4500 NORTH WEST AVE. • P. O. BOX 231 • EL DORADO, AR 71731 • (870) 863-1400

EL DORADO

CHEMICAL COMPANY

March 31, 2010

Mr. Jerry Neill
Senior Geologist
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

Dear Mr. Neill:

Please find the attached 2009 El Dorado Chemical Company groundwater monitoring report.
This report is being submitted in accordance with CAO LIS Number 06-0153.

Should you have any questions concerning this report please don't hesitate to contact me at 870-863-1400.

Sincerely,

David Sartain

David Sartain
Environmental Technician
El Dorado Chemical Company

2009 ANNUAL GROUND WATER REPORT

Prepared For:

El Dorado Chemical Company

Prepared By:

ENVIRONMENTAL MANAGEMENT SERVICES, INC.

12232 Industriplex Blvd, Suite 27
Baton Rouge, Louisiana
(225) 751-5386

April 1, 2010

2009 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

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1.0 INTRODUCTION

This report presents the results of ground water sampling activities conducted at the El Dorado Chemical Company (EDCC) facility during 2009. Field sampling techniques, ground water flow and ground water quality are discussed. A site map is provided as Figure 1.

2.0 SITE GEOLOGY

The EDCC facility is located west of the Mississippi Embayment in the Gulf Coastal Plain Geostratigraphic Region. Sediments within the region are characterized as a thick sequence of unconsolidated sediments, fluvial-deltaic in origin, and Tertiary in age. In some areas of Union County, unconsolidated alluvial deposits, Quaternary in age, overlay the Tertiary sediments.

Within the Claiborne Group, two units crop out in Union County, the Cook Mountain Formation and the Cockfield Formation. The Cook Mountain is overlain by the Cockfield Formation. The Cook Mountain is uniformly underlain by the Sparta Formation. The Cook Mountain is 50 to 200 feet thick and is composed of clay and silty clay containing minor amounts of localized very fine to silty sand. These clays serve as a confining unit between the more permeable overlying Cockfield Formation and the underlying aquifer. The Cockfield Formation, locally referred to as the "lignite sand", is generally characterized by fine sand, interbedded silty clay and lignite becoming more massive and containing less silt and clay with depth. The local shallow subsurface consists of interbedded sand, silty sand, silt and clay, with more clay in the northern area of the property and more sand to the south.

3.0 GROUND WATER MONITORING

The ground water monitoring program including parameters, sampling methodology and laboratory analyses is described in the following sections.

3.1 MONITORING PARAMETERS

Statistical analyses were performed on ground water data to compare downgradient well data to upgradient (background) data to determine if the site constituents of concern are present at statistically significant levels. As a result of the statistical analyses, the monitoring program has been revised. The list was changed to allow EDCC to continue to collect data to evaluate the potential risk associated with the current ground water conditions, but eliminate parameters for which there is sufficient data. The monitoring program was revised in 2005, 2006, 2007 and again in 2009.

Revisions were proposed in a letter dated April 25, 2007 and approved by the Arkansas Department of Environmental Quality (ADEQ) on June 8, 2007. The changes to the monitoring program that were implemented in 2007 are as follows:

- ***Lead and chromium.*** These parameters were removed from the monitoring program during 2007; these parameters will be sampled semiannually every two years starting in 2008.

- ***Background Wells***: There is sufficient data to establish the background levels of ammonia, nitrate, lead and chromium in the three background wells ECMW-1, ECMW-2 and ECMW-3. These four parameters were dropped from the annual parameter list but will be sampled semiannually every two years starting in 2008 to verify the current data set.

- ***Nitrate***: The statistical evaluation indicates that wells ECMW-12, ECMW-13, ECMW-15 and ECMW-19 through ECMW-22 have concentrations of nitrate comparable to the background level. Nitrate was dropped from the annual parameter list for these wells, but will be sampled semiannually every two years starting in 2008. Nitrate will continue to be analyzed in monitor wells ECMW-4 through ECMW-11, ECMW-14, ECMW-16, ECMW-17 and ECMW-18.

