name (Please Print Clearly) (To be completed by mailer)
Williams TravelCenters, Inc.
Street, Apt. No. or PO Box No.
1101 Kermit Drive, Suite 800
City, State, ZIP+4
Nashville, TN 37217

7099 3400 0007 7060 7324

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Brian Parnell
Williams TravelCenters, Inc.
1101 Kermit Drive, Suite 800
Nashville, TN 37217

AI#3060

A. Signature

X ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number 7099 3400 0007 7060 7324
(Transfer from service label)

PS Form 3811, August 2001 Domestic Return Receipt 102595-01-M-2509

UNITED STATES POSTAL SERVICE

First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

• Sender: Please print your name, address, and ZIP+4 in this box •

Department of Environmental Quality
Office of Environmental Assessment
Environmental Technology Division
Post Office Box 82178
Baton Rouge, Louisiana 70884-2178

LA DEQ/OEA/ETD/GG3 wlw LKP UST

State of Louisiana

Department of Environmental Quality

KATHLEEN BABINEAUX BLANCO
GOVERNOR

MIKE D. McDANIEL, Ph.D.
SECRETARY

January 25, 2005

Mr. Don Davis
Williams Travel Centers, Inc.
One Williams Center
East Second Street
Tulsa, OK 74172

RE: July 2003 – September 2004 Annual Groundwater Monitoring Report
Former Williams Travel Center No. 3060, **Agency Interest # 31055**
UST Facility # 61-006212, Incident # 92-02-0174
123 Lobdell Highway, @ I-10
Port Allen, West Baton Rouge Parish

Dear Mr. Davis:

The Louisiana Department of Environmental Quality (LDEQ) has completed its review of the above referenced submittal dated October 15, 2004, made on your behalf by Engineering Associates, Inc. Because of the proximity of the recent release from the diesel dispenser to the original gasoline release and recovery, the LDEQ is delaying appoval of a plugging and abandonment plan and No Further Action letter until the Corrective Action Plan for the second release is approved. Following this approval, you may re-submit the completion evaluation for the original release, which may include plugging and abandonment of any wells not necessary for the remediation of the diesel release.

If you have any questions, please contact me at 225-219-3412 or by email: laurie.peacock @la.gov.

Sincerely,

Laurie K. Peacock

Laurie K. Peacock, Geologist
Environmental Technology Division, Geology Group 3

/lkp

c: File Scanning, Room 144 – UST File
Douglas Bradford, Geologist Supervisor, ETD-GG3
Mr. Chad A. D'Gerolamo
Engineering Associates, Inc.
1415 Del Plaza Drive
Baton Rouge, LA 70815

OFFICE OF ENVIRONMENTAL ASSESSMENT
ENVIRONMENTAL TECHNOLOGY DIVISION

SECTION: 663 PROJECT: Wlm travel AI # 31055
ORIGINATOR: Peacock DATE: 11/25/05 Other # Inc. 92-02-0174

	Req'd.	Signature	Date	Comments
Immediate Supervisor				
Section Mgr./Supvr.	X	[signature]	11/26/05	
Section Secretary	X	[signature]	RCD 11/27/05	
Executive Secretary				
Administrator				
Legal				
Assistant Secretary				
Deputy Secretary				
Secretary				

OFFICE OF ENVIRONMENTAL ASSESSMENT
ENVIRONMENTAL TECHNOLOGY DIVISION

SECTION: 663 PROJECT: Wlm travel AI # 31055
ORIGINATOR: Peacock DATE: 1/25/05 Other # DW. 92-02-D174

	Req'd.	Signature	Date	Comments
Immediate Supervisor				
Section Mgr./Supvr.	X	[signature]	1/26/05	
Section Secretary	X	Wendy Wiegand	RW 1/27/05	
Executive Secretary				
Administrator				
Legal				
Assistant Secretary				
Deputy Secretary				
Secretary				

