

Red River

Environmental Laboratory and Consulting Company

Analytical Laboratory - Environmental Consulting - Permit Application and Compliance

Certificate of Analysis

ODEQ ID # 9953

To: MR. TONY CLYDE

TULSA DISTRICT CORPS OF ENGINEERS
1645 S 101st EAST AVE
TULSA, OK 74128-4609

Project #: W912BV07-P-0189

Date Received: 2/20/2009

Project Name: WATER QUALITY MONITORING

Report Date: 3/13/2009

Lab Number	Sample Identification	Date Sampled	Analysis Date	Time	Analized By	Parameter	Q	Results	Units	MDL	SQL	Method
200900603	GAGE # 07331000					METALS-TUL-D:						
		2/20/2009	2/25/2009	13:30	JL	Dissolved Arsenic		0.02	mg/L	0.009	0.009	200.7/6010B
			2/25/2009		JL	Dissolved Barium		0.103	mg/L	0.0006	0.0006	200.7/6010B
			2/25/2009		JL	Dissolved Cadmium		0.008	mg/L	0.0009	0.0009	200.7/6010B
			2/25/2009		JL	Dissolved Chromium	U	BDL	mg/L	0.0009	0.0009	200.7/6010B
			2/25/2009		JL	Dissolved Copper		0.073	mg/L	0.0003	0.0003	200.7/6010B
			2/25/2009		JL	Dissolved Iron		0.063	mg/L	0.0008	0.0008	200.7/6010B
			2/25/2009		JL	Dissolved Lead	U	BDL	mg/L	0.009	0.009	200.7/6010B
			2/25/2009		JL	Dissolved Manganese		0.015	mg/L	0.0001	0.0001	200.7/6010B
			2/25/2009		JL	Dissolved Nickel	U	BDL	mg/L	0.0069	0.0069	200.7/6010B
			2/25/2009		JL	Dissolved Silver	U	BDL	mg/L	0.0003	0.0003	200.7/6010B
			2/25/2009		JL	Dissolved Zinc		0.016	mg/L	0.0006	0.0006	200.7/6010B
200900603	GAGE # 07331000					METALS-TULSA:						
		2/20/2009	2/25/2009	16:50	JL	Arsenic, Total		0.073	mg/L	0.009	0.009	200.7/6010B
			2/25/2009		JL	Barium, Total		0.12	mg/L	0.0006	0.0006	200.7/6010B
			2/25/2009		JL	Cadmium, Total		0.008	mg/L	0.0009	0.0009	200.7/6010B
			2/25/2009		JL	Chromium, Total	U	BDL	mg/L	0.0009	0.0009	200.7/6010B
			2/25/2009		JL	Copper, Total		0.124	mg/L	0.0003	0.0003	200.7/6010B
			2/25/2009		JL	Iron, Total		0.094	mg/L	0.0008	0.0008	200.7/6010B
			2/25/2009		JL	Lead, Total		0.026	mg/L	0.009	0.009	200.7/6010B
			2/25/2009		JL	Manganese, Total		0.135	mg/L	0.0001	0.0001	200.7/6010B
			2/25/2009		JL	Nickel, Total		0.009	mg/L	0.0069	0.0069	200.7/6010B
			2/25/2009		JL	Silver, Total	U	BDL	mg/L	0.0003	0.0003	200.7/6010B
			2/25/2009		JL	Zinc, Total		0.013	mg/L	0.0006	0.0006	200.7/6010B
			2/27/2009	10:00	PR	Mercury, Dissolved	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
			2/23/2009	9:23	PR	Mercury	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
			2/27/2009	18:30	OL	Selenium, Dissolved	U	BDL	mg/l	0.00169	0.00169	EPA_7740
			2/27/2009	17:26	OL	Selenium	U	BDL	mg/l	0.00169	0.00169	EPA_7740

Susie Southwell

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TULSA DISTRICT CORPS OF ENGINEERS
1645 S 101st EAST AVE
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Lab Number	Sample Identification	Date Sampled	Analysis Date	Time	Analized By	Parameter	Q	Results	Units	MDL	SQL Method
200900603	GAGE # 07331000	2/20/2009	2/25/2009	16:50	JL	Silicon Dioxide (silica)		5.3	mg/l	0.006	0.006 200.7/6010B
200900603	GAGE # 07331000					SALTS-TULSA:					
		2/20/2009	2/26/2009	9:30	JL	Calcium, Dissolved		182	mg/L	0.0039	0.0039 200.7/6010B
			2/26/2009		JL	Magnesium, Dissolved		66	mg/L	0.0006	0.0006 200.7/6010B
			2/26/2009		JL	Phosphorus, Total		0.28	mg/L	0.0096	0.0096 200.7/6010B
			2/26/2009		JL	Potassium, Dissolved		5.1	mg/L	0.0009	0.0009 200.7/6010B
			2/26/2009		JL	Sodium, Dissolved		86	mg/L	0.0018	0.0018 200.7/6010B
			2/26/2009	12:50	JL	Total Hardness		771	mg/l	0.06	0.06 200.7/6010B
			2/25/2009	8:45	PR	Total Alkalinity		168	mg/l	2	2 EPA_310.1
			2/24/2009	9:00	JC	Chloride		73	mg/l	0.383	0.383 SM4500-CL-B
			2/20/2009	11:40	BS/J	Dissolved Oxygen		10.87	mg/l	0.1	0.1 EPA_360.1
			2/27/2009	10:00	PR	Fluoride		1.38	mg/L	0.04	0.04 SM4500F-D
			3/11/2009	10:00	PR	Nitrate/nitrite As Nitroge	U	BDL	mg/l	1.2	1.2 SM_4500-NO
			2/20/2009	11:40	BS/J	pH		7.7	s.u.		EPA_150.1
			2/26/2009	9:05	JC	Sulfate		600	mg/l	1.2	1.2 EPA_375.2
			2/24/2009	13:43	SS	Total Dissolved Solids		1308	mg/l	5.5	5.5 SM_2540C
			3/11/2009	9:00	PR	Total Kjeldahl Nitrogen	J	0.42	mg/l	0.4	0.4 EPA_351.3M
			2/24/2009	11:43	SS	Total Suspended Solids		47.7	mg/l	1.7	1.7 SM 2540D
			2/24/2009	15:25	SS	Turbidity		28.1	NTU	0.11	0.11 EPA_180.1
200900603	GAGE # 07331000					PEST-OC-A:					
		2/20/2009	3/3/2009	13:21	MY	tcmx (Surr)		42	%Rec	30	30 EPA_8081A
			3/3/2009		MY	Alpha-Bhc	U	BDL	ug/l	0.04	0.04 EPA_8081A
			3/3/2009		MY	Beta-Bhc	U	BDL	ug/l	0.05	0.05 EPA_8081A
			3/3/2009		MY	Gamma-Bhc	U	BDL	ug/l	0.04	0.04 EPA_8081A
			3/3/2009		MY	Delta-Bhc	U	BDL	ug/l	0.05	0.05 EPA_8081A
			3/3/2009		MY	Heptachlor	U	BDL	ug/l	0.04	0.04 EPA_8081A
			3/3/2009		MY	Aldrin	U	BDL	ug/l	0.04	0.04 EPA_8081A
			3/3/2009		MY	Heptachlor Epoxide	U	BDL	ug/l	0.04	0.04 EPA_8081A
			3/3/2009		MY	Chlordane	U	BDL	ug/l	0.2	0.2 EPA_8081A
			3/3/2009		MY	Endosulfan I	U	BDL	ug/l	0.05	0.05 EPA_8081A

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Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, By, Parameter, Q Results, Units, MDL, SQL Method. Contains data for samples 200900603, 200900604 (METALS-TUL-D), and 200900604 (METALS-TULSA).

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Lab Number	Sample Identification	Date Sampled	Analysis Date	Time	Analized By	Parameter	Q	Results	Units	MDL	SQL Method	
200900604	GAGE # 07331600	2/20/2009	2/25/2009		JL	Manganese, Total		0.022	mg/L	0.0001	0.0001 200.7/6010B	
			2/25/2009		JL	Nickel, Total		0.007	mg/L	0.0069	0.0069 200.7/6010B	
			2/25/2009		JL	Silver, Total	U	BDL	mg/L	0.0003	0.0003 200.7/6010B	
			2/25/2009		JL	Zinc, Total		0.018	mg/L	0.0006	0.0006 200.7/6010B	
			2/27/2009	10:00	PR	Mercury, Dissolved	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
			2/23/2009	9:23	PR	Mercury	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
			2/27/2009	18:33	OL	Selenium, Dissolved	<	0.00845	mg/l	0.00169	0.00845	EPA_7740
			2/27/2009	17:36	OL	Selenium	<	0.00845	mg/l	0.00169	0.00845	EPA_7740
			2/25/2009	16:50	JL	Silicon Dioxide (silica)		1.75	mg/l	0.006	0.006	200.7/6010B
			200900604	GAGE # 07331600	2/20/2009	SALTS-TULSA:						
2/26/2009	9:30	JL				Calcium, Dissolved		91	mg/L	0.0039	0.0039 200.7/6010B	
2/26/2009		JL				Magnesium, Dissolved		36.1	mg/L	0.0006	0.0006 200.7/6010B	
2/26/2009		JL				Phosphorus, Total		0.13	mg/L	0.0096	0.0096 200.7/6010B	
2/26/2009		JL				Potassium, Dissolved		8.1	mg/L	0.0009	0.0009 200.7/6010B	
2/26/2009		JL				Sodium, Dissolved		200.1	mg/L	0.0018	0.0018 200.7/6010B	
2/26/2009	12:50	JL				Total Hardness		412	mg/l	0.06	0.06	200.7/6010B
2/25/2009	8:45	PR				Total Alkalinity		126	mg/l	2	2	EPA_310.1
2/24/2009	9:00	JC				Chloride		275	mg/l	0.383	0.383	SM4500-CL-B
2/20/2009	10:25	BS/J				Dissolved Oxygen		10.8	mg/l	0.1	0.1	EPA_360.1
2/27/2009	10:00	PR				Fluoride		0.82	mg/L	0.04	0.04	SM4500F-D
3/11/2009	10:00	PR				Nitrate/nitrite As Nitroge	U	BDL	mg/l	1.2	1.2	SM_4500-NO
2/20/2009	10:26	BS/J				pH		7.6	s.u.			EPA_150.1
2/26/2009	9:05	JC				Sulfate		225	mg/l	1.2	1.2	EPA_375.2
2/24/2009	13:43	SS				Total Dissolved Solids		1016	mg/l	5.5	5.5	SM_2540C
3/11/2009	9:00	PR	Total Kjeldahl Nitrogen	U	BDL	mg/l	0.4	0.4	EPA_351.3M			
2/24/2009	11:43	SS	Total Suspended Solids	J	2.6	mg/l	1.7	1.7	SM 2540D			
2/24/2009	15:25	SS	Turbidity		3	NTU	0.11	0.11	EPA_180.1			
200900604	GAGE # 07331600	2/20/2009	PEST-OC-A:									
			3/3/2009	13:58	MY	tcmx (Surr)		47	%Rec	30	30 EPA_8081A	
			3/3/2009		MY	Alpha-Bhc	U	BDL	ug/l	0.04	0.04 EPA_8081A	

