



## 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 #: W912BV-07-P0189

Date Received: 9/27/2007

Project Name: RED RIVER & WICHITA MONITORING

Report Date: 10/15/2007

Lab Number	Sample Identification	Date Sampled	Analysis Date	Time	Analized By	Parameter	Q	Results	Units	MDL	SQL	Method
200704047	GAGE NUMBER: 07331000					METALS-TULSA:						
		9/27/2007	10/4/2007	9:30	JL	Arsenic, Dissolved	U	BDL	mg/L	0.009	0.00900	200.7/6010B
			10/4/2007	15:30	JL	Arsenic, Total		0.0190	mg/L	0.009	0.00900	200.7/6010B
			10/4/2007		JL	Barium, Dissolved		0.255	mg/L	0.0006	0.000600	200.7/6010B
			10/4/2007		JL	Barium, Total		0.255	mg/L	0.0006	0.000600	200.7/6010B
			10/4/2007		JL	Cadmium, Dissolved	U	BDL	mg/L	0.0009	0.000900	200.7/6010B
			10/4/2007		JL	Cadmium, Total	U	BDL	mg/L	0.0009	0.000900	200.7/6010B
			10/4/2007		JL	Chromium, Dissolved	U	BDL	mg/L	0.0009	0.000900	200.7/6010B
			10/4/2007		JL	Chromium, Total	U	BDL	mg/L	0.0009	0.000900	200.7/6010B
			10/4/2007		JL	Copper, Dissolved		0.0900	mg/L	0.0003	0.000300	200.7/6010B
			10/4/2007		JL	Copper, Total		0.0900	mg/L	0.0003	0.000300	200.7/6010B
			10/4/2007		JL	Iron, Dissolved		0.0600	mg/L	0.0008	0.000800	200.7/6010B
			10/4/2007		JL	Iron, Total		1.17	mg/L	0.0008	0.000800	200.7/6010B
			10/4/2007		JL	Lead, Dissolved		0.0130	mg/L	0.009	0.00900	200.7/6010B
			10/4/2007		JL	Lead, Total		0.0190	mg/L	0.009	0.00900	200.7/6010B
			10/4/2007		JL	Manganese, Dissolved		0.0140	mg/L	0.0001	0.000100	200.7/6010B
			10/4/2007		JL	Manganese, Total		0.534	mg/L	0.0001	0.000100	200.7/6010B
			10/4/2007		JL	Nickel, Dissolved	U	BDL	mg/L	0.0069	0.00690	200.7/6010B
			10/4/2007		JL	Nickel, Total	U	BDL	mg/L	0.0069	0.00690	200.7/6010B
			10/4/2007		JL	Silver, Dissolved	U	BDL	mg/L	0.0003	0.000300	200.7/6010B
			10/4/2007		JL	Silver, Total	U	BDL	mg/L	0.0003	0.000300	200.7/6010B
			10/4/2007		JL	Zinc, Dissolved	U	BDL	mg/L	0.0006	0.000600	200.7/6010B
			10/4/2007		JL	Zinc, Total		0.0300	mg/L	0.0006	0.000600	200.7/6010B
			10/8/2007	10:30	KK	Mercury, Dissolved	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
			10/2/2007	10:45	KK	Mercury	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
			10/9/2007	11:17	OL	Selenium, Dissolved	U	BDL	mg/l	0.0014	0.00140	EPA_7440
			10/9/2007	9:55	OL	Selenium	U	BDL	mg/l	0.0014	0.00140	EPA_7740
			10/4/2007	15:30	JL	Silicon Dioxide (silica)		20.9	mg/l	0.006	0.006	200.7/6010B

Laboratory Authorized Signature



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ODEQ ID # 9953

To: MR. TONY CLYDE

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

Project #: W912BV-07-P0189

Date Received: 9/27/2007

Project Name: RED RIVER & WICHITA MONITORING

Report Date: 10/15/2007

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, By, Parameter, Q, Results, Units, MDL, SQL, Method. Contains two main sections: SALTS-TULSA and METALS-TULSA.

