

Table 1
LDENR Registered Water Wells
Paul M. Levert, et al. v Union Texas
Bayou Choctaw Oil Gas Field
West Baton Rouge Parish, Louisiana

Well Number	Owner	Well Name	Well Depth	Screened Interval	Driller	Aquifer Name	Use Description	Well Status
047-77	Carter Oil Co		185		HEBERT A J	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Commercial Public Supply	Active
047-78	Carter Oil Co		185		HEBERT A J	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Riq Supply	Destroyed
047-81	Freeport Oil Co		159		UNKNOWN	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Riq Supply	Destroyed
047-125	US Dept of Energy	1	305	MULTIPLE	EBERHART	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Industrial	Destroyed
047-126	US Dept of Energy	2	145	94-145	EBERHART	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Industrial	Destroyed
047-127	Union Texas Pro	3	148	86-148	EBERHART	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Industrial	Destroyed
047-128	US Dept of Energy	4	128	88-128	EBERHART	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Industrial	Destroyed
047-129	Williams Energy	5	236	195-236	LAYNE (LA)	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Industrial	Abandoned
047-130	Williams Energy	6	229	186-229	LAYNE (LA)	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Industrial	Abandoned
047-131	Union Texas Pro	6-A	132	72-132	EBERHART	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Industrial	P&A
047-132	Williams Energy	7A	148	88-148	EBERHART	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Industrial	P&A
047-133	Williams Energy	8A	141	91-141	EBERHART	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Industrial	Active
047-274	US Dept of Energy	1	122	100-120	LAYNE (LA)	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Institution Public Supply	P&A
047-282	Williams Energy	9	192	171-192	STAMM-SCHEELE	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Industrial	Active
047-291	Ascension Water	STONESTHRO	143	123-143	LAMBERT'S	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Rural Public Supply	Active
047-292	Ascension Water	TIMBERLANE	126	106-126	LAMBERT'S	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Rural Public Supply	Active
047-300	US Dept of Energy	MAIN GATE	160		UNKNOWN	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Public Supply	P&A
047-301	US Dept of Energy	CAVERN 17	136		UNKNOWN	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Industrial	Active
047-310	Champagne, C		185	165-185	GURGANUS, J. R.	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Rural Public Supply	Active
047-5326Z	US Dept of Energy	P-1	10	1-10	UNKNOWN	MISSISSIPPI RIVER ALLUVIAL AQUIFER SURFICIAL CONFINING	Dewatering	Destroyed
047-5327Z	US Dept of Energy	P-2	12	1-12	UNKNOWN	MISSISSIPPI RIVER ALLUVIAL AQUIFER SURFICIAL CONFINING	Dewatering	Destroyed
047-5516Z	Tomlinson, Mor		200		ECONOMY	[NO WELL MADE]	Heat Pump Hole	Active
047-5662Z	Boeing Petro	C-17	136		UNKNOWN	[NO WELL MADE]	Borehole	P&A
047-5689Z	Total Minatome	GAY 52	170	150-170	GURGANUS, J. R.	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Oil/Gas Well Riq Supply	Active
047-5897Z	US Dept of Energy	WBP	123		UNKNOWN	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Riq Supply	P&A
047-5984Z	Bayou Choctaw	1	0		UNKNOWN	[UNKNOWN]	Domestic	Active
047-5986Z	Bayou Choctaw	3	0		UNKNOWN	[UNKNOWN]	Industrial	Active
047-5988Z	Bayou Choctaw	4	0		UNKNOWN	[UNKNOWN]	Industrial	P&A
047-6037Z	Union Texas Pro		170	140-170	UNKNOWN	MISSISSIPPI RIVER ALLUVIAL AQUIFER	plugged and abandoned	P&A
047-6165Z	Champagne, K		190	175-190	GURGANUS, J. R.	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Domestic	Active
047-6448Z	Williams Gas & Light	SB-1	40		APOLLO	[TO BE DETERMINED]	Borehole	P&A
047-6449Z	Williams Gas & Light	SB-2	20		APOLLO	[TO BE DETERMINED]	Borehole	P&A
047-6450Z	Williams Gas & Light	SB-3	40		APOLLO	[TO BE DETERMINED]	Borehole	P&A
047-6451Z	Williams Gas & Light	SB-4	40		APOLLO	[TO BE DETERMINED]	Borehole	P&A
121-5010Z	Pend Oreille	LEVERT 1	160	140-160	RIG WATER	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Riq Supply	P&A
121-5030Z	Lavino Oil Co	LEVERT 1	160	140-160	RIG WATER	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Riq Supply	P&A
121-5052Z	DOW Chemical	PH-DN7	52		BARRINGTON'S	[NO WELL MADE]	Borehole	P&A
121-5054Z	DOW Chemical	PH-DN8	52		BARRINGTON'S	[NO WELL MADE]	Borehole	P&A
121-5863Z	Rivet, Lin		170	160-170	GURGANUS, J. R.	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Domestic	Active
121-5884Z	Icon Oil, USA	VIC FIN #1	120	100-120	GUICHARD	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Oil/Gas Well Riq Supply	Active
121-6038Z	Northwind Oil & Gas, LLC	MARLBOROUGH OIL AND GAS LLC #3	160		GUICHARD OPERATING COMPANY, INC.	MISSISSIPPI RIVER ALLUVIAL AQUIFER	Oil/Gas Well Riq Supply	P&A

Notes:
Data from LDENR SONRIS database.

Table 2
Oil and Gas Well History
Paul M. Levert, et al. v Union Texas
Bayou Choctaw Oil Gas Field
West Baton Rouge Parish, Louisiana

Well Serial	Well Name	Well Num	Total Depth	Spud Date	Status Date	Well Status	Operator History	Notes
37734	Lever Land Co	001	8485	3/26/1949	9/22/1949	29 - Dry and Plugged	03/25/1949 - Illegible	03/25/1949 - Name Listed as Levert Land Company No. 1
44428	Lever Heirs	001	8200	11/16/1951	6/2/1966	30 - Plugged and Abandoned	10/15/1951 - Temple Hargrove et al	10/15/1949 - Name Listed as Levert Heirs No. 1
68122	Lever Heirs Brine B	001-D	9771	10/15/1957	10/1/1961	22 - Reverted to Single Completion	10/8/1957 - The British-American Oil Production Company 11/30/2004 - Petrologistics Olefins, LLC 01/13/2009 - PL Olefins, LLC 02/01/2012 - PL Midstream LLC 11/27/2012 - Boardwalk Louisiana Midstream, LLC	10/8/1957 - Name Listed as Levert Heirs "B" No. 1 11/30/2004 - Name Listed as Levert Heirs Brine B
69635	Lever Heirs C	001	9904	3/22/1958	7/11/1974	30 - Plugged and Abandoned	02/25/1958 - The British-American Oil Producing Company 08/02/1956 - Gulf Oil Corporation	02/25/1958 - Name Listed as Levert Heirs B No. 2 04/18/1958 - Name Listed as Lever Heirs "C" No. 1 5/18/71 Well Temporarily abandoned by Gulf
70947	Lever Heirs C	001D	9904	3/22/1958	7/11/1974	30 - Plugged and Abandoned	06/23/1958 - The British-American Oil Producing Company 08/02/1965 - Gulf Oil Corporation 12/08/1972 - Precise Exploration Corp. 10/09/1973 - Brock Exploration Corp.	06/23/1959 - Name Listed as Levert Heirs "C" No. 1-D
73467	Lever Heirs /D/	001	9508	1/28/1959	3/5/1959	29 - Dry and Plugged	01/06/1959 - The British-American Oil Producing Company	01/06/1959 - Name Listed as Levert-Heirs "D" No. 1
76522	Lever Heirs B Brine Disposal	001	9870	10/15/1957	5/12/1981	09 - Active - Injection	09/02/1959 - The British-American Oil Producing Company 08/02/1966 - Gulf Oil Corporation 11/13/1972 - Precise Exploration Corp. 10/09/1973 - Brock Exploration Corp. 12/20/1978 - J. H. bible and G. M. goldman 03/14/1980 - Memaca Petroleum Corporation 09/01/1980 - B & G Producers Inc. 02/23/1981 - Union Texas Petroleum Corp. 09/01/1999 - William Olefins, LLC 11/01/2004 - Petrolgistics Olefins, LLC 12/16/2008 - PL Olefins, LLC 05/02/2011 - PL Midstream, LLC 10/16/2012 - Boardwalk Louisiana Midstream, LLC	09/02/1959 - Name Listed as Levert Heirs "B" No. 1-D 12/13/1974 - Name Listed as Levert Heirs No. 1
124657	Lever et al	001	9917	6/12/1968	6/28/1968	29 - Dry and Plugged	06/03/1968 - Penton-Sohio-Southwest Gas	06/03/1987 - Name Listed as Levert, et al No. 1
205030	Lever Heirs	001	9904	-	6/6/1987	03 - Permit Expired	12/05/1986 - Quality Petroleum Corp.	12/05/1986 - Name Listed as Levert Heirs No. 1
206248	Lever Heirs C	001	9904	-	1/20/1994	23 - Act 404 Orphan Well - ENG	06/29/1987 - Quality Petroleum Corp.	06/29/1987 - Name Listed as Levert Heirs C No. 1
144260	Lever Heirs	2	9215	4/18/1974	4/19/1984	30 - Plugged and Abandoned	12/04/1973- Brock Exploration Corporation 12/15/1978- JH Bible & GM Goldman 03/14/1980- Memaca Petroleum Corporation 09/01/1980- B&G Producers Inc. 03/14/1983 Liberty Oil and Gas Corp.	12/04/1973- Name Listed as Levert Heirs No.2

Table 3
Pit Records Summary
Paul M. Levert, et al. v Union Texas
Bayou Choctaw Oil Gas Field
West Baton Rouge Parish, Louisiana

Pit ID	Associated Well Serial Number	Operator	Type of Pit	Type of Liner	Dimensions (L x W x D) (ft)	Status	In Compliance ?	Notes
61P040	76522	Boardwalk Louisiana Midstream, LLC	Nitrogen Lift Blowout	Natural soil	130x100x6	Existing	NA	Pit record dated 7/17/1986
						Closed	Yes	Production Pit Inspection Report dated 12/11/1989

Notes:
 Data summarized from LDENR pit records.

Table 4
Summary of Lease Facility Inspection Reports

Paul M. Levert, et al. v Union Texas

Bayou Choctaw Oil Gas Field

West Baton Rouge Parish, Louisiana

Well Serial Number	Operator	Inspection Date	In Compliance?	Notes
68122	Petrologistics Olefins, LLC	6/4/2008	Yes	No deficiency/violations noted
76522	Petrologistics Olefins, LLC	6/4/2008	Yes	No deficiency/violations noted
	Petrologistics Olefins, LLC	3/3/2011	Yes	No deficiency/violations noted
	PL Midstream, LLC	4/26/2012	Yes	No deficiency/violations noted
	Boardwalk Louisiana Midstream, LLC	5/17/2013	Yes	No deficiency/violations noted
	Boardwalk Louisiana Midstream, LLC	10/29/2014	Yes	No deficiency/violations noted
206248	Quality Petroleum Corp.	9/17/1971	No	Lacking well sign

Notes:

Data based on LDENR SONRIS database and individual well records

NA: Not available

Table 5
Soil Analytical Data
Paul M. Levert, et al. v Union Texas International Corporation, et al.
Bayou Choctaw Oil Gas Field
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[illegible]

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Bayou Choctaw Oil Gas Field
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				Boring ID			B-4								B-5								B-6															
				Wetland Designation			Elevated Wetland								Elevated Wetland								Elevated Wetland															
				Sample Date			10/22/2024								10/23/2024								10/22/2024															
				Sample Depth (feet)			0-2	0-2	2-4	2-4	4-6	4-6	6-8	6-8	8-10	8-10	0-2	0-2	2-4	2-4	4-6	4-6	6-8	6-8	8-10	8-10	0-2	0-2	2-4	DUP-02 (B-6 2-4')	2-4	4-6	4-6	6-8	6-8	8-10	8-10	
Parameters	Units	RECAP SOIL_ SSni	RECAP SSGW	29-B Elevated Wetland	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	
29B/Misc																																						
% Moisture	%	N/S	N/S	N/S	31.0	27.6	39.4	32.4	36.4	29.2	37.1	33.7	37.0	32.3	31.0	27.0	36.8	28.6	38.2	31.9	37.9	34.4	36.9	33.5	30.9	24.8	35.0	32.8	33.1	36.1	31.2	38.7	41.8	40.7	33.1			
pH	s.u.	N/S	N/S	6-9	7.31	NA	7.30	NA	7.65	NA	7.56	NA	7.63	NA	8.35	NA	7.86	NA	8.28	NA	8.18	NA	6.56	NA	7.78	NA	7.68	8.02	NA	8.23	NA	8.10	NA	7.89	NA			
Cation Exchange Capacity (CEC)	meq/100g	N/S	N/S	N/S	64.8	60.4	66.5	64.2	60.9	48.8	62.6	55.1	63.5	53.4	66.1	72.1	67.0	53.9	71.3	34.4	64.3	52.5	63.5	47.0	60.0	63.6	62.6	63.0	59.7	64.3	57.9	65.2	16.6	65.2	58.4			
Electrical Conductivity (EC)	mmhos/cm	N/S	N/S	8	3.09	3.52	4.19	3.39	5.97	4.17	11.5	12.1	17.5	16.7	2.30	1.59	4.04	2.74	5.86	4.45	6.51	4.62	9.72	6.56	2.17	2.14	4.44	4.14	3.67	5.16	4.39	8.48	8.80	16.30	10.6			
Exchangeable Sodium Percentage (ESP)	%	N/S	N/S	25	6.51	14.0	19.0	32.4	21.8	54.9	18.6	49.7	22.8	56.5	8.13	9.76	12.9	23.1	14.2	46.1	18.1	37.8	17.7	45.2	3.69	7.45	9.83	10.6	17.0	13.0	28.9	16.5	134	17.9	35.9			
Sodium Adsorption Ratio (SAR)	Unitless	N/S	N/S	14	12.9	12.8	35.0	24.5	42.8	23.6	40.6	36.8	39.6	37.1	12.6	9.44	21.2	13.4	29.0	19.4	32.2	21.3	32.0	22.2	7.13	6.20	16.8	17.1	13.4	25.5	18.2	27.3	20.9	26.3	21.1			
% Saturation (Sat Paste)	%	N/S	N/S	N/S	132	NA	212	NA	204	NA	166	NA	150	NA	125	NA	151	NA	163	NA	189	NA	156	NA	118	NA	123	127	NA	165	NA	169	NA	140	NA			
Soluble Calcium	mg/L	N/S	N/S	N/S	4.72	5.36	1.67	1.56	2.44	2.67	9.59	11.0	21.7	20.8	3.42	2.18	3.46	2.98	4.23	4.16	4.33	3.84	9.21	7.18	4.75	5.03	5.63	4.94	4.95	3.94	4.19	9.42	13.2	31.2	17.0			
Soluble Magnesium	mg/L	N/S	N/S	N/S	1.56	1.89	0.583	0.64	0.74	1.27	2.80	3.91	5.53	6.14	0.77	0.88	1.29	1.28	1.49	1.77	1.47	1.45	3.23	2.64	1.90	2.05	2.06	1.83	2.06	1.46	1.85	3.08	5.21	10.5	6.37			
Soluble Sodium	mg/L	N/S	N/S	N/S	22.9	24.4	37.2	25.8	54.0	33.0	101	100	146	136	18.2	11.7	32.7	19.6	49.1	33.3	54.8	34.7	79.7	49.2	13.0	11.7	32.9	31.5	25.1	41.9	31.6	68.3	63.5	120	77.2			
Chloride	mg/kg (as reported wet or dry)	N/S	N/S	N/S	NA	814	NA	1230	NA	1570	NA	5040	NA	6730	NA	376	NA	756	NA	1470	NA	1800	NA	2510	NA	521	NA	NA	1090	NA	1490	NA	3140	NA	3720			
Leachate Chloride	mg/L	N/S	N/S	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
True Total Barium	mg/kg-dry	N/S	N/S	20000	1350	1860	600	1660	387	494	446	1480	354	1300	12400	19100	584	2300	425	996	837	846	1500	720	1170	777	487	420	406	425	562	466	528	440	342			
HEM Oil & Grease	%	N/S	N/S	1	0.12	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA		
SPLP Metals																																						
SPLP Arsenic	mg/L	N/S	0.2	N/S	NA	NA	0.0144	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
SPLP Barium	mg/L	N/S	40	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
SPLP Barium (Filtered)	mg/L	N/S	40	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
SPLP Cadmium	mg/L	N/S	0.1	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
SPLP Chloride	mg/L	N/S	N/S	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
SPLP Lead	mg/L	N/S	0.3	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0970	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
SPLP Lead (Filtered)	mg/L	N/S	0.3	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0567	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
SPLP Mercury	mg/L	N/S	0.04	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
SPLP Selenium	mg/L	N/S	1	N/S	NA	NA	<0.0111	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
SPLP Zinc	mg/L	N/S	220	N/S	0.662	NA	0.289	NA	NA	NA	NA	NA	NA	NA	0.290	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA											

Table 5
Soil Analytical Data
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West Baton Rouge Parish, Louisiana

Parameters	Units	Boring ID				B-7								B-8								HA-1										
		Wetland Designation				Elevated Wetland								Elevated Wetland								Elevated Wetland										
		Sample Date				10/23/2024								10/23/2024								3/27/2019										
		Sample Depth (feet)				0-2	0-2	2-4	DUP-03 (B-7 2-4')	2-4	4-6	4-6	6-8	6-8	8-10	8-10	0-2	0-2	2-4	DUP-04 (B-8 2-4')	2-4	4-6	4-6	6-8	6-8	8-10	8-10	0-2	2-4	4-6	6-8	
		RECAP SOIL- SSni	RECAP SSGW	29-B Elevated Wetland	ERM	ICON	ERM	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ICON	ICON	ICON	ICON	ICON	
29B/Misc																																
% Moisture	%	N/S	N/S	N/S	29.3	23.4	36.0	34.9	29.5	42.7	33.0	36.7	32.9	38.8	30.3	35.0	32.1	38.0	37.8	36.9	38.2	35.5	40.8	39.0	38.7	32.8	39.6	42.4	36.9	34.8		
pH	s.u.	N/S	N/S	6-9	7.02	NA	7.05	7.04	NA	7.22	NA	7.14	NA	6.50	NA	7.09	NA	6.74	7.68	NA	7.16	NA	7.82	NA	7.56	NA	7.15	8.28	8.71	8.78		
Cation Exchange Capacity (CEC)	meq/100g	N/S	N/S	N/S	60.4	51.3	65.2	63.5	55.5	62.2	54.8	60.4	58.7	60.1	61.3	55.7	66.1	63.0	66.1	62.0	57.0	51.2	60.0	48.5	65.7	55.0	68.9	60.4	54.4	60.4		
Electrical Conductivity (EC)	mmhos/cm	N/S	N/S	8	4.11	3.79	5.73	5.46	5.60	6.76	7.00	8.53	8.14	10.6	9.57	2.30	1.24	2.14	2.44	1.14	2.31	1.38	4.01	1.69	4.35	3.48	1.01	1.56	2.43	2.86		
Exchangeable Sodium Percentage (ESP)	%	N/S	N/S	25	4.80	9.11	6.62	7.37	12.1	7.25	12.5	6.57	13.0	8.77	13.2	4.35	11.80	21.1	22	30.9	26.3	58.9	26.6	73.4	28.6	67.5	16.7	28.4	56.7	56.7		
Sodium Adsorption Ratio (SAR)	Unitless	N/S	N/S	14	8.13	6.69	10.8	12.4	9.05	12.5	10.1	12.4	9.15	12.1	8.93	12.1	9.00	24.3	29.3	9.91	30.1	13.5	43.4	15.5	49.5	23.9	11.4	20.6	22.8	31.7		
% Saturation (Sat Paste)	%	N/S	N/S	N/S	112	NA	124	130	NA	126	NA	129	NA	135	NA	114	NA	216	234	NA	243	NA	254	NA	324	NA	NA	NA	NA	NA		
Soluble Calcium	meq/L	N/S	N/S	N/S	10.7	10.5	13.1	10.5	14.6	15.0	18.8	21.6	24.2	31.0	31.6	2.95	1.42	0.73	0.735	0.82	0.615	0.77	0.951	0.83	0.940	1.74	0.67	0.48	0.92	0.67		
Soluble Magnesium	meq/L	N/S	N/S	N/S	4.50	4.83	5.65	4.53	6.71	6.54	8.51	9.58	11.7	12.9	15.4	1.17	0.72	0.425	0.311	0.50	0.293	0.52	0.419	0.59	0.265	0.76	0.21	0.29	0.47	0.42		
Soluble Sodium	meq/L	N/S	N/S	N/S	22.4	18.5	33.1	34.0	29.5	40.9	37.2	49.1	38.8	56.7	43.3	17.3	9.31	18.4	21.20	8.05	20.3	10.8	35.9	13.1	38.4	26.7	7.58	12.8	19	23.4		
Chloride	mg/kg (as reported wet or dry)	N/S	N/S	N/S	NA	961	NA	NA	1660	NA	2360	NA	2750	NA	2880	NA	248	NA	NA	345	NA	555	NA	783	NA	1620	NA	NA	NA	NA		
Leachate Chloride	mg/L	N/S	N/S	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
True Total Barium	mg/kg-dry	N/S	N/S	20000	786	705	799	634	931	493	480	612	631	318	492	3350	435	492	185	335	471	285	487	621	383	414	309	224	245	444		
HEM Oil & Grease	%	N/S	N/S	1	<0.10	NA	<0.10	<0.10	NA	0.13	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	NA	NA	NA	NA		
SPLP Metals																																
SPLP Arsenic	mg/L	N/S	0.2	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SPLP Barium	mg/L	N/S	40	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SPLP Barium (Filtered)	mg/L	N/S	40	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SPLP Cadmium	mg/L	N/S	0.1	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SPLP Chloride	mg/L	N/S	N/S	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SPLP Lead	mg/L	N/S	0.3	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SPLP Lead (Filtered)	mg/L	N/S	0.3	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SPLP Mercury	mg/L	N/S	0.04	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SPLP Selenium	mg/L	N/S	1	N/S	NA	NA	<0.0111	<0.0111	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SPLP Zinc	mg/L	N/S	220	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SPLP Zinc (Filtered)	mg/L	N/S	220	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Metals																																
Arsenic	mg/kg-wet	12	100	10	4.82	5.09	5.20	7.29	10.4	9.57	10.5	15.5	7.03	6.98	3.92	2.54	6.44	2.27	3.05	8.37	9.23	7.52	4.24	8.28	2.70	6.45	4.14	6.3	5.46	5.92		
Barium	mg/kg-wet	550	2000	N/S	195	323	118	207	330	120	174	707	212	170	191	151	165	147	130	139	112	112	95.1	174	97.5	198	112	75	117	216		
Cadmium	mg/kg-wet	3.9	20	10	0.241	<0.764	0.262	0.278	<0.702	1.23	0.673	0.292	<0.664	0.247	<0.696	0.22	<0.678	<0.200	0.278	<0.630	0.436	<0.639	<0.200	<0.609	0.226	<0.666	0.428	0.567	0.401	0.35		
Chromium	mg/kg-wet	12000	100	500	22.6	14.6	22.6	21.7	14.7	19.1	11.6	20.4	11.4	21.5	10.8	20.5	12.2	26.3	22.7	12.8	21.7	11.7	20.8	9.92	23.1	10.1	6.5	6.5	6.2	6.8		
Lead	mg/kg-wet	400	100	500	17.5	19.6	16.3	16.1	21.6	14.7	13.1	13.7	12.2	15.0	11.8	14.9	15.3	14.5	11.5	13.0	18.3	11.9	19.7	11.0	13.1	11.6	16.5	12.6	11.1	10.8		
Mercury	mg/kg-wet	2.3	4	10	0.0344	<0.0737	0.0339	0.0278	<0.0661	0.0452	<0.0647	0.0266	<0.073	0.0244	<0.07	0.0332	<0.0669	0.0359	0.0270	<0.0622	0.0264	<0.065	0.0310	<0.063	0.0250	<0.0625	<0.063	<0.062	<0.066	<0.0615		
Selenium	mg/kg-wet	39	20	10	<1.00	NA	1.12	1.51	NA	1.86	NA	1.00	<1.00	NA	<1.00	NA	<1.00	<1.00	NA	1.14	NA	<1.00	NA	<1.00	NA	<2.41	<2.29	<2.51	<2.59			
Silver	mg/kg-wet	39	100	200	<0.500	NA	<0.500	<0.500	NA	<0.500	NA	<0.500	NA	<0.500	NA	<0.500	NA	<0.500	<0.500	NA	<0.500	NA	<0.500	NA	<0.500	NA	NA	NA	NA	NA		
Strontium	mg/kg-wet	4700	44000	N/S	NA	54.3	NA	NA	55.5	NA	57.0	NA	62.5	NA	52.4	NA	94.6	NA	NA	90.7	NA	94.2	NA	91.9	NA	107	175	217	189	162		
Zinc	mg/kg-wet	2300	2800	500	65.6	80.5	60.1	66.7	76.5	59.3	53.6	57.9	50.9	63.0	55.9	61.7	92.5	64.3	57.4	56.2	53.4	54.5	52.4	56.1	58.6	51.0	124	58	39.8	43.2		
BTX																																
Benzene	mg/kg-wet	1.5	0.051	N/S	<0.0275	NA	<0.0275	<0.0275	NA	<0.0275	NA	<0.0275	NA	<0.0275	NA	<0.0275	NA	<0.0275	<0.0275	NA	<0.0275	NA	<0.0275	NA	<0.0275	NA	NA	NA	NA	NA		
Ethylbenzene	mg/kg-wet	160	19	N/S	<0.110	NA	<0.110	<0.110	NA	<0.110	NA	<0.110	NA	<0.110	NA	<0.110	NA	<0.110	<0.110	NA	<0.110	NA	<0.110	NA	<0.110	NA	NA	NA	NA	NA		
Toluene	mg/kg-wet	68	20	N/S	<0.110	NA	<0.220	<0.220	NA	<0.220	NA	<0.220	NA	<0.220	NA	<0.220	NA	<0.220	<0.220	NA	<0.220	NA	<0.220	NA	<0.220	NA	NA	NA	NA	NA		
o-Xylene	mg/kg-wet	N/S	N/S	N/S	<0.110	NA	<0.110	<0.110	NA	<0.110	NA	<0.110	NA	<0.110	NA	<0.110	NA	<0.110	<0.110	NA	<0.110	NA	<0.110	NA	<0.110	NA	NA	NA	NA	NA		
m&p-Xylenes	mg/kg-wet	N/S	N/S	N/S	<0.220	NA	<0.220	<0.220	NA	<0.220	NA	<0.220	NA	<0.220																		