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Lab Number	Sample Identification	Date Sampled	Analysis Date	Time	By	Parameter	Q	Results	Units	MDL	SQL Method	
200900604	GAGE # 07331600	2/20/2009	3/3/2009		MY	Gamma-Bhc	U	BDL	ug/l	0.04	0.04 EPA_8081A	
			3/3/2009		MY	Beta-Bhc	U	BDL	ug/l	0.05	0.05 EPA_8081A	
			3/3/2009		MY	Delta-Bhc	U	BDL	ug/l	0.05	0.05 EPA_8081A	
			3/3/2009		MY	Heptachlor	U	BDL	ug/l	0.04	0.04 EPA_8081A	
			3/3/2009		MY	Aldrin	U	BDL	ug/l	0.04	0.04 EPA_8081A	
			3/3/2009		MY	Heptachlor Epoxide	U	BDL	ug/l	0.04	0.04 EPA_8081A	
			3/3/2009		MY	Chlordane	U	BDL	ug/l	0.2	0.2 EPA_8081A	
			3/3/2009		MY	Endosulfan I	U	BDL	ug/l	0.05	0.05 EPA_8081A	
			3/3/2009		MY	Dieldrin	U	BDL	ug/l	0.09	0.09 EPA_8081A	
			3/3/2009		MY	Endrin	U	BDL	ug/l	0.07	0.07 EPA_8081A	
			3/3/2009		MY	Endosulfan II	U	BDL	ug/l	0.07	0.07 EPA_8081A	
			3/3/2009		MY	Endrin Aldehyde	U	BDL	ug/l	0.12	0.12 EPA_8081A	
			3/3/2009		MY	Methoxychlor	U	BDL	ug/l	0.07	0.07 EPA_8081A	
			3/3/2009		MY	Endosulfan Sulfate	U	BDL	ug/l	0.1	0.1 EPA_8081A	
			3/3/2009		MY	Endrin Ketone	U	BDL	ug/l	0.07	0.07 EPA_8081A	
			3/3/2009		MY	1,2-dcbpl (Surr)		MY	75	%Rec	25	25 EPA_8081A
			3/3/2009		MY	Toxaphene	U	BDL	ug/l	1.3	1.3 EPA_8081A	
200900605	GAGE # 07316000	2/20/2009	METALS-TUL-D:									
			2/25/2009	13:30	JL	Dissolved Arsenic		0.055	mg/L	0.009	0.009	200.7/6010B
			2/25/2009		JL	Dissolved Barium		0.094	mg/L	0.0006	0.0006	200.7/6010B
			2/25/2009		JL	Dissolved Cadmium		0.008	mg/L	0.0009	0.0009	200.7/6010B
			2/25/2009		JL	Dissolved Chromium	U	BDL	mg/L	0.0009	0.0009	200.7/6010B
			2/25/2009		JL	Dissolved Copper		0.088	mg/L	0.0003	0.0003	200.7/6010B
			2/25/2009		JL	Dissolved Iron		0.078	mg/L	0.0008	0.0008	200.7/6010B
			2/25/2009		JL	Dissolved Lead		0.026	mg/L	0.009	0.009	200.7/6010B
			2/25/2009		JL	Dissolved Manganese		0.061	mg/L	0.0001	0.0001	200.7/6010B
			2/25/2009		JL	Dissolved Nickel		0.013	mg/L	0.0069	0.0069	200.7/6010B
			2/25/2009		JL	Dissolved Silver	U	BDL	mg/L	0.0003	0.0003	200.7/6010B
2/25/2009		JL	Dissolved Zinc		0.05	mg/L	0.0006	0.0006	200.7/6010B			

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200900605	GAGE # 07316000					METALS-TULSA:					
		2/20/2009	2/25/2009	16:50	JL	Arsenic, Total		0.077	mg/L	0.009	0.009 200.7/6010B
			2/25/2009		JL	Barium, Total		0.099	mg/L	0.0006	0.0006 200.7/6010B
			2/25/2009		JL	Cadmium, Total		0.008	mg/L	0.0009	0.0009 200.7/6010B
			2/25/2009		JL	Chromium, Total	U	BDL	mg/L	0.0009	0.0009 200.7/6010B
			2/25/2009		JL	Copper, Total		0.14	mg/L	0.0003	0.0003 200.7/6010B
			2/25/2009		JL	Iron, Total		0.237	mg/L	0.0008	0.0008 200.7/6010B
			2/25/2009		JL	Lead, Total		0.034	mg/L	0.009	0.009 200.7/6010B
			2/25/2009		JL	Manganese, Total		0.123	mg/L	0.0001	0.0001 200.7/6010B
			2/25/2009		JL	Nickel, Total		0.013	mg/L	0.0069	0.0069 200.7/6010B
			2/25/2009		JL	Silver, Total	U	BDL	mg/L	0.0003	0.0003 200.7/6010B
			2/25/2009		JL	Zinc, Total		0.025	mg/L	0.0006	0.0006 200.7/6010B
		3/9/2009		9:10	PR	Mercury, Dissolved	U	BDL	mg/l	0.0002	0.0002 EPA_245.1
		2/23/2009		9:23	PR	Mercury	U	BDL	mg/l	0.0002	0.0002 EPA_245.1
		2/27/2009		18:36	OL	Selenium, Dissolved	U	BDL	mg/l	0.00169	0.00169 EPA_7740
		2/27/2009		17:39	OL	Selenium	U	BDL	mg/l	0.00169	0.00169 EPA_7740
		2/25/2009		16:50	JL	Silicon Dioxide (silica)		1.08	mg/l	0.006	0.006 200.7/6010B
200900605	GAGE # 07316000					SALTS-TULSA:					
		2/20/2009	2/26/2009	9:30	JL	Calcium, Dissolved		245	mg/L	0.0039	0.0039 200.7/6010B
			2/26/2009		JL	Magnesium, Dissolved		83.9	mg/L	0.0006	0.0006 200.7/6010B
			2/26/2009		JL	Phosphorus, Total		0.32	mg/L	0.0096	0.0096 200.7/6010B
			2/26/2009		JL	Potassium, Dissolved		20.7	mg/L	0.0009	0.0009 200.7/6010B
			2/26/2009		JL	Sodium, Dissolved		1482	mg/L	0.0018	0.0018 200.7/6010B
			2/26/2009	12:50	JL	Total Hardness		903	mg/l	0.06	0.06 200.7/6010B
			2/25/2009	8:45	PR	Total Alkalinity		116	mg/l	2	2 EPA_310.1
			2/24/2009	9:00	JC	Chloride		1550	mg/l	0.383	0.383 SM4500-CL-B
			2/20/2009	8:57	BS/J	Dissolved Oxygen		10.3	mg/l	0.1	0.1 EPA_360.1
			2/27/2009	10:00	PR	Fluoride		1.27	mg/L	0.04	0.04 SM4500F-D
			3/11/2009	10:00	PR	Nitrate/nitrite As Nitroge	U	BDL	mg/l	1.2	1.2 SM_4500-NO
			2/20/2009	8:57	BS/J	pH		7.8	s.u.		EPA_150.1
			2/26/2009	9:05	JC	Sulfate		650	mg/l	1.2	1.2 EPA_375.2

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200900605	GAGE # 07316000	2/20/2009	2/24/2009	13:43	SS	Total Dissolved Solids		3828	mg/l	5.5	5.5 SM_2540C
			3/11/2009	9:00	PR	Total Kjeldahl Nitrogen	J	0.52	mg/l	0.4	0.4 EPA_351.3M
			2/24/2009	11:43	SS	Total Suspended Solids		31.3	mg/l	1.7	1.7 SM_2540D
			2/24/2009	15:25	SS	Turbidity		20.9	NTU	0.11	0.11 EPA_180.1
200900605	GAGE # 07316000	2/20/2009	PEST-OC-A:								
			3/3/2009	14:35	MY	tcmx (Surr)		61	%Rec	30	30 EPA_8081A
			3/3/2009		MY	Alpha-Bhc	U	BDL	ug/l	0.04	0.04 EPA_8081A
			3/3/2009		MY	Beta-Bhc	U	BDL	ug/l	0.05	0.05 EPA_8081A
			3/3/2009		MY	Gamma-Bhc	U	BDL	ug/l	0.04	0.04 EPA_8081A
			3/3/2009		MY	Delta-Bhc	U	BDL	ug/l	0.05	0.05 EPA_8081A
			3/3/2009		MY	Heptachlor	U	BDL	ug/l	0.04	0.04 EPA_8081A
			3/3/2009		MY	Aldrin	U	BDL	ug/l	0.04	0.04 EPA_8081A
			3/3/2009		MY	Heptachlor Epoxide	U	BDL	ug/l	0.04	0.04 EPA_8081A
			3/3/2009		MY	Chlordane	U	BDL	ug/l	0.2	0.2 EPA_8081A
			3/3/2009		MY	Endosulfan I	U	BDL	ug/l	0.05	0.05 EPA_8081A
			3/3/2009		MY	Dieldrin	U	BDL	ug/l	0.09	0.09 EPA_8081A
			3/3/2009		MY	Endrin	U	BDL	ug/l	0.07	0.07 EPA_8081A
			3/3/2009		MY	Endosulfan II	U	BDL	ug/l	0.07	0.07 EPA_8081A
			3/3/2009		MY	Endrin Aldehyde	U	BDL	ug/l	0.12	0.12 EPA_8081A
3/3/2009		MY	Methoxychlor	U	BDL	ug/l	0.07	0.07 EPA_8081A			
3/3/2009		MY	Endosulfan Sulfate	U	BDL	ug/l	0.1	0.1 EPA_8081A			
3/3/2009		MY	Endrin Ketone	U	BDL	ug/l	0.07	0.07 EPA_8081A			
3/3/2009		MY	1,2-dcbpl (Surr)			84	%Rec	25	25 EPA_8081A		
3/3/2009		MY	Toxaphene	U	BDL	ug/l	1.3	1.3 EPA_8081A			
200900606	GAGE # 07312100	2/19/2009	METALS-TUL-D:								
			2/25/2009	13:30	JL	Dissolved Arsenic	U	BDL	mg/L	0.009	0.009 200.7/6010B
			2/25/2009		JL	Dissolved Barium		0.134	mg/L	0.0006	0.0006 200.7/6010B
			2/25/2009		JL	Dissolved Cadmium		0.011	mg/L	0.0009	0.0009 200.7/6010B
2/25/2009		JL	Dissolved Chromium	U	BDL	mg/L	0.0009	0.0009 200.7/6010B			