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Lab Number	Sample Identification	Date Sampled	Analysis Date	Time	Analized By	Parameter	Q	Results	Units	MDL	SQL	Method
200704048	GAGE NUMBER: 07331600	9/27/2007	10/4/2007		JL	Copper, Total		0.0800	mg/L	0.0003	0.000300	200.7/6010B
			10/4/2007		JL	Iron, Dissolved		0.0180	mg/L	0.0008	0.000800	200.7/6010B
			10/4/2007		JL	Iron, Total		0.0530	mg/L	0.0008	0.000800	200.7/6010B
			10/4/2007		JL	Lead, Dissolved	U	BDL	mg/L	0.009	0.00900	200.7/6010B
			10/4/2007		JL	Lead, Total		0.0140	mg/L	0.009	0.00900	200.7/6010B
			10/4/2007		JL	Manganese, Dissolved	U	BDL	mg/L	0.0001	0.000100	200.7/6010B
			10/4/2007		JL	Manganese, Total		0.0390	mg/L	0.0001	0.000100	200.7/6010B
			10/4/2007		JL	Nickel, Dissolved	U	BDL	mg/L	0.0069	0.00690	200.7/6010B
			10/4/2007		JL	Nickel, Total	U	BDL	mg/L	0.0069	0.00690	200.7/6010B
			10/4/2007		JL	Silver, Dissolved	U	BDL	mg/L	0.0003	0.000300	200.7/6010B
			10/4/2007		JL	Silver, Total	U	BDL	mg/L	0.0003	0.000300	200.7/6010B
			10/4/2007		JL	Zinc, Dissolved	U	BDL	mg/L	0.0006	0.000600	200.7/6010B
			10/4/2007		JL	Zinc, Total	U	BDL	mg/L	0.0006	0.000600	200.7/6010B
			10/8/2007	10:30	KK	Mercury, Dissolved	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
			10/2/2007	10:45	KK	Mercury	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
			10/9/2007	11:20	OL	Selenium, Dissolved	U	BDL	mg/l	0.0014	0.00140	EPA_7440
			10/9/2007	9:58	OL	Selenium	U	BDL	mg/l	0.0014	0.00140	EPA_7740
10/4/2007	15:30	JL	Silicon Dioxide (silica)		9.6	mg/l	0.006	0.006	200.7/6010B			
200704048	GAGE NUMBER: 07331600	9/27/2007	SALTS-TULSA:									
			10/4/2007	13:30	JL	Calcium, Dissolved		68.0	mg/L	0.0039	0.00390	200.7/6010B
			10/4/2007		JL	Magnesium, Dissolved		22.6	mg/L	0.0006	0.000600	200.7/6010B
			10/4/2007		JL	Phosphorus, Total		0.110	mg/L	0.0096	0.00960	200.7/6010B
			10/4/2007		JL	Potassium, Dissolved		9.90	mg/L	0.0009	0.000900	200.7/6010B
			10/4/2007		JL	Sodium, Dissolved		89.6	mg/L	0.0018	0.00180	200.7/6010B
			10/4/2007	13:30	JL	Total Hardness		269	mg/l	0.06	0.06	200.7/6010B
			10/5/2007	14:30	AP	Total Alkalinity		126	mg/l	2	2	EPA_310.1
			10/8/2007	15:45	MS	Chloride		100	mg/l	0.383	0.383	EPA 9253
			9/27/2007	13:15	AP/J	Dissolved Oxygen		6.92	mg/l	0.1	0.1	EPA_360.1
			10/4/2007	10:50	KK	Fluoride	J	0.370	mg/L	0.22	0.220	EPA 340.1