- ***Ammonia***: The statistical evaluation indicates that wells ECMW-12, ECMW-13, ECMW-15 and ECMW-18 through ECMW-22 have concentrations of ammonia comparable to the background level. Ammonia was dropped from the annual parameter list for these wells, but will be sampled semiannually every two years starting in 2008. Ammonia will continue to be analyzed semiannually in monitor wells ECMW-4 through ECMW-11, ECMW-14, ECMW-16 and ECMW-17.

- ***Sulfate***: The statistical evaluation indicates that wells ECMW-12, ECMW-13, ECMW-15 and ECMW-18 through ECMW-22 have concentrations of sulfate comparable to the background level. Sulfate was dropped from the annual parameter list for these wells, but

will be sampled semiannually every two years starting in 2008. Sulfate will continue to be analyzed semiannually in monitor wells ECMW-4 through ECMW-11, ECMW-14, ECMW-16 and ECMW-17.

- ***Total Dissolved Solids***: There is sufficient ground water data for TDS. This parameter was dropped from the list of all monitoring wells at this time. TDS can be added back to the list if the information becomes necessary.

- ***Vanadium***: Vanadium was added to the list of parameters in 2004. All monitor wells will continue to be analyzed for vanadium until a sufficient amount of data is collected to statistically evaluate this parameter.

In a letter dated June 30, 2009, EDCC proposed a modification to the monitoring program requesting the elimination of vanadium from the list of sampling parameters. ADEQ responded in a September 1, 2009 letter, approving the request, stating that historical vanadium data have been non-detect or at low concentrations in the 22 monitor wells at the facility. The removal of vanadium from the sampling program became effective during the second half of 2009 sampling event.

Collection began for several new parameters from all wells during the October 2005 sampling event. Field testing was conducted to collect measurements for dissolved oxygen, and redox. In addition, samples were shipped to the laboratory and analyzed for alkalinity, nitrite, dissolved manganese, dissolved iron, total phosphorus and Total Organic Carbon. These parameters were analyzed again during the 2009 sampling events.

3.2 FIELD SAMPLING

Ground water sampling events were conducted in April and October of 2009. In the second half of 2009, ECMW-14 was sampled in December 2009 due to flooding in the area of the well during the October 2009 sampling period. Anomalous results for ammonia and/or nitrate were present in wells ECMW-5, ECMW-10, ECMW-11 and ECMW-17 during the April sampling event and were resampled on June 3, 2009 to verify the results or determine if the analyses are outliers. Three of the four wells resampled were likely outliers. The results of the sampling are discussed in detail in Section 4.2.2.

Depth-to-water measurements were collected from each well using an electronic water level indicator. The device was decontaminated between each well to minimize cross-contamination. Depth-to-water measurements were subtracted from their respective top-of-casing elevations to calculate ground water elevations referenced to Mean Sea Level (MSL) at each well. Monitoring well construction details are provided on Table 1. Ground water elevations for the 2009 sampling events are summarized on Table 2.

The depth-to-water measurements were used to calculate the volume of water within each well and determine the amount to be purged prior to sampling. Three well volumes were removed from each well or until the well became dry using a Redi-Flo electric pump. Dedicated polyethylene tubing was used for each well to minimize the potential for cross-contamination. The field parameters were recorded on the sampling forms during the 2009 sampling events (see Appendix A) to demonstrate when aquifer parameters have stabilized sufficiently prior to sampling. Meters used to measure field data were calibrated each day during sampling. Ground water indicator parameter data (final readings only) are summarized on Table 3. Purge water was containerized for proper disposal.

Ground water samples were collected using new, clean, dedicated, disposable polyethylene bailers. Ground water samples were placed into laboratory-provided containers with the appropriate preservatives. The containers were packed in ice-chests and shipped to the laboratory under chain-of-custody.

Field quality assurance/quality control samples collected consisted of four (4) blind duplicates and two (2) field blanks.

3.3 LABORATORY ANALYSIS

Ground water samples were analyzed by Arkansas Analytical, Inc. in Little Rock, Arkansas. Arkansas Analytical is certified by the Arkansas Department of Environmental Quality. The analytical reports are provided in Appendix A.