Susie Southwell

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Red River

Environmental Laboratory and Consulting Company

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Certificate of Analysis

ODEQ ID # 9953

To: MR. TONY CLYDE

TULSA DISTRICT CORPS OF ENGINEERS
1645 S 101st EAST AVE
TULSA, OK 74128-4609

Project #: W912BV07-P-0189

Date Received: 2/20/2009

Project Name: WATER QUALITY MONITORING

Report Date: 3/13/2009

Lab Number	Sample Identification	Date Sampled	Analysis Date	Analized Time	Analized By	Parameter	Q	Results	Units	MDL	SQL Method
200900606	GAGE # 07312100	2/19/2009	2/25/2009		JL	Dissolved Copper		0.089	mg/L	0.0003	0.0003 200.7/6010B
			2/25/2009		JL	Dissolved Iron	U	BDL	mg/L	0.0008	0.0008 200.7/6010B
			2/25/2009		JL	Dissolved Lead	U	BDL	mg/L	0.009	0.009 200.7/6010B
			2/25/2009		JL	Dissolved Manganese		0.008	mg/L	0.0001	0.0001 200.7/6010B
			2/25/2009		JL	Dissolved Nickel	U	BDL	mg/L	0.0069	0.0069 200.7/6010B
			2/25/2009		JL	Dissolved Silver	U	BDL	mg/L	0.0003	0.0003 200.7/6010B
			2/25/2009		JL	Dissolved Zinc		0.028	mg/L	0.0006	0.0006 200.7/6010B
200900606	GAGE # 07312100					METALS-TULSA:					
		2/19/2009	2/25/2009	16:50	JL	Arsenic, Total		0.06	mg/L	0.009	0.009 200.7/6010B
			2/25/2009		JL	Barium, Total		0.141	mg/L	0.0006	0.0006 200.7/6010B
			2/25/2009		JL	Cadmium, Total		0.009	mg/L	0.0009	0.0009 200.7/6010B
			2/25/2009		JL	Chromium, Total	U	BDL	mg/L	0.0009	0.0009 200.7/6010B
			2/25/2009		JL	Copper, Total		0.143	mg/L	0.0003	0.0003 200.7/6010B
			2/25/2009		JL	Iron, Total		0.028	mg/L	0.0008	0.0008 200.7/6010B
			2/25/2009		JL	Lead, Total	U	BDL	mg/L	0.009	0.009 200.7/6010B
			2/25/2009		JL	Manganese, Total		0.012	mg/L	0.0001	0.0001 200.7/6010B
			2/25/2009		JL	Nickel, Total	U	BDL	mg/L	0.0069	0.0069 200.7/6010B
			2/25/2009		JL	Silver, Total	U	BDL	mg/L	0.0003	0.0003 200.7/6010B
			2/25/2009		JL	Zinc, Total		0.013	mg/L	0.0006	0.0006 200.7/6010B
			2/27/2009	10:00	PR	Mercury, Dissolved	U	BDL	mg/l	0.0002	0.0002 EPA_245.1
			2/23/2009	9:23	PR	Mercury	U	BDL	mg/l	0.0002	0.0002 EPA_245.1
			2/27/2009	18:39	OL	Selenium, Dissolved	U	BDL	mg/l	0.00169	0.00169 EPA_7740
			2/27/2009	17:42	OL	Selenium	U	BDL	mg/l	0.00169	0.00169 EPA_7740
			2/25/2009	16:50	JL	Silicon Dioxide (silica)		6.3	mg/l	0.006	0.006 200.7/6010B
200900606	GAGE # 07312100					SALTS-TULSA:					
		2/19/2009	2/26/2009	9:30	JL	Calcium, Dissolved		250	mg/L	0.0039	0.0039 200.7/6010B
			2/26/2009		JL	Magnesium, Dissolved		73.9	mg/L	0.0006	0.0006 200.7/6010B
			2/26/2009		JL	Phosphorus, Total		0.19	mg/L	0.0096	0.0096 200.7/6010B
			2/26/2009		JL	Potassium, Dissolved		20.6	mg/L	0.0009	0.0009 200.7/6010B
			2/26/2009		JL	Sodium, Dissolved		1200	mg/L	0.0018	0.0018 200.7/6010B

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To: MR. TONY CLYDE

TULSA DISTRICT CORPS OF ENGINEERS
1645 S 101st EAST AVE
TULSA, OK 74128-4609

Project #: W912BV07-P-0189

Date Received: 2/20/2009

Project Name: WATER QUALITY MONITORING

Report Date: 3/13/2009

Lab Number	Sample Identification	Date Sampled	Analysis Date	Time	Analyst	Parameter	Q	Results	Units	MDL	SQL Method
200900606	GAGE # 07312100	2/19/2009	2/26/2009	12:50	JL	Total Hardness		959	mg/l	0.06	0.06 200.7/6010B
			2/25/2009	8:45	PR	Total Alkalinity		102	mg/l	2	2 EPA_310.1
			2/24/2009	9:00	JC	Chloride		1200	mg/l	0.383	0.383 SM4500-CL-B
			2/19/2009	10:45	BS/J	Dissolved Oxygen		10.37	mg/l	0.1	0.1 EPA_360.1
			2/27/2009	10:00	PR	Fluoride		1.1	mg/L	0.04	0.04 SM4500F-D
			3/11/2009	10:00	PR	Nitrate/nitrite As Nitroge	U	BDL	mg/l	1.2	1.2 SM_4500-NO
			2/19/2009	12:19	BS/J	pH		8.1	s.u.		EPA_150.1
			2/26/2009	9:05	JC	Sulfate		850	mg/l	1.2	1.2 EPA_375.2
			2/24/2009	13:43	SS	Total Dissolved Solids		3606	mg/l	5.5	5.5 SM_2540C
			3/11/2009	9:00	PR	Total Kjeldahl Nitrogen	U	BDL	mg/l	0.4	0.4 EPA_351.3M
			2/24/2009	11:43	SS	Total Suspended Solids	J	4.4	mg/l	1.7	1.7 SM 2540D
			2/24/2009	15:25	SS	Turbidity		5.2	NTU	0.11	0.11 EPA_180.1
200900606	GAGE # 07312100					PEST-OC-A:					
		2/19/2009	2/26/2009	18:33	MY	tcmx (Surr)		80	%Rec	30	30 EPA_8081A
			2/26/2009		MY	Alpha-Bhc	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Gamma-Bhc	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Beta-Bhc	U	BDL	ug/l	0.05	0.05 EPA_8081A
			2/26/2009		MY	Delta-Bhc	U	BDL	ug/l	0.05	0.05 EPA_8081A
			2/26/2009		MY	Heptachlor	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Aldrin	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Heptachlor Epoxide	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Chlordane	U	BDL	ug/l	0.2	0.2 EPA_8081A
			2/26/2009		MY	Endosulfan I	U	BDL	ug/l	0.05	0.05 EPA_8081A
			2/26/2009		MY	Dieldrin	U	BDL	ug/l	0.09	0.09 EPA_8081A
			2/26/2009		MY	Endrin	U	BDL	ug/l	0.07	0.07 EPA_8081A
			2/26/2009		MY	Endosulfan II	U	BDL	ug/l	0.07	0.07 EPA_8081A
			2/26/2009		MY	Endrin Aldehyde	U	BDL	ug/l	0.12	0.12 EPA_8081A
			2/26/2009		MY	Methoxychlor	U	BDL	ug/l	0.07	0.07 EPA_8081A
			2/26/2009		MY	Endosulfan Sulfate	U	BDL	ug/l	0.1	0.1 EPA_8081A
			2/26/2009		MY	Endrin Ketone	U	BDL	ug/l	0.07	0.07 EPA_8081A
			2/26/2009		MY	1,2-dcbpl (Surr)		80	%Rec	25	25 EPA_8081A

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TULSA DISTRICT CORPS OF ENGINEERS
1645 S 101st EAST AVE
TULSA, OK 74128-4609

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200900606	GAGE # 07312100	2/19/2009	2/26/2009		MY	Toxaphene	U	BDL	ug/l	1.3	1.3 EPA_8081A
200900607	GAGE # 07311900					METALS-TUL-D:					
		2/19/2009	2/25/2009	13:30	JL	Dissolved Arsenic	U	BDL	mg/L	0.009	0.009 200.7/6010B
			2/25/2009		JL	Dissolved Barium		0.032	mg/L	0.0006	0.0006 200.7/6010B
			2/25/2009		JL	Dissolved Cadmium	U	BDL	mg/L	0.0009	0.0009 200.7/6010B
			2/25/2009		JL	Dissolved Chromium	U	BDL	mg/L	0.0009	0.0009 200.7/6010B
			2/25/2009		JL	Dissolved Copper		0.116	mg/L	0.0003	0.0003 200.7/6010B
			2/25/2009		JL	Dissolved Iron		0.013	mg/L	0.0008	0.0008 200.7/6010B
			2/25/2009		JL	Dissolved Lead		0.017	mg/L	0.009	0.009 200.7/6010B
			2/25/2009		JL	Dissolved Manganese		0.046	mg/L	0.0001	0.0001 200.7/6010B
			2/25/2009		JL	Dissolved Nickel		0.016	mg/L	0.0069	0.0069 200.7/6010B
			2/25/2009		JL	Dissolved Silver	U	BDL	mg/L	0.0003	0.0003 200.7/6010B
			2/25/2009		JL	Dissolved Zinc		0.07	mg/L	0.0006	0.0006 200.7/6010B
200900607	GAGE # 07311900					METALS-TULSA:					
		2/19/2009	2/25/2009	16:50	JL	Arsenic, Total		0.034	mg/L	0.009	0.009 200.7/6010B
			2/25/2009		JL	Barium, Total		0.034	mg/L	0.0006	0.0006 200.7/6010B
			2/25/2009		JL	Cadmium, Total		0.01	mg/L	0.0009	0.0009 200.7/6010B
			2/25/2009		JL	Chromium, Total	U	BDL	mg/L	0.0009	0.0009 200.7/6010B
			2/25/2009		JL	Copper, Total		0.21	mg/L	0.0003	0.0003 200.7/6010B
			2/25/2009		JL	Iron, Total		0.07	mg/L	0.0008	0.0008 200.7/6010B
			2/25/2009		JL	Lead, Total		0.015	mg/L	0.009	0.009 200.7/6010B
			2/25/2009		JL	Manganese, Total		0.045	mg/L	0.0001	0.0001 200.7/6010B
			2/25/2009		JL	Nickel, Total	U	BDL	mg/L	0.0069	0.0069 200.7/6010B
			2/25/2009		JL	Silver, Total	U	BDL	mg/L	0.0003	0.0003 200.7/6010B
			2/25/2009		JL	Zinc, Total		0.08	mg/L	0.0006	0.0006 200.7/6010B
			2/27/2009	10:00	PR	Mercury, Dissolved	U	BDL	mg/l	0.0002	0.0002 EPA_245.1
			2/23/2009	9:23	PR	Mercury	U	BDL	mg/l	0.0002	0.0002 EPA_245.1
			2/27/2009	18:42	OL	Selenium, Dissolved	<	0.00845	mg/l	0.00169	0.00845 EPA_7740
			2/27/2009	17:45	OL	Selenium	<	0.00845	mg/l	0.00169	0.00845 EPA_7740

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TULSA DISTRICT CORPS OF ENGINEERS
1645 S 101st EAST AVE
TULSA, OK 74128-4609