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200704048	GAGE NUMBER: 07331600	9/27/2007	10/9/2007	12:30	KK	Nitrate/nitrite As Nitroge	U	BDL	mg/l	1.2	1.2	EPA 353.3
			9/27/2007	13:22	AP/J	pH		8.02	s.u.			EPA_150.1
			10/1/2007	14:30	AP	Sulfate		140	mg/l	1.2	1.2	EPA_375.2
			10/2/2007	14:45	AP	Total Dissolved Solids		456	mg/l	5.5	5.5	EPA_160.1
			10/15/2007	11:00	AP	Total Kjeldahl Nitrogen	J	1.12	mg/l	0.4	0.4	EPA_351.3M
			10/2/2007	16:30	AP	Total Suspended Solids		6.4	mg/l	1.7	1.7	EPA_160.2
			10/9/2007	12:00	KK	Turbidity		3.1	NTU	0.078	0.078	EPA_180.1
200704049	GAGE NUMBER: 07316000		METALS-TULSA:									
		9/27/2007	10/4/2007	9:30	JL	Arsenic, Dissolved	U	BDL	mg/L	0.009	0.00900	200.7/6010B
			10/4/2007	15:30	JL	Arsenic, Total		0.0170	mg/L	0.009	0.00900	200.7/6010B
			10/4/2007		JL	Barium, Dissolved		0.181	mg/L	0.0006	.000600	200.7/6010B
			10/4/2007		JL	Barium, Total		0.212	mg/L	0.0006	.000600	200.7/6010B
			10/4/2007		JL	Cadmium, Dissolved	U	BDL	mg/L	0.0009	.000900	200.7/6010B
			10/4/2007		JL	Cadmium, Total	U	BDL	mg/L	0.0009	.000900	200.7/6010B
			10/4/2007		JL	Chromium, Dissolved	U	BDL	mg/L	0.0009	.000900	200.7/6010B
			10/4/2007		JL	Chromium, Total	U	BDL	mg/L	0.0009	.000900	200.7/6010B
			10/4/2007		JL	Copper, Dissolved		0.100	mg/L	0.0003	.000300	200.7/6010B
			10/4/2007		JL	Copper, Total		0.100	mg/L	0.0003	.000300	200.7/6010B
			10/4/2007		JL	Iron, Dissolved		0.0350	mg/L	0.0008	.000800	200.7/6010B
			10/4/2007		JL	Iron, Total		0.559	mg/L	0.0008	.000800	200.7/6010B
			10/4/2007		JL	Lead, Dissolved	U	BDL	mg/L	0.009	0.00900	200.7/6010B
			10/4/2007		JL	Lead, Total		0.0190	mg/L	0.009	0.00900	200.7/6010B
			10/4/2007		JL	Manganese, Dissolved		0.00400	mg/L	0.0001	.000100	200.7/6010B
			10/4/2007		JL	Manganese, Total		0.253	mg/L	0.0001	.000100	200.7/6010B
			10/4/2007		JL	Nickel, Dissolved	U	BDL	mg/L	0.0069	0.00690	200.7/6010B
			10/4/2007		JL	Nickel, Total	U	BDL	mg/L	0.0069	0.00690	200.7/6010B
			10/4/2007		JL	Silver, Dissolved	U	BDL	mg/L	0.0003	.000300	200.7/6010B
			10/4/2007		JL	Silver, Total	U	BDL	mg/L	0.0003	.000300	200.7/6010B

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200704049	GAGE NUMBER: 07316000	9/27/2007	10/4/2007		JL	Zinc, Dissolved		0.008	mg/L	0.0006	0.0006	200.7/6010B
			10/4/2007		JL	Zinc, Total		0.0160	mg/L	0.0006	0.000600	200.7/6010B
			10/8/2007	10:30	KK	Mercury, Dissolved	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
			10/2/2007	10:45	KK	Mercury	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
			10/9/2007	11:24	OL	Selenium, Dissolved	U	BDL	mg/l	0.0014	0.00140	EPA_7440
			10/9/2007	10:01	OL	Selenium	U	BDL	mg/l	0.0014	0.00140	EPA_7740
			10/4/2007	15:30	JL	Silicon Dioxide (silica)		12.8	mg/l	0.006	0.006	200.7/6010B
200704049	GAGE NUMBER: 07316000	9/27/2007	SALTS-TULSA:									
			10/4/2007	13:30	JL	Calcium, Dissolved		132	mg/L	0.0039	0.00390	200.7/6010B
			10/4/2007		JL	Magnesium, Dissolved		46.0	mg/L	0.0006	0.000600	200.7/6010B
			10/4/2007		JL	Phosphorus, Total		0.290	mg/L	0.0096	0.00960	200.7/6010B
			10/4/2007		JL	Potassium, Dissolved		16.1	mg/L	0.0009	0.000900	200.7/6010B
			10/4/2007		JL	Sodium, Dissolved		679	mg/L	0.0018	0.00180	200.7/6010B
			10/4/2007	13:30	JL	Total Hardness		568	mg/l	0.06	0.06	200.7/6010B
			10/5/2007	14:30	AP	Total Alkalinity		150	mg/l	2	2	EPA_310.1
			10/8/2007	15:45	MS	Chloride		650	mg/l	0.383	0.383	EPA_9253
			9/27/2007	15:20	AP/J	Dissolved Oxygen		11.84	mg/l	0.1	0.1	EPA_360.1
			10/4/2007	10:50	KK	Fluoride		0.660	mg/L	0.22	0.220	EPA_340.1
			10/9/2007	12:30	KK	Nitrate/nitrite As Nitroge	U	BDL	mg/l	1.2	1.2	EPA_353.3
			9/27/2007	15:15	AP/J	pH		8.41	s.u.			EPA_150.1
			10/1/2007	14:30	AP	Sulfate		400	mg/l	1.2	1.2	EPA_375.2
			10/2/2007	14:45	AP	Total Dissolved Solids		1634	mg/l	5.5	5.5	EPA_160.1
			10/15/2007	11:00	AP	Total Kjeldahl Nitrogen	J	0.56	mg/l	0.4	0.4	EPA_351.3M
			10/2/2007	16:30	AP	Total Suspended Solids		269	mg/l	1.7	1.7	EPA_160.2
10/9/2007	12:00	KK	Turbidity		140	NTU	0.078	0.078	EPA_180.1			
200704050	GAGE NUMBER: 07308500	9/27/2007	METALS-TULSA:									
			10/4/2007	9:30	JL	Arsenic, Dissolved	U	BDL	mg/L	0.009	0.00900	200.7/6010B