Table 5
Soil Analytical Data
Paul M. Levert, et al. v Union Texas International Corporation, et al.
Bayou Choctaw Oil Gas Field
West Baton Rouge Parish, Louisiana

Parameters	Units	Boring ID				HA-7R				HA-9		HA-9R		HA-10		HA-10R			HA-11		SB-1	SB-2	L-2										
		Wetland Designation				Elevated Wetland				Elevated Wetland		Elevated Wetland		Elevated Wetland		Elevated Wetland			Elevated Wetland		Elevated Wetland	Elevated Wetland	Elevated Wetland										
		Sample Date				10/24/2024				4/9/2019		10/24/2024		4/9/2019		10/24/2024			4/10/2019		1/7/2020	1/7/2020	8/29/2023										
		Sample Depth (feet)				0-2	2-4	4-6	6-8	0-2	2-4	0-2	2-4	0-2	2-3	0-2	2-3	DUP-05 (HA-10R 2-3')	2-4	4-6	2-4	6-8	2-4	4-6	4-6	6-8	6-8	8-12	8-12	14-16	14-16		
		RECAP SOIL_	RECAP SSGw	29-B Elevated Wetland	ERM	ERM	ERM	ERM	ICON	ICON	ERM	ERM	ICON	ICON	ERM	ERM	ERM	ICON	ICON	ICON	ICON	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	
29B/Misc																																	
% Moisture	%	N/S	N/S	N/S	29.3	32.9	32.6	34.6	51.5	50.6	83.6	52.0	50.6	37.5	63.7	64.2	58.9	25.5	31.7	36.3	35	22.7	37.2	29.2	32.8	29.3	37.7	35.5	34.1	35.1			
pH	s.u.	N/S	N/S	6-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.4	NA	7.21	NA	7.19	NA	7.42	NA			
Cation Exchange Capacity (CEC)	meq/100g	N/S	N/S	N/S	NA	NA	NA	NA	54	60.2	NA	NA	53.1	46.5	NA	NA	NA	55	54.5	70.1	61.6	62.1	55.2	65.9	53.9	57.8	57.8	59.6	54.3	NA			
Electrical Conductivity (EC)	mmhos/cm	N/S	N/S	8	NA	NA	NA	NA	1.08	1.12	NA	NA	1.15	1.38	NA	NA	NA	1.24	2.14	0.72	1.53	1.72	2.78	2.81	4.07	4.06	8.62	6.92	12.8	9.82			
Exchangeable Sodium Percentage (ESP)	%	N/S	N/S	25	NA	NA	NA	NA	38.6	55.9	NA	NA	7.77	21.6	NA	NA	NA	1.54	2.56	2.67	6.47	3.68	1.64	2.68	1.05	1.93	1.37	4.49	3.07	NA			
Sodium Adsorption Ratio (SAR)	Unitless	N/S	N/S	14	NA	NA	NA	NA	12.2	12.9	NA	NA	8.23	15.8	NA	NA	NA	2.17	2.47	3.62	6.46	3.53	2.97	3.53	2.45	3.56	3.48	3.01	8.64	NA			
% Saturation (Sat Paste)	%	N/S	N/S	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	128	NA	120	NA	122	NA			
Soluble Calcium	meq/L	N/S	N/S	N/S	NA	NA	NA	NA	0.39	0.41	NA	NA	1.1	0.55	NA	NA	NA	4.55	8.05	1.51	2.21	6.3	10.6	15.8	18	17	40.6	31.2	48	NA			
Soluble Magnesium	meq/L	N/S	N/S	N/S	NA	NA	NA	NA	0.61	0.54	NA	NA	0.37	0.23	NA	NA	NA	2.21	4.45	0.65	0.95	3.33	6.13	8.56	10.1	9.47	22.1	15.9	24.4	NA			
Soluble Sodium	meq/L	N/S	N/S	N/S	NA	NA	NA	NA	8.66	8.93	NA	NA	7.06	9.87	NA	NA	NA	3.99	6.16	3.76	8.12	7.76	8.58	12.3	9.17	13	19.5	14.6	52	NA			
Chloride	mg/kg (as reported wet or dry)	N/S	N/S	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	327	640	651	1040	991	2170	2080	NA	3280			
Leachate Chloride	mg/L	N/S	N/S	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1640			
True Total Barium	mg/kg-dry	N/S	N/S	20000	NA	NA	NA	NA	377	359	NA	NA	275	183	NA	NA	NA	NA	NA	2210	511	604	576	558	379	403	390	560	430	NA			
HEM Oil & Grease	%	N/S	N/S	1	NA	NA	NA	NA	0.08	0.25	NA	NA	3.92	0.57	NA	NA	NA	NA	NA	NA	NA	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA			
SPLP Metals																																	
SPLP Arsenic	mg/L	N/S	0.2	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SPLP Barium	mg/L	N/S	40	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SPLP Barium (Filtered)	mg/L	N/S	40	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SPLP Cadmium	mg/L	N/S	0.1	N/S	NA	NA	NA	NA	NA	NA	<0.0022	<0.0022	NA	NA	<0.0022	<0.0022	<0.0022	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SPLP Chloride	mg/L	N/S	N/S	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	131	NA		
SPLP Lead	mg/L	N/S	0.3	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0071	0.0908	0.0278	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SPLP Lead (Filtered)	mg/L	N/S	0.3	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.0067	0.0292	<0.0067	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SPLP Mercury	mg/L	N/S	0.04	N/S	0.00030	<0.00020	NA	NA	NA	NA	NA	NA	NA	NA	<0.00020	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SPLP Selenium	mg/L	N/S	1	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SPLP Zinc	mg/L	N/S	220	N/S	NA	NA	NA	NA	NA	NA	0.0455	0.211	NA	NA	0.0728	0.310	0.0696	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
SPLP Zinc (Filtered)	mg/L	N/S	220	N/S	NA	NA	NA	NA	NA	NA	NA	0.0793	NA	NA	NA	0.105	0.036	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Metals																																	
Arsenic	mg/kg-wet	12	100	10	NA	NA	NA	NA	5.9	4.32	NA	NA	4.17	5.7	NA	NA	NA	NA	7.8	5.91	6.43	5.57	0.98	8.64	2.9	7.38	10.8	7.13	2.89	NA			
Barium	mg/kg-wet	550	2000	N/S	NA	NA	NA	NA	127	130	NA	NA	84	57.1	NA	NA	NA	NA	218	595	209	179	82	176	66.7	145	117	189	137	NA			
Cadmium	mg/kg-wet	3.9	20	10	NA	NA	NA	NA	0.5	0.484	<0.200	0.38	8.2	1.78	1.44	2.47	4.00	NA	NA	0.434	0.38	NA	0.199	NA	0.218	NA	0.332	NA	0.5	NA			
Chromium	mg/kg-wet	12000	100	500	NA	NA	NA	NA	7.2	7.5	NA	NA	7.8	10.4	NA	NA	NA	NA	NA	14.8	12.3	NA	13.7	NA	13	NA	19	NA	11.1	NA			
Lead	mg/kg-wet	400	100	500	NA	NA	NA	NA	20.5	19.4	NA	NA	468	68	127	314	647	NA	NA	12.4	11.8	NA	9.6	NA	9.9	NA	13.5	NA	8.8	NA			
Mercury	mg/kg-wet	2.3	4	10	0.0477	0.0529	NA	NA	0.0476	<0.051	NA	NA	0.055	<0.063	0.0279	NA	NA	NA	NA	<0.069	<0.068	NA	0.0415	NA	0.026	NA	0.0356	NA	0.024	NA			
Selenium	mg/kg-wet	39	20	10	NA	NA	NA	NA	<1.93	<1.98	NA	NA	<1.97	<2.49	NA	NA	NA	NA	NA	<2.41	<2.57	NA	<0.63	NA	<0.67	NA	<1.00	NA	<0.66	NA			
Silver	mg/kg-wet	39	100	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.314	NA	<0.336	NA	<0.500	NA	<0.33	NA			
Strontium	mg/kg-wet	4700	44000	N/S	NA	NA	NA	NA	71	69	NA	NA	139	221	NA	NA	NA	NA	NA	32.7	32	37.0	NA	34.3	NA	30.0	NA	32.7	NA	NA			
Zinc	mg/kg-wet	2300	2800	500	NA	NA	NA	NA	137	129	44.6	141	3216	894	665	1100	2020	NA	NA	56.2	54.9	54.2	36	52.7	47.6	55.8	73.3	49.8	58.1	NA			
BTEX																																	
Benzene	mg/kg-wet	1.5	0.051	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Ethylbenzene	mg/kg-wet	160	19	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Toluene	mg/kg-wet	68	20	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
o-Xylene	mg/kg-wet	N/S	N/S	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
m&p-Xylenes	mg/kg-wet	N/S	N/S	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Xylenes (total)	mg/kg-wet	18	150	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Hydrocarbons																																	
TPH-G	mg/kg-wet	65	65</																														

Table 5
Soil Analytical Data
Paul M. Levert, et al. v Union Texas International Corporation, et al.
Bayou Choctaw Oil Gas Field
West Baton Rouge Parish, Louisiana

Parameters	Units	Boring ID				L-3								L-3R					L-4								L-5							
		Wetland Designation				Elevated Wetland								Elevated Wetland					Elevated Wetland								Elevated Wetland							
		Sample Date				8/29/2023								10/23/2024					8/30/2023								8/31/2023							
		Sample Depth (feet)				2-4	2-4	4-8	4-8	8-10	8-10	10-12	10-12	12-14	12-14	0-2	2-4	4-6	6-8	8-10	2-4	6-8	6-8	10-12	10-12	14-16	14-16	48-50	48-50	2-4	6-8	6-8	10-12	10-12
		RECAP SOIL_	RECAP SSGw	29-B Elevated Wetland		ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ERM	ERM	ERM	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ICON	ERM	ICON	ERM	ICON
29B/Misc																																		
% Moisture	%	N/S	N/S	N/S	NA	33.6	NA	28.2	40	35.2	37.8	30.8	37.5	31.7	37.5	42.1	33.6	27.5	36.6	26.8	34.9	31	38	32.2	34.2	29.0	34.8	27.5	33.2	36.3	33.3	25.4	22.8	
pH	s.u.	N/S	N/S	6-9	NA	NA	NA	NA	7.49	NA	7.52	NA	7.4	NA	6.60	7.99	6.62	7.70	6.89	NA	8.09	NA	7.44	NA	7.22	NA	8.01	NA	NA	8.04	NA	8.30	NA	
Cation Exchange Capacity (CEC)	meq/100g	N/S	N/S	N/S	NA	23.3	NA	18.2	55.2	44.5	53.5	54	53.9	NA	61.7	20.9	14.2	21.9	62.2	55.9	53.5	NA	57	60.9	50.4	NA	49.1	NA	69.4	60.4	62.3	37.0	41.8	
Electrical Conductivity (EC)	mmhos/cm	N/S	N/S	8	NA	11.2	NA	11.8	19.4	12.5	20.6	16.9	22.2	20.5	1.31	7.27	19.8	25.5	15.6	2.18	5.56	3.71	16.2	14.8	22.3	16.4	0.565	0.7	1.03	2.82	1.07	4.28	2.41	
Exchangeable Sodium Percentage (ESP)	%	N/S	N/S	25	NA	30	NA	45.4	16.8	67.7	8.26	50.1	16.6	NA	4.05	15.4	23.6	24.3	20.9	10.4	11.6	NA	11.7	29.3	7.77	NA	0.844	NA	24.1	28.3	44.5	29.9	37.4	
Sodium Adsorption Ratio (SAR)	Unitless	N/S	N/S	14	NA	29	NA	31.1	40.6	31.2	40.9	33.1	35.7	NA	6.04	27.6	42.1	39.2	37.2	10.0	25.1	17.6	21.8	20.8	16.6	NA	1.57	NA	11.2	27.1	6.64	40.0	24.5	
% Saturation (Sat Paste)	%	N/S	N/S	N/S	NA	NA	NA	NA	NA	NA	NA	NA	156	NA	124	88.4	44.5	63.3	161	NA	186	NA	140	NA	NA	NA	NA	0.77	255	NA	170	NA		
Soluble Calcium	meq/L	N/S	N/S	N/S	NA	13.6	NA	14	22.3	15.4	24.9	24.9	33.1	NA	2.67	7.98	30.3	42.2	18.2	5.03	4.49	7.61	35.4	36.8	73.7	NA	1.84	NA	0.77	1.03	1.20	1.14	2.35	
Soluble Magnesium	meq/L	N/S	N/S	N/S	NA	3.96	NA	4.52	8.38	5.46	9.59	9.46	13.4	NA	0.756	0.892	0.463	11.0	5.45	2.14	1.68	3.84	13.6	13.9	32.7	NA	1.06	NA	0.51	0.628	2.65	0.477	0.96	
Soluble Sodium	meq/L	N/S	N/S	N/S	NA	85.9	NA	94.5	159	101	170	137	172	NA	7.91	58.2	165	202	128	19	44.1	42.1	108	105	121	NA	1.89	NA	8.96	24.7	9.21	36.0	31.5	
Chloride	mg/kg (as reported wet or dry)	N/S	N/S	N/S	NA	2010	NA	2080	6030	4810	6680	5590	7320	6930	NA	NA	NA	NA	NA	758	1610	1400	5980	5600	NA	5420	NA	126	223	782	307	1180	811	
Leachate Chloride	mg/L	N/S	N/S	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	2850	NA	NA	NA	NA	NA	NA	NA	439	NA	NA	NA	2520	NA	26.8	NA	NA	NA	NA	322	
True Total Barium	mg/kg-dry	N/S	N/S	20000	NA	222000	NA	302000	856	26100	369	3110	454	NA	7720	114000	347000	114000	7270	2620	402	801	408	741	440	NA	354	NA	482	557	532	241	141	
HEM Oil & Grease	%	N/S	N/S	1	NA	NA	NA	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	0.892	0.079	0.26	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	NA	<0.10	NA	<0.10	NA	
SPLP Metals																																		
SPLP Arsenic	mg/L	N/S	0.2	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SPLP Barium	mg/L	N/S	40	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.770	3.81	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SPLP Barium (Filtered)	mg/L	N/S	40	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SPLP Cadmium	mg/L	N/S	0.1	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SPLP Chloride	mg/L	N/S	N/S	N/S	NA	NA	NA	NA	NA	NA	NA	NA	291	NA	NA	NA	145	NA	NA	NA	NA	NA	NA	NA	273	NA	1.37	NA	NA	NA	NA	53.1	NA	
SPLP Lead	mg/L	N/S	0.3	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0401	NA	0.162	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SPLP Lead (Filtered)	mg/L	N/S	0.3	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0215	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SPLP Mercury	mg/L	N/S	0.04	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SPLP Selenium	mg/L	N/S	1	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SPLP Zinc	mg/L	N/S	220	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.459	0.0503	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SPLP Zinc (Filtered)	mg/L	N/S	220	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.238	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Metals																																		
Arsenic	mg/kg-wet	12	100	10	NA	9.93	NA	11.6	4.19	3.48	3.89	6.95	4.02	NA	7.54	3.59	7.94	2.64	4.97	5.52	4.47	3.48	6.18	3.44	5.07	NA	10.5	NA	7.79	2.57	3.14	5.12	6.02	
Barium	mg/kg-wet	550	2000	N/S	NA	2760	NA	3400	252	2590	196	712	188	NA	2600	673	577	520	231	940	164	236	155	204	260	NA	173	NA	226	99.6	171	74.3	102	
Cadmium	mg/kg-wet	3.9	20	10	NA	NA	NA	NA	0.276	NA	0.643	NA	<0.200	NA	0.288	<0.200	0.451	<0.200	<0.200	NA	0.78	NA	<0.200	NA	<0.200	NA	<0.200	NA	0.525	NA	0.261	NA		
Chromium	mg/kg-wet	12000	100	500	NA	NA	NA	NA	20.4	NA	20.8	NA	20.2	NA	20.8	12.2	8.07	6.66	21.0	NA	22.5	NA	21	NA	21.7	NA	19.3	NA	18.6	NA	16.1	NA		
Lead	mg/kg-wet	400	100	500	NA	NA	NA	NA	14.9	NA	15.3	NA	11.9	NA	57.9	20.6	114	15.5	17.1	NA	15	NA	14.3	NA	16.7	NA	13.2	NA	13.3	NA	6.68	NA		
Mercury	mg/kg-wet	2.3	4	10	NA	NA	NA	NA	0.0312	NA	0.0303	NA	0.0388	NA	0.0383	0.0234	0.128	<0.0173	0.0308	NA	0.0401	NA	0.0321	NA	0.0338	NA	0.0383	NA	0.0341	NA	0.0206	NA		
Selenium	mg/kg-wet	39	20	10	NA	NA	NA	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	<1.00	<1.00	<1.00	<1.00	NA	<1.00	NA	<1.00	NA	1.14	NA	<1.00	NA	NA	<1.00	NA	<1.00	NA	
Silver	mg/kg-wet	39	100	200	NA	NA	NA	NA	<0.500	NA	<0.500	NA	<0.500	NA	<0.500	<0.500	<0.500	<0.500	<0.500	NA	<0.500	NA	<0.500	NA	<0.500	NA	<0.500	NA	NA	<0.500	NA	<0.500	NA	
Strontium	mg/kg-wet	4700	44000	N/S	NA	922	NA	1190	NA	191	NA	104	NA	NA	NA	NA	NA	NA	130	NA	67.5	NA	67	NA	NA	NA	NA	181	NA	131	NA	NA	87.8	
Zinc	mg/kg-wet	2300	2800	500	NA	128	NA	110	73.1	55.0	65	54.5	76	NA	180	70.9	69.8	23.0	61.1	58.2	71.6	45.9	61.6	52.9	61.4	NA	64.4	NA	54.2	52	54.9	42.9	40.5	
BTEX																																		
Benzene	mg/kg-wet	1.5	0.051	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.0275	1.10	0.729	<0.138	<0.0275	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Ethylbenzene	mg/kg-wet	160	19	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.110	12.4	8.22	2.03	<0.110	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Toluene	mg/kg-wet	68	20	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.220	3.77	5.97	<1.10	<0															