Project #: W912BV07-P-0189

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Lab Number	Sample Identification	Date Sampled	Analysis Date	Time	Analized By	Parameter	Q	Results	Units	MDL	SQL Method
200900607	GAGE # 07311900	2/19/2009	2/25/2009	16:50	JL	Silicon Dioxide (silica)		1.31	mg/l	0.006	0.006 200.7/6010B
200900607	GAGE # 07311900					SALTS-TULSA:					
		2/19/2009	2/26/2009	9:30	JL	Calcium, Dissolved		755	mg/L	0.0039	0.0039 200.7/6010B
			2/26/2009		JL	Magnesium, Dissolved		152	mg/L	0.0006	0.0006 200.7/6010B
			2/26/2009		JL	Phosphorus, Total		0.26	mg/L	0.0096	0.0096 200.7/6010B
			2/26/2009		JL	Potassium, Dissolved		42	mg/L	0.0009	0.0009 200.7/6010B
			2/26/2009		JL	Sodium, Dissolved		6783	mg/L	0.0018	0.0018 200.7/6010B
			2/26/2009	12:50	JL	Total Hardness		2417	mg/l	0.06	0.06 200.7/6010B
			2/25/2009	8:45	PR	Total Alkalinity		110	mg/l	2	2 EPA_310.1
			2/24/2009	9:00	JC	Chloride		5848	mg/l	0.383	0.383 SM4500-CL-B
			2/19/2009	12:19	BS/J	Dissolved Oxygen		10.77	mg/l	0.1	0.1 EPA_360.1
			2/27/2009	10:00	PR	Fluoride		1.31	mg/L	0.04	0.04 SM4500F-D
			3/11/2009	10:00	PR	Nitrate/nitrite As Nitroge	U	BDL	mg/l	1.2	1.2 SM_4500-NO
			2/19/2009	12:54	BS/J	pH		7.9	s.u.		EPA_150.1
			2/26/2009	9:05	JC	Sulfate		2850	mg/l	1.2	1.2 EPA_375.2
			2/24/2009	13:43	SS	Total Dissolved Solids		13998	mg/l	5.5	5.5 SM_2540C
			3/11/2009	9:00	PR	Total Kjeldahl Nitrogen	U	BDL	mg/l	0.4	0.4 EPA_351.3M
			2/24/2009	11:43	SS	Total Suspended Solids	J	2.2	mg/l	1.7	1.7 SM 2540D
			2/24/2009	15:25	SS	Turbidity		4.8	NTU	0.11	0.11 EPA_180.1
200900607	GAGE # 07311900					PEST-OC-A:					
		2/19/2009	2/26/2009	19:09	MY	tcmx (Surr)		83	%Rec	30	30 EPA_8081A
			2/26/2009		MY	Alpha-Bhc	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Gamma-Bhc	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Beta-Bhc	U	BDL	ug/l	0.05	0.05 EPA_8081A
			2/26/2009		MY	Delta-Bhc	U	BDL	ug/l	0.05	0.05 EPA_8081A
			2/26/2009		MY	Heptachlor	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Aldrin	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Heptachlor Epoxide	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Chlordane	U	BDL	ug/l	0.2	0.2 EPA_8081A
			2/26/2009		MY	Endosulfan I	U	BDL	ug/l	0.05	0.05 EPA_8081A

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Lab Number	Sample Identification	Date Sampled	Analysis Date	Time	By	Parameter	Q	Results	Units	MDL	SQL Method		
200900607	GAGE # 07311900	2/19/2009	2/26/2009		MY	Dieldrin	U	BDL	ug/l	0.09	0.09 EPA_8081A		
			2/26/2009		MY	Endrin	U	BDL	ug/l	0.07	0.07 EPA_8081A		
			2/26/2009		MY	Endosulfan II	U	BDL	ug/l	0.07	0.07 EPA_8081A		
			2/26/2009		MY	Endrin Aldehyde	U	BDL	ug/l	0.12	0.12 EPA_8081A		
			2/26/2009		MY	Methoxychlor	U	BDL	ug/l	0.07	0.07 EPA_8081A		
			2/26/2009		MY	Endosulfan Sulfate	U	BDL	ug/l	0.1	0.1 EPA_8081A		
			2/26/2009		MY	Endrin Ketone	U	BDL	ug/l	0.07	0.07 EPA_8081A		
			2/26/2009		MY	1,2-dcbpl (Surr)			109	%Rec	25	25 EPA_8081A	
			2/26/2009		MY	Toxaphene	U	BDL	ug/l	1.3	1.3 EPA_8081A		
200900608	GAGE # 07311800	2/19/2009	METALS-TUL-D:										
			2/25/2009	13:30	JL	Dissolved Arsenic	U	BDL	mg/L	0.009	0.009	200.7/6010B	
			2/25/2009		JL	Dissolved Barium			0.05	mg/L	0.0006	0.0006	200.7/6010B
			2/25/2009		JL	Dissolved Cadmium	U	BDL	mg/L	0.0009	0.0009	200.7/6010B	
			2/25/2009		JL	Dissolved Chromium	U	BDL	mg/L	0.0009	0.0009	200.7/6010B	
			2/25/2009		JL	Dissolved Copper			0.1	mg/L	0.0003	0.0003	200.7/6010B
			2/25/2009		JL	Dissolved Iron	U	BDL	mg/L	0.0008	0.0008	200.7/6010B	
			2/25/2009		JL	Dissolved Lead	U	BDL	mg/L	0.009	0.009	200.7/6010B	
			2/25/2009		JL	Dissolved Manganese	U	BDL	mg/L	0.0001	0.0001	200.7/6010B	
			2/25/2009		JL	Dissolved Nickel	U	BDL	mg/L	0.0069	0.0069	200.7/6010B	
200900608	GAGE # 07311800	2/19/2009	METALS-TULSA:										
			2/25/2009	16:50	JL	Arsenic, Total	U	BDL	mg/L	0.009	0.009	200.7/6010B	
			2/25/2009		JL	Barium, Total			0.04	mg/L	0.0006	0.0006	200.7/6010B
			2/25/2009		JL	Cadmium, Total	U	BDL	mg/L	0.0009	0.0009	200.7/6010B	
			2/25/2009		JL	Chromium, Total	U	BDL	mg/L	0.0009	0.0009	200.7/6010B	
			2/25/2009		JL	Copper, Total			0.1	mg/L	0.0003	0.0003	200.7/6010B
			2/25/2009		JL	Iron, Total	U	BDL	mg/L	0.0008	0.0008	200.7/6010B	
			2/25/2009		JL	Lead, Total	U	BDL	mg/L	0.009	0.009	200.7/6010B	

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200900608	GAGE # 07311800	2/19/2009	2/25/2009		JL	Manganese, Total	U	BDL	mg/L	0.0001	0.0001	200.7/6010B
			2/25/2009		JL	Nickel, Total	U	BDL	mg/L	0.0069	0.0069	200.7/6010B
			2/25/2009		JL	Silver, Total	U	BDL	mg/L	0.0003	0.0003	200.7/6010B
			2/25/2009		JL	Zinc, Total		0.03	mg/L	0.0006	0.0006	200.7/6010B
			2/27/2009	10:00	PR	Mercury, Dissolved	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
			2/23/2009	9:23	PR	Mercury	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
			2/27/2009	18:52	OL	Selenium, Dissolved	<	0.00845	mg/l	0.00169	0.00845	EPA_7740
			2/27/2009	17:49	OL	Selenium	<	0.00845	mg/l	0.00169	0.00845	EPA_7740
			2/25/2009	16:50	JL	Silicon Dioxide (silica)		3.8	mg/l	0.006	0.006	200.7/6010B
			200900608	GAGE # 07311800	2/19/2009	SALTS-TULSA:						
2/26/2009	9:30	JL				Calcium, Dissolved		934	mg/L	0.0039	0.0039	200.7/6010B
2/26/2009		JL				Magnesium, Dissolved		447	mg/L	0.0006	0.0006	200.7/6010B
2/26/2009		JL				Phosphorus, Total		1.3	mg/L	0.0096	0.0096	200.7/6010B
2/26/2009		JL				Potassium, Dissolved		38.4	mg/L	0.0009	0.0009	200.7/6010B
2/26/2009		JL				Sodium, Dissolved		4097	mg/L	0.0018	0.0018	200.7/6010B
2/26/2009	12:50	JL				Total Hardness		3982	mg/l	0.06	0.06	200.7/6010B
2/25/2009	8:45	PR				Total Alkalinity		182	mg/l	2	2	EPA_310.1
2/24/2009	9:00	JC				Chloride		5798	mg/l	0.383	0.383	SM4500-CL-B
2/19/2009	12:54	BS/J				Dissolved Oxygen		9.87	mg/l	0.1	0.1	EPA_360.1
2/27/2009	10:00	PR				Fluoride		1.43	mg/L	0.04	0.04	SM4500F-D
3/11/2009	10:00	PR				Nitrate/nitrite As Nitroge	U	BDL	mg/l	1.2	1.2	SM_4500-NO
2/19/2009	14:06	BS/J				pH		7.9	s.u.			EPA_150.1
2/26/2009	9:05	JC				Sulfate		3000	mg/l	1.2	1.2	EPA_375.2
2/24/2009	13:43	SS				Total Dissolved Solids		14688	mg/l	5.5	5.5	SM_2540C
3/11/2009	9:00	PR	Total Kjeldahl Nitrogen	U	BDL	mg/l	0.4	0.4	EPA_351.3M			
2/24/2009	11:43	SS	Total Suspended Solids		17.8	mg/l	1.7	1.7	SM 2540D			
2/24/2009	15:25	SS	Turbidity		16.9	NTU	0.11	0.11	EPA_180.1			
200900608	GAGE # 07311800	2/19/2009	PEST-OC-A:									
			2/26/2009	19:46	MY	tcmx (Surr)		39	%Rec	30	30	EPA_8081A
			2/26/2009		MY	Alpha-Bhc	U	BDL	ug/l	0.04	0.04	EPA_8081A

Susie Southwell

Laboratory Authorized Signature



Environmental Laboratory and Consulting Company

Analytical Laboratory - Environmental Consulting - Permit Application and Compliance

Certificate of Analysis

ODEQ ID # 9953

To: MR. TONY CLYDE

TULSA DISTRICT CORPS OF ENGINEERS
1645 S 101st EAST AVE
TULSA, OK 74128-4609

Project #: W912BV07-P-0189

Date Received: 2/20/2009

Project Name: WATER QUALITY MONITORING

Report Date: 3/13/2009

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, By, Parameter, Q Results, Units, MDL, SQL Method. Contains data for two sample IDs: 200900608 and 200900609.

Susie Southwell

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Red River

Environmental Laboratory and Consulting Company

Analytical Laboratory - Environmental Consulting - Permit Application and Compliance

Certificate of Analysis

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To: MR. TONY CLYDE

TULSA DISTRICT CORPS OF ENGINEERS
1645 S 101st EAST AVE
TULSA, OK 74128-4609

Project #: W912BV07-P-0189

Date Received: 2/20/2009

Project Name: WATER QUALITY MONITORING

Report Date: 3/13/2009

Lab Number	Sample Identification	Date Sampled	Analysis Date	Time	Analized By	Parameter	Q	Results	Units	MDL	SQL	Method
200900609	GAGE # 07311700					METALS-TULSA:						
		2/19/2009	2/25/2009	16:50	JL	Arsenic, Total	U	BDL	mg/L	0.009	0.009	200.7/6010B
			2/25/2009		JL	Barium, Total		0.03	mg/L	0.0006	0.0006	200.7/6010B
			2/25/2009		JL	Cadmium, Total	U	BDL	mg/L	0.0009	0.0009	200.7/6010B
			2/25/2009		JL	Chromium, Total	U	BDL	mg/L	0.0009	0.0009	200.7/6010B
			2/25/2009		JL	Copper, Total		0.1	mg/L	0.0003	0.0003	200.7/6010B
			2/25/2009		JL	Iron, Total		0.05	mg/L	0.0008	0.0008	200.7/6010B
			2/25/2009		JL	Lead, Total		0.016	mg/L	0.009	0.009	200.7/6010B
			2/25/2009		JL	Manganese, Total	U	BDL	mg/L	0.0001	0.0001	200.7/6010B
			2/25/2009		JL	Nickel, Total		0.06	mg/L	0.0069	0.0069	200.7/6010B
			2/25/2009		JL	Silver, Total	U	BDL	mg/L	0.0003	0.0003	200.7/6010B
			2/25/2009		JL	Zinc, Total		0.04	mg/L	0.0006	0.0006	200.7/6010B
		2/27/2009		10:00	PR	Mercury, Dissolved	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
		2/23/2009		9:23	PR	Mercury	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
		2/27/2009		18:55	OL	Selenium, Dissolved	<	0.00845	mg/l	0.00169	0.00845	EPA_7740
		2/27/2009		17:52	OL	Selenium	<	0.00845	mg/l	0.00169	0.00845	EPA_7740
		2/25/2009		16:50	JL	Silicon Dioxide (silica)		1.15	mg/l	0.006	0.006	200.7/6010B
200900609	GAGE # 07311700					SALTS-TULSA:						
		2/19/2009	2/26/2009	9:30	JL	Calcium, Dissolved		848	mg/L	0.0039	0.0039	200.7/6010B
			2/26/2009		JL	Magnesium, Dissolved		219	mg/L	0.0006	0.0006	200.7/6010B
			2/26/2009		JL	Phosphorus, Total		1.1	mg/L	0.0096	0.0096	200.7/6010B
			2/26/2009		JL	Potassium, Dissolved		28.9	mg/L	0.0009	0.0009	200.7/6010B
			2/26/2009		JL	Sodium, Dissolved		5058	mg/L	0.0018	0.0018	200.7/6010B
			2/26/2009	12:50	JL	Total Hardness		2971	mg/l	0.06	0.06	200.7/6010B
			2/25/2009	8:45	PR	Total Alkalinity		94	mg/l	2	2	EPA_310.1
			2/24/2009	9:00	JC	Chloride		6348	mg/l	0.383	0.383	SM4500-CL-B
			2/19/2009	14:06	BS/J	Dissolved Oxygen		9.77	mg/l	0.1	0.1	EPA_360.1
			2/27/2009	10:00	PR	Fluoride		1.69	mg/L	0.04	0.04	SM4500F-D
			3/11/2009	10:00	PR	Nitrate/nitrite As Nitroge	U	BDL	mg/l	1.2	1.2	SM_4500-NO
			2/19/2009	14:28	BS/J	pH		8.0	s.u.			EPA_150.1
			2/26/2009	9:59	JC	Sulfate		2573	mg/l	1.2	1.2	EPA_375.2