Ground water samples were analyzed for the following constituents:

PARAMETER	ANALYTICAL METHODS
Ammonia-N	4500-NH3 D
Nitrate-N	EPA 300.0
Sulfate	EPA 300.0
Vanadium (Total and Dissolved)	EPA 200.7
Iron (Dissolved)	EPA 200.7
Manganese (Dissolved)	EPA 200.7
Phosphorus	EPA 200.7
Alkalinity	2320 B
Total Organic Carbon	SM 5310C
Nitrite	EPA 300.0

4.0 SAMPLING RESULTS

The following sections present ground water flow and analytical data collected in 2009.

4.1 GROUND WATER FLOW

Ground water elevations from April and October were used to construct the maps on Figures 2 and 3. The April ground water elevations were slightly lower than the October measurements in 2009, ranging from 149.64 feet MSL in ECMW-19 to 204.66 feet MSL in ECMW-1. The averaged November readings had the higher elevations with values ranging from 150.41 feet MSL in ECMW-19 and 206.15 feet MSL in ECMW-1. Consistent with previous measurements, the ground water flow direction is from northwest to southeast with the exception of localized areas where shallow perched ground water likely exists.

4.2 GROUND WATER QUALITY

4.2.1 Field Parameters

Indicator parameter data are summarized on Table 3. In the first half of 2009, pH values ranged from 3.55 in ECMW-7 to 7.82 in ECMW-19. Specific conductance values ranged from 37 (ECMW-1) to 13,999 (ECMW-7) microSiemens/cm (µS/cm) in 2009. EC readings in ECMW-4, ECMW-6, ECMW-7 and ECMW-8 for the first half of 2009 were lower than typical previous readings and may be due to an equipment malfunction.

4.2.2 Analytical Results

The analytical results are summarized in Tables 4 through 26 and the laboratory reports are provided in Appendix A. A discussion of each constituent is provided below:

Ammonia

During the year 2009, ammonia concentrations ranged from below the detection limit (0.5 mg/L) to 181 mg/L (ECMW-6). ECMW-6, ECMW-7 and ECMW-8 exhibited the highest concentrations throughout the year. The highest ammonia concentrations are located north of the acid and nitrate process areas known as the Production Area.

Trend graphs of ammonia concentrations are provided in Appendix B. ECMW-6 shows a clear increasing trend. Wells ECMW-7, ECMW-8 and EDMW-16 show a slight decreasing trend. Ammonia concentration trends in all other wells are fairly constant.

ECMW-10, ECMW-11 and ECMW-17 showed anomalous ammonia results for the April 2009 sampling event and were therefore resampled in June 2009. As shown on Tables 13, 14 and 20, the resample analytical data indicate the April 2009 results for ECMW-10, ECMW-11 and ECMW-17, respectively, were likely outliers.

Nitrate

For the year 2009, nitrate concentrations ranged from below the detection limit (0.5 mg/L) to 1330 mg/L (ECMW-6). ECMW-6, ECMW-7 and ECMW-8 exhibited the highest concentrations throughout the year. The highest nitrate concentrations are located north of the Production Area.

Trends graphs for nitrate are provided in Appendix B. Although nitrate concentrations in ECMW-6 have historically been increasing, the more recent data indicate a possible decreasing trend. Well ECMW-22 shows a slight increasing trend. The trend for well ECMW-5 shows an increase in concentration over the last two years. The April 2009 nitrate analytical result for ECMW-5 showed an increase to 7.81 mg/L, from an average of 4.16 mg/L during 2008 and 3.43 mg/L during 2007. The well was resampled in June 2009, with a concentration of 8.82 mg/L, verifying the increasing trend in this well.

Wells ECMW-7, ECMW-8, ECMW-10, ECMW-14, ECMW-16 and ECMW-17 nitrate data show decreasing trends. Nitrate concentration trends in the remaining wells are fairly constant.

Sulfate

For the year 2009, sulfate concentrations ranged from 3.67 mg/L in ECMW-22 to 1090 mg/L (ECMW-7). ECMW-4, ECMW-7 and ECMW-8 exhibited the highest concentrations throughout the year.