Table 5
Soil Analytical Data
Paul M. Levert, et al. v Union Texas International Corporation, et al.
Bayou Choctaw Oil Gas Field
West Baton Rouge Parish, Louisiana

Parameters	Units	Boring ID				L-6						L-7						L-8						L-9							
		Wetland Designation			Sample Date	Elevated Wetland						Elevated Wetland						Elevated Wetland						Elevated Wetland							
		Sample Depth (feet)				8/31/2023						9/1/2023						9/6/2023						9/6/2023							
		RECAP SOIL SSni	RECAP SSGW	29-B Elevated Wetland		2-4	6-8	6-8	8-10	8-10	22-24	22-24	2-4	6-8	6-8	10-12	10-12	14-16	14-16	2-4	4-8	4-8	10-12	12-14	12-14	0-4	4-6	4-6	10-12	10-12	
Parameters	Units	RECAP SOIL SSni	RECAP SSGW	29-B Elevated Wetland	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ICON	ERM	ICON	ERM	ICON	ERM	ICON
29B/Misc																															
% Moisture	%	N/S	N/S	N/S	33.3	38.0	31.8	33.6	26.8	41.0	35.5	30.9	35.7	30.5	34.8	32.2	29.4	28.7	37.7	42.1	35.9	36.2	39.7	37.9	31.9	35.6	33.8	35.2	29.9		
pH	s.u.	N/S	N/S	6-9	NA	7.99	NA	8.53	NA	7.71	NA	NA	8.13	NA	8.01	NA	8.09	NA	NA	7.69	NA	NA	7.36	NA	NA	8.32	NA	8.29	NA		
Cation Exchange Capacity (CEC)	meq/100g	N/S	N/S	N/S	53.2	69.1	66.4	123	52.3	21.7	NA	64.5	55.7	62.4	62.6	63.9	57.8	NA	55.0	59.1	55.5	58.0	61.3	NA	59.0	60.9	m	52.6	48.7		
Electrical Conductivity (EC)	mmhos/cm	N/S	N/S	8	0.81	1.41	0.96	2.52	1.10	32.0	23.4	2.43	11.2	10.6	23.3	13.0	21.5	15	2.30	8.91	7.21	21.20	24.9	23.9	0.72	0.985	0.980	0.965	0.790		
Exchangeable Sodium Percentage (ESP)	%	N/S	N/S	25	40.1	36.0	49.4	15.4	51.8	2.66	NA	64.6	22.0	40.8	8.82	38.30	12.0	NA	19.0	12.3	24.7	22.7	4.99	NA	1.92	1.79	2.76	2.37	2.47		
Sodium Adsorption Ratio (SAR)	Unitless	N/S	N/S	14	7.5	17.8	5.37	22.9	13.3	24.6	NA	19.6	42.1	37.8	28.6	23.9	20.1	NA	14.3	24.5	24.3	20.9	14.3	NA	3.4	4.31	9.07	3.13	4.09		
% Saturation (Sat Paste)	%	N/S	N/S	N/S	NA	334	NA	242	NA	111	NA	NA	179	NA	135	NA	132	NA	NA	150	NA	NA	147	NA	NA	137	NA	85.0	NA		
Soluble Calcium	meq/L	N/S	N/S	N/S	1.17	0.599	1.65	1.06	0.74	90.7	NA	1.96	6.96	9.44	49.5	30.5	58.2	NA	3.18	10.5	11.9	77.4	96.0	NA	2.81	2.33	1.89	2.92	3.16		
Soluble Magnesium	meq/L	N/S	N/S	N/S	0.930	0.370	2.37	0.634	0.99	44.1	NA	2.37	2.67	3.48	19.3	11.2	25.8	NA	1.36	3.80	4.48	32.30	44.3	NA	1.43	1.04	1.06	1.49	1.78		
Soluble Sodium	meq/L	N/S	N/S	N/S	7.68	12.4	7.61	21.1	12.4	202	NA	28.8	92.3	96.1	168	109	130	NA	21.6	65.4	69.5	155.0	120	NA	4.95	5.60	11.00	4.65	6.43		
Chloride	mg/kg (as reported wet or dry)	N/S	N/S	N/S	281	608	484	638	340	5120	4980	806	5290	4170	7550	5880	4930	4480	712	2900	2700	7820	NA	9620	147	49.6	94.5	NA	99.5		
Leachate Chloride	mg/L	N/S	N/S	N/S	NA	NA	NA	NA	234	NA	NA	NA	NA	NA	NA	NA	2370	NA	NA	NA	NA	NA	NA	3040	NA	NA	NA	NA	31.3		
True Total Barium	mg/kg-dry	N/S	N/S	20000	327	434	964	343	541	259	NA	755	590	385	550	445	533	NA	364	503	686	337	483	NA	259	419	347	406	339		
HEM Oil & Grease	%	N/S	N/S	1	NA	<0.10	NA	<0.10	NA	0.16	NA	NA	<0.10	NA	<0.10	NA	<0.10	NA	NA	<0.10	NA	NA	<0.10	NA	NA	<0.10	NA	<0.10	NA		
SPLP Metals																															
SPLP Arsenic	mg/L	N/S	0.2	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SPLP Barium	mg/L	N/S	40	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SPLP Barium (Filtered)	mg/L	N/S	40	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SPLP Cadmium	mg/L	N/S	0.1	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SPLP Chloride	mg/L	N/S	N/S	N/S	NA	NA	NA	32.4	NA	265	NA	NA	NA	NA	NA	NA	201	NA	NA	NA	NA	NA	315	NA	NA	NA	NA	NA	3.61	NA	
SPLP Lead	mg/L	N/S	0.3	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SPLP Lead (Filtered)	mg/L	N/S	0.3	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SPLP Mercury	mg/L	N/S	0.04	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SPLP Selenium	mg/L	N/S	1	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SPLP Zinc	mg/L	N/S	220	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SPLP Zinc (Filtered)	mg/L	N/S	220	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Metals																															
Arsenic	mg/kg-wet	12	100	10	4.24	3.96	4.68	4.26	4.78	7.47	NA	4.17	4.55	4.34	2.6	3.51	3.85	NA	14	4.39	<12.7	3.95	4.93	NA	13.7	4.29	<12.9	6.62	2.84		
Barium	mg/kg-wet	550	2000	N/S	146	126	188	223	176	133	NA	295	138	206	148	250	151	NA	153	159	296	132	220	NA	170	131	161	451	165		
Cadmium	mg/kg-wet	3.9	20	10	NA	0.702	NA	0.896	NA	0.726	NA	NA	0.271	NA	0.347	NA	0.326	NA	NA	0.283	NA	NA	0.318	NA	NA	0.288	NA	0.274	NA		
Chromium	mg/kg-wet	12000	100	500	NA	19.9	NA	20.1	NA	13.7	NA	NA	19.2	NA	19.2	NA	16.4	NA	NA	20.7	NA	NA	20.5	NA	NA	22.9	NA	20	NA		
Lead	mg/kg-wet	400	100	500	NA	13	NA	14.8	NA	9.45	NA	NA	12.9	NA	12.3	NA	15.1	NA	NA	13.5	NA	NA	13.7	NA	NA	14	NA	15.7	NA		
Mercury	mg/kg-wet	2.3	4	10	NA	0.0272	NA	0.0195	NA	<0.0169	NA	NA	0.0392	NA	0.0328	NA	0.0179	NA	NA	0.0344	NA	NA	0.0286	NA	NA	0.0322	NA	0.0267	NA		
Selenium	mg/kg-wet	39	20	10	NA	<1.00	NA	<1.00	NA	<1.00	NA	NA	<1.00	NA	<1.00	NA	<1.00	NA	NA	<1.00	NA	NA	<1.00	NA	NA	<1.00	NA	<1.00	NA		
Silver	mg/kg-wet	39	100	200	NA	<0.500	NA	<0.500	NA	<0.500	NA	NA	<0.500	NA	<0.500	NA	<0.500	NA	NA	<0.500	NA	NA	<0.500	NA	NA	<0.500	NA	<0.500	NA		
Strontium	mg/kg-wet	4700	44000	N/S	158	NA	117	NA	92.3	NA	NA	83.2	NA	81.4	NA	92.4	NA	NA	112	NA	104	54.1	NA	NA	49.7	NA	35.1	NA	26.8		
Zinc	mg/kg-wet	2300	2800	500	45.3	57.7	41.4	63	43.4	63.4	NA	52.6	53.9	49.7	65.8	62.8	48.7	NA	80.9	55.8	61.4	44	60.5	NA	67.9	54.8	77.6	49.9	40		
BTEX																															
Benzene	mg/kg-wet	1.5	0.051	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Ethylbenzene	mg/kg-wet	160	19	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Toluene	mg/kg-wet	68	20	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
o-Xylene	mg/kg-wet	N/S	N/S	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
m&p-Xylenes	mg/kg-wet	N/S	N/S	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Xylenes (total)	mg/kg-wet	18	150	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Hydrocarbons																															
TPH-G	mg/kg-wet	65	65	N/S	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
TPH-D	mg/kg-wet	65	65	N/S	NA	NA	NA	NA																							

Table 5
Soil Analytical Data
Paul M. Levert, et al. v Union Texas International Corporation, et al.
Bayou Choctaw Oil Gas Field
West Baton Rouge Parish, Louisiana

Parameters	Units	Boring ID				L-10						L-11						L-12										
		Wetland Designation			Sample Date	Elevated Wetland						Elevated Wetland						Elevated Wetland										
		Sample Depth (feet)				9/7/2023						9/7/2023						10/16/2023										
		RECAP SOIL SSni	RECAP SSGW	29-B Elevated Wetland		0-4	0-4	4-8	4-8	10-12	10-12	0-4	0-4	6-8	6-8	8-10	8-10	14-16	14-16	2-4	4-6	4-6	10-12	10-12	18-20	18-20	42-44	42-44
						ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON
29B/Misc																												
% Moisture	%	N/S	N/S	N/S		43.1	34.3	39.2	36.3	36.9	30.0	36.1	36.0	37.6	35.3	38.4	34.1	44.8	41.7	24.8	27.1	26.0	37.7	34.0	32.2	28.6	37.0	35.5
pH	s.u.	N/S	N/S	6-9		7.22	NA	8.05	NA	7.84	NA	7.86	NA	7.86	NA	7.64	NA	7.39	NA	NA	8.59	NA	8.63	NA	8.60	NA	8.32	NA
Cation Exchange Capacity (CEC)	meq/100g	N/S	N/S	N/S		60.9	47.8	68.7	59.0	57.0	NA	63.9	59.6	68.3	47.8	67.4	52.1	59.6	NA	65.3	57.8	57.2	65.7	59.7	NA	NA	NA	NA
Electrical Conductivity (EC)	mmhos/cm	N/S	N/S	8		2.31	1.64	2.88	2.48	7.01	6.92	6.65	6.49	15.7	16.5	20.5	19.1	22.8	26.2	0.45	0.460	0.52	0.290	0.46	0.588	1.05	0.803	0.56
Exchangeable Sodium Percentage (ESP)	%	N/S	N/S	25		6.73	12.30	9.71	16.10	9.11	NA	14.1	36.8	16.4	14.1	16.1	11.3	7.21	NA	0.41	0.382	0.79	1.04	1.26	NA	NA	NA	NA
Sodium Adsorption Ratio (SAR)	Unitless	N/S	N/S	14		10.8	10.2	21.0	17.4	11.6	13.6	22.3	21.3	28.4	30.0	24.3	24.9	10.9	NA	1.26	0.510	1.12	1.34	1.78	NA	NA	NA	NA
% Saturation (Sat Paste)	%	N/S	N/S	N/S		139	NA	217	NA	116	NA	153	NA	150	NA	134	NA	111	NA	NA	128	NA	139	NA	112	NA	124	NA
Soluble Calcium	meg/L	N/S	N/S	N/S		3.27	3.62	1.65	3.20	16.4	19.4	7.66	11.70	26.4	34.9	48.6	57.0	94.0	NA	2.89	2.60	3.35	1.10	2.08	2.57	NA	3.47	NA
Soluble Magnesium	meg/L	N/S	N/S	N/S		1.19	1.60	0.695	1.520	7.47	9.50	2.49	4.42	8.21	12.70	17.8	23.2	50.9	NA	1.51	1.12	1.62	0.667	1.22	1.51	NA	1.71	NA
Soluble Sodium	meg/L	N/S	N/S	N/S		16.2	16.5	22.7	26.7	40.0	51.8	50.2	60.6	118	146	140	157	92.8	NA	1.87	0.696	1.76	1.26	2.28	1.81	NA	2.14	NA
Chloride	mg/kg (as reported wet or dry)	N/S	N/S	N/S		414	444	712	794	NA	2230	1850	2100	4730	5500	6600	6990	7520	9520	28.6	4.01	30.4	<4.00	23.5	4.98	125	4.32	16.8
Leachate Chloride	mg/L	N/S	N/S	N/S		NA	NA	NA	NA	NA	666	NA	NA	NA	NA	NA	NA	NA	2780	NA	NA	NA	NA	NA	2.33	NA	8.31	
True Total Barium	mg/kg-dry	N/S	N/S	20000		556	433	590	506	369	NA	347	485	347	230	341	263	332	NA	329	352	209	411	257	NA	NA	NA	NA
HEM Oil & Grease	%	N/S	N/S	1		<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	<0.10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SPLP Metals																												
SPLP Arsenic	mg/L	N/S	0.2	N/S		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SPLP Barium	mg/L	N/S	40	N/S		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SPLP Barium (Filtered)	mg/L	N/S	40	N/S		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SPLP Cadmium	mg/L	N/S	0.1	N/S		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SPLP Chloride	mg/L	N/S	N/S	N/S		NA	NA	NA	NA	70.1	NA	NA	NA	NA	NA	302	NA	NA	NA	NA	NA	NA	NA	NA	<0.400	NA	<0.400	NA
SPLP Lead	mg/L	N/S	0.3	N/S		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SPLP Lead (Filtered)	mg/L	N/S	0.3	N/S		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SPLP Mercury	mg/L	N/S	0.04	N/S		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SPLP Selenium	mg/L	N/S	1	N/S		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SPLP Zinc	mg/L	N/S	220	N/S		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SPLP Zinc (Filtered)	mg/L	N/S	220	N/S		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals																												
Arsenic	mg/kg-wet	12	100	10		8.59	<12.3	7.48	<12.4	6.97	NA	5.06	<12.2	3.49	<12.0	4.35	3.29	3.45	NA	5.78	2.56	5.39	3.54	2.4	NA	NA	NA	NA
Barium	mg/kg-wet	550	2000	N/S		146	277	163	416	91.9	NA	163	156	123	159	134	107	162	NA	153	168	114	410	142	NA	NA	NA	NA
Cadmium	mg/kg-wet	3.9	20	10		<0.200	NA	<0.200	NA	0.622	NA	0.218	NA	0.544	NA	0.366	NA	<0.200	NA	<0.365	0.683	<0.351	<0.200	<0.315	NA	NA	NA	NA
Chromium	mg/kg-wet	12000	100	500		19.7	NA	19.5	NA	21.7	NA	20.4	NA	21.3	NA	21.6	NA	17	NA	14	25.7	10.9	26.6	10.2	NA	NA	NA	NA
Lead	mg/kg-wet	400	100	500		14.4	NA	12.9	NA	11.3	NA	13.4	NA	13.7	NA	16.4	NA	12.8	NA	11	15	9.8	17.2	10.2	NA	NA	NA	NA
Mercury	mg/kg-wet	2.3	4	10		0.0426	NA	0.0334	NA	0.0444	NA	0.0301	NA	0.0299	NA	0.0397	NA	0.0297	NA	<0.0726	0.0627	<0.076	0.0318	<0.0613	NA	NA	NA	NA
Selenium	mg/kg-wet	39	20	10		<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/kg-wet	39	100	200		<0.500	NA	<0.500	NA	<0.500	NA	<0.500	NA	<0.500	NA	<0.500	NA	<0.500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	mg/kg-wet	4700	44000	N/S		NA	111	NA	59.6	NA	NA	NA	NA	109	NA	111	NA	76.2	NA	32.1	52.9	26.5	45.9	28.8	NA	NA	NA	NA
Zinc	mg/kg-wet	2300	2800	500		52.5	86.6	54.2	61.9	55.6	NA	62.9	63.1	71.8	71.5	65.6	47.9	42.9	NA	56.1	68.8	44.4	76.4	47.7	NA	NA	NA	NA
BTEX																												
Benzene	mg/kg-wet	1.5	0.051	N/S		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	mg/kg-wet	160	19	N/S		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	mg/kg-wet	68	20	N/S		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	mg/kg-wet	N/S	N/S	N/S		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
m&p-Xylenes	mg/kg-wet	N/S	N/S	N/S		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes (total)	mg/kg-wet	18	150	N/S		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydrocarbons																												
TPH-G	mg/kg-wet	65	65	N/S		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH-D	mg/kg-wet	65	65	N/S		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH-O	mg/kg-wet	180	10000	N/S		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aliphatic C6-C8	mg/kg-wet	1200	10000	N/S		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aliphatic >C8-C10	mg/kg-wet	120	5300	N/S		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aliphatic >C10-C12	mg/kg-wet	230	10000	N/S		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aliphatic >C12-C16	mg/kg-wet	370	100																									

Table 5
Soil Analytical Data
Paul M. Levert, et al. v Union Texas International Corporation, et al.
Bayou Choctaw Oil Gas Field
West Baton Rouge Parish, Louisiana

Notes:
meq/100g = milliequivalents per 100 grams of soil
mmhos/cm = millimhos per centimeter
mg/kg = milligram per kilogram
meq/L = milliequivalents per liter
s.u. = standard units
NA - Not analyzed; N/S - No standard
Bolded values were detected in the sample
Filtered SPLP samples = leachate filtered through a 0.45 micron filter.
Light grey shading indicates that soil in the vicinity of this sample is identified for remediation.
Other shadings indicate exceedance of reference standards.
< - Not detected at or above the reporting limit shown
Wetland designation based on USFWS wetland map

Table 6**EDX and XRD Results**

Paul M. Levert, et al. v Union Texas

Bayou Choctaw Oil Gas Field

West Baton Rouge Parish, Louisiana

Sample Location Depth (ft bgs) Sample Date Data Provider			HA-1R	B-2	B-2	L-3R	L-3R*
			0-2	2-4	4-6	0-2	0-2
			10/21/2024	10/22/2024	10/22/2024	10/23/2024	10/23/2024
Parameters			ERM	ERM	ERM	ERM	ERM
Analytical Method	Units						
Elemental Composition							
Carbon (C)	EDX	wt%	10.28	0.13	2.10	6.05	5.70
Oxygen (O)	EDX	wt%	32.47	36.55	41.47	43.84	43.33
Sodium (Na)	EDX	wt%	0.36	0.70	1.00	0.18	0.45
Magnesium (Mg)	EDX	wt%	1.13	0.60	1.32	0.90	1.32
Aluminum (Al)	EDX	wt%	6.47	5.69	8.92	8.19	9.33
Silicon (Si)	EDX	wt%	17.95	16.28	24.39	27.85	26.27
Phosphorous (P)	EDX	wt%	0.04	ND	ND	ND	ND
Sulfur (S)	EDX	wt%	5.06	4.10	2.17	0.68	0.66
Chlorine (Cl)	EDX	wt%	0.02	0.50	1.11	0.09	0.08
Potassium (K)	EDX	wt%	1.76	1.60	3.11	3.08	3.27
Calcium (Ca)	EDX	wt%	2.45	3.00	1.62	1.97	1.22
Chromium (Cr)	EDX	wt%	ND	ND	ND	ND	ND
Manganese (Mn)	EDX	wt%	ND	ND	ND	ND	ND
Iron (Fe)	EDX	wt%	3.83	3.20	4.68	5.06	5.37
Zinc (Zn)	EDX	wt%	ND	ND	ND	ND	ND
Strontium (Sr)	EDX	wt%	ND	0.60	ND	ND	ND
Barium (Ba)	EDX	wt%	17.73	26.28	7.57	1.65	2.53
Titanium (Ti)	EDX	wt%	0.44	0.78	0.54	0.48	0.47
Total	EDX	wt%	100	100	100	100	100
Mineral Phase							
Quartz (SiO ₂)	XRD	wt%	35	28.2	24.0	25.3	28.0
K-Feldspars (KAlSi ₃ O ₈)	XRD	wt%	0.5	0.9	1.0	0.7	0.7
Plagioclase (NaAlSi ₃ O ₈)	XRD	wt%	1.9	1.3	3.6	2.3	2.7
Calcite (CaCO ₃)	XRD	wt%	2.8	3.1	1.1	0.7	1.3
Pyrite (FeS ₂)	XRD	wt%	ND	ND	ND	ND	ND
Fe Dolomite (FeMgCa(CO ₃) ₂)	XRD	wt%	ND	ND	ND	ND	ND
Halite (NaCl)	XRD	wt%	ND	ND	ND	NA	NA
Barium Sulfide (BaS)	XRD	wt%	ND	ND	ND	ND	ND
Barite (BaSO ₄)	XRD	wt%	20.8	44.6	11.5	1.7	2.3
Witherite (BaCO ₃)	XRD	wt%	ND	ND	ND	ND	ND
Barium Chloride (BaCl ₂)	XRD	wt%	ND	ND	ND	ND	ND
Baria (BaO)	XRD	wt%	ND	ND	ND	ND	ND
Barium Peroxide (BaO ₂)	XRD	wt%	ND	ND	ND	ND	ND
Total Clay	XRD	wt%	39.0	22.0	58.7	69.2	65.0
Total	XRD	wt%	100	100	100	100	100

NOTES:

NA - Not Analyzed

ND - Not Detected

EDX - Energy Dispersive X-Ray Spectrometry

XRD - X-Ray Diffraction

* - Sample Reanalyzed

Table 7**Soil Geotechnical Data***Paul M. Levert, et al. v Union Texas**Bayou Choctaw Oil Gas Field**West Baton Rouge Parish, Louisiana*