DEPARTMENT OF ENVIRONMENTAL QUALITY

KATHLEEN BABINEAUX BLANCO
GOVERNOR

MIKE D. McDANIEL, Ph.D.
SECRETARY

OCT - 2 2007

CERTIFIED – RETURN RECEIPT REQUESTED (7003 2260 0005 9326 4384)

Mr. Dan Reutlinger
The Williams Companies
One Williams Center
East Second Street
Tulsa, OK 74172

RE: No Further Action Notification
Former Williams Travel Center No. 3060
Agency Interest # 31055, UST Facility # 61-006212
123 Lobdell Highway, Port Allen, West Baton Rouge

Dear Mr. Reutlinger:

The Louisiana Department of Environmental Quality – Underground Storage Tanks Division (LDEQ-USTD) has completed its review of your Conveyance Notification report dated July 11, 2007, for the above referenced area of investigation located at 123 Lobdell Highway in West 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.

ENVIRONMENTAL **ASSESSMENT**
: PO BOX 4314, BATON ROUGE, LA 70821-4314
P:225-219-3236 F:225-219-3239
WWW.DEQ.LOUISIANA.GOV

If you have any questions or need further information, please call Chris Means at (225) 219-3430. Thank you for your cooperation in addressing this area.

Sincerely,

Steve Chustz, Administrator
Underground Storage Tanks Division

crm

Attachment

c: Terri Gibson, Remediation
Imaging Operations - UST
Melissa Vizinat, Motor Fuels Trust Fund
Shawn Funderburk, Engineering Associates, Inc.

BASIS OF DECISION FOR NO FURTHER ACTION

Former Williams Travel Center No. 3060
AI No. 31055

The Louisiana Department of Environmental Quality – Underground Storage Tanks Division—Remediation Process (LDEQ-USTD-RP) has determined that the Former Williams Travel Center No. 3060 requires No Further Action At This Time.

The property had been used as a convenience store and gasoline station. The property will continue to be used as a convenience store and gasoline station in the future, and will also include a casino building. Three different areas of concern (AOCs) exist at the site, including an area where a gasoline release occurred from the UST system, an area where a diesel release occurred from the diesel fuel dispensers, and an area where a gasoline release occurred from the gasoline fuel dispensers. Both gasoline releases were closed under UST Matrix Level 3 standards, while the diesel release was closed under RECAP.

A gasoline release from the UST system was discovered in 1992. Follow up site investigations confirmed TPH-G, benzene, toluene, ethyl benzene, and xylene (BTEX) in soil and BTEX in groundwater. The highest TPH-G concentration found in soil was 1700 ppm at boring B-4 in a July 1992 investigation.

A dual-phase groundwater remediation system operated at the facility from October 1995 to August 2003. During the period of October 2003 to September 2004, post-remediation monitoring and sampling activities were performed. Total dissolved BTEX concentrations remained below the LDEQ UST Matrix Level 3 standard in all site monitoring wells for four consecutive quarters subsequent to discontinuing operation of the remediation system:

1992 TPH-G Release (Groundwater)	Maximum Remaining Concentration	UST Matrix Level 3 Standard
Total BTEX	0.024 ppm	5 ppm

Boring B-4 was re-sampled in April of 2006 as boring CB-1 and found to be below Matrix Level 3 standards:

1992 TPH-G Release (Soil)	Maximum Remaining Concentration	UST Matrix Level 3 Standard
TPH-G	340 ppm	500 ppm
Total BTEX	188.8 ppm	200 ppm

In May of 2002, a diesel fuel release occurred from a line in the vicinity of the diesel dispenser island. Approximately two cubic yards of soil were initially removed from the area of the line. A site investigation in 2003 confirmed TPH-D and 2-methylnaphthalene in soil and TPH-D, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, naphthalene, pyrene, and 2-methylnaphthalene in groundwater above RECAP Screening Standards (SS).