Metals

Chromium and lead are sampled every two years and were not tested during 2009. Vanadium was only detected in ECMW-18, at concentration of 0.03 mg/L. Historically, the highest vanadium concentration detected on site was 0.213 mg/L, below the EPA ground water screening standard of 0.26 mg/L. Due to the historically low concentrations of this parameter, vanadium will no longer be tested as part of the ground water monitoring program.

In Situ Remediation Parameters

Samples were analyzed for alkalinity, nitrite, manganese, iron, phosphorus and total organic carbon in 2009. The analytical results of these parameters are summarized on Table 26.

Field Blanks

The field blank samples were non-detected for all parameters with the exception of total alkalinity tested during the second half of 2009, which showed a concentration right at the detection limit of 5 mg/L.

5.0 GROUND WATER REMEDIATION

Approximately 262,800 gallons of ground water was recovered from ECRW #2 in 2009, with an average rate of 0.5 gallons per minute. Recovery well ECRW #1 was not used during 2009. Operating both wells simultaneously caused the wells to quickly becoming dry resulting in

frequent damage to the pump and motor assemblies. Well ECRW #2 has operated efficiently since ECRW #1 was taken out of service.

TABLES

TABLE 1
MONITORING WELL CONSTRUCTION DETAILS
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Monitoring Well ID	Completion Date	Well Depth (ft below top of casing)	Screened Interval (ft from top of casing)	Top of Casing Elevation (ft above MSL)
ECMW-1	2/14/1996	22.1	12.1 to 22.2	213.28
ECMW-2	2/14/1996	20.2	10.2 to 20.2	196.25
ECMW-3	2/15/1996	27.1	17.1 to 27.1	192.11
ECMW-4	2/15/1996	22.1	12.1 to 22.1	194.84
ECMW-5	2/21/1996	17.7	7.7 to 17.7	182.69
ECMW-6	2/21/1996	22.0	12 to 22	191.87
ECMW-7	2/20/1996	23.9	13.9 to 23.9	195.88
ECMW-8	2/20/1996	29.9	19.9 to 29.9	197.34
ECMW-9	2/15/1996	30.0	20 to 30	198.39
ECMW-10	2/19/1996	22.6	12.6 to 22.6	205.75
ECMW-11	2/19/1996	19.8	9.8 to 19.8	201.65
ECMW-12	2/19/1996	19.9	9.9 to 19.9	184.97
ECMW-13	2/14/1996	19.8	9.8 to 19.8	177.26
ECMW-14	2/13/1996	18.2	8.2 to 18.2	178.48
ECMW-15	2/13/1996	17.0	7 to 17	180.84
ECMW-16	2/12/1996	19.3	9.3 to 19.3	180.14
ECMW-17	2/13/1996	34.7	24.7 to 34.7	185.40
ECMW-18	2/22/1996	17.2	7.2 to 17.2	155.46
ECMW-19	1/11/2004	61.5	51.5 to 61.5	150.41
ECMW-20	1/7/2004	54.4	44.5 to 54.4	192.77
ECMW-21	1/6/2004	34.9	24.9 to 34.9	176.29
ECMW-22	1/21/2004	79.8	69.8 to 79.8	173.55

Notes:

1. EDC-MW-1 through EDC-MW-18 constructed of 4-inch Sch. 40 PVC flush threaded pipe with 4-inch diamater screens, 10-foot length and 0.01-inch openings, casing risers are approximately 3 feet above ground surface, drilled with hollow-stem auger (Data from Woodward-Clyde June 1996 Report)
2. EDC-MW-19, EDC-MW-20 and EDC-MW-22 constructed of 2-inch Sch. 40 PVC flush threaded pipe with 2-inch diamater screens, 10-foot length and 0.01-inch openings, casing risers are approximately 2.5 to 3 feet above ground surface, drilled with rotary wash procedures
2. EDC-MW-20 constructed of 1-inch Sch. 40 PVC flush threaded pipe with 1-inch diameter screen, 10-foot length and 0.01-inch opening, casing riser approximately 2.5 feet above ground surface, drilled with Geoprobe