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200704050	GAGE NUMBER: 07308500	9/27/2007	10/4/2007	15:30	JL	Arsenic, Total	U	BDL	mg/L	0.009	0.00900	200.7/6010B			
			10/4/2007		JL	Barium, Dissolved		0.123	mg/L	0.0006	0.000600	200.7/6010B			
			10/4/2007		JL	Barium, Total		0.141	mg/L	0.0006	0.000600	200.7/6010B			
			10/4/2007		JL	Cadmium, Dissolved	U	BDL	mg/L	0.0009	0.000900	200.7/6010B			
			10/4/2007		JL	Cadmium, Total	U	BDL	mg/L	0.0009	0.000900	200.7/6010B			
			10/4/2007		JL	Chromium, Dissolved	U	BDL	mg/L	0.0009	0.000900	200.7/6010B			
			10/4/2007		JL	Chromium, Total	U	BDL	mg/L	0.0009	0.000900	200.7/6010B			
			10/4/2007		JL	Copper, Dissolved		0.100	mg/L	0.0003	0.000300	200.7/6010B			
			10/4/2007		JL	Copper, Total		0.100	mg/L	0.0003	0.000300	200.7/6010B			
			10/4/2007		JL	Iron, Dissolved		0.0340	mg/L	0.0008	0.000800	200.7/6010B			
			10/4/2007		JL	Iron, Total		0.130	mg/L	0.0008	0.000800	200.7/6010B			
			10/4/2007		JL	Lead, Dissolved		0.0170	mg/L	0.009	0.00900	200.7/6010B			
			10/4/2007		JL	Lead, Total		0.0170	mg/L	0.009	0.00900	200.7/6010B			
			10/4/2007		JL	Manganese, Dissolved	U	BDL	mg/L	0.0001	0.000100	200.7/6010B			
			10/4/2007		JL	Manganese, Total		0.0320	mg/L	0.0001	0.000100	200.7/6010B			
			10/4/2007		JL	Nickel, Dissolved		0.0130	mg/L	0.0069	0.00690	200.7/6010B			
			10/4/2007		JL	Nickel, Total		0.0130	mg/L	0.0069	0.00690	200.7/6010B			
			10/4/2007		JL	Silver, Dissolved	U	BDL	mg/L	0.0003	0.000300	200.7/6010B			
			10/4/2007		JL	Silver, Total	U	BDL	mg/L	0.0003	0.000300	200.7/6010B			
			10/4/2007		JL	Zinc, Dissolved		0.0140	mg/L	0.0006	0.000600	200.7/6010B			
			10/4/2007		JL	Zinc, Total		0.0160	mg/L	0.0006	0.000600	200.7/6010B			
						10/8/2007	10:30	KK	Mercury, Dissolved	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
						10/2/2007	10:45	KK	Mercury	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
						10/9/2007	11:27	OL	Selenium, Dissolved	U	BDL	mg/l	0.0014	0.00140	EPA_7440
			10/9/2007	10:04	OL	Selenium	U	BDL	mg/l	0.0014	0.00140	EPA_7740			
			10/4/2007	15:30	JL	Silicon Dioxide (silica)		9	mg/l	0.006	0.006	200.7/6010B			
200704050	GAGE NUMBER: 07308500	9/27/2007	SALTS-TULSA:												
			10/4/2007	13:30	JL	Calcium, Dissolved		267	mg/L	0.0039	0.00390	200.7/6010B			
			10/4/2007		JL	Magnesium, Dissolved		93.0	mg/L	0.0006	0.000600	200.7/6010B			