Groundwater was classified as Groundwater 3 Drinking Water (GW_{3DW}). The fractional organic content (foc) of the impacted soils was determined to be 0.035 and the source length was determined to be 30 feet. Using figure I-1 in Appendix I, the site was evaluated as a Category 16. The distance between the Point of Compliance (POC) and the Mississippi River, which is the Point of Exposure (POE), is greater than 2,000 feet. Using Figure I-2 in Appendix I, a dilution factor (DF) of 3,380 was derived. The Category 16 Soil GW_{3DW} value for TPH-D and 2-methylnaphthalene were multiplied by this DF to account for attenuation from the POC to the POE. The Soil GW_{3DW} values for TPH-D and 2-

methylnaphthalene were compared to the $Soil_I$ values with the lowest value taken as the RECAP clean-up standard. The impacted media, COCs, maximum concentration remaining on site and limiting Appendix I RECAP standards established for this AOC are listed in the following table:

2002 TPH-D Release (Soil)	Maximum Remaining Concentration	Limiting App. I RECAP Standard
TPH-D*	6,100 ppm	9,500 ppm[1]
2-methylnaphthalene	170 ppm	3,050 ppm[1]

[1] $Soil_I$

The Category 16 GW_{3DW} values for all COCs were multiplied by a DF of 3,380 to account for attenuation from the POC to the POE. These GW_{3DW} values were compared to the $Water_{SOL}$ and GW_{AIR} values where appropriate with the lowest value taken as the RECAP clean-up standard. The impacted media, COCs, maximum concentration remaining on site and limiting Appendix I RECAP standards established for this site are listed in the following table:

2002 TPH-D Release (Groundwater)	Maximum Remaining Concentration	Limiting App. I RECAP Standard
TPH-D*	2.1 ppm	3,380 ppm[1]
Benzo(a)pyrene	0.0001 ppm	0.0016 ppm[2]
Benzo(b)fluoranthene	0.0001 ppm	0.0048 ppm[2]
Benzo(k)fluoranthene	0.000067 ppm	0.0025 ppm[2]
Chrysene	<0.00005 ppm	0.0016 ppm[2]
Naphthalene	0.00038 ppm	31 ppm[2]
Pyrene	0.00075 ppm	0.14 ppm[2]
2-methylnaphthalene	0.0013 ppm	25 ppm[2]

[1] GW_{3DW}; [2] $Water_{Sol}$

*The total concentration of petroleum hydrocarbons present in each impacted medium at an AOI shall be less than or equal to 10,000 ppm. The total petroleum hydrocarbon concentration shall be determined by summing the AOIC or compliance concentration for each aliphatic and aromatic hydrocarbon fraction detected in the medium of concern at the AOI or by summing the AOIC or compliance concentration for each hydrocarbon mixture detected in the medium of concern at the AOI.

In December of 2005, the USTs located at the site were removed. Confirmatory soil samples were collected in conjunction with UST removal activities, which identified TPH-G to be present in the vicinity of the dispenser islands exceeding LDEQ UST Matrix Level 3 standards. Additional investigation activities conducted in November of 2006 defined the extent of impact in soils. In April of 2007, approximately 270 tons of TPH-G contaminated soil were excavated and removed from the site. Confirmatory soil samples were collected and found to be below LDEQ UST Matrix Level 3 standards:

UST TPH-G Release (Soil)	Maximum Remaining Concentration	UST Matrix Level 3 Standard
TPH-G	59 ppm	500 ppm

Remedial actions included soil excavation along with groundwater remediation by use of a dual-phase remediation system. Soil and groundwater sampling has confirmed that constituents of concern concentrations do not exceed the established site-specific remediation standards. No Further Action At

This Time is granted when contamination is reduced to the extent necessary to achieve the established standards.