TABLE 2
GROUNDWATER ELEVATION DATA
2009 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

Monitor Well	Top of Casing Elevation (ft above Mean Sea Level)	Measurement Date			
		4/20/2009 - 4/21/2009		10/19/2009 - 10/20/2009 (ECMW-14 12/16/2009)	
		Depth to Water (ft from top of casing)	Ground Water Elevation (ft above MSL)	Depth to Water (ft from top of casing)	Ground Water Elevation (ft above MSL)
ECMW-1	213.28	8.62	204.66	7.13	206.15
ECMW-2	196.25	0.00	196.25	0.00	196.25
ECMW-3	192.11	8.87	183.24	9.46	182.65
ECMW-4	194.84	8.53	186.31	8.49	186.35
ECMW-5	182.69	4.19	178.50	3.01	179.68
ECMW-6	191.87	4.97	186.90	4.43	187.44
ECMW-7	195.88	7.74	188.14	7.03	188.85
ECMW-8	197.34	7.60	189.74	6.82	190.52
ECMW-9	198.39	8.52	189.87	9.27	189.12
ECMW-10	205.75	11.91	193.84	11.41	194.34
ECMW-11	201.65	9.63	192.02	8.32	193.33
ECMW-12	184.97	6.61	178.36	5.71	179.26
ECMW-13	177.26	5.60	171.66	5.41	171.85
ECMW-14	178.48	4.11	174.37	6.59	171.89
ECMW-15	180.84	3.96	176.88	3.47	177.37
ECMW-16	180.14	7.81	172.33	2.70	177.44
ECMW-17	185.40	27.78	157.62	28.85	156.55
ECMW-18	155.46	4.97	150.49	4.87	150.59
ECMW-19	150.41	0.77	149.64	0.00	150.41
ECMW-20	192.77	29.45	163.32	28.17	164.60
ECMW-21	176.29	17.15	159.14	16.49	159.80
ECMW-22	173.55	6.13	167.42	5.52	168.03

TABLE 3
GROUNDWATER INDICATOR PARAMETER DATA
2009 ANNUAL GROUND WATER REPORT
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EL DORADO, ARKANSAS

WELL	TEMPERATURE(C)			pH(s.u.)			CONDUCTIVITY(uS)		
	Date			Date			Date		
	4/20-21/2009	6/3/2009	10/19-20/2009	4/20-21/2009	6/3/2009	10/19-20/2009	4/20-21/2009	6/3/2009	10/19-20/2009
ECMW-1	17.3		19.2	4.57		4.68	299		37
ECMW-2	17.8		19.1	5.41		5.48	350		270
ECMW-3	18.9		19.2	5.76		5.83	268		236
ECMW-4	17.8		21.1	4.17		3.62	874		5904
ECMW-5	17.8	20.2	20.1	5.06	5.92	4.98	266	382	409
ECMW-6	17.2		20.0	4.47		4.16	810		11320
ECMW-7	18.2		20.3	4.13		3.55	571		13990
ECMW-8	18.6		18.8	4.88		3.79	660		13870
ECMW-9	18.1		19.1	5.91		5.41	869		1975
ECMW-10	18.7	21.2	22.3	4.58	6.35	4.57	663	638	579
ECMW-11	18.2	21.4	21.7	4.09	6.10	4.28	825	468	518
ECMW-12	18.2		22.9	6.52		7.08	886		532
ECMW-13	19.3		20.9	4.77		4.63	649		737
ECMW-14*	17.8		18.1	4.36		5.53	351		664
ECMW-15	17.2		21.6	4.53		4.36	328		77
ECMW-16	18.7		22.5	4.66		4.38	570		199
ECMW-17	18.4	20.9	18.2	4.25	5.84	4.68	510	350	443
ECMW-18	16.9		20.5	5.42		7.16	260		76
ECMW-19	17.6		17.9	5.66		7.82	184.4		84
ECMW-20	22.1		18.1	6.22		7.37	178.6		75
ECMW-21	18.3		19.5	5.24		5.91	238		46
ECMW-22	19.1		18.6	5.80		6.15	475		121