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200704050	GAGE NUMBER: 07308500	9/27/2007	10/4/2007		JL	Phosphorus, Total		0.170	mg/L	0.0096	0.00960	200.7/6010B
			10/4/2007		JL	Potassium, Dissolved		28.0	mg/L	0.0009	0.000900	200.7/6010B
			10/4/2007		JL	Sodium, Dissolved		1920	mg/L	0.0018	0.00180	200.7/6010B
			10/4/2007	13:30	JL	Total Hardness		1064	mg/l	0.06	0.06	200.7/6010B
			10/5/2007	14:30	AP	Total Alkalinity		118	mg/l	2	2	EPA_310.1
			10/8/2007	15:45	MS	Chloride		1624	mg/l	0.383	0.383	EPA 9253
			9/27/2007	18:22	AP/J	Dissolved Oxygen		9.64	mg/l	0.1	0.1	EPA_360.1
			10/4/2007	10:50	KK	Fluoride		0.720	mg/L	0.22	0.220	EPA 340.1
			10/9/2007	12:30	KK	Nitrate/nitrite As Nitroge	U	BDL	mg/l	1.2	1.2	EPA 353.3
			9/27/2007	18:20	AP/J	pH		8.31	s.u.			EPA_150.1
			10/1/2007	14:30	AP	Sulfate		875	mg/l	1.2	1.2	EPA_375.2
			10/2/2007	14:45	AP	Total Dissolved Solids		3964	mg/l	5.5	5.5	EPA_160.1
			10/15/2007	11:00	AP	Total Kjeldahl Nitrogen	J	1.1	mg/l	0.4	0.4	EPA_351.3M
			10/2/2007	16:30	AP	Total Suspended Solids		66	mg/l	1.7	1.7	EPA_160.2
			10/9/2007	12:00	KK	Turbidity		18.1	NTU	0.078	0.078	EPA_180.1
200704051	GAGE NUMBER: 07312100	9/28/2007	METALS-TULSA:									
			10/4/2007	9:30	JL	Arsenic, Dissolved		0.0200	mg/L	0.009	0.00900	200.7/6010B
			10/4/2007	15:30	JL	Arsenic, Total		0.0200	mg/L	0.009	0.00900	200.7/6010B
			10/4/2007		JL	Barium, Dissolved		0.0430	mg/L	0.0006	0.000600	200.7/6010B
			10/4/2007		JL	Barium, Total		0.0420	mg/L	0.0006	0.000600	200.7/6010B
			10/4/2007		JL	Cadmium, Dissolved	U	BDL	mg/L	0.0009	0.000900	200.7/6010B
			10/4/2007		JL	Cadmium, Total	U	BDL	mg/L	0.0009	0.000900	200.7/6010B
			10/4/2007		JL	Chromium, Dissolved	U	BDL	mg/L	0.0009	0.000900	200.7/6010B
			10/4/2007		JL	Chromium, Total	U	BDL	mg/L	0.0009	0.000900	200.7/6010B
			10/4/2007		JL	Copper, Dissolved		0.0700	mg/L	0.0003	0.000300	200.7/6010B
			10/4/2007		JL	Copper, Total		0.0700	mg/L	0.0003	0.000300	200.7/6010B
			10/4/2007		JL	Iron, Dissolved		0.0380	mg/L	0.0008	0.000800	200.7/6010B
			10/4/2007		JL	Iron, Total		0.0920	mg/L	0.0008	0.000800	200.7/6010B

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 #: W912BV-07-P0189

Date Received: 9/27/2007

Project Name: RED RIVER & WICHITA MONITORING

Report Date: 10/15/2007

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, By, Parameter, Q, Results, Units, MDL, SQL, Method. Contains two main sections of data for sample 200704051.

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 #: W912BV-07-P0189

Date Received: 9/27/2007

Project Name: RED RIVER & WICHITA MONITORING

Report Date: 10/15/2007

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Time, Analyzed By, Parameter, Q Results, Units, MDL, SQL Method. Contains data for samples 200704051 and 200704052.

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 #: W912BV-07-P0189

Date Received: 9/27/2007

Project Name: RED RIVER & WICHITA MONITORING

Report Date: 10/15/2007

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, By, Parameter, Q, Results, Units, MDL, SQL, Method. Includes data for GAGE NUMBER: 07311900 and METALS-TULSA.