Boring ID	Sample Date	Depth (ft)	Targeted Zone	Laboratory Description (ASTM D2487)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	Moisture Content (ASTM D2216) (%)	Dry Density (lbs/ft ³)	Vertical Permeability (ASTM D5084) (cm/sec)
MW-1	10/29/2024	12-14	Confining Unit	Gray FAT CLAY (CH)	0.0	3.5	5.7	90.8	53.5	70.5	1.9E-08
		20-22	Water-Bearing Zone	Gray SANDY SILT (ML)	0.0	40.2	52.7	7.1	30.1	NA	NA
		44-46	Confining Unit	Gray FAT CLAY (CH)	0.0	1	0.0	99.0	53.6	68.1	1.5E-08
		58-59	Water-Bearing Zone	Gray FAT CLAY (CH)	0.0	1	26.8	72.2	66.2	NA	NA

Notes:

Analyses performed by Ardaman & Associates, Inc., Baton Rouge, Louisiana

Laboratory soil classification by ASTM D2487

Particle size analysis by ASTM D422

NA - Not analyzed

Table 8
Groundwater Analytical Data
Paul M. Levert, et al. v Union Texas International Corporation, et al.
Bayou Choctaw Oil Gas Field
West Baton Rouge Parish, Louisiana

Parameters	Well Identifier:				L-1A				L-1B				L-2				L-3				L-4A				L-4B			
	UTM Zone 15R Easting (m):				663307				663306				663442				663485				663504				663503			
	UTM Zone 15R Northing (m):				3356164				3356163				3356112				3356026				3356006				3356005			
	reened Depth Interval (ft bgs):				16-26'				47-57'				16-26'				15-30'				16-26'				52-62'			
	Sample Date:				9/5/2023		10/17/2024		9/12/2023		10/17/2024		9/8/2023		10/15/2024		9/11/2023		10/14/2024		9/11/2023		10/14/2024		9/12/2023		10/16/2024	
	Units	LDEQ RECAP GW _{SS}	EPA SMCL		ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON
Total Metals																												
Arsenic	mg/L	0.01	NS	0.0265	0.0229	0.0189	0.0272	0.0212	NA	0.0403	0.0371	0.105	0.0782	0.0767	0.0859	0.128	NA	0.177	0.153	<0.100	0.0669	0.145	0.0987	0.0351	NA	0.0608	0.0517	
Barium	mg/L	2	NS	4.89	4.96	5.81	5.25	0.282	NA	0.290	0.214	12	12.0	13.1	13.6	43.0	NA	54.6	58.9	25.9	21.9	21.9	27.0	0.653	NA	0.498	0.319	
Cadmium	mg/L	0.005	NS	<0.0100	NA	NA	NA	<0.0010	NA	NA	NA	<0.0100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.0010	NA	NA	NA	
Calcium	mg/L	NS	NS	959	NA	980	915	71.3	NA	56.0	53.6	1,840	NA	1,810	1,810	5910	NA	5870	5,980	4250	NA	3230	3,680	148	NA	82.3	75.9	
Chromium	mg/L	0.1	NS	<0.010	NA	NA	NA	0.001	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	0.001	NA	NA	NA	
Iron	mg/L	NS	0.3	98.2	NA	NA	NA	7.68	NA	NA	NA	155	NA	NA	NA	434	NA	NA	NA	415	NA	NA	NA	16.6	NA	NA	NA	
Lead	mg/L	0.015	NS	<0.0100	NA	NA	NA	<0.0010	NA	NA	NA	<0.0100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.0010	NA	NA	NA	
Magnesium	mg/L	NS	NS	359	NA	392	329.0	26.7	NA	21.7	20.1	490	NA	523	498	1170	NA	1170	1220	1160	NA	1060	1130	53.3	NA	28.6	26.1	
Manganese	mg/L	NS	0.05	14.0	NA	NA	NA	0.573	NA	NA	NA	22.6	NA	NA	NA	67.1	NA	NA	NA	57.0	NA	NA	NA	0.806	NA	NA	NA	
Mercury	mg/L	0.002	NS	<0.00020	NA	NA	NA	<0.00020	NA	NA	NA	<0.00020	<0.000200	NA	NA	<0.00020	NA	NA	NA	<0.00020	NA	NA	NA	<0.00020	NA	NA	NA	
Potassium	mg/L	NS	NS	8.23	NA	9.38	<50.0	3.38	NA	3.51	<5.00	8.48	NA	9.31	15.7329	48.6	NA	39.1	86.3	16.0	NA	14.7	27.5684	3.40	NA	3.82	<5.00	
Selenium	mg/L	0.05	NS	<0.010	NA	NA	NA	<0.001	NA	NA	NA	<0.010	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.001	NA	NA	NA	
Silver	mg/L	0.018	0.10	<0.0100	NA	NA	NA	<0.0010	NA	NA	NA	<0.0100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.0010	NA	NA	NA	
Sodium	mg/L	NS	NS	1,300	1,450	1,170	1,150	77.3	NA	41.7	44.2	3,530	3,570	3,210	3,140	18500	NA	18400	17,700	7550	7,180	4630	5,050	124	NA	51.5	53.0	
Strontium	mg/L	NS	NS	7.77	8.19	NA	NA	0.483	NA	NA	NA	35.3	<0.0100	NA	NA	178	NA	NA	NA	61.0	60.6	NA	NA	1.08	NA	NA	NA	
Zinc	mg/L	1.1	5	<0.100	<0.0100	NA	NA	0.049	NA	NA	NA	<1.00	0.0155	NA	NA	<1.00	NA	NA	NA	<1.00	0.0479	NA	NA	0.010	NA	NA	NA	
Dissolved Metals																												
Arsenic	mg/L	0.01	NS	0.0227	0.0224	0.0268	NA	0.0188	0.0341	0.0381	NA	<0.100	NA	0.0797	NA	0.121	0.248	0.156	NA	<0.100	NA	0.117	NA	0.0327	0.0545	0.0485	NA	
Barium	mg/L	2	NS	4.78	4.76	5.05	NA	0.233	0.246	0.232	NA	11.9	NA	13.8	NA	41.9	46.3	67.1	NA	24.4	NA	33.3	NA	0.606	0.634	0.290	NA	
Cadmium	mg/L	0.01	NS	<0.0100	NA	NA	NA	<0.0010	NA	NA	NA	<0.0100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.0010	NA	NA	NA	
Calcium	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5860	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Chromium	mg/L	0.10	NS	<0.010	NA	NA	NA	<0.001	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.001	NA	NA	NA	
Iron	mg/L	NS	0.30	96	NA	NA	NA	5.20	NA	NA	NA	148	NA	NA	NA	423	NA	NA	NA	372	NA	NA	NA	14.3	NA	NA	NA	
Lead	mg/L	0.02	NS	<0.0100	NA	NA	NA	<0.0010	NA	NA	NA	<0.0100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.0010	NA	NA	NA	
Magnesium	mg/L	NS	NS	348	NA	NA	NA	27.5	NA	NA	NA	494	NA	NA	NA	1150	NA	NA	NA	1130	NA	NA	NA	53.0	NA	NA	NA	
Manganese	mg/L	NS	0.05	14.2	NA	NA	NA	0.553	NA	NA	NA	22.2	NA	NA	NA	65.7	NA	NA	NA	57.5	NA	NA	NA	0.816	NA	NA	NA	
Mercury	mg/L	0.00	NS	<0.00020	NA	NA	NA	<0.00020	NA	NA	NA	<0.00020	NA	NA	NA	<0.00020	NA	NA	NA	<0.00020	NA	NA	NA	<0.00020	NA	NA	NA	
Potassium	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Selenium	mg/L	0.05	NS	<0.010	NA	NA	NA	<0.001	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.001	NA	NA	NA	
Silver	mg/L	0.02	0.10	<0.0100	NA	NA	NA	<0.0010	NA	NA	NA	<0.0100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.0010	NA	NA	NA	
Sodium	mg/L	NS	NS	NA	1630	NA	NA	71.8	75.3	NA	NA	NA	NA	NA	NA	18200	21300	NA	NA	6930	NA	NA	NA	121	123	NA	NA	
Strontium	mg/L	NS	NS	7.46	8.14	NA	NA	0.484	0.503	NA	NA	34.3	NA	NA	NA	178	173	NA	NA	59.5	NA	NA	NA	1.08	1.11	NA	NA	
Zinc	mg/L	1.10	5.00	<0.100	<0.0100	NA	NA	0.026	0.298	NA	NA	<1.00	NA	NA	NA	<1.00	0.157	NA	NA	<1.00	NA	NA	NA	<0.010	<0.0100	NA	NA	
Anions																												
Bromide	mg/L	NS	NS	<10.0	<5.00	NA	NA	NA	NA	NA	NA	<20.0	<5.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Chloride	mg/L	NS	250	4,940	5,140	4,330	4,460	109	208	18.5	32.6	10,500	11,700	9,980	10,100	45800	57200	44300	40900	24700	25200	18200	18900	597	1010	75.4	133	
Sulfate	mg/L	NS	250	<50.0	NA	<50.0	<5.00	<2.50	NA	<1.00	<0.250	<100	NA	<200	<12.5	<500	NA	<1000	<50.0	<250	NA	<200	<25.0	<5.00	NA	<1.00	<0.250	
Alkalinity																												
Bicarbonate Alkalinity	mg/L	NS	NS	290	308	280	258	302	288	350	298	245	218	130	210	305	355	270	332	220	290	160	210	270	258	340	295	
Carbonate Alkalinity	mg/L	NS	NS	<10	< 20.0	<10	<20.0	<10	<20.0	<10	<20.0	<10	<20.0	<10	<20.0	<10	<20.0	<10	<20.0	<10	<20.0	<10	<20.0	<10	<20.0	<10	<20.0	
Total Alkalinity	mg/L	NS	NS	290	308	280	258	302	288	350	298	245	218	130	210	305	355	270	332	220	290	160	210	270	258	340	295	
Total Dissolved Solids (TDS)	mg/L	NS	500	11,000	8,620	8,620	6,820	502	490	354	352	21,500	17,600	20300	16,400	77900	72800	80400	71200	44000	36800	36100	32300	1710	1260	454	407	
BTEX Compounds																												
Benzene	mg/L	0.005	NS	<0.001	<0.00500	NA	NA	<0.001	<0.00500	NA	NA	<0.001	<0.00500	NA	NA	0.233	0.251	0.282	0.234	0.076	0.0503	0.041	0.034	<0.001	<0.00500	NA	<0.00500	
Ethylbenzene	mg/L	0.7	NS	<0.001	<0.00500	NA	NA	<0.001	<0.00500	NA	NA	<0.001	<0.00500	NA	NA	0.003	<0.00500	NA	<0.0250	<0.001	<0.500	NA	<0.0250	<0.001	<0.00500	NA	<0.00500	
Toluene	mg/L	1	NS	<0.005	<0.0100	NA	NA	<0.005	<0.0100	NA	NA	<0.005	<0.0100	NA	NA	0.033	0.0256	NA	<0.0500	0.007	<0.0100	NA	<0.0500	<0.005	<0.0100	NA	<0.0100	
Xylene (total)	mg/L	10	NS	<0.001	<0.0500	NA	NA	<0.001	<0.0500	NA	NA	<0.001	<0.0500	NA	NA	0.010	<0.0500	NA	<0.250	<0.001	<0.0500	NA	<0.250	<0.001	<0.0500	NA	&	

Table 8
Groundwater Analytical Data
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Parameters	Well Identifier:			L-5				L-6				DUP-01 (L-6)	L-7				L-8				L-9				L-10			
	UTM Zone 15R Easting (m):			663287				663276				663276	663323				663412				663290				663321			
	UTM Zone 15R Northing (m):			3355852				3355835				3355835	3356208				3356034				3355998				3355943			
	reened Depth Interval (ft bgs):			12-22'				11-21'				11-21'	16-26'				16-26'				12-22'				12-22'			
	Sample Date:			9/12/2023		10/15/2024		9/13/2023		10/15/2024		10/15/2024	9/5/2023		10/17/2024		9/12/2023		10/17/2024		9/11/2023		10/15/2024		9/13/2023		10/16/2024	
	Units	LDEQ RECAP GW _{SS}	EPA SMCL	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON
Total Metals																												
Arsenic	mg/L	0.01	NS	<0.100	0.0266	0.0169	0.0177	<0.100	0.0378	<0.100	0.0370	<0.100	0.0882	0.0910	0.123	0.124	<0.100	0.0372	<0.100	0.0401	<0.100	0.038	<0.100	0.0518	<0.100	0.0476	<0.100	0.0726
Barium	mg/L	2	NS	4.52	4.46	6.74	7.16	2.34	2.41	3.15	3.29	3.16	4.54	4.57	5.65	4.52	16.8	17.4	16.0	15.9	13.3	13.7	16.0	17.9	16.1	13.9	15.6	19.5
Cadmium	mg/L	0.005	NS	<0.100	NA	NA	NA	<0.100	NA	NA	NA	NA	<0.0100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA
Calcium	mg/L	NS	NS	1250	NA	1530	1530	829	NA	1060	980	1010	1,320	NA	1,590	1,490	2880	NA	2530	2780	2230	NA	2430	2480	2590	NA	2280	2560
Chromium	mg/L	0.1	NS	<0.100	NA	NA	NA	<0.100	NA	NA	NA	NA	<0.010	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA
Iron	mg/L	NS	0.3	80.8	NA	NA	NA	41.2	NA	NA	NA	NA	91.8	NA	NA	NA	347	NA	NA	NA	206	NA	NA	NA	238	NA	NA	NA
Lead	mg/L	0.015	NS	<0.100	NA	NA	NA	<0.100	NA	NA	NA	NA	<0.0100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA
Magnesium	mg/L	NS	NS	356	NA	447	452	212	NA	302	NA	289	414	NA	502	496	916	NA	830	920	723	NA	806	757	779	NA	732	757
Manganese	mg/L	NS	0.05	16.3	NA	NA	NA	14.4	NA	NA	260	NA	23.6	NA	NA	NA	41.0	NA	NA	NA	34.3	NA	NA	NA	34.4	NA	NA	NA
Mercury	mg/L	0.002	NS	<0.00020	NA	NA	NA	<0.00020	NA	NA	NA	NA	<0.00020	NA	NA	NA	<0.00020	NA	NA	NA	<0.00020	NA	NA	NA	<0.00020	NA	NA	NA
Potassium	mg/L	NS	NS	<10.0	NA	9.81	17.7671	<10.0	NA	<10.0	17.6724	<10.0	10.9	NA	7.64	14.3	10.6	NA	<10.0	17.9	10.0	NA	<10.0	15.9478	11.8	NA	11.2	18.0562
Selenium	mg/L	0.05	NS	<0.100	NA	NA	NA	<0.100	NA	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA
Silver	mg/L	0.018	0.10	<0.100	NA	NA	NA	<0.100	NA	NA	NA	NA	<0.0100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA
Sodium	mg/L	NS	NS	3570	3540	2730	3390	4200	4,370	3910	3,930	3740	2,950	2,790	2,770	2,900	3240	3430	3170	3140	2240	2370	2420	2390	3160	3300	3180	3100
Strontium	mg/L	NS	NS	29.9	31.4	NA	NA	24.1	21.8	NA	NA	NA	19.3	19.4	NA	NA	31.0	33.6	NA	NA	25.4	27.3	NA	NA	35.2	36.2	NA	NA
Zinc	mg/L	1.1	5	<1.00	<0.0100	NA	NA	<1.00	<0.0100	NA	NA	NA	<0.100	<0.0100	NA	NA	<1.00	0.0452	NA	NA	<1.00	0.0274	NA	NA	<1.00	0.0234	NA	NA
Dissolved Metals																												
Arsenic	mg/L	0.01	NS	<0.100	NA	0.0196	NA	<0.100	NA	<0.100	NA	<0.100	<0.100	0.091	0.117	NA	<0.100	NA	<0.100	NA	<0.100	NA	<0.100	NA	<0.100	NA	<0.100	NA
Barium	mg/L	2	NS	4.48	NA	6.54	NA	2.33	NA	3.34	NA	4.17	4.4	4.57	8.52	NA	16.4	NA	21.2	NA	14.0	NA	16.3	NA	16.0	NA	19.7	NA
Cadmium	mg/L	0.01	NS	<0.100	NA	NA	NA	<0.100	NA	NA	NA	NA	<0.0100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA
Calcium	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	1110	NA	1340	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	mg/L	0.10	NS	<0.100	NA	NA	NA	<0.100	NA	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA
Iron	mg/L	NS	0.30	78.8	NA	NA	NA	40.9	NA	NA	NA	NA	92.9	NA	NA	NA	334	NA	NA	NA	206	NA	NA	NA	238	NA	NA	NA
Lead	mg/L	0.02	NS	<0.100	NA	NA	NA	<0.100	NA	NA	NA	NA	<0.0100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA
Magnesium	mg/L	NS	NS	358	NA	NA	NA	214	NA	309	NA	379	399	NA	NA	NA	907	NA	NA	NA	737	NA	NA	NA	810	NA	NA	NA
Manganese	mg/L	NS	0.05	16.3	NA	NA	NA	15.0	NA	NA	NA	NA	22.6	NA	NA	NA	43.7	NA	NA	NA	35.5	NA	NA	NA	37.0	NA	NA	NA
Mercury	mg/L	0.00	NS	<0.00020	NA	NA	NA	<0.00020	NA	NA	NA	NA	<0.00020	NA	NA	NA	<0.00020	NA	NA	NA	<0.00020	NA	NA	NA	<0.00020	NA	NA	NA
Potassium	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	11.6	NA	13.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	mg/L	0.05	NS	<0.100	NA	NA	NA	<0.100	NA	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA
Silver	mg/L	0.02	0.10	<0.100	NA	NA	NA	<0.100	NA	NA	NA	NA	<0.0100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA
Sodium	mg/L	NS	NS	3220	NA	NA	NA	4020	NA	3950	NA	4080	NA	2790	NA	NA	3130	NA	NA	NA	2270	NA	NA	NA	3350	NA	NA	NA
Strontium	mg/L	NS	NS	28.6	NA	NA	NA	22.3	NA	NA	NA	NA	18.8	19.4	NA	NA	31.8	NA	NA	NA	27.1	NA	NA	NA	34.3	NA	NA	NA
Zinc	mg/L	1.10	5.00	<1.00	NA	NA	NA	<1.00	NA	NA	NA	NA	<1.00	< 0.0100	NA	NA	<1.00	NA	NA	NA	<1.00	NA	NA	NA	<1.00	NA	NA	NA
Anions																												
Bromide	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	<10.0	<5.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	mg/L	NS	250	8810	8760	8670	8850	8730	9,300	8830	8,960	8740	7,990	8,850	8,380	8,460	14300	22300	12600	12500	10700	14600	10200	10400	12800	12600	11900	12100
Sulfate	mg/L	NS	250	<100	NA	<200	<12.5	<100	NA	<200	<12.5	<200	<50.0	NA	<200	<12.5	<100	NA	<200	<12.5	<100	NA	<200	<12.5	<100	NA	<200	<12.5
Alkalinity																												
Bicarbonate Alkalinity	mg/L	NS	NS	450	448	310	398	620	582	630	570	620	320	305	360	348	172	190	165	170	335	352	340	292	215	250	210	218
Carbonate Alkalinity	mg/L	NS	NS	<10	<20.0	<10	<20.0	<10	<20.0	<10	<20.0	<10	<10	<20.0	<10	<20.0	<10	<20.0	<10	<20.0	<10	<20.0	<10	<20.0	<10	<20.0	<10	<20.0
Total Alkalinity	mg/L	NS	NS	450	448	310	398	620	582	630	570	620	320	305	360	348	172	190	165	170	335	352	340	292	215	250	210	218
Total Dissolved Solids (TDS)	mg/L	NS	500	20000	13900	16500	14000	17600	13,500	16500	14,400	16100	17,400	13,700	16,200	13,500	26200	23700	23400	22800	19600	18200	19400	16200	27300	20700	22800	21700
BTEX Compounds																												
Benzene	mg/L	0.005	NS	0.002	<0.00500	NA	NA	0.001	<0.00500	NA	NA	NA	<0.001	<0.00500	NA	NA	<0.001	<0.00500	NA	NA	<0.001	<0.00500	NA	NA	<0.001	<0.00500	NA	NA
Ethylbenzene	mg/L	0.7	NS	<0.001	<0.0250	NA	NA	<0.001	<0.0250	NA	NA	NA	<0.001	<0.00500	NA	NA	<0.001	<0.00500	NA	NA	<0.001	<0.00500	NA	NA	<0.001	<0.00500	NA	NA
Toluene	mg/L	1	NS	<0.005	<0.0500	NA	NA	0.021	<0.0500	NA	NA	NA	0.009	<0.0100	NA	NA	<0.005	<0.0100	NA	NA	0.006	<0.0100	NA	NA	<0.005	<0.01		