In accordance with LAC 33:I. Chapter 13, if land use is going to be changed from industrial to non-industrial, the responsible party shall notify the LDEQ within thirty (30) days and the Area of Investigation shall be reevaluated to determine if conditions are appropriate for the proposed land use. Future use may dictate additional remedial activities. A conveyance notice has been filed with the West Baton Rouge Parish Clerk of Court noting that the AOI was closed under industrial standards.

An inspection of the site was performed on September 28, 2007, confirming that no investigation derived waste remains on site and that all monitoring wells were plugged and abandoned. 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.

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.

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY
FIELD INTERVIEW FORM

AGENCY INTEREST#: 31055 INSPECTION DATE: 9/28/07 TIME OF ARRIVAL: 1:07 PM

ALTERNATE ID#: _____ DEPARTURE DATE: 9/28/07 TIME OF DEPARTURE: 1:20 PM

FACILITY NAME: (ID Type/Number) Former Williams Travel Center No. 3060 PH #: _____

LOCATION: 123 Labbell Hwy., Port Allen

RECEIVING STREAM (BASIN/SUBSEGMENT): _____ PARISH NAME: WBR

MAILING ADDRESS: _____
(Street/P.O. Box) (City) (State) (ZIP)

FACILITY REPRESENTATIVE: _____ TITLE: _____

FACILITY REPRESENTATIVE PHONE NUMBER: _____

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

INSPECTION TYPE: NFA-ATT PROGRAM INVOLVED: AIR WASTE WATER OTHER UST

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

NFA-ATT inspection: All monitoring wells P+Aed properly. No investigation derived waste observed on-site

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: _____

PRINT NAME: _____

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

INSPECTOR(S): Chris Kramer CROSS REFERENCE: _____

ATTACHMENTS: _____

REVIEWER: _____

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

CONVEYANCE NOTIFICATION

Sarah Anne Munson Creed, Mary K. Munson McKee and Susan Pipes Munson hereby notifies the public that the following described Area of Investigation (AOI), Louisiana Department of Environmental Quality (LDEQ) Agency Interest Number (AI No. 31055), was closed with contaminant levels present that are acceptable for industrial/commercial use of the property as described in LDEQ's Risk Evaluation/Corrective Action Program (RECAP), Section 2.9. In accordance with LAC 33:I., Chapter 13, if land use changes from industrial to non-industrial, the responsible party shall notify the LDEQ within 30 days and the AOI shall be reevaluated to determine if conditions are appropriate for the proposed land use.

This site was closed in accordance with Subtitle II of Title 30 of the Louisiana Revised Statutes, Section 2195.2.A. (c)(i). Information regarding this site is available in the LDEQ public record and may be obtained by contacting the LDEQ Records Manager for LDEQ at (225) 219-3168. Inquiries regarding the contents of this site may be directed to

Mr. Richard Creed
8017 Jefferson Highway
Wolfe's Creek-Suite B-3
Baton Rouge, Louisiana 70809

FILED
2007 JUL 11 A 9:15
CB BK. 474 NO. 150
BK. ____ NO. ____
BK. ____ NO. ____
DY CLERK

AOI Description:

The AOI is identified as being the Former Williams TravelCenter No. 3060 located at 123 Lobdell Highway @ I-10, Port Allen, Louisiana. A legal description of the AOI is as follows:

> Three (3) acres of a 5.605 acre parcel, joining Lobdell Interchange of Interstate 10, West Baton Rouge Parish, Louisiana, as shown on the attached Exhibit "A".

No constituent concentrations in soil at the Former Williams TravelCenter No. 3060 exceed the established remedial standards for an industrial site. However, several soil samples exceeded the established screening standards for a non-industrial site. A summary of soil analytical data, as well as the screening standards, have been provided on the attached Table 1 and Table 2. Soil sample locations have been shown on the attached Figure 1 and Figure 2.

Richard Creed
A Horizontal owner
Designated Signee

7/9/07
Date

(A true copy of the document certified by the parish clerk of court must be sent to the Remediation Services Division, Post Office Box 4314, Baton Rouge, Louisiana 70821-4314.)