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 #: W912BV-07-P0189

Date Received: 9/27/2007

Project Name: RED RIVER & WICHITA MONITORING

Report Date: 10/15/2007

Lab Number	Sample Identification	Date Sampled	Analysis Date	Time	By	Parameter	Q	Results	Units	MDL	SQL	Method			
200704053	GAGE NUMBER: 07311800	9/28/2007	10/4/2007		JL	Cadmium, Dissolved	U	BDL	mg/L	0.0009	0.000900	200.7/6010B			
			10/4/2007		JL	Cadmium, Total	U	BDL	mg/L	0.0009	0.000900	200.7/6010B			
			10/4/2007		JL	Chromium, Dissolved	U	BDL	mg/L	0.0009	0.000900	200.7/6010B			
			10/4/2007		JL	Chromium, Total	U	BDL	mg/L	0.0009	0.000900	200.7/6010B			
			10/4/2007		JL	Copper, Dissolved	U	BDL	mg/L	0.0003	0.000300	200.7/6010B			
			10/4/2007		JL	Copper, Total	U	BDL	mg/L	0.0003	0.000300	200.7/6010B			
			10/4/2007		JL	Iron, Dissolved		0.0500	mg/L	0.0008	0.000800	200.7/6010B			
			10/4/2007		JL	Iron, Total		0.250	mg/L	0.0008	0.000800	200.7/6010B			
			10/4/2007		JL	Lead, Dissolved	U	BDL	mg/L	0.009	0.00900	200.7/6010B			
			10/4/2007		JL	Lead, Total	U	BDL	mg/L	0.009	0.00900	200.7/6010B			
			10/4/2007		JL	Manganese, Dissolved	U	BDL	mg/L	0.0001	0.000100	200.7/6010B			
			10/4/2007		JL	Manganese, Total		0.100	mg/L	0.0001	0.000100	200.7/6010B			
			10/4/2007		JL	Nickel, Dissolved	U	BDL	mg/L	0.0069	0.00690	200.7/6010B			
			10/4/2007		JL	Nickel, Total	U	BDL	mg/L	0.0069	0.00690	200.7/6010B			
			10/4/2007		JL	Silver, Dissolved	U	BDL	mg/L	0.0003	0.000300	200.7/6010B			
			10/4/2007		JL	Silver, Total	U	BDL	mg/L	0.0003	0.000300	200.7/6010B			
			10/4/2007		JL	Zinc, Dissolved	U	BDL	mg/L	0.0006	0.000600	200.7/6010B			
			10/4/2007		JL	Zinc, Total	U	BDL	mg/L	0.0006	0.000600	200.7/6010B			
			10/8/2007		10:30			KK	Mercury, Dissolved	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
			10/2/2007		10:45			KK	Mercury	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
10/9/2007		11:43			OL	Selenium, Dissolved	U	BDL	mg/l	0.0014	0.00140	EPA_7440			
10/9/2007		10:13			OL	Selenium	U	BDL	mg/l	0.0014	0.00140	EPA_7740			
10/4/2007		15:30			JL	Silicon Dioxide (silica)		9.6	mg/l	0.006	0.006	200.7/6010B			
200704053	GAGE NUMBER: 07311800	9/28/2007	SALTS-TULSA:												
			10/4/2007	13:30	JL	Calcium, Dissolved		753	mg/L	0.0039	0.00390	200.7/6010B			
			10/4/2007		JL	Magnesium, Dissolved		309	mg/L	0.0006	0.000600	200.7/6010B			
			10/4/2007		JL	Phosphorus, Total		0.500	mg/L	0.0096	0.00960	200.7/6010B			
			10/4/2007		JL	Potassium, Dissolved		38.4	mg/L	0.0009	0.000900	200.7/6010B			
10/4/2007		JL	Sodium, Dissolved		2560	mg/L	0.0018	0.00180	200.7/6010B						

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 #: W912BV-07-P0189

Date Received: 9/27/2007

Project Name: RED RIVER & WICHITA MONITORING

Report Date: 10/15/2007

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, Analyzed By, Parameter, Q, Results, Units, MDL, SQL, Method. Contains data for Lab 200704053 and Lab 200704054 (METALS-TULSA).

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 #: W912BV-07-P0189

Date Received: 9/27/2007

Project Name: RED RIVER & WICHITA MONITORING

Report Date: 10/15/2007

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, By, Parameter, Q Results, Units, MDL, SQL, Method. Contains data for GAGE NUMBER: 07311700 and SALTS-TULSA.