Table 8
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Parameters	Well Identifier:			L-11				L-12A				L-12B				MW-1		MW-1D		MW-2		MW-3		MW-4		DUP-06 (MW4)
	UTM Zone 15R Easting (m):			663429				663842				663842				663543		663545		663250		663239		663243		663243
	UTM Zone 15R Northing (m):			3355950				3356002				3356003				3356023		3356022		3356300		3355999		3355810		3355810
	reened Depth Interval (ft bgs):			17-27'				19-29'				44-54'				14-24'		52-62'		14-24'		14-24'		14-24'		14-24'
	Sample Date:			9/12/2023		10/16/2024		10/17/2023		10/16/2024		10/17/2023		10/16/2024		10/31/2024		10/30/2024		10/30/2024		10/31/2024		10/31/2024		10/31/2024
	Units	LDEQ RECAP GW _{SS}	EPA SMCL	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM	ICON	ERM
Total Metals																										
Arsenic	mg/L	0.01	NS	<0.100	0.0605	0.0410	0.0490	0.0012	<0.0100	0.0024	<0.0100	0.0831	NA	0.0874	0.0702	<0.100	NA	0.0634	0.0709	<0.0500	0.0495	<0.0100	0.0132	<0.0500	<0.0100	<0.500
Barium	mg/L	2	NS	6.11	6.06	6.79	6.06	0.315	0.3380	0.372	0.454	0.418	NA	0.549	0.204	23.1	NA	0.280	0.279	9.57	8.07	4.77	4.31	7.87	5.40	7.03
Cadmium	mg/L	0.005	NS	<0.100	NA	NA	NA	<0.0010	<0.00500	NA	NA	<0.0010	NA	NA	NA	<0.100	NA	<0.0010	<0.00500	<0.0100	<0.00500	<0.0100	<0.00500	<0.0500	<0.00500	<0.500
Calcium	mg/L	NS	NS	1450	NA	1510	1,420	99.2	100	107	96.6	67.3	NA	74.4	59.4	3020	NA	58.2	59.4	1420	1,400	937	881	1320	1,310	1310
Chromium	mg/L	0.1	NS	<0.100	NA	NA	NA	0.001	<0.0100	NA	NA	0.043	NA	NA	NA	<0.100	NA	0.004	<0.0100	<0.010	<0.0100	<0.010	<0.0100	<0.050	<0.0100	<0.500
Iron	mg/L	NS	0.3	123	NA	NA	NA	8.89	8.76	NA	NA	24.0	NA	NA	NA	257	NA	9.24	7.21	155	149	81.9	87.4	71.2	67.1	60.2
Lead	mg/L	0.015	NS	<0.100	NA	NA	NA	<0.0010	<0.0100	NA	NA	0.0062	NA	NA	NA	<0.100	NA	0.0016	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	0.0121	<0.0100
Magnesium	mg/L	NS	NS	463	NA	468	422	36.4	38.1	39.6	36.2	21.7	NA	28.2	18.8	847	NA	19.5	18.5	467	487	307	311	357	374	376
Manganese	mg/L	NS	0.05	19.3	NA	NA	NA	0.711	0.706	NA	NA	0.667	NA	NA	NA	29.8	NA	0.431	0.452	11.4	10.5	13.8	13.2	20.3	18.5	19.4
Mercury	mg/L	0.002	NS	<0.00020	NA	NA	NA	<0.00020	<0.000200	NA	NA	<0.00020	NA	NA	NA	<0.00020	NA	<0.00020	0.000245	<0.00020	<0.000200	<0.00020	0.000230	<0.00020	<0.000200	<0.00020
Potassium	mg/L	NS	NS	<10.0	NA	7.58	11.7519	1.90	<5.00	1.78	4.6739	3.90	NA	6.77	<5.00	14.4	NA	3.73	<5.00	11.2	17.4	7.72	10.4	12.1	25.1	<50.0
Selenium	mg/L	0.05	NS	<0.100	NA	NA	NA	<0.001	NA	NA	NA	0.002	NA	NA	NA	<0.100	NA	0.001	NA	<0.050	NA	<0.010	NA	<0.050	NA	<0.500
Silver	mg/L	0.018	0.10	<0.100	NA	NA	NA	<0.0010	NA	NA	NA	<0.0010	NA	NA	NA	<0.100	NA	<0.0010	NA	<0.0100	NA	<0.0100	NA	<0.0500	NA	<0.500
Sodium	mg/L	NS	NS	2320	2,410	2490	2,430	45.4	52.4	54.6	56.3538	37.1	NA	45.7	40.0	4180	NA	41.2	44.5	1370	1,540	727	802	3690	3,810	3580
Strontium	mg/L	NS	NS	15.8	14.7	NA	NA	0.559	0.583	NA	NA	0.380	NA	NA	NA	57.7	NA	0.375	0.393	12.1	11.9	7.13	6.40	37.5	<0.0100	36.7
Zinc	mg/L	1.1	5	<1.00	0.0159	NA	NA	<0.010	<0.0100	NA	NA	0.051	NA	NA	NA	<1.00	NA	0.013	<0.0100	<0.100	0.0261	<0.100	<0.0100	<0.500	0.0100	<5.00
Dissolved Metals																										
Arsenic	mg/L	0.01	NS	<0.100	NA	0.0437	NA	0.0010	NA	0.0018	NA	0.0741	0.0882	0.0676	NA	<0.100	0.0510	0.0594	NA	0.0389	NA	<0.0100	NA	<0.0500	NA	<0.0500
Barium	mg/L	2	NS	6.00	NA	6.47	NA	0.296	NA	0.355	NA	0.219	0.252	0.230	NA	21.3	19.9	0.251	NA	11.2	NA	4.92	NA	6.78	NA	7.20
Cadmium	mg/L	0.01	NS	<0.100	NA	NA	NA	<0.0010	NA	NA	NA	<0.0010	<0.00500	NA	NA	<0.100	<0.00500	<0.0010	NA	<0.0100	NA	<0.0100	NA	<0.0500	NA	<0.0500
Calcium	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	72.3	NA	NA	NA	3170	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	mg/L	0.10	NS	<0.100	NA	NA	NA	<0.001	NA	NA	NA	0.005	<0.0100	NA	NA	<0.100	<0.0100	<0.001	NA	<0.010	NA	<0.010	NA	<0.050	NA	<0.050
Iron	mg/L	NS	0.30	122	NA	NA	NA	7.85	NA	NA	NA	6.87	5.88	NA	NA	237	263	6.76	NA	177	NA	83.0	NA	65.5	NA	61.5
Lead	mg/L	0.02	NS	<0.100	NA	NA	NA	<0.0010	NA	NA	NA	<0.0010	<0.0100	NA	NA	<0.100	0.0130	<0.0010	NA	<0.0100	NA	<0.0100	NA	<0.0100	NA	<0.0100
Magnesium	mg/L	NS	NS	459	NA	NA	NA	<0.100	NA	NA	NA	<0.100	23.1	NA	NA	NA	882	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	mg/L	NS	0.05	18.9	NA	NA	NA	0.730	NA	NA	NA	0.438	0.466	NA	NA	27.4	24.6	0.391	NA	12.6	NA	13.6	NA	19.1	NA	18.2
Mercury	mg/L	0.00	NS	<0.00020	NA	NA	NA	<0.00020	NA	NA	NA	<0.00020	<0.000200	NA	NA	<0.00020	<0.000200	<0.00020	NA	<0.00020	NA	<0.00020	NA	<0.00020	NA	<0.00020
Potassium	mg/L	NS	NS	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5.00	NA	NA	NA	31.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	mg/L	0.05	NS	<0.100	NA	NA	NA	<0.001	NA	NA	NA	<0.001	NA	NA	NA	<0.100	NA	<0.001	NA	0.013	NA	<0.010	NA	<0.050	NA	<0.050
Silver	mg/L	0.02	0.10	<0.100	NA	NA	NA	<0.0010	NA	<0.010	NA	<0.0010	NA	NA	NA	<0.100	NA	<0.0010	NA	0.0364	NA	<0.0100	NA	<0.0500	NA	<0.0500
Sodium	mg/L	NS	NS	2110	NA	NA	NA	NA	NA	NA	NA	NA	50.1	NA	NA	NA	5260	NA	NA	NA	NA	NA	NA	NA	NA	NA
Strontium	mg/L	NS	NS	15.2	NA	NA	NA	<0.001	NA	NA	NA	<0.001	0.437	NA	NA	59.0	<0.0100	0.358	NA	10.9	NA	6.46	NA	35.1	NA	34.3
Zinc	mg/L	1.10	5.00	<1.00	NA	NA	NA	<0.010	NA	NA	NA	0.012	<0.0100	NA	NA	<1.00	0.0262	<0.010	NA	<0.100	NA	<0.100	NA	<0.500	NA	<0.500
Anions																										
Bromide	mg/L	NS	NS	NA	NA	NA	NA	NA	<0.100	NA	NA	NA	<0.100	NA	NA	NA	NA	NA	<0.100	NA	<5.00	NA	NA	NA	NA	NA
Chloride	mg/L	NS	250	7140	9,600	8000	8,130	8.12	8.34	8.09	9.97	7.24	7.75	7.24	52.4	15300	15900	8.16	0.537	6450	6830	3330	3,220	8840	8750	8370
Sulfate	mg/L	NS	250	37.0	NA	<200	<12.5	0.530	0.807	<1.00	<0.250	0.590	0.382	<1.00	<0.250	<200	<25.0	9.19	0.556	<100	38.3	<50.0	6.12	<200	19.8	<200
Alkalinity																										
Bicarbonate Alkalinity	mg/L	NS	NS	205	270	240	280	520	502	520	482	350	320	360	322	200	235	330	295	210	245	540	535	620	620	650
Carbonate Alkalinity	mg/L	NS	NS	<10	<20.0	<10	<20.0	<10	<20.0	<10	<20.0	<10	<20.0	<10	<20.0	<10	<20.0	<10	<20.0	<10	<20.0	<10	<20.0	<10	<20.0	<10
Total Alkalinity	mg/L	NS	NS	205	270	240	280	520	502	520	482	350	320	360	322	200	235	330	295	210	245	540	535	620	620	650
Total Dissolved Solids (TDS)	mg/L	NS	500	19100	12,600	15900	12,200	569	558	650	506	358	362	364	336	28700	28,400	375	354	13000	11,300	7030	5,800	15700	15,200	16400
BTEX Compounds																										
Benzene	mg/L	0.005	NS	<0.001	<0.00500	NA	NA	<0.001	<0.00500	NA	NA	<0.001	<0.00500	NA	NA	0.002	<0.00500	<0.001	<0.00500	<0.001	<0.00500	<0.001	<0.00500	<0.001	<0.00500	<0.001
Ethylbenzene	mg/L	0.7	NS	<0.001	<0.0250	NA	NA	<0.001	<0.00500	NA	NA	<0.001	<0.00500	NA	NA	<0.001	<0.00500	<0.001	<0.00500	<0.001	<0.00500	<0.001	<0.00500	<0.001	<0.00500	<0.001
Toluene	mg/L	1	NS	0.043	<0.0500	NA	NA	<0.005	<0.0100	NA	NA	<0.005	<0.0100	NA	NA	<0.005	<0.010									

Table 8
Groundwater Analytical Data
Paul M. Levert, et al. v Union Texas International Corporation, et al.
Bayou Choctaw Oil Gas Field
West Baton Rouge Parish, Louisiana

Notes:
ft bgs = feet below ground surface
BTEX - Benzene, Toluene, Ethylbenzene, and xylenes
m = meters
mg/L = milligrams per liter
pCi/L = picocuries per liter
NA = Not analyzed or available.; NS = No standard available
UTM = Universal Transverse Mercator
< - Not detected at or above the reporting limit shown.
Bolded values were detected in the sample.
Shaded or underlined results indicates exceedance of corresponding regulatory standard.
GW_{SS} - RECAP Groundwater Screening Standard
SMCL - EPA Secondary Maximum Contaminant Level

Table 9**Groundwater Field Parameters***Paul M. Levert, et al. v Union Texas**Bayou Choctaw Oil Gas Field**West Baton Rouge Parish, Louisiana*

Well ID **L-1A**
 Date 9/5/2023
 DTW (ft btoc) 5.29
 Stickup (ft agl) flush
 TD (ft btoc) 25.65

Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
12:16	Start purging							
ICON								
12:16	7.23	15.72	31	NM	NM	13,740	-104	0
12:20	6.76	17.77	24.6	NM	NM	16,030	-110	0.5
12:24	6.55	16.83	24.3	NM	15.9	14,930	-118	1
12:28	6.51	15.99	24.4	NM	61.5	14,080	-118	1.5
12:32	6.45	15.4	24.4	NM	23.7	13,520	-114	2
12:40	5.65	14.76	24.5	NM	32.2	13,600	-120	3
12:44	6.20	14.64	25	NM	49.2	12,760	-103	3.5
12:53	6.21	15.41	25.4	NM	NM	13,500	-109	4.5
12:59	6.27	14.07	25.2	NM	23.2	12,230	-107	5
ERM								
12:16	6.47	17.87	28.9	NM	NM	16,100	-57	0
12:20	6.32	17.66	24.3	NM	NM	15,970	-93	0.5
12:24	6.32	16.62	24.0	NM	NM	14,930	-102	1
12:28	6.3	15.81	24.3	NM	NM	14,110	-105	1.5
12:32	6.28	15.23	24.6	NM	NM	13,530	-104	2
12:40	6.28	14.68	24.5	NM	NM	12,960	-102	3
12:44	6.26	14.43	24.8	NM	NM	12,760	-102	3.5
12:53	6.15	16.04	25.5	NM	NM	14,350	-98	4.5
12:59	6.29	14.00	25.1	NM	NM	12,270	-105	5
13:00	Begin sampling							
13:35	Finish sampling							

Well ID **L-1A**
 Date 10/17/2024
 DTW (ft btoc) 3.45
 Stickup (ft agl) flush
 TD (ft btoc) 25.67

Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
ERM								
8:42	5.96	13.03	21.2	20.44	OR	NM	-40.2	0
8:46	5.94	11.93	22.1	2.10	228	NM	-75.5	0.5
8:51	5.94	11.80	22.1	1.49	41.7	NM	-84.7	1
8:57	5.93	11.81	22.1	1.38	13.8	NM	-88.2	1.5
9:02	5.93	11.84	22.1	1.48	13.3	NM	-89.7	2
9:07	5.93	11.82	22.2	1.10	8.72	NM	-91.2	2.5
9:15	Sample time							
NR	Finish sampling							

Table 9**Groundwater Field Parameters***Paul M. Levert, et al. v Union Texas**Bayou Choctaw Oil Gas Field**West Baton Rouge Parish, Louisiana*

Well ID **L-1B**
 Date 9/5/2023
 DTW (ft btoc) 1.82
 Stickup (ft agl) flush
 TD (ft btoc) 56.70

Time	pH	SC [μS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
11:18	Start purging							
ICON								
11:18	8.17	1881	30.8	NM	NM	1331	-84	0
11:21	7.49	1780	25.0	NM	NM	1261	-101	0.5
Stopped pump, put on check valve								
11:37	7.57	1777	28.6	NM	NM	1252	-122	1
11:43	7.45	1755	27.4	NM	NM	1239	-69	1.25
Pump turned off, dry, let recharge								
ERM								
11:21	7.29	1821	25.1	NM	NM	1333	-13	0.5
Stopped pump, put on check valve								
11:37	7.20	1746	27.0	NM	NM	1248	-43	1
11:43	7.06	1720	26.9	NM	NM	1226	-61	1.25
Pump turned off, dry, let recharge								
11:48	Pump turned on							
12:01	Pump turned off, dry, very little water							

Date 9/11/2023
 DTW (ft btoc) 13.78
 TD (ft btoc) 56.78

Time	pH	SC [μS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS (ppm)	ORP [mV]	Vol [Gal]
8:55	5.78	1732	24.8	NM	NM	1263	151	0
9:00	6.48	1040	23	NM	82.7	719	-54	0.5
9:08	6.55	1050	23.2	NM	53.6	731	-106	0.75
9:15	6.61	1061	23.7	NM	114	732	-95	1
9:23	6.74	1065	24.9	NM	NM	733	-98	1.15 (Dry)
Let recharge								

Date 9/11/2023

Time	Note
7:30	Start sampling L-1B
7:57	Finish sampling L-1B. ICON field filter metals. Radium sample not collected.

Table 9**Groundwater Field Parameters***Paul M. Levert, et al. v Union Texas**Bayou Choctaw Oil Gas Field**West Baton Rouge Parish, Louisiana*

Well ID **L-1B**
 Date 10/17/2024
 DTW (ft btoc) 0.00
 Stickup (ft agl) flush
 TD (ft btoc) 56.73

Time	pH	SC [μS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
ERM								
8:13	6.88	594.6	20.4	14.61	29	NM	-90	0
8:16	6.86	588.8	21.5	2.07	OR	NM	-121	0.5
8:22	6.83	594.1	21.1	2.13	OR	NM	-136	1
8:27	6.85	596.4	20.7	4.70	OR	NM	-135	1.25
Dry at 1.25 gal.								
13:00	Sample time							
	*Well went dry while sampling, wait for recharge							
15:10	Resume sampling							
15:20	Finish sampling							

Well ID **L-2**
 Date 9/8/2023
 DTW (ft btoc) 7.04
 Stickup (ft agl) -
 TD (ft btoc) 27.62

Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
8:25	Start purging			NM				
8:25	5.24	23.74	23.4	NM	NM	22.5	-19	0
8:30	5.74	25.33	21.3	NM	NM	24.58	-84	0.5
8:35	5.84	25.88	21.1	NM	62.5	25.02	-98	1
8:39	5.85	25.98	21.1	NM	42.6	25.20	-97	1.5
8:43	5.93	26.44	21.5	NM	40.2	27.73	-95	2
8:48	5.99	26.25	21.7	NM	30.2	25.43	-94	2.5
8:55	6.03	26.35	21.8	NM	11.7	25.53	-98	3
9:00	Sample time							

Table 9**Groundwater Field Parameters***Paul M. Levert, et al. v Union Texas**Bayou Choctaw Oil Gas Field**West Baton Rouge Parish, Louisiana***Well ID****L-2**

Date 10/15/2024

DTW (ft btoc) 5.53

Stickup (ft agl) -

TD (ft btoc) 27.64

Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
ERM								
11:00	5.77	22.61	22.9	4.94	OR	NM	-72.9	0
11:05	5.77	23.48	22.4	1.66	693	NM	-83.3	0.5
11:11	5.78	23.88	22.2	1.31	74.5	NM	-88.3	1
11:17	5.78	23.61	22.3	1.14	20.7	NM	-91.1	1.5
11:24	5.78	23.11	22.7	1.93	25.5	NM	-92.8	2
11:30	5.77	21.90	22.6	3.91	80.1	NM	-93.3	2.5
11:37	5.77	21.23	22.6	5.12	33.9	NM	-94.0	3
11:44	5.77	20.92	22.6	5.22	35.2	NM	-93.9	3.5
11:50	5.77	21.33	22.6	4.27	22.9	NM	-94.4	4

12:00 Sample time
NR Finish sampling

Well ID**L-3**

Date 9/11/2023

DTW (ft btoc) 5.16

Stickup (ft agl) 1.98

TD (ft btoc) 31.75

Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
9:54	5.57	70.33	24.6	NM	NM	86,300	-50	0
9:59	5.64	89.12	21.7	NM	NM	125,100	-79	0.5
10:05	5.69	89.35	21.5	NM	NM	127,000	-89	1
10:11	5.25	91.29	21.5	NM	120	131,500	-83	1.5
10:16	5.77	92.18	21.7	NM	50.9	132,400	-89	2
10:22	5.76	90.82	NM	NM	94.3	130,700	-84	2.5
10:30	Begin sampling							
11:03	Finish sampling							

Table 9**Groundwater Field Parameters***Paul M. Levert, et al. v Union Texas**Bayou Choctaw Oil Gas Field**West Baton Rouge Parish, Louisiana***Well ID L-3**

Date 10/14/2024

DTW (ft btoc) 3.70

Stickup (ft agl) 1.98

TD (ft btoc) 31.73

Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
13:02	5.81	91.39	23.6	17.9	OR	NM	-40.4	0
13:09	5.76	73.11	22.1	1.51	249	NM	-98.0	0.5
13:15	5.76	75.21	21.9	1.19	35.0	NM	-104.2	1
13:20	5.75	79.12	21.9	1.07	17.5	NM	-106.1	1.5
13:25	5.75	76.63	21.7	0.94	10.0	NM	-108	2
13:30	5.77	76.43	21.8	0.90	6.47	NM	-109.7	2.5
13:35	5.77	76.48	21.8	0.80	7.76	NM	-112.1	3

13:40 Begin sampling

13:58 Finish sampling

Well ID L-4A

Date 9/11/2023

DTW (ft btoc) 7.01

Stickup (ft agl) 2.24

TD (ft btoc) 28.23

Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
12:23	Start purging							
ICON								
12:31	5.75	35.44	28.2	NM	NM	35,600	-59	0
12:35	5.73	49.35	22.7	NM	NM	52,480	-84	0.5
12:39	5.74	50.94	23.0	NM	183	55,700	-91	1
12:43	5.76	52.26	22.0	NM	NM	52,300	-87	1.5
12:46	5.76	46.5	22.0	NM	NM	49,620	-95	2
12:53	5.84	56.51	23.3	NM	NM	57,780	-95	3
Pump slowed, tubing pulled up								
12:59	5.89	56.51	23.3	NM	53.6	63,600	-60	3.5
13:05	5.86	53.93	22.6	NM	115	59,230	-79	4
ERM								
12:31	5.63	39.84	24.8	NM	NM	42,170	14	0
12:35	5.69	48.56	22.3	NM	NM	53,400	-63	0.5
12:39	5.76	50.97	21.9	NM	NM	56,930	-85	1
12:43	5.83	51.85	21.8	NM	NM	58,500	-91	1.5
12:46	5.88	48.65	21.8	NM	NM	53,810	-97	2
12:53	5.88	52.15	21.6	NM	NM	58,810	-103	3
Pump slowed, tubing pulled up								
12:59	5.87	55.41	22.8	NM	NM	63,940	-96	3.5
13:05	5.88	52.59	22.3	NM	NM	60,040	-96	4

13:10 Begin sampling

13:35 Finish sampling

Table 9**Groundwater Field Parameters***Paul M. Levert, et al. v Union Texas**Bayou Choctaw Oil Gas Field**West Baton Rouge Parish, Louisiana***Well ID L-4A**

Date 10/14/2024

DTW (ft btoc) 5.89

Stickup (ft agl) 1.98

TD (ft btoc) 28.16

Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
14:14	5.85	39.42	25.7	22.3	OR	NM	-73.8	0
14:18	5.97	37.83	22.4	1.78	410	NM	-95.8	0.5
14:23	5.99	38.80	22.2	1.23	84.5	NM	-101.6	1
14:29	5.96	38.85	21.9	0.99	26.5	NM	-102.9	1.5
14:36	5.94	38.90	22.0	0.88	13.8	NM	-104.8	2
14:43	5.92	38.97	22.0	0.89	7.67	NM	-105.6	2.5
14:50	5.91	40.67	22.0	0.79	6.89	NM	-106.6	3
14:56	5.90	40.55	21.9	0.73	5.34	NM	-107.2	3.5
15:05	5.89	40.35	21.4	0.70	4.62	NM	-108.0	4

15:10 Begin sampling

15:30 Finish sampling

Well ID L-4B

Date 9/12/2023

DTW (ft btoc) 4.26

Stickup (ft agl) 2.41

TD (ft btoc) 64.39

Time	pH	SC [μS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
9:52	Start purging							
ICON								
9:52	6.44	5168	26.1	NM	NM	3903	-29	0
9:56	6.45	5059	22.4	NM	NM	3915	-93	0.5
10:03	6.57	4925	22.8	NM	NM	3799	-107	1
10:10	6.61	4900	22.9	NM	NM	3778	-90	1.5
ERM								
9:52	6.59	4950	24.7	NM	NM	3903	29	0
9:56	6.63	4874	22.4	NM	NM	3850	-32	0.5
10:03	6.70	4714	22.8	NM	NM	3714	-76	1
10:10	6.71	4718	22.8	NM	NM	3710	-72	1.5

10:15 Pump dry ~1.6 gal

10:45 Pump on

10:50 Pump dry ~1.7 gal

14:30 Start sampling L-4B

14:35 Stop sampling L-4B. Well went dry, filled 2-1L jars, partial 1L radium

Date 9/13/2023

Time	Note
7:32	Resume sampling L-4B
7:58	Stop sampling L-4B, well went dry, all samples filled except ERM radium
10:30	Resume sampling L-4B
10:40	Finish sampling L-4B. Well went dry. Limited volume for ERM radium.