Susie Southwell

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Environmental Laboratory and Consulting Company

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Certificate of Analysis

ODEQ ID # 9953

To: MR. TONY CLYDE

TULSA DISTRICT CORPS OF ENGINEERS
1645 S 101st EAST AVE
TULSA, OK 74128-4609

Project #: W912BV07-P-0189

Date Received: 2/20/2009

Project Name: WATER QUALITY MONITORING

Report Date: 3/13/2009

Lab Number	Sample Identification	Date Sampled	Analysis Date	Time	By	Parameter	Q	Results	Units	MDL	SQL Method
200900609	GAGE # 07311700	2/19/2009	2/24/2009	13:43	SS	Total Dissolved Solids		15050	mg/l	5.5	5.5 SM_2540C
			3/11/2009	9:00	PR	Total Kjeldahl Nitrogen	U	BDL	mg/l	0.4	0.4 EPA_351.3M
			2/24/2009	11:43	SS	Total Suspended Solids		7	mg/l	1.7	1.7 SM_2540D
			2/24/2009	15:25	SS	Turbidity		13	NTU	0.11	0.11 EPA_180.1
200900609	GAGE # 07311700	2/19/2009	PEST-OC-A:								
			2/26/2009	20:23	MY	tcmx (Surr)		46	%Rec	30	30 EPA_8081A
			2/26/2009		MY	Alpha-Bhc	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Gamma-Bhc	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Beta-Bhc	U	BDL	ug/l	0.05	0.05 EPA_8081A
			2/26/2009		MY	Delta-Bhc	U	BDL	ug/l	0.05	0.05 EPA_8081A
			2/26/2009		MY	Heptachlor	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Aldrin	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Heptachlor Epoxide	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Chlordane	U	BDL	ug/l	0.2	0.2 EPA_8081A
			2/26/2009		MY	Endosulfan I	U	BDL	ug/l	0.05	0.05 EPA_8081A
			2/26/2009		MY	Dieldrin	U	BDL	ug/l	0.09	0.09 EPA_8081A
			2/26/2009		MY	Endrin	U	BDL	ug/l	0.07	0.07 EPA_8081A
			2/26/2009		MY	Endosulfan II	U	BDL	ug/l	0.07	0.07 EPA_8081A
			2/26/2009		MY	Endrin Aldehyde	U	BDL	ug/l	0.12	0.12 EPA_8081A
2/26/2009		MY	Methoxychlor	U	BDL	ug/l	0.07	0.07 EPA_8081A			
2/26/2009		MY	Endosulfan Sulfate	U	BDL	ug/l	0.1	0.1 EPA_8081A			
2/26/2009		MY	Endrin Ketone	U	BDL	ug/l	0.07	0.07 EPA_8081A			
2/26/2009		MY	1,2-dcbpl (Surr)			85	%Rec	25	25 EPA_8081A		
2/26/2009		MY	Toxaphene	U	BDL	ug/l		1.3	1.3 EPA_8081A		
200900610	GAGE # 07311630	2/19/2009	METALS-TUL-D:								
			2/25/2009	13:30	JL	Dissolved Arsenic	U	BDL	mg/L	0.009	0.009 200.7/6010B
			2/25/2009		JL	Dissolved Barium		0.02	mg/L	0.0006	0.0006 200.7/6010B
			2/25/2009		JL	Dissolved Cadmium		0.06	mg/L	0.0009	0.0009 200.7/6010B
2/25/2009		JL	Dissolved Chromium	U	BDL	mg/L	0.0009	0.0009 200.7/6010B			

Susie Southwell

Laboratory Authorized Signature



Environmental Laboratory and Consulting Company

Analytical Laboratory - Environmental Consulting - Permit Application and Compliance

Certificate of Analysis

ODEQ ID # 9953

To: MR. TONY CLYDE

TULSA DISTRICT CORPS OF ENGINEERS
1645 S 101st EAST AVE
TULSA, OK 74128-4609

Project #: W912BV07-P-0189

Date Received: 2/20/2009

Project Name: WATER QUALITY MONITORING

Report Date: 3/13/2009

Lab Number	Sample Identification	Date Sampled	Analysis Date	Analized Time	Analized By	Parameter	Q	Results	Units	MDL	SQL	Method
200900610	GAGE # 07311630	2/19/2009	2/25/2009		JL	Dissolved Copper	U	BDL	mg/L	0.0003	0.0003	200.7/6010B
			2/25/2009		JL	Dissolved Iron	U	BDL	mg/L	0.0008	0.0008	200.7/6010B
			2/25/2009		JL	Dissolved Lead	U	BDL	mg/L	0.009	0.009	200.7/6010B
			2/25/2009		JL	Dissolved Manganese	U	BDL	mg/L	0.0001	0.0001	200.7/6010B
			2/25/2009		JL	Dissolved Nickel		0.05	mg/L	0.0069	0.0069	200.7/6010B
			2/25/2009		JL	Dissolved Silver	U	BDL	mg/L	0.0003	0.0003	200.7/6010B
			2/25/2009		JL	Dissolved Zinc		0.02	mg/L	0.0006	0.0006	200.7/6010B
200900610	GAGE # 07311630	2/19/2009	METALS-TULSA:									
			2/25/2009	16:50	JL	Arsenic, Total	U	BDL	mg/L	0.009	0.009	200.7/6010B
			2/25/2009		JL	Barium, Total		0.03	mg/L	0.0006	0.0006	200.7/6010B
			2/25/2009		JL	Cadmium, Total		0.04	mg/L	0.0009	0.0009	200.7/6010B
			2/25/2009		JL	Chromium, Total	U	BDL	mg/L	0.0009	0.0009	200.7/6010B
			2/25/2009		JL	Copper, Total		0.07	mg/L	0.0003	0.0003	200.7/6010B
			2/25/2009		JL	Iron, Total	U	BDL	mg/L	0.0008	0.0008	200.7/6010B
			2/25/2009		JL	Lead, Total	U	BDL	mg/L	0.009	0.009	200.7/6010B
			2/25/2009		JL	Manganese, Total	U	BDL	mg/L	0.0001	0.0001	200.7/6010B
			2/25/2009		JL	Nickel, Total		0.05	mg/L	0.0069	0.0069	200.7/6010B
			2/25/2009		JL	Silver, Total	U	BDL	mg/L	0.0003	0.0003	200.7/6010B
			2/25/2009		JL	Zinc, Total		0.02	mg/L	0.0006	0.0006	200.7/6010B
			2/27/2009	10:00	PR	Mercury, Dissolved	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
			2/23/2009	9:23	PR	Mercury	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
2/27/2009	18:58	OL	Selenium, Dissolved	<	0.00845	mg/l	0.00169	0.00845	EPA_7740			
2/27/2009	17:55	OL	Selenium	<	0.00845	mg/l	0.00169	0.00845	EPA_7740			
2/25/2009	16:50	JL	Silicon Dioxide (silica)		10.2	mg/l	0.006	0.006	200.7/6010B			
200900610	GAGE # 07311630	2/19/2009	SALTS-TULSA:									
			2/26/2009	9:30	JL	Calcium, Dissolved		821	mg/L	0.0039	0.0039	200.7/6010B
			2/26/2009		JL	Magnesium, Dissolved		170	mg/L	0.0006	0.0006	200.7/6010B
			2/26/2009		JL	Phosphorus, Total		0.7	mg/L	0.0096	0.0096	200.7/6010B
			2/26/2009		JL	Potassium, Dissolved		19.8	mg/L	0.0009	0.0009	200.7/6010B
2/26/2009		JL	Sodium, Dissolved		2762	mg/L	0.0018	0.0018	200.7/6010B			

Susie Southwell

Laboratory Authorized Signature

Red River

Environmental Laboratory and Consulting Company

Analytical Laboratory - Environmental Consulting - Permit Application and Compliance

Certificate of Analysis

ODEQ ID # 9953

To: MR. TONY CLYDE

TULSA DISTRICT CORPS OF ENGINEERS
1645 S 101st EAST AVE
TULSA, OK 74128-4609

Project #: W912BV07-P-0189

Date Received: 2/20/2009

Project Name: WATER QUALITY MONITORING

Report Date: 3/13/2009

Lab Number	Sample Identification	Date Sampled	Analysis Date	Time	Analyst	Parameter	Q	Results	Units	MDL	SQL Method
200900610	GAGE # 07311630	2/19/2009	2/26/2009	12:50	JL	Total Hardness		2645	mg/l	0.06	0.06 200.7/6010B
			3/13/2009	9:00	PR	Total Alkalinity		154	mg/l	2	2 EPA_310.1
			2/24/2009	9:00	JC	Chloride		3799	mg/l	0.383	0.383 SM4500-CL-B
			2/19/2009	14:28	BS/J	Dissolved Oxygen		10.07	mg/l	0.1	0.1 EPA_360.1
			2/27/2009	10:00	PR	Fluoride		1.45	mg/L	0.04	0.04 SM4500F-D
			3/11/2009	10:00	PR	Nitrate/nitrite As Nitroge	U	BDL	mg/l	1.2	1.2 SM_4500-NO
			2/19/2009	15:23	BS/J	pH		8.1	s.u.		EPA_150.1
			2/26/2009	9:05	JC	Sulfate		2450	mg/l	1.2	1.2 EPA_375.2
			2/24/2009	13:43	SS	Total Dissolved Solids		10396	mg/l	5.5	5.5 SM_2540C
			3/11/2009	9:00	PR	Total Kjeldahl Nitrogen	U	BDL	mg/l	0.4	0.4 EPA_351.3M
			2/24/2009	11:43	SS	Total Suspended Solids	U	BDL	mg/l	1.7	1.7 SM 2540D
			2/24/2009	15:25	SS	Turbidity		2.3	NTU	0.11	0.11 EPA_180.1
200900610	GAGE # 07311630					PEST-OC-A:					
		2/19/2009	2/26/2009	21:00	MY	tcmx (Surr)		77	%Rec	30	30 EPA_8081A
			2/26/2009		MY	Alpha-Bhc	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Gamma-Bhc	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Beta-Bhc	U	BDL	ug/l	0.05	0.05 EPA_8081A
			2/26/2009		MY	Delta-Bhc	U	BDL	ug/l	0.05	0.05 EPA_8081A
			2/26/2009		MY	Heptachlor	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Aldrin	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Heptachlor Epoxide	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Chlordane	U	BDL	ug/l	0.2	0.2 EPA_8081A
			2/26/2009		MY	Endosulfan I	U	BDL	ug/l	0.05	0.05 EPA_8081A
			2/26/2009		MY	Dieldrin	U	BDL	ug/l	0.09	0.09 EPA_8081A
			2/26/2009		MY	Endrin	U	BDL	ug/l	0.07	0.07 EPA_8081A
			2/26/2009		MY	Endosulfan II	U	BDL	ug/l	0.07	0.07 EPA_8081A
			2/26/2009		MY	Endrin Aldehyde	U	BDL	ug/l	0.12	0.12 EPA_8081A
			2/26/2009		MY	Methoxychlor	U	BDL	ug/l	0.07	0.07 EPA_8081A
			2/26/2009		MY	Endosulfan Sulfate	U	BDL	ug/l	0.1	0.1 EPA_8081A
			2/26/2009		MY	Endrin Ketone	U	BDL	ug/l	0.07	0.07 EPA_8081A
			2/26/2009		MY	1,2-dcbpl (Surr)		86	%Rec	25	25 EPA_8081A