* Well Sampled 12/16/09

TABLE 4
ECMW-1 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

ECMW-1

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
3/14/1996	9.7	--	1.7	4.1	--	0.0037	< 0.002	< 0.005	< 0.005	--	--
5/29/2001	5.1	< 0.5	1.83	3.67	42	< 0.04	--	< 0.02	--	--	--
11/1/2001	4.8	< 0.5	2.74	3.34	43	< 0.04	--	< 0.02	--	--	--
6/3/2002	5.5	< 0.5	2.01	4.66	83	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	5.6	0.66	1.56	4.63	44	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	6.1	< 0.5	1.8	6.73	108	< 0.015	< 0.015	< 0.02	< 0.02	--	--
5/20/2003	4.77	< 0.5	2.40	3.79	46	< 0.015	< 0.015	< 0.02	< 0.02	--	--
7/24/2003	7.10	< 0.5	2.55	5.05	59	< 0.015	< 0.015	< 0.02	< 0.02	--	--
9/24/2003	5.26	< 0.5	3.18	6.52	68	< 0.015	< 0.015	< 0.02	< 0.02	--	--
11/19/2003	5.11	< 0.5	1.47	5.85	64	< 0.015	< 0.015	< 0.02	< 0.02	--	--
1/28/2004	5.25	0.56	1.6	6.19	53	<0.015	<0.015	<0.02	<0.02	--	--
3/16/2004	5.59	<0.5	2.73	4.22	56	<0.015	<0.015	<0.02	<0.02	--	--
5/18/2004	5.51	<0.5	4.79	6.57	35	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	6.16	<0.5	3.68	3.88	80	<0.015	<0.015	<0.02	<0.02	--	--
9/14/2004	5.65	0.76	4.26	3.48	53	<0.015	<0.015	<0.02	<0.02	<0.02	--
11/16/2004	5.11	<0.5	3.81	3.9	58	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/25/2005	5.43	<0.5	2.88	6.69	86	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
5/24/2005	5.73	0.55	2.45	4.39	52	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
5/24/2005	--	<0.5	2.39	4.43	52	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
10/18/2005	3.61	--	--	--	--	--	--	--	--	<0.02	<0.02
10/18/2005	--	--	--	--	--	--	--	--	--	<0.02	<0.02
4/11/2006	4.73	--	--	--	--	--	--	--	--	<0.02	<0.02
11/1/2006	4.98	--	--	--	--	--	--	--	--	<0.02	--
5/23/2007	5.24	--	--	--	--	--	--	--	--	<0.02	--
11/6/2007	4.77	--	--	--	--	--	--	--	--	<0.02	--
5/21/2008	7.91	<0.5	1.57	4.23	--	<0.015	--	<0.02	--	<0.02	--
11/5/2008	4.63	<0.5	0.732	4.34	--	<0.015	--	<0.02	--	<0.02	--
4/22/2009	4.57	--	--	--	--	--	--	--	--	<0.02	--
10/20/2009	4.68	--	--	--	--	--	--	--	--	--	--