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 #: W912BV-07-P0189

Date Received: 9/27/2007

Project Name: RED RIVER & WICHITA MONITORING

Report Date: 10/15/2007

Lab Number	Sample Identification	Date Sampled	Analysis Date	Time	Analized By	Parameter	Q	Results	Units	MDL	SQL	Method
200704054	GAGE NUMBER: 07311700	9/28/2007	10/9/2007	12:00	KK	Turbidity		3.95	NTU	0.078	0.078	EPA_180.1
200704055	GAGE NUMBER: 07311630					METALS-TULSA:						
		9/28/2007	10/4/2007	9:30	JL	Arsenic, Dissolved	U	BDL	mg/L	0.009	0.00900	200.7/6010B
			10/4/2007	15:30	JL	Arsenic, Total	U	BDL	mg/L	0.009	0.00900	200.7/6010B
			10/4/2007		JL	Barium, Dissolved		0.0600	mg/L	0.0006	0.000600	200.7/6010B
			10/4/2007		JL	Barium, Total		0.0600	mg/L	0.0006	0.000600	200.7/6010B
			10/4/2007		JL	Cadmium, Dissolved	U	BDL	mg/L	0.0009	0.000900	200.7/6010B
			10/4/2007		JL	Cadmium, Total	U	BDL	mg/L	0.0009	0.000900	200.7/6010B
			10/4/2007		JL	Chromium, Dissolved	U	BDL	mg/L	0.0009	0.000900	200.7/6010B
			10/4/2007		JL	Chromium, Total	U	BDL	mg/L	0.0009	0.000900	200.7/6010B
			10/4/2007		JL	Copper, Dissolved	U	BDL	mg/L	0.0003	0.000300	200.7/6010B
			10/4/2007		JL	Copper, Total	U	BDL	mg/L	0.0003	0.000300	200.7/6010B
			10/4/2007		JL	Iron, Dissolved	U	BDL	mg/L	0.0008	0.000800	200.7/6010B
			10/4/2007		JL	Iron, Total		0.120	mg/L	0.0008	0.000800	200.7/6010B
			10/4/2007		JL	Lead, Dissolved	U	BDL	mg/L	0.009	0.00900	200.7/6010B
			10/4/2007		JL	Lead, Total	U	BDL	mg/L	0.009	0.00900	200.7/6010B
			10/4/2007		JL	Manganese, Dissolved	U	BDL	mg/L	0.0001	0.000100	200.7/6010B
			10/4/2007		JL	Manganese, Total	U	BDL	mg/L	0.0001	0.000100	200.7/6010B
			10/4/2007		JL	Nickel, Dissolved	U	BDL	mg/L	0.0069	0.00690	200.7/6010B
			10/4/2007		JL	Nickel, Total	U	BDL	mg/L	0.0069	0.00690	200.7/6010B
			10/4/2007		JL	Silver, Dissolved	U	BDL	mg/L	0.0003	0.000300	200.7/6010B
			10/4/2007		JL	Silver, Total	U	BDL	mg/L	0.0003	0.000300	200.7/6010B
			10/4/2007		JL	Zinc, Dissolved	U	BDL	mg/L	0.0006	0.000600	200.7/6010B
			10/4/2007		JL	Zinc, Total	U	BDL	mg/L	0.0006	0.000600	200.7/6010B
			10/8/2007	10:30	KK	Mercury, Dissolved	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
			10/2/2007	10:45	KK	Mercury	U	BDL	mg/l	0.0002	0.0002	EPA_245.1
			10/9/2007	12:37	OL	Selenium, Dissolved	<	0.00420	mg/l	0.0014	0.00420	EPA_7440
			10/9/2007	10:26	OL	Selenium	U	BDL	mg/l	0.0014	0.00140	EPA_7740

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 #: W912BV-07-P0189

Date Received: 9/27/2007

Project Name: RED RIVER & WICHITA MONITORING

Report Date: 10/15/2007

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, By, Parameter, Q, Results, Units, MDL, SQL, Method. Includes data for Silica, Salts-Tulsa, and Metals-Tulsa.

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 #: W912BV-07-P0189

Date Received: 9/27/2007

Project Name: RED RIVER & WICHITA MONITORING

Report Date: 10/15/2007

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, By, Parameter, Q Results, Units, MDL, SQL Method. Contains data for Lab 200704056 and Lab 200704056 under 'SALTS-TULSA:'.

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 #: W912BV-07-P0189

Date Received: 9/27/2007

Project Name: RED RIVER & WICHITA MONITORING

Report Date: 10/15/2007

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, Analyzed By, Parameter, Q Results, Units, MDL, SQL Method. Contains data for Lab 200704056 and Lab 200704057.

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 #: W912BV-07-P0189

Date Received: 9/27/2007

Project Name: RED RIVER & WICHITA MONITORING

Report Date: 10/15/2007

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, By, Parameter, Q Results, Units, MDL, SQL Method. Contains two main sections of data for lab numbers 200704057 and 200704057.

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 #: W912BV-07-P0189

Date Received: 9/27/2007

Project Name: RED RIVER & WICHITA MONITORING

Report Date: 10/15/2007

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, By, Parameter, Q Results, Units, MDL, SQL Method. Includes METALS-TULSA and SALTS-TULSA sections.