Susie Southwell

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Certificate of Analysis

ODEQ ID # 9953

To: MR. TONY CLYDE

TULSA DISTRICT CORPS OF ENGINEERS
1645 S 101st EAST AVE
TULSA, OK 74128-4609

Project #: W912BV07-P-0189

Date Received: 2/20/2009

Project Name: WATER QUALITY MONITORING

Report Date: 3/13/2009

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, By, Parameter, Q Results, Units, MDL, SQL Method. Contains data for samples 200900610, 200900611 (METALS-TUL-D), and 200900611 (METALS-TULSA).

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Laboratory Authorized Signature

Red River

Environmental Laboratory and Consulting Company

Analytical Laboratory - Environmental Consulting - Permit Application and Compliance

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TULSA, OK 74128-4609

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Project Name: WATER QUALITY MONITORING

Report Date: 3/13/2009

Lab Number	Sample Identification	Date Sampled	Analysis Date	Time	Analized By	Parameter	Q	Results	Units	MDL	SQL Method
200900611	GAGE # 07311600	2/19/2009	2/25/2009	16:50	JL	Silicon Dioxide (silica)		4.06	mg/l	0.006	0.006 200.7/6010B
200900611	GAGE # 07311600					SALTS-TULSA:					
		2/19/2009	2/26/2009	9:30	JL	Calcium, Dissolved		824	mg/L	0.0039	0.0039 200.7/6010B
			2/26/2009		JL	Magnesium, Dissolved		200	mg/L	0.0006	0.0006 200.7/6010B
			2/26/2009		JL	Phosphorus, Total		1.1	mg/L	0.0096	0.0096 200.7/6010B
			2/26/2009		JL	Potassium, Dissolved		30.3	mg/L	0.0009	0.0009 200.7/6010B
			2/26/2009		JL	Sodium, Dissolved		6217	mg/L	0.0018	0.0018 200.7/6010B
			2/26/2009	12:50	JL	Total Hardness		2868	mg/l	0.06	0.06 200.7/6010B
			3/13/2009	9:00	PR	Total Alkalinity		130	mg/l	2	2 EPA_310.1
			2/24/2009	9:00	JC	Chloride		7798	mg/l	0.383	0.383 SM4500-CL-B
			2/19/2009	15:23	BS/J	Dissolved Oxygen		11.43	mg/l	0.1	0.1 EPA_360.1
			2/27/2009	10:00	PR	Fluoride		1.77	mg/L	0.04	0.04 SM4500F-D
			3/11/2009	10:00	PR	Nitrate/nitrite As Nitroge	U	BDL	mg/l	1.2	1.2 SM_4500-NO
			2/19/2009	16:39	BS/J	pH		8.1	s.u.		EPA_150.1
			2/26/2009	9:05	JC	Sulfate		2750	mg/l	1.2	1.2 EPA_375.2
			2/24/2009	13:43	SS	Total Dissolved Solids		17454	mg/l	5.5	5.5 SM_2540C
			3/11/2009	9:00	PR	Total Kjeldahl Nitrogen	U	BDL	mg/l	0.4	0.4 EPA_351.3M
			2/24/2009	11:43	SS	Total Suspended Solids		7	mg/l	1.7	1.7 SM 2540D
			2/24/2009	15:25	SS	Turbidity		6.2	NTU	0.11	0.11 EPA_180.1
200900611	GAGE # 07311600					PEST-OC-A:					
		2/19/2009	2/26/2009	21:36	MY	tcmx (Surr)		64	%Rec	30	30 EPA_8081A
			2/26/2009		MY	Alpha-Bhc	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Gamma-Bhc	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Beta-Bhc	U	BDL	ug/l	0.05	0.05 EPA_8081A
			2/26/2009		MY	Delta-Bhc	U	BDL	ug/l	0.05	0.05 EPA_8081A
			2/26/2009		MY	Heptachlor	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Aldrin	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Heptachlor Epoxide	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Chlordane	U	BDL	ug/l	0.2	0.2 EPA_8081A
			2/26/2009		MY	Endosulfan I	U	BDL	ug/l	0.05	0.05 EPA_8081A

Susie Southwell

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Certificate of Analysis

ODEQ ID # 9953

To: MR. TONY CLYDE

TULSA DISTRICT CORPS OF ENGINEERS
1645 S 101st EAST AVE
TULSA, OK 74128-4609

Project #: W912BV07-P-0189

Date Received: 2/20/2009

Project Name: WATER QUALITY MONITORING

Report Date: 3/13/2009

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, By, Parameter, Q Results, Units, MDL, SQL Method. Contains data for samples 200900611, 200900612, and 200900612.

Susie Southwell

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Lab Number	Sample Identification	Date Sampled	Analysis Date	Time	Analized By	Parameter	Q	Results	Units	MDL	SQL Method	
200900612	GAGE # 07311782	2/19/2009	2/25/2009		JL	Manganese, Total		0.2	mg/L	0.0001	0.0001 200.7/6010B	
			2/25/2009		JL	Nickel, Total		0.04	mg/L	0.0069	0.0069 200.7/6010B	
			2/25/2009		JL	Silver, Total	U	BDL	mg/L	0.0003	0.0003 200.7/6010B	
			2/25/2009		JL	Zinc, Total		0.19	mg/L	0.0006	0.0006 200.7/6010B	
			2/27/2009	10:00	PR	Mercury, Dissolved	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
			2/23/2009	9:23	PR	Mercury	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
			2/27/2009	19:04	OL	Selenium, Dissolved	<	0.00845	mg/l	0.00169	0.00845	EPA_7740
			2/27/2009	18:01	OL	Selenium	<	0.00845	mg/l	0.00169	0.00845	EPA_7740
			2/25/2009	16:50	JL	Silicon Dioxide (silica)		2.5	mg/l	0.006	0.006	200.7/6010B
			200900612	GAGE # 07311782	2/19/2009	SALTS-TULSA:						
2/26/2009	9:30	JL				Calcium, Dissolved		1231	mg/L	0.0039	0.0039 200.7/6010B	
2/26/2009		JL				Magnesium, Dissolved		369	mg/L	0.0006	0.0006 200.7/6010B	
2/26/2009		JL				Phosphorus, Total		1.4	mg/L	0.0096	0.0096 200.7/6010B	
2/26/2009		JL				Potassium, Dissolved		108.8	mg/L	0.0009	0.0009 200.7/6010B	
2/26/2009		JL				Sodium, Dissolved		18730	mg/L	0.0018	0.0018 200.7/6010B	
2/26/2009	12:50	JL				Total Hardness		4870	mg/l	0.06	0.06	200.7/6010B
3/13/2009	9:00	PR				Total Alkalinity		112	mg/l	2	2	EPA_310.1
2/24/2009	9:00	JC				Chloride		19994	mg/l	0.383	0.383	SM4500-CL-B
2/19/2009	16:39	BS/J				Dissolved Oxygen		13.2	mg/l	0.1	0.1	EPA_360.1
2/27/2009	10:00	PR				Fluoride		2.19	mg/L	0.04	0.04	SM4500F-D
3/11/2009	10:00	PR				Nitrate/nitrite As Nitroge	U	BDL	mg/l	1.2	1.2	SM_4500-NO
2/19/2009	17:45	BS/J				pH		7.9	s.u.			EPA_150.1
2/26/2009	9:05	JC				Sulfate		2000	mg/l	1.2	1.2	EPA_375.2
2/25/2009	11:17	SS				Total Dissolved Solids		39016	mg/l	5.5	5.5	SM_2540C
3/11/2009	9:00	PR	Total Kjeldahl Nitrogen	U	BDL	mg/l	0.4	0.4	EPA_351.3M			
2/24/2009	11:43	SS	Total Suspended Solids		5.6	mg/l	1.7	1.7	SM 2540D			
2/24/2009	15:25	SS	Turbidity		8.2	NTU	0.11	0.11	EPA_180.1			
200900612	GAGE # 07311782	2/19/2009	PEST-OC-A:									
			2/26/2009	22:13	MY	tcmx (Surr)		63	%Rec	30	30 EPA_8081A	
			2/26/2009		MY	Alpha-Bhc	U	BDL	ug/l	0.04	0.04 EPA_8081A	