TABLE 1
SOIL CONSTITUENTS OF CONCERN SUMMARY
Former Williams TravelCenter No. 3060
123 Lobdell Highway at I-10
Port Allen, Louisiana

Boring Well No.	Sampling Date	Sample Interval	TPH-DRO mg/Kg	2-Methylnaphthalene mg/Kg
SB-1	02/19/03	4'-6'	1640	--
	02/19/03	6'-8'	1700	--
SB-2	02/19/03	0'-2'	300	--
	02/19/03	4'-6'	1500	--
SB-3	02/19/03	0'-2'	290	--
	02/19/03	4'-6'	1200	--
SB-4	02/20/03	4'-6'	470	--
SB-5	02/20/03	0'-2'	5200	--
	02/20/03	4'-6'	630	--
SB-6	02/20/03	0'-2'	920	--
SB-7	02/20/03	0'-2'	990	--
	02/20/03	4'-6'	1500	--
SB-8	02/20/03	0'-2'	450	--
	02/20/03	4'-6'	160	--
MW-7	07/14/93	4'-6'	88	--
MW-9 (B-17)	08/31/93	14'-16.5'	230	--
MW-12	10/30/03	4'-6'	1300	0.430
MW-14	10/31/03	2'-4'	96100	20
MW-15	10/30/03	4'-6'	2400	0.130
MW-16	10/31/03	2'-4'	150	0.160
Duplicate of SB-4 (SB-34)	02/20/03	4'-6'	580	--
Duplicate of SB-8 (SB-38)	02/20/03	4'-6'	92	--
RECAP Table 1 Soil Screening Standards (Soil SS)			65	22

Denotes exceedance of RECAP Remedial Standards

-- Not analyzed for this parameter

< Denotes constituent concentration below the reported laboratory detection limit

TABLE 2

SOIL ANALYTICAL DATA RESULTS
FORMER WILLIAMS TRAVEL CENTER NO. 3060
PORT ALLEN, LA

Boring No.	Sampling Date	Sample Interval	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Xylenes (mg/kg)	TPH-G (mg/kg)	TPH-D (mg/kg)
B-4	07/02/92	3'-5'	4.8	54.0	20.0	110.0	1700.0	NA
MW-1	07/15/93	6'-8'	4.7	7.4	6.5	27.0	34.0	ND
CB-1	04/18/06	3'-5'	NA	NA	NA	NA	7.7	NA
RECAP Table 1 Soil Screening Standards (Soil SS)			1.5	68	1.60	19	65	65

Notes:

ND - Not Detected

NA - Not Applicable

Denotes exceedance of the RECAP Table 1 Screening Standards for a non-industrial site