Table 9**Groundwater Field Parameters***Paul M. Levert, et al. v Union Texas**Bayou Choctaw Oil Gas Field**West Baton Rouge Parish, Louisiana*

Well ID		L-4B						
Date	10/16/2024							
DTW (ft btoc)	3.26							
Stickup (ft agl)	2.41							
TD (ft btoc)	64.42							
		SC	Temp	DO	Turb	TDS	ORP	Vol
Time	pH	[μS/cm]	[C]	[%]	[NTU]	[ppm]	[mV]	[Gal]
ERM								
8:00	6.82	734.1	20.3	10.98	204	NM	-118.7	0
8:03	6.87	728.5	20.5	1.01	OR	NM	-138.5	0.5
8:06	6.87	730.5	20.4	0.56	OR	NM	-149.3	1
8:11	6.88	734.3	20.1	7.83	OR	NM	-146.2	1.5
NR	Well dry ~1.6 gal.							
Date	10/16/2024							
Time	Note							
13:25	Sample time							
	*Well went dry; Return next day to finish sampling							
Date	10/17/2024							
Time	Note							
7:40	Finish sampling salts and metals							
Well ID		L-5						
Date	9/12/2023							
DTW (ft btoc)	4.45							
Stickup (ft agl)	1.91							
TD (ft btoc)	23.90							
		SC	Temp	DO	Turb	TDS	ORP	Vol
Time	pH	[mS/cm]	[C]	[%]	[NTU]	[ppm]	[mV]	[Gal]
13:23	Start purging							
ICON								
13:23	6.22	20.49	28.3	NM	NM	8,870	-44	0
13:28	6.34	21.91	22.5	NM	NM	20,630	-112	1
13:33	6.50	22.08	22.4	NM	NM	21,090	-104	2
Pump slowed, tubing pulled up								
13:37	6.62	21.43	22.8	NM	4.74	20,120	-106	2.5
13:42	6.62	22.3	23.2	NM	9.43	20,910	-101	3
ERM								
13:23	6.30	22.03	25.1	NM	NM	21,140	-27	0
13:28	6.59	20.49	22.1	NM	NM	19,570	-102	1
13:33	6.52	20.95	22.0	NM	NM	20,110	-112	2
Pump slowed, tubing pulled up								
13:37	6.49	20.22	22.4	NM	NM	19,200	-113	2.5
13:42	6.45	20.95	22.9	NM	NM	20,040	-112	3
13:50	Begin sampling							
14:15	Finish sampling							

Table 9**Groundwater Field Parameters***Paul M. Levert, et al. v Union Texas**Bayou Choctaw Oil Gas Field**West Baton Rouge Parish, Louisiana***Well ID****L-5**

Date 10/15/2024

DTW (ft btoc) 3.24

Stickup (ft agl) 1.91

TD (ft btoc) 23.89

Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
ERM								
9:34	6.08	24.96	21.9	14.84	OR	NM	-70.1	0
9:40	5.95	21.88	21.6	2.99	60.8	NM	-101.5	0.5
9:46	5.94	22.04	21.5	1.78	12.8	NM	-105.3	1
9:52	5.94	21.83	21.5	1.72	11.4	NM	-107.4	1.5
10:00	5.93	21.92	21.5	1.35	4.65	NM	-109.8	2
10:05	5.93	21.61	21.5	1.43	3.95	NM	-111.4	2.5
10:11	5.93	21.78	21.5	1.23	6.23	NM	-113.5	3

10:15 Sample time
NR Finish sampling**Well ID****L-6**

Date 9/13/2023

DTW (ft btoc) 4.46

Stickup (ft agl) 2.21

TD (ft btoc) 23.02

Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
8:18	Start purging							
ICON								
8:18	7.10	18.97	23.5	NM	NM	17,350	-104	0
8:24	6.81	20.80	21.5	NM	NM	19,510	-127	1
Pump slowed, tubing pulled up								
8:29	6.67	20.48	21.8	NM	NM	19,080	-133	1.5
8:34	6.67	21.02	21.7	NM	29.5	19,780	-130	2
8:37	6.65	21.60	21.6	NM	25.8	20,270	-130	2.5
8:42	6.62	22.24	21.6	NM	10.2	21,170	-130	3
ERM								
8:18	5.45	26.53	22.5	NM	NM	26,380	228	0
8:24	6.04	20.16	21.4	NM	NM	19,210	117	1
Pump slowed, tubing pulled up								
8:29	6.35	19.51	21.8	NM	NM	18,820	18	1.5
8:34	6.60	20.19	21.8	NM	NM	19,250	-97	2
8:37	6.46	20.78	21.6	NM	NM	19,950	-118	2.5
8:42	6.44	21.43	21.6	NM	NM	20,640	-124	3
8:45	Begin sampling							
9:10	Finish sampling							

Table 9**Groundwater Field Parameters***Paul M. Levert, et al. v Union Texas**Bayou Choctaw Oil Gas Field**West Baton Rouge Parish, Louisiana*

Well ID **L-6**
Date 10/15/2024
DTW (ft btoc) 3.30
Stickup (ft agl) 2.21
TD (ft btoc) 23.05

Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
ERM								
7:52	5.89	27.28	21.7	11.58	OR	NM	-89.9	0.0
7:57	6.23	20.17	21.4	2.77	544	NM	-127.9	0.5
8:03	6.20	20.20	21.3	1.86	16.8	NM	-127.9	1
8:09	6.19	19.72	21.21	1.52	7.43	NM	-127.7	1.5
8:15	6.18	18.19	21.18	1.18	7.61	NM	-128.0	2
8:21	6.18	17.76	21.19	1.08	5.38	NM	-127.8	2.5
8:27	6.17	16.07	21.18	1.04	5.34	NM	-128.0	3
8:32	6.17	21.11	21.19	1.01	4.78	NM	-127.9	3.5
8:38	6.16	20.18	21.23	0.98	5.23	NM	-127.8	4
8:45	Sample time							
9:05	Finish sampling							

Well ID **L-7**
Date 9/5/2023
DTW (ft btoc) 7.41
Stickup (ft agl) 1.82
TD (ft btoc) 27.58

Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
13:53	Start purging							
ICON								
13:54	6.88	21.60	30.7	NM	NM	20,080	-101	0
13:56	6.70	25.09	23.6	NM	NM	24,080	-115	0.5
14:00	6.49	24.55	22.6	NM	NM	23,360	-122	1
14:05	6.47	22.70	22.5	NM	NM	21,360	-125	2
14:11	6.46	22.14	23.5	NM	51.5	21,150	-112	3
14:18	6.44	21.89	24.6	NM	43.0	20,390	-110	3.5
14:23	6.41	21.68	23.7	NM	38.2	20,220	-112	4
ERM								
13:54	6.84	26.97	27.5	NM	NM	26,430	-44	0
13:56	6.49	24.58	22.6	NM	NM	23,700	-99	0.5
14:00	6.42	23.81	22.2	NM	NM	22,910	-106	1
14:05	6.40	22.26	22.3	NM	NM	21,310	-114	2
14:11	6.31	21.80	23.3	NM	NM	20,520	-108	3
14:18	6.28	21.29	23.4	NM	NM	20,120	-103	3.5
14:23	6.26	21.15	22.7	NM	NM	19,960	-102	4
14:30	Begin sampling							
14:55	Finish sampling							

Table 9**Groundwater Field Parameters***Paul M. Levert, et al. v Union Texas**Bayou Choctaw Oil Gas Field**West Baton Rouge Parish, Louisiana***Well ID****L-7**

Date 10/17/2024

DTW (ft btoc) 5.64

Stickup (ft agl) 1.82

TD (ft btoc) 27.61

Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
ERM								
10:11	5.84	22.40	19.7	25.06	OR	NM	-15	0
10:16	5.87	21.95	20.7	2.63	3.53	NM	-77	0.5
10:24	5.87	21.27	20.2	1.78	35.3	NM	-86	1
10:30	5.87	20.94	20.2	1.47	9.80	NM	-89	1.5
10:39	5.87	20.64	20.3	1.35	7.96	NM	-91	2
10:46	5.87	20.66	20.3	1.17	9.86	NM	-92	2.5

10:50 Sample time
NR Finish sampling**Well ID****L-8**

Date 9/12/2023

DTW (ft btoc) 4.19

Stickup (ft agl) 1.63

TD (ft btoc) 27.77

Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
8:35	Start purging							
ICON								
8:35	5.10	32.21	24.0	NM	NM	32,140	152	0
8:39	5.33	32.44	21.4	NM	NM	32,580	-5	0.5
8:42	5.42	33.43	20.9	NM	NM	33,790	-42	1
8:46	5.52	33.69	20.9	NM	NM	34,070	-59	2
8:50	5.55	33.60	21.3	NM	18.6	33,990	-67	2.5
8:55	5.58	33.72	21.4	NM	20.5	34,100	-72	3
ERM								
8:35	6.29	30.54	23.0	NM	NM	31,160	123	0
8:39	6.05	31.18	21.3	NM	NM	31,900	16	0.5
8:42	5.99	32.14	20.9	NM	NM	33,070	-23	1
8:46	5.94	32.17	21.0	NM	NM	33,140	-51	2
8:50	5.93	32.10	21.4	NM	NM	33,050	-57	2.5
8:55	5.93	32.09	21.4	NM	NM	33,130	-62	3

9:00 Begin sampling

9:25 Finish sampling

Table 9**Groundwater Field Parameters***Paul M. Levert, et al. v Union Texas**Bayou Choctaw Oil Gas Field**West Baton Rouge Parish, Louisiana***Well ID****L-8**

Date 10/17/2024

DTW (ft btoc) 3.23

Stickup (ft agl) 1.63

TD (ft btoc) 27.79

Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
ERM								
11:53	5.65	25.56	22.1	11.26	OR	NM	-4	0
11:57	5.59	27.71	21.4	2.22	291	NM	-44	0.5
12:00	5.58	28.48	21.2	1.64	32.9	NM	-56	1
12:05	5.58	29.06	21.3	1.31	10.8	NM	-61	1.5
12:10	5.58	29.16	21.4	1.18	8.31	NM	-63	2
12:16	5.59	29.36	21.4	1.07	9.43	NM	-65	2.5
12:20	Sample time							
12:40	Finish sampling							

Well ID**L-9**

Date 9/11/2023

DTW (ft btoc) 4.62

Stickup (ft agl) 1.64

TD (ft btoc) 23.65

Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
14:02	Start purging							
ICON								
14:02	6.15	15.48	28.8	NM	NM	13,380	-74	0
14:08	6.12	25.57	22.1	NM	NM	24,500	-103	1
14:11	6.11	25.22	21.9	NM	45.3	24,310	-109	1.5
14:16	6.12	25.11	22.2	NM	NM	24,050	-109	2
14:20	6.14	25.69	22.2	NM	NM	24,640	-107	NM
ERM								
14:02	5.82	22.67	25.8	NM	NM	21,900	12	0
14:08	6.27	25.04	22.1	NM	NM	24,720	-78	1
14:11	6.18	24.62	21.9	NM	NM	24,220	-88	1.5
14:16	6.17	24.62	21.9	NM	NM	24,190	-93	2
14:20	6.16	25.17	22.4	NM	NM	24,780	-95	NM
14:25	Begin sampling							
14:47	Finish sampling							

Table 9**Groundwater Field Parameters***Paul M. Levert, et al. v Union Texas**Bayou Choctaw Oil Gas Field**West Baton Rouge Parish, Louisiana*

Well ID **L-9**
 Date 10/15/2024
 DTW (ft btoc) 3.52
 Stickup (ft agl) 1.64
 TD (ft btoc) 23.72

Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
ERM								
12:45	5.70	26.01	23.7	2.89	OR	NM	-74.2	0
12:51	5.78	25.14	21.9	1.20	926	NM	-91.9	0.5
12:56	5.79	25.03	21.7	1.06	199	NM	-94.5	1
13:02	5.77	25.01	21.7	0.94	67.9	NM	-96.5	1.5
13:08	5.77	24.88	21.6	0.83	26.9	NM	-97.6	2
13:14	5.77	24.99	21.6	0.77	21.5	NM	-98.4	2.5
13:22	5.77	25.00	21.5	0.72	11.9	NM	-99.0	3

13:25 Sample time
 NR Finish sampling

Well ID **L-10**
 Date 9/13/2023
 DTW (ft btoc) 4.37
 Stickup (ft agl) 1.81
 TD (ft btoc) 23.50

Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
9:38	Start purging							
ICON								
9:38	6.91	27.24	25.0	NM	NM	26,390	-50	0
9:44	6.58	30.44	21.3	NM	NM	30,030	-66	1
Pump slowed, tubing pulled up								
9:48	6.41	30.58	22.2	NM	75.3	30,220	-69	1.5
9:52	6.19	30.67	21.9	NM	36.6	30,380	-84	2
9:56	6.18	30.7	21.6	NM	6.95	30,400	-89	2.5
ERM								
9:38	7.14	27.38	23.1	NM	NM	27,220	-94	0
9:44	6.27	29.31	21.3	NM	NM	29,590	-104	1
Pump slowed, tubing pulled up								
9:48	6.16	29.35	21.9	NM	NM	29,580	-101	1.5
9:52	6.12	29.46	22.0	NM	NM	29,710	-101	2
9:56	6.12	29.42	21.6	NM	NM	29,720	-101	2.5

10:00 Begin sampling
 10:22 Finish sampling

Table 9**Groundwater Field Parameters***Paul M. Levert, et al. v Union Texas**Bayou Choctaw Oil Gas Field**West Baton Rouge Parish, Louisiana*

Well ID **L-10**
 Date 10/16/2024
 DTW (ft btoc) 3.35
 Stickup (ft agl) 1.81
 TD (ft btoc) 23.51

Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
ERM								
10:42	5.84	23.78	20.4	14.77	OR	NM	-41	0
10:47	5.77	26.86	20.6	1.63	220	NM	-76	0.5
10:52	5.76	27.00	20.6	1.27	62.4	NM	-82	1
10:56	5.76	27.14	20.6	1.03	34.2	NM	-84	1.5
11:00	5.76	27.20	20.6	0.90	14.7	NM	-86	2
11:05	5.75	27.58	20.6	0.88	9.89	NM	-87	2.5
11:10	5.75	27.64	20.6	0.78	6.42	NM	-88	3

11:15 Sample time
 NR Finish sampling

Well ID **L-11**
 Date 9/12/2023
 DTW (ft btoc) 3.29
 Stickup (ft agl) 1.51
 TD (ft btoc) 28.3

Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
11:10	Start purging							
ICON								
11:10	6.45	14.03	25.7	NM	NM	12,320	-12	0
11:16	6.18	26.06	21.8	NM	NM	25,200	-64	1
11:18	5.94	25.82	21.3	NM	NM	24,850	-78	1.5
Pump slowed, tubing pulled up								
11:25	6.20	23.14	22.1	NM	21.8	21,920	-72	2
11:29	6.10	22.24	22.1	NM	21.9	20,920	-83	2.5
11:34	6.01	21.08	22.3	NM	13.1	19,630	-85	3
ERM								
11:10	6.54	23.08	23.8	NM	NM	22,330	0	0
11:16	6.19	24.99	21.6	NM	NM	24,600	-55	1
11:18	6.16	24.51	21.2	NM	NM	24,280	-64	1.5
Pump slowed, tubing pulled up								
11:25	6.19	21.62	21.9	NM	NM	20,750	-77	2
11:29	6.17	20.77	22.0	NM	NM	19,820	-80	2.5
11:34	6.14	20.34	22.2	NM	NM	19,400	-81	3

11:40 Begin sampling
 12:03 Finish sampling

Table 9**Groundwater Field Parameters***Paul M. Levert, et al. v Union Texas**Bayou Choctaw Oil Gas Field**West Baton Rouge Parish, Louisiana***Well ID L-11**

Date 10/16/2024

DTW (ft btoc) 2.28

Stickup (ft agl) 1.51

TD (ft btoc) 28.36

Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
ERM								
11:52	5.64	25.61	21.7	5.21	375	NM	-47	0
11:55	5.70	21.41	21.3	2.47	223	NM	-66	0.5
12:00	5.69	20.95	21.1	1.78	26.8	NM	-73	1
12:05	5.70	14.05	21.3	1.31	96.5	NM	-77	1.5
12:10	5.71	1.025	21.3	1.15	25.8	NM	-79	2
12:15	5.72	1.238	21.2	1.07	7.48	NM	-80	2.5
12:21	5.72	0.793	21.2	0.98	14.7	NM	-82	3
12:27	5.72	17.67	21.1	0.92	6.79	NM	-83	3.5
12:33	5.73	20.99	21.2	0.85	4.93	NM	-84	4

12:40 Sample time
NR Finish sampling**Well ID L-12A**

Date 10/17/2023

DTW (ft btoc) 8.93

Stickup (ft agl) 1.94

TD (ft btoc) 30.73

Time	pH	SC [μS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
11:46	Start purging							
ICON								
11:46	7.41	86.82	23.2	NM	NM	608.0	-5	0
11:49	7.12	87.92	21.8	NM	664	619.4	-24	0.5
11:54	7.10	90.35	21.7	NM	85	632.5	-58	1
11:58	7.07	90.12	21.8	NM	92	635.4	-76	1.5
12:04	7.07	90.13	22.2	NM	8.79	634.3	-78	2
ERM								
11:46	7.75	84.96	22.0	NM	NM	598.0	-100	0
11:49	7.62	86.50	21.3	NM	NM	609.1	-102	0.5
11:54	7.50	88.74	21.2	NM	NM	625.4	-114	1
11:58	7.39	88.47	21.3	NM	NM	623.6	-125	1.5
12:04	7.30	88.49	21.6	NM	NM	622.0	-125	2
12:10	Begin sampling							
12:46	Finish sampling							

Table 9**Groundwater Field Parameters***Paul M. Levert, et al. v Union Texas**Bayou Choctaw Oil Gas Field**West Baton Rouge Parish, Louisiana*

Well ID **L-12A**
 Date 10/16/2024
 DTW (ft btoc) 10.64
 Stickup (ft agl) 1.94
 TD (ft btoc) 30.75

Time	pH	SC [μS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
ERM								
9:10	6.85	709.4	19.7	12.62	OR	NM	-89.9	0
9:16	6.70	714.3	20.1	1.80	127	NM	-113	0.5
9:22	6.64	680.0	20.2	1.24	172	NM	-115	1
9:28	6.62	691.4	20.2	1.13	249	NM	-119	1.5
9:34	6.62	674.2	20.2	1.04	28	NM	-120	2
9:40	6.62	677.7	20.1	1.03	25.4	NM	-122	2.5
9:46	6.62	672.3	20.2	0.99	12.5	NM	-122	3
9:52	6.62	691.6	20.2	0.92	10	NM	-123	3.5

10:00 Sample time
 NR Finish sampling

Well ID **L-12B**
 Date 10/17/2023
 DTW (ft btoc) 5.04
 Stickup (ft agl) 1.96
 TD (ft btoc) 55.9

Time	pH	SC [μS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
11:19	Start purging							
ICON								
11:19	8.02	60.03	22.7	NM	NM	415.3	11.5	0
11:23	8.04	59.6	21.6	NM	NM	415.3	11.6	0.5
11:31	7.48	59.25	21.9	NM	NM	410.7	49	1
11:41	7.47	59.44	23.5	NM	NM	407.9	-11	~1.45

Well dry, let recharge

ERM
 11:19 9.57 58.87 21.6 NM NM 407.7 8 0
 11:23 9.26 58.86 21.2 NM NM 408.7 7 0.5
 11:31 8.41 58.92 21.5 NM NM 408.6 -83 1
 11:41 7.98 58.77 21.9 NM NM 408.1 -111 ~1.45

Well dry, let recharge

15:00 Resumed purging, well dry
 15:35 Beging sampling. Filled containers except ERM EPH containers and all radium.
 15:45 Will allow well to recharge overnight.

Date 10/18/2023

Time	Note
8:45	Resume sampling L-12B. Filled ERM EPH containers and ICON radium. Well dry.
12:10	Resume sampling
12:15	Stop sampling, well dry. Filled ~80% of ERM radium container.
14:30	Resume sampling. Fill remainder of ERM radium container and complete sampling.