Susie Southwell

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TULSA DISTRICT CORPS OF ENGINEERS
1645 S 101st EAST AVE
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200900612	GAGE # 07311782	2/19/2009	2/26/2009		MY	Gamma-Bhc	U	BDL	ug/l	0.04	0.04 EPA_8081A	
			2/26/2009		MY	Beta-Bhc	U	BDL	ug/l	0.05	0.05 EPA_8081A	
			2/26/2009		MY	Delta-Bhc	U	BDL	ug/l	0.05	0.05 EPA_8081A	
			2/26/2009		MY	Heptachlor	U	BDL	ug/l	0.04	0.04 EPA_8081A	
			2/26/2009		MY	Aldrin	U	BDL	ug/l	0.04	0.04 EPA_8081A	
			2/26/2009		MY	Heptachlor Epoxide	U	BDL	ug/l	0.04	0.04 EPA_8081A	
			2/26/2009		MY	Chlordane	U	BDL	ug/l	0.2	0.2 EPA_8081A	
			2/26/2009		MY	Endosulfan I	U	BDL	ug/l	0.05	0.05 EPA_8081A	
			2/26/2009		MY	Dieldrin	U	BDL	ug/l	0.09	0.09 EPA_8081A	
			2/26/2009		MY	Endrin	U	BDL	ug/l	0.07	0.07 EPA_8081A	
			2/26/2009		MY	Endosulfan II	U	BDL	ug/l	0.07	0.07 EPA_8081A	
			2/26/2009		MY	Endrin Aldehyde	U	BDL	ug/l	0.12	0.12 EPA_8081A	
			2/26/2009		MY	Methoxychlor	U	BDL	ug/l	0.07	0.07 EPA_8081A	
			2/26/2009		MY	Endosulfan Sulfate	U	BDL	ug/l	0.1	0.1 EPA_8081A	
			2/26/2009		MY	Endrin Ketone	U	BDL	ug/l	0.07	0.07 EPA_8081A	
			2/26/2009		MY	1,2-dcbpl (Surr)			123	%Rec	25	25 EPA_8081A
			2/26/2009		MY	Toxaphene	U	BDL	ug/l	1.3	1.3 EPA_8081A	
			200900613	GAGE # 07311783	2/19/2009	METALS-TUL-D:						
2/25/2009	13:30	JL				Dissolved Arsenic	0.4	mg/L	0.009	0.009	200.7/6010B	
2/25/2009		JL				Dissolved Barium	0.03	mg/L	0.0006	0.0006	200.7/6010B	
2/25/2009		JL				Dissolved Cadmium	0.05	mg/L	0.0009	0.0009	200.7/6010B	
2/25/2009		JL				Dissolved Chromium	U	BDL	mg/L	0.0009	0.0009	200.7/6010B
2/25/2009		JL				Dissolved Copper	0.05	mg/L	0.0003	0.0003	200.7/6010B	
2/25/2009		JL				Dissolved Iron	U	BDL	mg/L	0.0008	0.0008	200.7/6010B
2/25/2009		JL				Dissolved Lead	0.02	mg/L	0.009	0.009	200.7/6010B	
2/25/2009		JL				Dissolved Manganese	0.21	mg/L	0.0001	0.0001	200.7/6010B	
2/25/2009		JL				Dissolved Nickel	0.05	mg/L	0.0069	0.0069	200.7/6010B	
2/25/2009		JL				Dissolved Silver	U	BDL	mg/L	0.0003	0.0003	200.7/6010B
2/25/2009		JL				Dissolved Zinc	0.2	mg/L	0.0006	0.0006	200.7/6010B	

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200900613	GAGE # 07311783					METALS-TULSA:					
		2/19/2009	2/25/2009	16:50	JL	Arsenic, Total		0.45	mg/L	0.009	0.009 200.7/6010B
			2/25/2009		JL	Barium, Total		0.03	mg/L	0.0006	0.0006 200.7/6010B
			2/25/2009		JL	Cadmium, Total		0.06	mg/L	0.0009	0.0009 200.7/6010B
			2/25/2009		JL	Chromium, Total	U	BDL	mg/L	0.0009	0.0009 200.7/6010B
			2/25/2009		JL	Copper, Total		0.11	mg/L	0.0003	0.0003 200.7/6010B
			2/25/2009		JL	Iron, Total		0.02	mg/L	0.0008	0.0008 200.7/6010B
			2/25/2009		JL	Lead, Total		0.05	mg/L	0.009	0.009 200.7/6010B
			2/25/2009		JL	Manganese, Total		0.25	mg/L	0.0001	0.0001 200.7/6010B
			2/25/2009		JL	Nickel, Total		0.06	mg/L	0.0069	0.0069 200.7/6010B
			2/25/2009		JL	Silver, Total	U	BDL	mg/L	0.0003	0.0003 200.7/6010B
			2/25/2009		JL	Zinc, Total		0.16	mg/L	0.0006	0.0006 200.7/6010B
			2/27/2009	10:00	PR	Mercury, Dissolved	U	BDL	mg/l	0.0002	0.0002 EPA_245.1
			2/23/2009	9:23	PR	Mercury	U	BDL	mg/l	0.0002	0.0002 EPA_245.1
			2/27/2009	19:08	OL	Selenium, Dissolved	<	0.00845	mg/l	0.00169	0.00845 EPA_7740
			2/27/2009	18:04	OL	Selenium	<	0.00845	mg/l	0.00169	0.00845 EPA_7740
			2/25/2009	16:50	JL	Silicon Dioxide (silica)		8.1	mg/l	0.006	0.006 200.7/6010B
200900613	GAGE # 07311783					SALTS-TULSA:					
		2/19/2009	2/26/2009	9:30	JL	Calcium, Dissolved		944	mg/L	0.0039	0.0039 200.7/6010B
			2/26/2009		JL	Magnesium, Dissolved		287	mg/L	0.0006	0.0006 200.7/6010B
			2/26/2009		JL	Phosphorus, Total		0.9	mg/L	0.0096	0.0096 200.7/6010B
			2/26/2009		JL	Potassium, Dissolved		63.5	mg/L	0.0009	0.0009 200.7/6010B
			2/26/2009		JL	Sodium, Dissolved		11470	mg/L	0.0018	0.0018 200.7/6010B
			2/26/2009	12:50	JL	Total Hardness		3563	mg/l	0.06	0.06 200.7/6010B
			3/13/2009	9:00	PR	Total Alkalinity		142	mg/l	2	2 EPA_310.1
			2/24/2009	9:00	JC	Chloride		18244	mg/l	0.383	0.383 SM4500-CL-B
			2/19/2009	17:45	BS/J	Dissolved Oxygen		10.8	mg/l	0.1	0.1 EPA_360.1
			2/27/2009	10:00	PR	Fluoride		2.01	mg/L	0.04	0.04 SM4500F-D
			3/11/2009	10:00	PR	Nitrate/nitrite As Nitroge	U	BDL	mg/l	1.2	1.2 SM_4500-NO
			2/19/2009	18:01	BS/J	pH		7.9	s.u.		EPA_150.1
			2/26/2009	9:05	JC	Sulfate		1875	mg/l	1.2	1.2 EPA_375.2

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TULSA DISTRICT CORPS OF ENGINEERS
1645 S 101st EAST AVE
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200900613	GAGE # 07311783	2/19/2009	2/25/2009	11:17	SS	Total Dissolved Solids		35788	mg/l	5.5	5.5 SM_2540C
			3/11/2009	9:00	PR	Total Kjeldahl Nitrogen	U	BDL	mg/l	0.4	0.4 EPA_351.3M
			2/25/2009	15:55	SS	Total Suspended Solids		11.6	mg/l	1.7	1.7 SM 2540D
			2/24/2009	15:25	SS	Turbidity		14.2	NTU	0.11	0.11 EPA_180.1
200900613	GAGE # 07311783	2/19/2009	PEST-OC-A:								
			2/26/2009	22:50	MY	tcmx (Surr)		52	%Rec	30	30 EPA_8081A
			2/26/2009		MY	Alpha-Bhc	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Gamma-Bhc	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Beta-Bhc	U	BDL	ug/l	0.05	0.05 EPA_8081A
			2/26/2009		MY	Delta-Bhc	U	BDL	ug/l	0.05	0.05 EPA_8081A
			2/26/2009		MY	Heptachlor	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Aldrin	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Heptachlor Epoxide	U	BDL	ug/l	0.04	0.04 EPA_8081A
			2/26/2009		MY	Chlordane	U	BDL	ug/l	0.2	0.2 EPA_8081A
			2/26/2009		MY	Endosulfan I	U	BDL	ug/l	0.05	0.05 EPA_8081A
			2/26/2009		MY	Dieldrin	U	BDL	ug/l	0.09	0.09 EPA_8081A
			2/26/2009		MY	Endrin	U	BDL	ug/l	0.07	0.07 EPA_8081A
			2/26/2009		MY	Endosulfan II	U	BDL	ug/l	0.07	0.07 EPA_8081A
			2/26/2009		MY	Endrin Aldehyde	U	BDL	ug/l	0.12	0.12 EPA_8081A
2/26/2009		MY	Methoxychlor	U	BDL	ug/l	0.07	0.07 EPA_8081A			
2/26/2009		MY	Endosulfan Sulfate	U	BDL	ug/l	0.1	0.1 EPA_8081A			
2/26/2009		MY	Endrin Ketone	U	BDL	ug/l	0.07	0.07 EPA_8081A			
2/26/2009		MY	1,2-dcbpl (Surr)			64	%Rec	25	25 EPA_8081A		
2/26/2009		MY	Toxaphene	U	BDL	ug/l	1.3	1.3 EPA_8081A			
200900614	GAGE # 07308500	2/19/2009	METALS-TUL-D:								
			2/25/2009	13:30	JL	Dissolved Arsenic		0.033	mg/L	0.009	0.009 200.7/6010B
			2/25/2009		JL	Dissolved Barium		0.062	mg/L	0.0006	0.0006 200.7/6010B
			2/25/2009		JL	Dissolved Cadmium		0.005	mg/L	0.0009	0.0009 200.7/6010B
2/25/2009		JL	Dissolved Chromium	U	BDL	mg/L	0.0009	0.0009 200.7/6010B			

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200900614	GAGE # 07308500	2/19/2009	2/25/2009		JL	Dissolved Copper		0.107	mg/L	0.0003	0.0003 200.7/6010B
			2/25/2009		JL	Dissolved Iron		0.061	mg/L	0.0008	0.0008 200.7/6010B
			2/25/2009		JL	Dissolved Lead		0.013	mg/L	0.009	0.009 200.7/6010B
			2/25/2009		JL	Dissolved Manganese		0.026	mg/L	0.0001	0.0001 200.7/6010B
			2/25/2009		JL	Dissolved Nickel	U	BDL	mg/L	0.0069	0.0069 200.7/6010B
			2/25/2009		JL	Dissolved Silver	U	BDL	mg/L	0.0003	0.0003 200.7/6010B
			2/25/2009		JL	Dissolved Zinc		0.03	mg/L	0.0006	0.0006 200.7/6010B
200900614	GAGE # 07308500					METALS-TULSA:					
		2/19/2009	2/25/2009	16:50	JL	Arsenic, Total		0.033	mg/L	0.009	0.009 200.7/6010B
			2/25/2009		JL	Barium, Total		0.067	mg/L	0.0006	0.0006 200.7/6010B
			2/25/2009		JL	Cadmium, Total		0.006	mg/L	0.0009	0.0009 200.7/6010B
			2/25/2009		JL	Chromium, Total	U	BDL	mg/L	0.0009	0.0009 200.7/6010B
			2/25/2009		JL	Copper, Total		0.188	mg/L	0.0003	0.0003 200.7/6010B
			2/25/2009		JL	Iron, Total		0.144	mg/L	0.0008	0.0008 200.7/6010B
			2/25/2009		JL	Lead, Total		0.014	mg/L	0.009	0.009 200.7/6010B
			2/25/2009		JL	Manganese, Total		0.051	mg/L	0.0001	0.0001 200.7/6010B
			2/25/2009		JL	Nickel, Total	U	BDL	mg/L	0.0069	0.0069 200.7/6010B
			2/25/2009		JL	Silver, Total	U	BDL	mg/L	0.0003	0.0003 200.7/6010B
			2/25/2009		JL	Zinc, Total		0.036	mg/L	0.0006	0.0006 200.7/6010B
			2/27/2009	10:00	PR	Mercury, Dissolved	U	BDL	mg/l	0.0002	0.0002 EPA_245.1
			2/23/2009	9:23	PR	Mercury	U	BDL	mg/l	0.0002	0.0002 EPA_245.1
			2/27/2009	19:11	OL	Selenium, Dissolved	<	0.00845	mg/l	0.00169	0.00845 EPA_7740
			2/27/2009	18:14	OL	Selenium	<	0.00845	mg/l	0.00169	0.00845 EPA_7740
			2/25/2009	16:50	JL	Silicon Dioxide (silica)		1.04	mg/l	0.006	0.006 200.7/6010B
200900614	GAGE # 07308500					SALTS-TULSA:					
		2/19/2009	2/26/2009	9:30	JL	Calcium, Dissolved		285	mg/L	0.0039	0.0039 200.7/6010B
			2/26/2009		JL	Magnesium, Dissolved		88.3	mg/L	0.0006	0.0006 200.7/6010B
			2/26/2009		JL	Phosphorus, Total		0.2	mg/L	0.0096	0.0096 200.7/6010B
			2/26/2009		JL	Potassium, Dissolved		16.6	mg/L	0.0009	0.0009 200.7/6010B
			2/26/2009		JL	Sodium, Dissolved		2134	mg/L	0.0018	0.0018 200.7/6010B