* Boring CB-1 served to replace boring B-4 for TPH-GRO

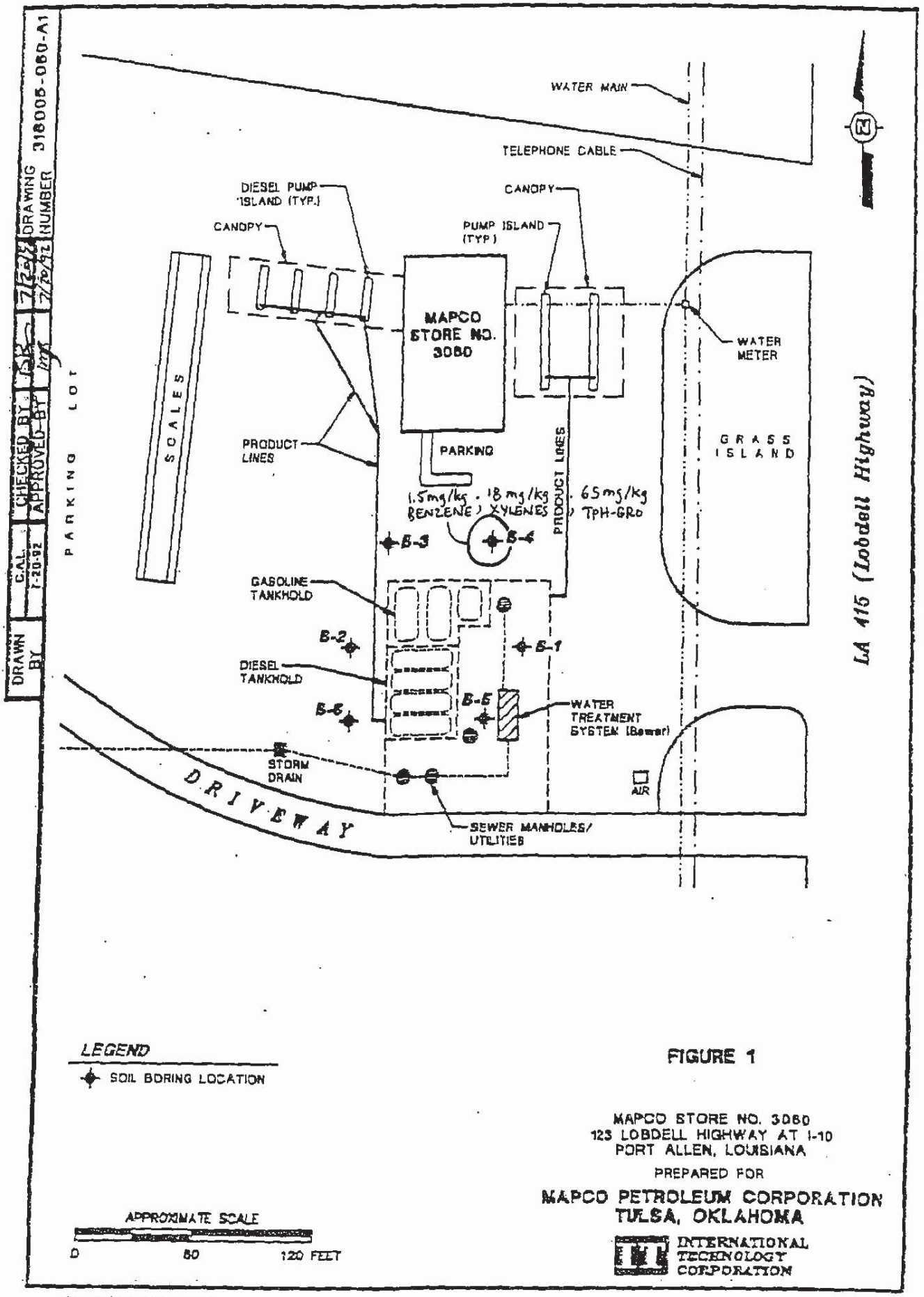


FIGURE 1

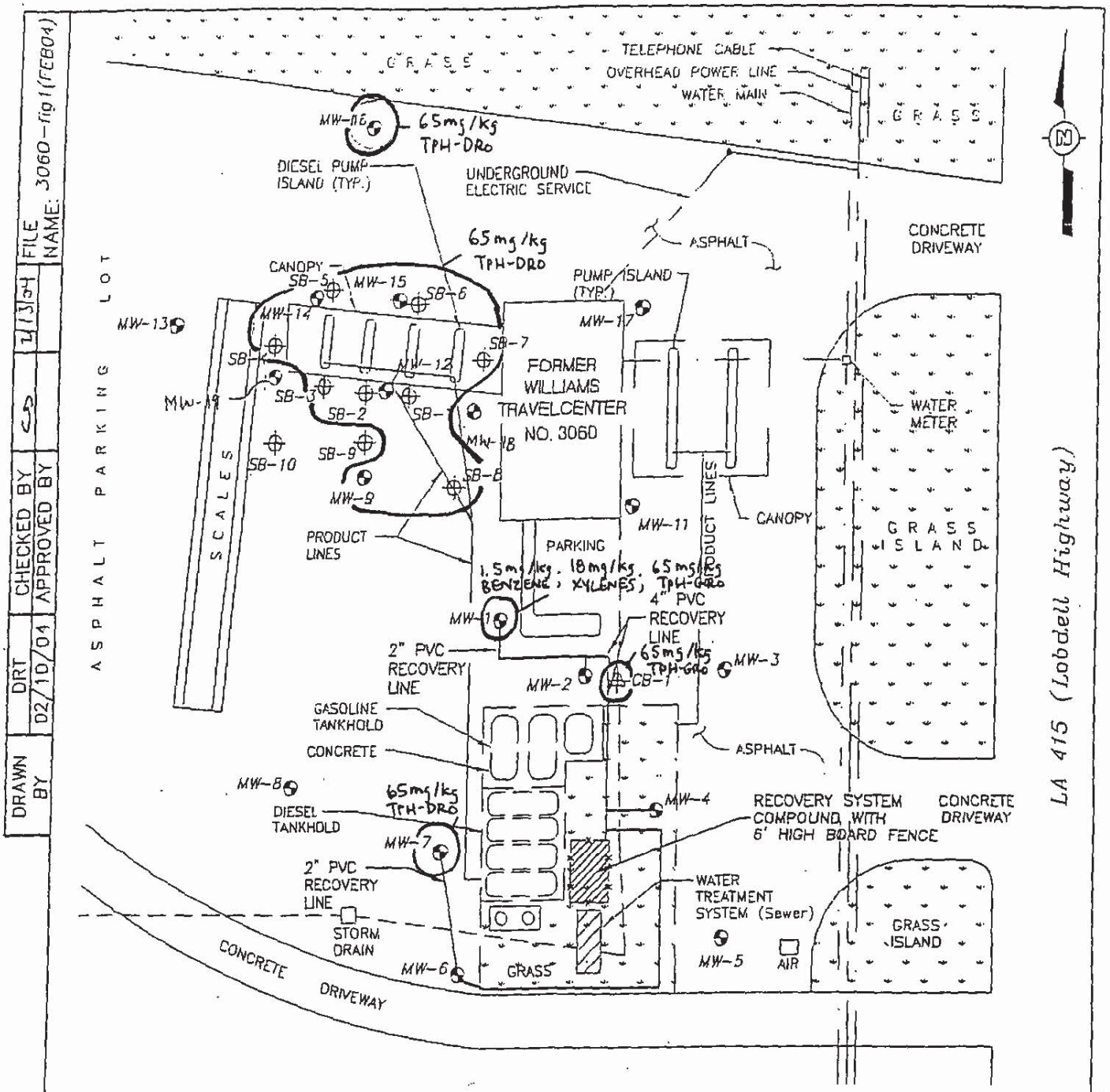
MAPCO STORE NO. 3060
123 LOBDELL HIGHWAY AT I-10
PORT ALLEN, LOUISIANA

PREPARED FOR

MAPCO PETROLEUM CORPORATION
TULSA, OKLAHOMA

INTERNATIONAL TECHNOLOGY CORPORATION

"Do Not Scale This Drawing"



LEGEND

- MONITOR WELL LOCATION
- SOIL BORING/TEMPORARY MONITORING WELL LOCATION

SCALE

0 60 120 FEET

FIGURE 2

SITE PLAN

FORMER WILLIAMS TRAVELCENTER
NO. 3060
123 LOBDELL HIGHWAY AT I-10
PORT ALLEN, LOUISIANA
LDEQ A.I. NO. 72689
PREPARED FOR
THE WILLIAMS COMPANIES
TULSA, OKLAHOMA

ENGINEERING ASSOCIATES, INC.
CONSULTING ENGINEERS
BATON ROUGE, LOUISIANA

F:\DATA\3060\fig1(FEB04).dwg (Model) Feb 10, 2004 - 3:51pm