Table 9**Groundwater Field Parameters***Paul M. Levert, et al. v Union Texas**Bayou Choctaw Oil Gas Field**West Baton Rouge Parish, Louisiana*

Well ID		L-12B						
Date		10/16/2024						
DTW (ft btoc)		5.28						
Stickup (ft agl)		1.96						
TD (ft btoc)		55.9						
Time	pH	SC [μS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
ERM								
8:46	6.92	561.25	19.7	11.83	146	NM	-109.3	0
8:49	6.86	562.77	20.1	1.43	OR	NM	-131.9	0.5
8:55	6.95	551.21	19.9	23.99	OR	NM	-148.7	1
8:58	7.25	521.28	19.5	21.00	644	NM	-149.2	1.3
Well dry at ~1.3 gal.								
14:10		Sample time						
NR		Finish sampling						
Well ID		MW-1						
Date		10/31/2024						
DTW (ft btoc)		7.03						
Stickup (ft agl)		2.28						
TD (ft btoc)		26.37						
Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
ERM								
11:36	5.81	24.30	22.52	16.78	OR	NM	-14	0
11:38	5.88	17.95	21.82	1.85	OR	NM	-48	0.5
11:43	5.70	23.37	21.69	1.20	404	NM	-56	1
11:45	5.68	26.83	21.40	1.10	368	NM	-59	1.5
11:49	5.65	22.89	21.43	0.92	255	NM	-62	2
11:53	5.64	24.38	21.30	0.83	218	NM	-64	2.5
11:57	5.63	28.56	21.26	0.78	204	NM	-65	3
12:02	5.62	24.89	21.30	0.74	140	NM	-66	3.5
12:05	5.61	22.70	21.29	0.74	97.6	NM	-67	4
12:09	5.60	27.73	21.31	0.77	85.3	NM	-67	4.5
12:14	5.60	27.08	21.32	0.68	80.9	NM	-67	5
12:20		Sample time						
NR		Finish sampling						

Table 9**Groundwater Field Parameters***Paul M. Levert, et al. v Union Texas**Bayou Choctaw Oil Gas Field**West Baton Rouge Parish, Louisiana*

Well ID		MW-1D						
Date		10/30/2024						
DTW (ft btoc)		5.02						
Stickup (ft agl)		2.77						
TD (ft btoc)		64.97						
Time	pH	SC [μS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
ERM								
14:40	6.83	662.8	24.8	6.61	OR	NM	-55	0
14:43	6.85	626.5	23.8	1.64	OR	NM	-84	0.5
14:46	6.80	690.5	23.0	1.17	OR	NM	-101	1
14:48	6.76	529.6	23.3	1.13	OR	NM	-110	1.5
14:51	6.75	610.2	22.7	0.96	668	NM	-115	2
14:54	6.74	509.4	22.6	0.92	407	NM	-118	2.5
14:57	6.73	596.2	22.4	0.86	399	NM	-121	3
15:00	6.72	547.6	22.4	0.83	344	NM	-122	3.5
15:04	6.70	572.6	22.3	0.81	313	NM	-121	4
15:07	6.68	583.6	23.5	0.67	602	NM	-122	4.5
15:09	6.65	419.3	22.2	0.99	614	NM	-121	5
15:13	6.66	481.0	22.2	0.78	337	NM	-123	5.5
15:16	6.67	512.3	22.0	1.11	307	NM	-124	6
15:20	6.68	539.1	22.0	1.11	310	NM	-124	6.5
Turn down pump speed								
15:25	6.68	583.7	22.5	1.05	148	NM	-127	7
15:30	6.67	585.6	22.6	1.05	52.6	NM	-127	7.5
15:34	6.66	565.2	22.6	1.18	112	NM	-128	8
15:39	6.68	531.5	22.6	1.08	143	NM	-128	8.5
15:44	6.67	533.5	22.6	1.12	69.9	NM	-128	9
15:50	6.66	527.1	22.6	1.10	61.2	NM	-128	9.5
15:56	6.67	524.3	22.5	1.09	58.4	NM	-129	10
16:00	Sample time							
NR	Finish sampling							

Table 9**Groundwater Field Parameters***Paul M. Levert, et al. v Union Texas**Bayou Choctaw Oil Gas Field**West Baton Rouge Parish, Louisiana*

Well ID		MW-2						
Date		10/30/2024						
DTW (ft btoc)		8.19						
Stickup (ft agl)		3.05						
TD (ft btoc)		26.99						
Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
ERM								
12:00	6.01	12.65	23.5	6.60	OR	NM	-73	0
12:04	6.16	10.02	22.8	1.47	OR	NM	-90	0.5
12:08	6.13	11.36	22.5	1.18	604	NM	-94	1
12:13	6.07	9.726	22.4	1.07	175	NM	-95	1.5
12:18	6.03	12.05	22.6	0.90	885	NM	-94	2
12:23	5.99	14.07	22.7	0.88	119	NM	-91	2.5
12:28	5.98	12.76	22.8	0.82	75.2	NM	-90	3
12:33	5.99	11.01	22.7	0.80	45.6	NM	-91	3.5
12:39	5.98	11.20	22.7	0.74	39.2	NM	-91	4
12:44	5.97	11.41	22.7	0.71	38.4	NM	-90	4.5
12:49	5.96	11.43	22.5	0.69	40.5	NM	-91	5
13:00	Sample time							
NR	Finish sampling							
Well ID		MW-3						
Date		10/31/2024						
DTW (ft btoc)		6.16						
Stickup (ft agl)		2.4						
TD (ft btoc)		26.95						
Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
ERM								
7:49	6.45	3.094	22.7	5.67	OR	NM	-73	0
7:53	6.40	0.253	22.1	1.45	OR	NM	-96	0.5
7:58	6.26	6.484	21.9	1.29	445	NM	-105	1
8:02	6.24	6.532	21.9	1.16	214	NM	-109	1.5
8:08	6.21	7.656	21.8	0.99	104	NM	-113	2
8:13	6.20	6.431	21.8	0.96	69.3	NM	-112	2.5
8:17	6.19	8.992	21.8	0.93	86.6	NM	-113	3
8:23	6.18	8.212	21.9	1.02	36.0	NM	-114	3.5
8:28	6.15	7.557	22.0	1.00	39.4	NM	-115	4
8:35	6.16	9.078	22.0	0.90	30.8	NM	-117	4.5
8:42	6.15	9.249	22.2	0.91	24.6	NM	-117	5
9:45	Sample time							
NR	Finish sampling							

Table 9**Groundwater Field Parameters***Paul M. Levert, et al. v Union Texas**Bayou Choctaw Oil Gas Field**West Baton Rouge Parish, Louisiana*

Well ID		MW-4						
Date		10/31/2024						
DTW (ft btoc)		7.75						
Stickup (ft agl)		2.40						
TD (ft btoc)		26.18						
Time	pH	SC [mS/cm]	Temp [C]	DO [%]	Turb [NTU]	TDS [ppm]	ORP [mV]	Vol [Gal]
ERM								
10:17	6.06	29.96	23.4	17.84	OR	NM	-10	0
10:19	6.09	11.08	22.8	1.83	OR	NM	-68	0.5
10:21	6.07	17.87	23.0	2.53	OR	NM	-76	1
10:24	6.07	17.65	22.7	1.16	OR	NM	-86	1.5
10:28	6.06	16.15	22.5	1.05	OR	NM	-93	2
10:33	6.06	19.11	22.5	0.99	245	NM	-98	2.5
10:35	6.06	20.86	22.5	0.99	163	NM	-100	3
10:39	6.06	13.50	22.5	0.96	90.5	NM	-103	3.5
10:43	6.06	22.22	22.5	0.91	74.6	NM	-102	4
10:46	6.06	21.50	22.5	0.85	48.1	NM	-103	4.5
10:50	6.06	21.46	22.4	0.79	25.2	NM	-104	5
11:00	Sample time							
NR	Finish sampling							

Table 10**Surface Water Analytical Data***Paul M. Levert, et al. v Union Texas International Corporation, et al.**Bayou Choctaw Oil Gas Field**West Baton Rouge Parish, Louisiana*

			Sample ID	SW-1	SW-2
			Sample Date	10/31/2024	10/31/2024
Parameter	Units	AWQC-HH ^(a)		ERM	ERM
Metals (total)					
Arsenic	mg/L	0.01		0.00530	0.0048
Barium	mg/L	NS		0.090	0.090
Calcium	mg/L	NS		50.2	42.7
Magnesium	mg/L	NS		16.7	14.8
Potassium	mg/L	NS		5.68	4.95
Sodium	mg/L	NS		29.2	25.8
Metals (dissolved)					
Arsenic	mg/L	0.01		0.0054	0.0041
Barium	mg/L	NS		0.088	0.083
Water Quality					
Chloride	mg/L	60		29.1	27.1
Sulfate	mg/L	40		41.8	36.3
Bicarbonate Alkalinity	mg/L CaCO ₃	NE		177	167
Carbonate Alkalinity	mg/L CaCO ₃	NE		<10	<10
Total Alkalinity	mg/L CaCO ₃	NE		177	167
Total Dissolved Solids ^(b)	mg/L	300		281	263

Notes:

Bolded values indicate constituents were detected in the sample.

Shaded values indicate exceedance of shown standard.

< indicates constituent was not detected at or above the reporting limit shown.

NS = No Standard provided

(a) Ambient Water Quality Criteria from the Water Quality regulations (LAC 33:IX). Values for inorganics/metals from LAC 33:IX.1113, Table 1A, for Human Health Protection in water bodies designated Drinking Water Supply. Values for water quality parameters from LAC 33:IX.1123, Table 3, specific to Subsegment 120109 (Intracoastal Waterway From Port Allen Locks to Bayou Sorrel Locks).

Table 11
Surface Water Field Parameters
Paul M. Levert, et al. v Union Texas
Bayou Choctaw Oil Gas Field
West Baton Rouge Parish, Louisiana

ID	SW-1					
Date	10/31/2024					
SWCT (ft)	10.65					
Surface Water Parameters (ERM)						
Time	pH	SC [μS/cm]	Temp [°C]	Turb [NTU]	DO [%]	ORP [mV]
1313	7.23	477.29	23.96	21.80	42.98	5.30
ID	SW-2					
Date	10/31/2024					
SWCT (ft)	14.46					
Surface Water Parameters (ERM)						
Time	pH	SC [μS/cm]	Temp [°C]	Turb [NTU]	DO [%]	ORP [mV]
1407	7.35	429.89	24.29	26.70	39.52	25.70
ID	HA-10R					
Date	10/24/2024					
Time	pH	SC [μS/cm]	Temp [°C]	Turb [NTU]	DO [%]	ORP [mV]
ERM						
13:50	6.16	0.96704	23.53	NM	0.88	-90.1

Notes:

Sample HA-10R was taken in the sediment

Table 12
Survey Results and Water Elevation
Paul M. Levert, et al. v Union Texas
Bayou Choctaw Oil Gas Field
West Baton Rouge Parish, Louisiana

	Coordinates				Screened Interval	Screen Length	Top of Casing Elevation	Ground Surface Elevation	Stickup Height	Total Depth	Mid Screen Depth	Mid Screen Elevation	TDS	Density	10/17/2023			9/20/2024			11/1/2024		
	Louisiana State Plane, NAD 1983 (2011), South Zone		UTM Zone 15N												DTW	Water Elevation	EFWH	DTW	Water Elevation	EFWH	DTW	Water Elevation	EFWH
Well ID	Latitude	Longitude	Northing (m)	Easting (m)	ft bgs	ft	ft	ft	ft	ft btoc	ft bgs	ft	mg/L	kg/m³	ft btoc	ft	ft	ft btoc	ft	ft	ft btoc	ft	ft
Shallow Zone																							
L1-A	30.326284	-91.301321	3356163.73	663306.85	16-26	10	5.25	5.36	-0.11	25.67	21	-15.42	8,620	1,004.357	5.87	-0.62	-0.53	1.42	3.83	3.95	3.88	1.37	1.47
L2	30.325801	-91.299924	3356112.16	663442.02	16-26	10	7.65	5.91	1.74	27.64	21	-14.99	20,300	1,012.700	8.34	-0.69	-0.48	3.86	3.79	4.06	6.37	1.28	1.52
L3	30.325022	-91.299495	3356026.43	663484.55	15-30	15	5.61	3.67	1.94	31.73	22.5	-18.62	80,400	1,055.630	6.55	-0.94	0.08	1.95	3.66	4.94	4.39	1.22	2.36
L4-A	30.324832	-91.299295	3356005.69	663504.11	16-26	10	7.61	5.34	2.27	28.16	21	-15.55	36,100	1,023.986	8.29	-0.68	-0.30	4.16	3.45	3.94	6.8	0.81	1.23
L5	30.323474	-91.301576	3355851.92	663287.00	12-22	10	5.19	3.26	1.93	23.89	17	-13.70	16,500	1,009.986	6.35	-1.16	-1.01	1.46	3.73	3.94	3.77	1.42	1.60
L6	30.323321	-91.301691	3355834.82	663276.17	11-21	10	5.08	2.87	2.21	23.05	16	-12.97	16,500	1,009.986	6.30	-1.22	-1.08	1.36	3.72	3.92	3.17	1.91	2.09
L7	30.326679	-91.301146	3356207.71	663323.01	16-26	10	7.27	5.49	1.78	27.61	21	-15.34	16,200	1,009.772	8.45	-1.18	-1.02	3.55	3.72	3.94	6.09	1.18	1.37
L8	30.325101	-91.300253	3356034.12	663411.54	16-26	10	5.12	3.38	1.74	27.79	21	-17.67	23,400	1,014.915	6.80	-1.68	-1.41	1.40	3.72	4.08	3.84	1.28	1.60
L9	30.324793	-91.301521	3355998.14	663290.15	12-22	10	5.09	3.38	1.71	23.72	17	-13.63	19,400	1,012.057	6.51	-1.42	-1.25	1.46	3.63	3.87	3.38	1.71	1.92
L10	30.324293	-91.301203	3355943.22	663321.53	12-22	10	4.87	3.34	1.53	23.51	17	-13.64	22,800	1,014.486	6.14	-1.27	-1.07	1.24	3.63	3.91	3.22	1.65	1.90
L11	30.324336	-91.300080	3355949.57	663429.45	17-27	10	4.48	3.22	1.26	28.56	22	-19.08	15,900	1,009.557	4.82	-0.34	-0.13	0.67	3.81	4.07	2.84	1.64	1.88
L12-A	30.324752	-91.295781	3356001.93	663842.06	19-29	10	6.77	4.76	2.01	30.75	24	-18.98	650	998.664	8.93	-2.16	-2.15	8.9	-2.13	-2.12	11.43	-4.66	-4.65
MW-1	30.324984	-91.298888	3356023.09	663542.96	14-24	10	7.62	5.10	2.52	26.37	19	-13.75	28700	1,018.700	--	--	--	--	--	--	6.93	0.69	0.99
MW-2	30.327519	-91.301887	3356299.77	663250.41	14-24	10	8.06	5.11	2.95	26.99	19	-13.93	13000	1,007.486	--	--	--	--	--	--	7.78	0.28	0.41
MW-3	30.324805	-91.302049	3355998.73	663239.28	14-24	10	6.81	3.90	2.91	26.95	19	-15.14	7030	1,003.222	--	--	--	--	--	--	4.89	1.92	2.01
MW-4	30.323106	-91.302045	3355810.40	663242.57	14-24	10	8.71	5.91	2.80	26.18	19	-12.47	15700	1,009.415	--	--	--	--	--	--	6.39	2.32	2.49
Deep Zone																							
L1-B	30.326274	-91.301325	3356162.62	663306.45	47-57	10	5.22	5.37	-0.15	56.73	52	-46.51	354	998.453	3.04	2.18	2.19	0	5.22	5.23	1.23	3.99	4.00
L4-B	30.324829	-91.299303	3356005.38	663503.34	52-62	10	7.68	5.30	2.38	64.42	57	-51.74	454	998.524	4.87	2.81	2.83	1.70	5.98	6.00	3.71	3.97	3.99
L12-B	30.324760	-91.295782	3356002.80	663841.98	44-54	10	6.98	4.84	2.14	55.90	49	-43.92	364	998.460	5.04	1.94	1.95	4.07	2.91	2.92	5.78	1.20	1.21
MW-1D	30.324975	-91.298872	3356022.17	663544.50	52-62	10	7.78	5.12	2.66	64.97	57	-52.19	375	998.468	--	--	--	--	--	--	4.54	3.24	3.25
Surface Water (Bayou Bourbeaux)																							
SW-1	30.335576	-91.301997	3357192.68	663226.44	--	--	9.20	--	--	--	--	--	281	998.401	--	--	--	--	--	--	7.53	1.67	--
SW-2	30.322495	-91.311162	3355729.67	662366.90	--	--	8.95	--	--	--	--	--	263	998.388	--	--	--	--	--	--	7.32	1.63	--

NOTES:
Elevation data are referenced to NAVD '88 datum.
Depth to water (DTW) measurements are shown as depth below top of casing (btoc).
Density is calculated using Langevin, et al., 2003.
NM = Not measured
ft bgs = feet below ground surface
EFWH = Equivalent fresh water head (corrected for density based on TDS), based on Post, et al., 2007.
For surface water locations, the elevation of the surveyed point on bridge is listed under "Top of Casing Elevation".

Table 13
Slug Test Results

Paul M. Levert, et al. v Union Texas International Corporation, et al.
Bayou Choctaw Oil Gas Field
West Baton Rouge Parish, Louisiana

				K (ft/day)		Estimated Yield	
Well ID	b (ft)	hc (ft)	Slug ID	Hvorslev	cm/sec	Q (gpm)	Q (GPD)
Shallow Zone							
L-1A	9.7	10.10	Slug 1 In	0.6982	2.46E-04		
			Slug 2 In	0.7281	2.57E-04		
			Slug 3 In	0.7005	2.47E-04		
			Average	0.709	2.50E-04	0.22	317
L-3	7.7	11.87	Slug 1 In	0.6231	2.20E-04		
			Slug 2 In	0.7329	2.59E-04		
			Slug 3 In	0.6304	2.22E-04		
			Average	0.6621	2.34E-04	0.20	281
L-5	10.5	7.76	Slug 1 In	0.7334	2.59E-04		
			Slug 2 In	0.7878	2.78E-04		
			Slug 3 In	0.8022	2.83E-04		
			Average	0.7745	2.73E-04	0.20	285
L-9	10	7.55	Slug 1 In	1.041	3.67E-04		
			Slug 2 In	1.070	3.77E-04		
			Slug 3 In	1.173	4.14E-04		
			Average	1.095	3.86E-04	0.25	366
			Geometric Mean	0.794	2.80E-04	0.22	310
Deep Zone							
L-1B	6	44.61	Slug 1 In	0.003348	1.18E-06		
			Average	0.003348	1.18E-06	0.005	7

Notes:

Well yield equation for confined aquifer from RECAP Appendix F:

$$Q = \frac{60H_c Kb}{9.3 + \log(Kb)}$$

K = hydraulic conductivity (cm/sec)

b = saturated thickness (feet)

h_c = confining head (feet)

gpm = Gallons per Minute

GPD = Gallons per Day

Table 14**RECAP Non-Industrial Screening Evaluation - Surface Soil***Paul M. Levert, et al. v Union Texas International Corporation, et al.**Bayou Choctaw Oil & Gas Field**West Baton Rouge Parish, Louisiana*

Constituents	Soilssni (a)	Soilssgw (b)	Limiting SS (c)	Maximum Concentrations (d)
Metals				
Arsenic	12	100	12	5.8 (g)
Barium	550	SPLP	550	3510
Cadmium	3.9	20	3.9	1.39
Chromium	12000	100	100	26.6
Lead	400	SPLP	400	228
Mercury	2.3	4	2.3	0.497
Selenium	39	20	20	1.86
Silver	39	100	39	<0.500
Strontium (e)	4700	44000	4700	244
Zinc	2300	2800	2300	560
TPH Fractions (f)				
Aliphatic C6-C8	1200	10000	1200	2.78
Aliphatic >C8-C10	120	5300	120	8.39
Aliphatic >C10-C12	230	10000	230	20.4
Aliphatic >C12-C16	370	10000	370	100
Aliphatic >C16-C35	7100	10000	7100	392
Aromatic >C8-C10	65	65	65	0.785
Aromatic >C10-C12	120	100	100	5.83
Aromatic >C12-C16	180	200	180	33.9
Aromatic >C16-C21	150	2100	150	62.4
Aromatic >C21-C35	180	10000	180	13.4
BTEX				
Benzene	1.5	0.051	0.051	<0.0275
Ethylbenzene	160	19	19	<0.110
Toluene	68	20	20	<0.220
Xylenes, Total	18	150	18	<0.220
PAHs				
2-Methylnaphthalene	22	1.7	1.7	0.0894
Acenaphthene	370	220	220	0.000791
Acenaphthylene	350	88	88	<0.00660
Anthracene	2200	120	120	0.00187
Benzo(a)anthracene	0.62	330	0.62	<0.00660
Benzo(a)pyrene	0.33	23	0.33	0.000674
Benzo(b)fluoranthene	0.62	220	0.62	0.000858
Benzo(k)fluoranthene	6.2	120	6.2	<0.00660
Chrysene	62	76	62	0.0142
Dibenz(a,h)anthracene	0.33	540	0.33	<0.00660
Fluoranthene	220	1200	220	0.000903
Fluorene	280	230	230	0.0206
Indeno(1,2,3-cd)pyrene	0.62	9.2	0.62	<0.00660
Naphthalene	6.2	1.5	1.5	0.0312
Phenanthrene	2100	660	660	0.0253
Pyrene	230	1100	230	0.00335
SPLP Constituents (mg/L)				
Barium	NE	40	40	1.17
Lead	NE	0.3	0.3	0.0970

Table 14**RECAP Non-Industrial Screening Evaluation - Surface Soil**

Paul M. Levert, et al. v Union Texas International Corporation, et al.

Bayou Choctaw Oil & Gas Field

West Baton Rouge Parish, Louisiana

Notes:

Units are mg/kg-wet except for SPLP provided in mg/L.

< - Not detected at or above the reporting limit shown.

TPH - Total Petroleum Hydrocarbons

BTEX - Benzene, Toluene, Ethylbenzene, and Xylenes (total)

PAH - Polycyclic Aromatic Hydrocarbons

A **bold and shaded** value indicates that the concentration exceeds the limiting screening standard (SS) for the respective constituent and is subject to further risk evaluation under a higher Management Option.

- (a) Soilssni is the RECAP Screening Option Standard from Table 1 of RECAP (2003) for soil protective of non-industrial land use.
- (b) Soilssgw is the RECAP Screening Option Standard from Table 1 of RECAP 2003 for soil protective of groundwater. For SPLP leachate data, the screening standard is GW1 x 20.
- (c) The limiting RECAP Screening Option Standard is the lower of the Soilssni and Soilssgw. Where SPLP data provide further site-specific evaluation of groundwater protection, Soilssni becomes the limiting standard.
- (d) Maximum detected concentrations (or maximum reporting limit for non-detect constituents) reported in samples collected by ERM and ICON outside of the remediation areas (laterally and vertically) are included in the screening evaluation.
- (e) Value not provided in RECAP; the risk-based values were calculated in accordance with Appendix H of RECAP (2003) using the current EPA-recommended toxicity value.
- (f) Appendix D of RECAP identifies: "If TPH fractionation data and TPH mixture data have both been collected at an AOI and the two data sets yield different conclusions about management of the AOI, then management decisions shall be based on the fractionation data since the fractionation method yields more specific information regarding the TPH constituents present and thus more accurately characterizes site conditions." TPH fraction data are available for the soil sampling areas and are used in the RECAP evaluation.
- (g) In accordance with RECAP, the arithmetic mean concentration for surface soil is used for comparison to the RECAP standard based on a state-specific background concentration. Input values provided in RECAP Supporting Calculations appendix.