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Project Name: WATER QUALITY MONITORING

Report Date: 3/13/2009

Lab Number	Sample Identification	Date Sampled	Analysis Date	Time	Analized By	Parameter	Q	Results	Units	MDL	SQL Method			
200900614	GAGE # 07308500	2/19/2009	2/26/2009	12:50	JL	Total Hardness		1163	mg/l	0.06	0.06 200.7/6010B			
			3/4/2009	9:00	PR	Total Alkalinity		126	mg/l	2	2 EPA_310.1			
			2/24/2009	9:00	JC	Chloride		3149	mg/l	0.383	0.383 SM4500-CL-B			
			2/19/2009	18:01	BS/J	Dissolved Oxygen		11.37	mg/l	0.1	0.1 EPA_360.1			
			2/27/2009	10:00	PR	Fluoride		1.59	mg/L	0.04	0.04 SM4500F-D			
			3/11/2009	10:00	PR	Nitrate/nitrite As Nitroge	U	BDL	mg/l	1.2	1.2 SM_4500-NO			
			2/19/2009	10:45	BS/J	pH		7.9	s.u.		EPA_150.1			
			2/26/2009	9:05	JC	Sulfate		1450	mg/l	1.2	1.2 EPA_375.2			
			2/25/2009	11:17	SS	Total Dissolved Solids		7656	mg/l	5.5	5.5 SM_2540C			
			3/11/2009	9:00	PR	Total Kjeldahl Nitrogen	U	BDL	mg/l	0.4	0.4 EPA_351.3M			
			2/25/2009	15:55	SS	Total Suspended Solids		21.6	mg/l	1.7	1.7 SM 2540D			
			2/24/2009	15:25	SS	Turbidity		9.3	NTU	0.11	0.11 EPA_180.1			
			200900614	GAGE # 07308500	2/19/2009	PEST-OC-A:								
						2/26/2009	23:27	MY	tcmx (Surr)		75	%Rec	30	30 EPA_8081A
2/26/2009		MY				Alpha-Bhc	U	BDL	ug/l	0.04	0.04 EPA_8081A			
2/26/2009		MY				Gamma-Bhc	U	BDL	ug/l	0.04	0.04 EPA_8081A			
2/26/2009		MY				Beta-Bhc	U	BDL	ug/l	0.05	0.05 EPA_8081A			
2/26/2009		MY				Delta-Bhc	U	BDL	ug/l	0.05	0.05 EPA_8081A			
2/26/2009		MY				Heptachlor	U	BDL	ug/l	0.04	0.04 EPA_8081A			
2/26/2009		MY				Aldrin	U	BDL	ug/l	0.04	0.04 EPA_8081A			
2/26/2009		MY				Heptachlor Epoxide	U	BDL	ug/l	0.04	0.04 EPA_8081A			
2/26/2009		MY				Chlordane	U	BDL	ug/l	0.2	0.2 EPA_8081A			
2/26/2009		MY				Endosulfan I	U	BDL	ug/l	0.05	0.05 EPA_8081A			
2/26/2009		MY				Dieldrin	U	BDL	ug/l	0.09	0.09 EPA_8081A			
2/26/2009		MY				Endrin	U	BDL	ug/l	0.07	0.07 EPA_8081A			
2/26/2009		MY				Endosulfan II	U	BDL	ug/l	0.07	0.07 EPA_8081A			
2/26/2009		MY				Endrin Aldehyde	U	BDL	ug/l	0.12	0.12 EPA_8081A			
2/26/2009		MY	Methoxychlor	U	BDL	ug/l	0.07	0.07 EPA_8081A						
2/26/2009		MY	Endosulfan Sulfate	U	BDL	ug/l	0.1	0.1 EPA_8081A						
2/26/2009		MY	Endrin Ketone	U	BDL	ug/l	0.07	0.07 EPA_8081A						
2/26/2009		MY	1,2-dcbpl (Surr)		96	%Rec	25	25 EPA_8081A						

Susie Southwell

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Environmental Laboratory and Consulting Company

Analytical Laboratory - Environmental Consulting - Permit Application and Compliance

Certificate of Analysis

ODEQ ID # 9953

To: MR. TONY CLYDE

TULSA DISTRICT CORPS OF ENGINEERS
1645 S 101st EAST AVE
TULSA, OK 74128-4609

Project #: W912BV07-P-0189

Date Received: 2/20/2009

Project Name: WATER QUALITY MONITORING

Report Date: 3/13/2009

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, By, Parameter, Q Results, Units, MDL, SQL Method. Includes data for Toxaphene and various metals (Arsenic, Barium, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Nickel, Silver, Zinc) for samples 200900614 and 200900615.

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Red River

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Lab Number	Sample Identification	Date Sampled	Analysis Date	Time	Analized By	Parameter	Q	Results	Units	MDL	SQL	Method
200900615	GAGE # 07331600 DUPLICATE	2/20/2009	2/27/2009	19:14	OL	Selenium, Dissolved	U	BDL	mg/l	0.00169	0.00169	EPA_7740
			2/27/2009	18:17	OL	Selenium	U	BDL	mg/l	0.00169	0.00169	EPA_7740
			2/25/2009	16:50	JL	Silicon Dioxide (silica)		1.84	mg/l	0.006	0.006	200.7/6010B
200900615	GAGE # 07331600 DUPLICATE					SALTS-TULSA:						
		2/20/2009	2/26/2009	9:30	JL	Calcium, Dissolved		92	mg/L	0.0039	0.0039	200.7/6010B
			2/26/2009		JL	Magnesium, Dissolved		36.6	mg/L	0.0006	0.0006	200.7/6010B
			2/26/2009		JL	Phosphorus, Total		0.17	mg/L	0.0096	0.0096	200.7/6010B
			2/26/2009		JL	Potassium, Dissolved		8.04	mg/L	0.0009	0.0009	200.7/6010B
			2/26/2009		JL	Sodium, Dissolved		199	mg/L	0.0018	0.0018	200.7/6010B
			2/26/2009	12:50	JL	Total Hardness		416	mg/l	0.06	0.06	200.7/6010B
			3/4/2009	9:00	PR	Total Alkalinity		124	mg/l	2	2	EPA_310.1
			2/24/2009	9:00	JC	Chloride		256	mg/l	0.383	0.383	SM4500-CL-B
			2/20/2009	10:35	BS/J	Dissolved Oxygen		10.6	mg/l	0.1	0.1	EPA_360.1
			2/27/2009	10:00	PR	Fluoride		0.62	mg/L	0.04	0.04	SM4500F-D
			3/11/2009	10:00	PR	Nitrate/nitrite As Nitroge	U	BDL	mg/l	1.2	1.2	SM_4500-NO
			2/20/2009	10:36	BS/J	pH		7.6	s.u.			EPA_150.1
			2/26/2009	9:05	JC	Sulfate		225	mg/l	1.2	1.2	EPA_375.2
			2/25/2009	11:17	SS	Total Dissolved Solids		1006	mg/l	5.5	5.5	SM_2540C
			3/11/2009	9:00	PR	Total Kjeldahl Nitrogen	U	BDL	mg/l	0.4	0.4	EPA_351.3M
			2/25/2009	15:55	SS	Total Suspended Solids	J	2.4	mg/l	1.7	1.7	SM 2540D
			2/24/2009	15:25	SS	Turbidity		2.8	NTU	0.11	0.11	EPA_180.1
200900615	GAGE # 07331600 DUPLICATE					PEST-OC-A:						
		2/20/2009	3/3/2009	15:12	MY	tcmx (Surr)		55	%Rec	30	30	EPA_8081A
			3/3/2009		MY	Alpha-Bhc	U	BDL	ug/l	0.04	0.04	EPA_8081A
			3/3/2009		MY	Gamma-Bhc	U	BDL	ug/l	0.04	0.04	EPA_8081A
			3/3/2009		MY	Beta-Bhc	U	BDL	ug/l	0.05	0.05	EPA_8081A
			3/3/2009		MY	Delta-Bhc	U	BDL	ug/l	0.05	0.05	EPA_8081A
			3/3/2009		MY	Heptachlor	U	BDL	ug/l	0.04	0.04	EPA_8081A

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Lab Number	Sample Identification	Date Sampled	Analysis Date	Time	By	Parameter	Q	Results	Units	MDL	SQL	Method
200900615	GAGE # 07331600 DUPLICATE	2/20/2009	3/3/2009		MY	Aldrin	U	BDL	ug/l	0.04	0.04	EPA_8081A
			3/3/2009		MY	Heptachlor Epoxide	U	BDL	ug/l	0.04	0.04	EPA_8081A
			3/3/2009		MY	Chlordane	U	BDL	ug/l	0.2	0.2	EPA_8081A
			3/3/2009		MY	Endosulfan I	U	BDL	ug/l	0.05	0.05	EPA_8081A
			3/3/2009		MY	Dieldrin	U	BDL	ug/l	0.09	0.09	EPA_8081A
			3/3/2009		MY	Endrin	U	BDL	ug/l	0.07	0.07	EPA_8081A
			3/3/2009		MY	Endosulfan II	U	BDL	ug/l	0.07	0.07	EPA_8081A
			3/3/2009		MY	Endrin Aldehyde	U	BDL	ug/l	0.12	0.12	EPA_8081A
			3/3/2009		MY	Methoxychlor	U	BDL	ug/l	0.07	0.07	EPA_8081A
			3/3/2009		MY	Endosulfan Sulfate	U	BDL	ug/l	0.1	0.1	EPA_8081A
			3/3/2009		MY	Endrin Ketone	U	BDL	ug/l	0.07	0.07	EPA_8081A
			3/3/2009		MY	1,2-dcbpl (Surr)		94	%Rec	25	25	EPA_8081A
			3/3/2009		MY	Toxaphene	U	BDL	ug/l	1.3	1.3	EPA_8081A

Note:

200900604: The higher detection limit on the selenium results is based on the sample being diluted prior to analysis.
 200900607: The higher detection limit on the selenium results is based on the sample being diluted prior to analysis.
 200900608: The higher detection limit on the selenium results is based on the sample being diluted prior to analysis.
 200900609: The higher detection limit on the selenium results is based on the sample being diluted prior to analysis.
 200900610: The higher detection limit on the selenium results is based on the sample being diluted prior to analysis.
 200900612: The higher detection limit on the selenium results is based on the sample being diluted prior to analysis.
 200900613: The higher detection limit on the selenium results is based on the sample being diluted prior to analysis.
 200900614: The higher detection limit on the selenium results is based on the sample being diluted prior to analysis.

MDL = Method Detection Limit. SQL* = Sample Quantitation Level.

BDL = Analyte was analyzed for but not detected above MDL.

B = Analyte was detected in both the sample and associated blank.

J = Analyte was detected above the MDL but below the PQL.

OL2 = Subcontracted to ODEQ Lab #7211.

Q = Surrogate recovery fell outside acceptance limits.

M = Matrix effect present

* When a sample contains a high concentration of either a target or non-target compound(s) or interference, it must be diluted. SQL = Dilution factor x MDL. Samples are disposed of 20 days after the sample is reported.

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