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 #: W912BV-07-P0189

Date Received: 9/27/2007

Project Name: RED RIVER & WICHITA MONITORING

Report Date: 10/15/2007

Lab Number	Sample Identification	Date Sampled	Analysis Date	Time	Analyst	Parameter	Q	Results	Units	MDL	SQL	Method
200704058	GAGE NUMBER: 07311783	9/28/2007	10/4/2007	13:30	JL	Calcium, Dissolved		1290	mg/L	0.0039	0.00390	200.7/6010B
			10/4/2007		JL	Magnesium, Dissolved		358	mg/L	0.0006	0.000600	200.7/6010B
			10/4/2007		JL	Phosphorus, Total		0.600	mg/L	0.0096	0.00960	200.7/6010B
			10/4/2007		JL	Potassium, Dissolved		77.6	mg/L	0.0009	0.000900	200.7/6010B
			10/4/2007		JL	Sodium, Dissolved		15000	mg/L	0.0018	0.00180	200.7/6010B
			10/4/2007	13:30	JL	Total Hardness		4972	mg/l	0.06	0.06	200.7/6010B
			10/5/2007	14:30	AP	Total Alkalinity		108	mg/l	2	2	EPA_310.1
			10/8/2007	15:45	MS	Chloride		19994	mg/l	0.383	0.383	EPA 9253
			9/28/2007	15:15	AP/J	Dissolved Oxygen		8.52	mg/l	0.1	0.1	EPA_360.1
			10/4/2007	10:50	KK	Fluoride		1.77	mg/L	0.22	0.220	EPA 340.1
			10/9/2007	12:30	KK	Nitrate/nitrite As Nitroge		U BDL	mg/l	1.2	1.2	EPA 353.3
			9/28/2007	15:10	AP/J	pH		7.55	s.u.			EPA_150.1
			10/1/2007	14:30	AP	Sulfate		3300	mg/l	1.2	1.2	EPA_375.2
			10/10/2007	16:15	AP	Total Dissolved Solids		40804	mg/l	5.5	5.5	EPA_160.1
			10/15/2007	11:00	AP	Total Kjeldahl Nitrogen		2.05	mg/l	0.4	0.4	EPA_351.3M
			10/3/2007	14:50	AP	Total Suspended Solids		15.2	mg/l	1.7	1.7	EPA_160.2
			10/9/2007	12:00	KK	Turbidity		3.89	NTU	0.078	0.078	EPA_180.1
200704059	GAGE NUMBER: 07316000 FIELD DUP	9/27/2007	METALS-TULSA:									
			10/4/2007	9:30	JL	Arsenic, Dissolved	U	BDL	mg/L	0.009	0.00900	200.7/6010B
			10/4/2007	15:30	JL	Arsenic, Total		0.0200	mg/L	0.009	0.00900	200.7/6010B
			10/4/2007		JL	Barium, Dissolved		0.199	mg/L	0.0006	0.000600	200.7/6010B
			10/4/2007		JL	Barium, Total		0.190	mg/L	0.0006	0.000600	200.7/6010B
			10/4/2007		JL	Cadmium, Dissolved	U	BDL	mg/L	0.0009	0.000900	200.7/6010B
			10/4/2007		JL	Cadmium, Total	U	BDL	mg/L	0.0009	0.000900	200.7/6010B
			10/4/2007		JL	Chromium, Dissolved	U	BDL	mg/L	0.0009	0.000900	200.7/6010B
			10/4/2007		JL	Chromium, Total	U	BDL	mg/L	0.0009	0.000900	200.7/6010B
			10/4/2007		JL	Copper, Dissolved		0.102	mg/L	0.0003	0.000300	200.7/6010B
			10/4/2007		JL	Copper, Total		0.107	mg/L	0.0003	0.000300	200.7/6010B

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 #: W912BV-07-P0189

Date Received: 9/27/2007

Project Name: RED RIVER & WICHITA MONITORING

Report Date: 10/15/2007

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, By, Parameter, Q, Results, Units, MDL, SQL, Method. Contains two main sections of data for lab 200704059.

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 #: W912BV-07-P0189

Date Received: 9/27/2007

Project Name: RED RIVER & WICHITA MONITORING

Report Date: 10/15/2007

Table with columns: Lab Number, Sample Identification, Date Sampled, Analysis Date, Analyzed Time, Analyzed By, Parameter, Q, Results, Units, MDL, SQL, Method. Includes data for sample 200704059 with multiple analysis entries.

Note:

200704052: Different reporting limit on Selenium is due to dilution factor.
200704054: Different reporting limit on Selenium is due to dilution factor.
200704055: Different reporting limit on Selenium is due to dilution factor.
200704056: Different reporting limit on Selenium is due to dilution factor.
200704057: Different reporting limit on Selenium is due to dilution factor.
200704058: Different reporting limit on Selenium is due to dilution factor.

MDL = Method Detection Limit. SQL\* = Sample Quantitation Level.
B = Analyte was detected in both the sample and associated blank.
OL2 = Subcontracted to ODEQ Lab #7211.

BDL = Analyte was analyzed for but not detected above MDL.
J = Analyte was detected above the MDL but below the PQL.
Q = Surrogate recovery fell outside acceptance limits.

\* 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.

Laboratory Authorized Signature