Table 15
RECAP Groundwater Protection Screening Evaluation - Subsurface Soil

Paul M. Levert, et al. v Union Texas International Corporation, et al.
Bayou Choctaw Oil & Gas Field
West Baton Rouge Parish, Louisiana

Constituents	Soilssgw (a)	Maximum Concentrations (b)
Metals		
Arsenic	100	10.5
Barium	2000	173
Cadmium	20	0.726
Chromium	100	19.3
Lead	100	13.2
Mercury	4	0.0383
Selenium	20	<1.00
Silver	100	<0.500
Zinc	2800	64.4

Notes:

Units are mg/kg-wet.

< - Not detected at or above the reporting limit shown.

- (a) Soilssgw is the RECAP Screening Option Standard from Table 1 of RECAP 2003 for soil protective of groundwater.
- (b) Maximum detected concentrations (or maximum reporting limit for non-detect constituents) reported in samples collected by ERM and ICON outside of the remediation areas (laterally and vertically) are included in the screening evaluation of subsurface soils.

Table 16**MO-2 Non-Industrial Evaluation - Surface Soil***Paul M. Levert, et al. v Union Texas International Corporation, et al.**Bayou Choctaw Oil & Gas Field**West Baton Rouge Parish, Louisiana*

Constituents (a)	Initial Default Soilni (b)	Target Organ / Critical Effect (c)	Additivity Divisor (d)	Final Soilni (e)	SoilGW3DW (f)	Limiting MO-2 RS (g)	Area of Investigation Concentration (AOIC) (h)
Metals							
Barium	16000	Kidney	1	16000	SPLP	16000	3510

Notes:

Units are mg/kg-wet.

- (a) Constituents with maximum reported soil concentrations above the Limiting Screening Standard were included for further evaluation under Management Option 2.
- (b) RECAP standard for soil protective of non-industrial (Soilni) land use. The Soilni for barium was calculated in accordance with Appendix H of RECAP (2003), using default exposure parameters provided in RECAP with the current EPA RfDo for barium of 0.2 mg/kg-day.
- (c) Additive effects are considered in accordance with RECAP. Target organ for non-carcinogenic effects was obtained from Appendices D and G of RECAP (2003) and EPA Integrated Risk Information System (IRIS).
- (d) Additivity divisor for exposure to multiple constituents of concern (COC) exhibiting the same critical health effects and/or targeting the same organ/system.
- (e) Final Soilni = Initial (default) Soilni divided by additivity divisor.
- (f) SPLP analysis for barium demonstrates that concentrations in soil comply with the leachate screening standard. Therefore, the groundwater protection pathway does not warrant MO-2 evaluation.
- (g) Limiting MO-2 RECAP Standard (RS) for non-industrial land use is the lower of the final Soilni and Soilsat. However, the Soilsat is not applicable to barium and was therefore not included.
- (h) The Area of Investigation Concentration (AOIC) is the maximum reported concentration in soil samples.

Table 17**RECAP Groundwater Screening Evaluation***Paul M. Levert, et al. v Union Texas International Corporation, et al.**Bayou Choctaw Oil & Gas Field**West Baton Rouge Parish, Louisiana*

Constituents	RECAP GWss (a)	Maximum Concentrations (b)			
		Shallow Zone		Deep Zone	
		Total	Dissolved	Total	Dissolved
Metals					
Arsenic	0.01	0.177 (<0.5)	0.248	0.0874	0.0882
Barium	2	58.9	67.1	0.653	0.634
Cadmium	0.005	<0.5	<0.1	<0.005	<0.005
Calcium (e)	NS	5980	5860	148	72.3
Chromium	0.1	0.001 (<0.5)	<0.1	0.043	0.005 (<0.01)
Iron	0.3 (c)	434	423	24.0	14.3
Lead	0.015	0.0121 (<0.1)	0.013 (<0.1)	0.0062 (<0.01)	<0.01
Magnesium (e)	NS	1220.00	1150	53.3	53
Manganese	0.05 (c)	260	65.7	0.806	0.816
Mercury	0.002	0.00023	<0.0002	0.000245	<0.0002
Potassium (e)	NS	86.3	31.6	6.77	<5
Selenium	0.05	<0.5	0.013 (<0.1)	0.002	<0.001
Silver	0.018	<0.5	0.0364 (<0.1) (g)	<0.001	<0.001
Sodium (e)	NS	18500.00	21300	124	123
Strontium	2.2 (d)	178	178	1.08	1.11
Zinc	1.1	0.0479 (<5)	0.157 (<1)	0.051	0.298
BTEX					
Benzene	0.005	0.282		<0.005	
Ethylbenzene	0.7	0.003 (<0.5)		<0.005	
Toluene	1	0.043 (<0.05)		<0.01	
Xylene (Total)	10	0.01 (<0.25)		<0.05	
Water Quality					
Chloride	250 (c)	57200		1010 / 133 (h)	
Sulfate	250 (c)	38.3 (<1000)		9.19	
Total Dissolved Solids	500 (c)	80400		1710 / 454 (h)	
TPH Fractions (f)					
Aliphatic >C6-C8	3.2	0.382		0.006	
Aliphatic >C8-C10	0.15	0.073		<0.013	
Aliphatic >C10-C12	0.15	<0.136		<0.15	
Aliphatic >C12-C16	0.15	<0.136		<0.15	
Aliphatic >C16-C35	7.3	<0.227		0.258	
Aromatic >C8-C10	0.15	0.015		<0.005	
Aromatic >C10-C12	0.15	<0.136		<0.15	
Aromatic >C12-C16	0.15	0.177		<0.15	
Aromatic >C16-C21	0.15	0.192		<0.15	
Aromatic >C21-C35	0.15	<0.159		<0.175	

Table 17**RECAP Groundwater Screening Evaluation***Paul M. Levert, et al. v Union Texas International Corporation, et al.**Bayou Choctaw Oil & Gas Field**West Baton Rouge Parish, Louisiana***Notes:**

Units are mg/L.

NS - standard not applicable

< - Not detected at or above the reporting limit shown for the constituent. Maximum reporting limit shown. Where the maximum reporting limit was greater than the maximum detected concentration, that reporting limit is provided in parentheses following the maximum detection.

TPH - Total Petroleum Hydrocarbons

BTX - Benzene, Toluene, Ethylbenzene, and Xylenes

A **bold and shaded** value indicates that the maximum reported concentration exceeds the GWss or SMCL and is identified as an E&P-related constituent of concern subject to further evaluation.

A **bold** value with no shading indicates that the maximum reported concentration exceeds the GWss or SMCL but is not identified for further evaluation. Discussion is provided in the report text.

(a) GWss = RECAP Screening Standard from Table 1 of RECAP (2003), unless otherwise noted.

(b) Maximum reported concentrations in groundwater samples collected in each zone, including results reported by ICON and ERM. The zones include the following monitoring wells:

Shallow Zone			Deep Zone
L-1A	L-7	L-12A	L-1B
L-2	L-8	MW-1	L-4B
L-3	L-9	MW-2	L-12B
L-4A	L-10	MW-3	MW-1D
L-5	L-11	MW-4	
L-6			

- (c) EPA Secondary Maximum Contaminant Level (SMCL), a non-enforceable guideline for public water systems addressing undesirable aesthetic effects such as taste, color, and odor.
- (d) GWss not provided in RECAP; the risk-based value was calculated in accordance with Appendix H of RECAP (2003) using the current EPA-recommended toxicity value.
- (e) Essential elements have no RECAP standards or toxicity factors (i.e. calcium, magnesium, potassium, sodium), and are not addressed in the risk evaluation.
- (f) Appendix D of RECAP identifies: "If TPH fractionation data and TPH mixture data have both been collected at an AOI and the two data sets yield different conclusions about management of the AOI, then management decisions shall be based on the fractionation data since the fractionation method yields more specific information regarding the TPH constituents present and thus more accurately characterizes site conditions." TPH fraction data are available for the groundwater samples and are used in the RECAP evaluation.
- (g) A single detection of dissolved silver above the screening standard in monitoring well MW-2 was not confirmed in the total silver result (which includes the dissolved fraction).
- (h) The second concentration is the result of resampling of deep zone monitoring wells following initial installation/sampling. Results did not confirm the initial elevated results, and the initial concentrations appear to be related to poor well development due to the low yield of the zone.

Table 18**RECAP Surface Water Evaluation***Paul M. Levert, et al. v Union Texas International Corporation, et al.**Bayou Choctaw Oil & Gas Field**West Baton Rouge Parish, Louisiana*

Constituents	AWQC LAC 33:IX Numerical Criteria (a)	RECAP GW3DW (b)	Surface Water Concentrations			
			SW-1		SW-2	
			Total	Dissolved	Total	Dissolved
Metals						
Arsenic	0.01	0.05	0.0053	0.0054	0.0048	0.0041
Barium	NS	2	0.090	0.0880	0.090	0.0830
Calcium	NS	NS	50.2	-	42.7	-
Magnesium	NS	NS	16.7	-	14.8	-
Potassium	NS	NS	5.68	-	4.95	-
Sodium	NS	NS	29.2	-	25.8	-
Water Quality						
Chloride	60	NS	29.1		27.1	
Sulfate	40	NS	41.8		36.3	
Total Dissolved Solids	300	NS	281		263	

Notes:

Units are mg/L.

NS - standard not applicable

A **bold** value indicates that the reported concentration exceeds the reference standard. Sulfate is not identified as an E&P-related constituent of concern.

(a) Ambient Water Quality Criteria (AWQC) from the Water Quality regulations (LAC 33:IX). Values for inorganics/metals from LAC 33:IX.1113, Table 1A, for Human Health Protection in water bodies designated Drinking Water Supply. Values for water quality parameters from LAC 33:IX.1123, Table 3, specific to Subsegment 120109 (Intracoastal Waterway From Port Allen Locks to Bayou Sorrel Locks).

(b) Groundwater 3 Drinking Water (GW3DW) standards obtained from Table 3 of RECAP (2003), protective of surface water used for a drinking water source, primary and secondary contact recreation, and fish ingestion.

Table 19**Soil Remediation Cost Estimate**

Paul M. Levert, et al v Union Texas Petroleum, et al
Bayou Choctaw Oil & Gas Field
West Baton Rouge Parish, Louisiana

Cost Basis	Unit	Value	Basis
Soil removal Area (L-3/L-4 West)	square feet	2,640	ERM Report (Section 10)
Soil removal Area (L-3/L-4 West)	acre	0.06	Conversion
Soil removal Depth (L-3/L-4 West)	feet	6.0	ERM Report (Section 10), Excavate 2-8', also 200 CY overburden
Soil removal Volume(L-3/L-4 West)	cubic yards	587	Calculation
Soil removal Area (L-3/L-4 Central)	square feet	5,231	ERM Report (Section 10)
Soil removal Area (L-3/L-4 Central)	acre	0.12	Conversion
Soil removal Depth (L-3/L-4 Central)	feet	2.0	ERM Report (Section 10) Excavate 0-2'
Soil removal Volume(L-3/L-4 Central)	cubic yards	387	Calculation
Soil removal Area (L-3/L-4 South)	square feet	3,725	ERM Report (Section 10)
Soil removal Area (L-3/L-4 South)	acre	0.09	Conversion
Soil removal Depth (L-3/L-4 South)	feet	6.0	ERM Report (Section 10) Excavate 0-6'
Soil removal Volume(L-3/L-4 South)	cubic yards	828	Calculation
Soil removal Area (HA-10 Area)	square feet	2,902	ERM Report (Section 10)
Soil removal Area (HA-10 Area)	acre	0.07	Conversion
Soil removal Depth (HA-10 Area)	feet	3.0	ERM Report (Section 10) Excavate 0-3'
Soil removal Volume (HA-10 Area)	cubic yards	322.4	Calculation
Soil removal Area (HA-9 Area)	square feet	13,182	ERM Report (Section 10)
Soil removal Area (HA-9 Area)	acre	0.30	Conversion
Soil removal Depth (HA-9 Area)	feet	0.0	ERM Report (Section 10), Treatment only, no excavation
Soil removal Volume (HA-9 Area)	cubic yards	0.0	Calculation
Soil removal Area (HA-1/HA-1R Area)	square feet	3,139	ERM Report (Section 10)
Soil removal Area (HA-1/HA-1R Area)	acre	0.07	Conversion
Soil removal Depth (HA-1/HA-1R Area)	feet	0.0	ERM Report (Section 10), Assessment Only
Soil removal Volume (HA-1/HA-1R Area)	cubic yards	0.0	Calculation
Soil removal Volume (Total)	cubic yards	2,124	Calculation
Soil disposal quantity	Tons	2,549	Conversion (cu yds * 1.2) - Diversified Estimate
Soil backfill quantity - 2.0 ft	cubic yards	5,200	Diversified Calculation - replace excavation plus backfill HA-9
Time to Complete (Excavation, trucking and disposal)	days	41	Diversified Estimate

Table 19
Soil Remediation Cost Estimate
Paul M. Levert, et al v Union Texas Petroleum, et al
Bayou Choctaw Oil & Gas Field
West Baton Rouge Parish, Louisiana

<i>Work Plan Development</i>	Unit Cost	Units	Quantity	Cost	Cost Basis
Work Plan Preparation and Submittal to LDNR	\$14,000	unit	1	\$14,000	ERM Estimate
<i>Work Plan Development</i>				<u>\$14,000</u>	
<i>Soil Removal and Remediation</i>	Unit Cost	Units	Quantity	Cost	Cost Basis
Site Subsurface Clearance	\$5,000	unit	1	\$5,000	ERM Estimate
Pre-job Planning and Deliverables	\$2,750	unit	1	\$2,750	Diversified Estimate
Mobilization/Demobe (Equipment, Tankage, Board Mats)	\$17,950	unit	1	\$17,950	Diversified Estimate
Vac Truck Transport	\$29,944	unit	1	\$29,944	Diversified Estimate (75 loads)
HA-9 Area Water Disposal (FAS Pierre Part)	\$117,260	unit	1	\$117,260	Diversified Estimate (8,200 bbl)
L-3/L-4 Transport	\$66,888	unit	1	\$66,888	Diversified Estimate (142 loads)
L-3/L-4 Disposal (Republic Colonial)	\$173,400	unit	1	\$173,400	Diversified Estimate (2,550 tons)
Backfill and Grading	\$125,339	unit	1	\$125,339	Diversified Estimate (5,201 cubic yards)
Limestone (access road upgrade)	\$6,500	unit	1	\$6,500	Diversified Estimate
Concrete Rubble and Debris Transportation and Disposal	\$5,500	unit	1	\$5,500	Diversified Estimate
Contractor Labor	\$131,664	unit	2	\$263,328	Diversified Estimate
Contractor Per Diem	\$29,310	unit	3	\$87,930	Diversified Estimate
Misc. Field Expenses	\$15,415	unit	1	\$15,415	Diversified Estimate
Contractor Equipment (heavy equipment, trucks, field office, mats, pumps/hoses, etc.)	\$134,496	unit	1	\$134,496	Diversified Estimate
NORM Flowline Removal and disposal	\$10,000	unit	1	\$10,000	Diversified Estimate
ERM Oversight (Labor and Expenses)	\$2,000	day	44	\$88,000	ERM Estimate (with 1 additional day for site subsurface clearance)
Sampling	\$500	unit	30	\$15,000	ERM Estimate, 6 areas (including Ha-1/HA-1R), 5 samples per area
<i>Soil Removal and Remediation Subtotal</i>				<u>\$1,164,700</u>	
<i>Project Management and Reporting</i>	Unit Cost	Units	Quantity	Cost	Cost Basis
Project Management	\$10,000	unit	1	\$10,000	ERM Estimate
Data Evaluation and Reporting	\$15,000	unit	1	\$15,000	ERM Estimate
<i>Project Management and Reporting Subtotal</i>				<u>\$25,000</u>	
Total Cost				\$1,203,700	
			10% Contingency	\$120,370	
			Total with Contingency	\$1,324,070	

Table 20
Contingent Soil Remediation Cost Estimate
Paul M. Levert, et al v Union Texas Petroleum, et al
Bayou Choctaw Oil & Gas Field
West Baton Rouge Parish, Louisiana

<u>Cost Basis</u>	<u>Unit</u>	<u>Value</u>	<u>Basis</u>
Soil removal Area (HA-1/HA-1R Area)	square feet	3,139	ERM Report (Section 10)
Soil removal Area (HA-1/HA-1R Area)	acre	0.07	Conversion
Soil removal Depth (HA-1/HA-1R Area)	feet	2.0	ERM Report (Section 10)
Soil removal Volume (HA-1/HA-1R Area)	cubic yards	232.5	Calculation
Soil removal Volume (Total)	cubic yards	233	Calculation
Soil disposal quantity	cubic yards - hauled	291	Conversion (cu yds * 1.25) - Diversified Estimate
Soil backfill quantity - 2.0 ft	cubic yards	233	Calculation
Time to Complete (Excavation, blending, trucking and disposal)	days	6	Diversified Estimate

<u>Work Plan Development</u>	<u>Unit Cost</u>	<u>Units</u>	<u>Quantity</u>	<u>Cost</u>	<u>Cost Basis</u>
Work Plan Preparation and Submittal to LDNR	\$0	unit	1	\$0	ERM Estimate - Included in Excavation Work Plan
<i>Work Plan Development</i>				<i>\$0</i>	
<u>Soil Removal and Remediation</u>	<u>Unit Cost</u>	<u>Units</u>	<u>Quantity</u>	<u>Cost</u>	<u>Cost Basis</u>
Site Subsurface Clearance	\$5,000	unit	1	\$5,000	ERM Estimate
Pre-job Planning and Deliverables	\$0	unit	1	\$0	Included in Proposed Remedy
Mobilization/Demobe (Equipment, Tankage, Board Mats)	\$0	unit	1	\$0	Included in Proposed Remedy
HA-1 Transport	\$8,361	unit	1	\$8,361	Diversified Estimate (142 loads)
HA-1/HA-1R Disposal (Republic Colonial)	\$19,040	unit	1	\$19,040	Diversified Estimate (2,550 tons)
Backfill and Grading	\$7,200	unit	1	\$7,200	Diversified Estimate (5,201 cubic yards)
Contractor Labor	\$9,091	unit	2	\$18,182	Diversified Estimate
Contractor Per Diem	\$2,220	unit	3	\$6,660	Diversified Estimate
Misc. Field Expenses	\$1,240	unit	1	\$1,240	Diversified Estimate
Contractor Equipment (heavy equipment, trucks, field office, mats, pumps/hoses, etc.)	\$5,594	unit	1	\$5,594	Diversified Estimate
ERM Oversight (Labor and Expenses)	\$1,800	day	11	\$19,800	ERM Estimate (with 1 additional day for site subsurface clearance)
Sampling	\$200	unit	5	\$1,000	ERM Estimate, One area, 5 samples
<i>Soil Removal and Remediation Subtotal</i>				<i>\$92,077</i>	
<u>Project Management and Reporting</u>	<u>Unit Cost</u>	<u>Units</u>	<u>Quantity</u>	<u>Cost</u>	<u>Cost Basis</u>
Project Management	\$5,000	unit	1	\$5,000	ERM Estimate - if completed during soil excavation
Data Evaluation and Reporting	\$7,500	unit	1	\$7,500	ERM Estimate - if completed during soil excavation
<i>Project Management and Reporting Subtotal</i>				<i>\$12,500</i>	
Total Cost				\$104,577	
				10% Contingency	\$10,458
				Total with Contingency	\$115,035

Table 21
Proposed Groundwater Monitoring Cost Estimate
Paul M. Levert, et al v Union Texas Petroleum, et al
Bayou Choctaw Oil & Gas Field
West Baton Rouge Parish, Louisiana

<u>Monitoring Well Installation (Reinstall Wells in Soil Remediation Area)</u>						
Geoprobe drill rig, crew, and supplies (1.5 days)	\$7,540	Event	1	1	\$7,440	DEPS Cost Estimate
ERM 2-person field crew and equipment	\$3,600	Day	2.5	1	\$9,000	ERM Estimate - includes mob/demob
<i>Monitoring Well Sampling Subtotal</i>					<i>\$16,440</i>	
<u>Monitoring Well Sampling - 8 Wells</u>						
ERM 2-person field crew and equipment	\$3,600	day	2.5	12	\$108,000	Assume sample 4 wells per day & mob/demob
Lab Analysis - Benzene, Chloride, TDS, Barium, and Arsenic	\$153	Sample	8	12	\$14,688	Waypoint Unit Cost
Purge water handling & disposal	\$2,500	Year	3	1	\$7,500	ERM Estimate - Disposal 1/year
<i>Monitoring Well Sampling Subtotal</i>					<i>\$130,188</i>	
<u>Monitoring Well Decommissioning (after 3 years)</u>						
Drill Crew Mob/Demob, and Plug & Abandon 7 Monitoring Wells (3 days)	\$8,590	Event	1	1	\$12,225	DEPS Cost Estimate
ERM 1-man field crew for oversight	\$1,800	day	3	1	\$5,400	ERM Estimate - includes mob-debmob
<i>Monitoring Well Decommissioning Subtotal</i>					<i>\$17,625</i>	
<u>Project Management and Reporting</u>						
Project Management	\$6,000	Year	1	3	\$18,000	ERM Estimate
Data Evaluation and Reporting	\$18,000	Year	1	3	\$54,000	ERM Estimate
<i>Project Management and Reporting Subtotal</i>					<i>\$72,000</i>	
Total					\$236,253	

Table 22**Contingent Groundwater Remediation Cost Estimate***Paul M. Levert, et al v Union Texas Petroleum, et al**Bayou Choctaw Oil & Gas Field**West Baton Rouge Parish, Louisiana***Contingent Groundwater Remediation via Injection**

	<u>Cost</u>	<u>Unit</u>	<u>Quantity</u>	<u>Total</u>
PetroFix and ORC product	\$35,916	Lump	1	\$35,916
Injection subcontractor - 5 days	\$59,000	Lump	1	\$59,000
Shipping and tax	\$17,085	Lump	1	\$17,085
ERM 1-person field crew and equipment - 5 days	\$1,800	Day	6	\$10,800
<i>Contingent Groundwater Remediation via Injection Subtotal</i>				<i>\$122,801</i>

Regensis Cost Estimate
Regensis Cost Estimate
Regensis Cost Estimate
ERM Estimate - includes mob/demob

Project Management and Reporting

	<u>Cost</u>	<u>Unit</u>	<u>Quantity</u>	<u>Total</u>
Project Management	\$6,000	Year	1	\$6,000
Data Evaluation and Reporting	\$0	Year	0	\$0
<i>Project Management and Reporting Subtotal</i>				<i>\$6,000</i>

ERM Estimate
Included in groundwater monitoring program

Total **\$128,801**