"--" - Parameter not analyzed

TABLE 5
ECMW-2 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

ECMW-2

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
3/14/1996	9.7	--	< 0.2	17	--	0.018	< 0.002	0.0342	< 0.005	--	--
5/29/2001	5.4	< 0.5	< 0.5	19.6	340	< 0.04	--	0.032	--	--	--
11/1/2001	5.3	< 0.5	< 0.5	22.9	300	< 0.04	--	< 0.02	--	--	--
6/3/2002	6.0	< 0.5	< 0.5	20	396	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	6.1	< 0.5	< 0.5	25.7	517	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	6.7	< 0.5	< 0.5	24	305	< 0.015	< 0.015	< 0.02	< 0.02	--	--
5/20/2003	5.31	< 0.5	< 0.5	22.1	309	< 0.015	< 0.015	< 0.02	< 0.02	--	--
7/24/2003	7.26	< 0.5	< 0.5	22.9	370	< 0.015	< 0.015	< 0.02	< 0.02	--	--
9/24/2003	5.50	< 0.5	< 0.5	24.9	380	< 0.015	< 0.015	< 0.02	< 0.02	--	--
11/19/2003	5.42	< 0.5	< 0.5	28.2	360	< 0.015	< 0.015	< 0.02	< 0.02	--	--
1/28/2004	5.2	<0.5	<0.5	25.3	490	<0.015	<0.015	<0.02	<0.02	--	--
3/16/2004	5.47	<0.5	<0.5	20.9	311	<0.015	<0.015	<0.02	<0.02	--	--
5/18/2004	5.4	<0.5	<0.5	24	298	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	5.68	<0.5	<0.5	22.4	330	<0.015	<0.015	<0.02	<0.02	--	--
9/14/2004	5.44	<0.5	<0.5	24.3	340	<0.015	<0.015	<0.02	<0.02	<0.02	--
11/16/2004	6.12	<0.5	<0.5	21.5	320	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/25/2005	5.38	<0.5	<0.5	20.8	300	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/25/2005	--	<0.5	<0.5	20.5	300	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
5/24/2005	5.87	0.79	<0.5	22.9	290	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
10/18/2005	5.15	--	<0.5	--	--	--	--	--	--	<0.02	<0.02
4/11/2006	5.56	--	<0.5	--	--	--	--	--	--	<0.02	<0.02
11/1/2006	5.2	--	--	--	--	--	--	--	--	<0.02	--
5/23/2007	5.29	--	--	--	--	--	--	--	--	<0.02	--
11/6/2007	5.17	--	--	--	--	--	--	--	--	<0.02	--
5/21/2008	7.04	<0.5	<0.5	20.1	--	<0.015	--	<0.02	--	<0.02	--
11/5/2008	5.47	<0.5	<0.5	15.4	--	<0.015	--	<0.02	--	0.02	--
4/22/2009	5.41	--	--	--	--	--	--	--	--	<0.02	--
10/20/2009	5.48	--	--	--	--	--	--	--	--	--	--

"--" - Parameter not analyzed

TABLE 6
ECMW-3 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

ECMW-3

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
3/14/1996	8.0	--	< 0.2	10	--	0.0027	< 0.002	< 0.005	< 0.005	--	--
5/29/2001	6.2	< 0.5	< 0.5	10.6	180	< 0.04	--	< 0.02	--	--	--
11/1/2001	5.4	< 0.5	< 0.5	22.5	240	< 0.04	--	< 0.02	--	--	--
6/3/2002	6.4	< 0.5	< 0.5	11.4	228	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	6.5	< 0.5	< 0.5	21.6	295	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	6.0	< 0.5	< 0.5	16.4	242	< 0.015	< 0.015	< 0.02	< 0.02	--	--
5/20/2003	6.05	< 0.5	< 0.5	12.5	207	< 0.015	< 0.015	< 0.02	< 0.02	--	--
7/24/2003	6.23	< 0.5	< 0.5	11.8	210	< 0.015	< 0.015	< 0.02	< 0.02	--	--
9/24/2003	5.97	< 0.5	< 0.5	27.7	250	< 0.015	< 0.015	< 0.02	< 0.02	--	--
11/19/2003	5.81	< 0.5	< 0.5	23.5	220	< 0.015	< 0.015	< 0.02	< 0.02	--	--
1/28/2004	5.59	<0.5	<0.5	26.9	270	<0.015	<0.015	<0.02	<0.02	--	--
3/16/2004	5.94	<0.5	<0.5	11.2	188	<0.015	<0.015	<0.02	<0.02	--	--
5/18/2004	5.86	<0.5	<0.5	9.75	176	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	5.92	<0.5	<0.5	13	260	<0.015	<0.015	<0.02	<0.02	--	--
9/14/2004	5.74	<0.5	<0.5	18.3	220	<0.015	<0.015	<0.02	<0.02	<0.02	--
11/16/2004	5.96	<0.5	<0.5	18.8	260	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/25/2005	6.33	<0.5	<0.5	15.8	240	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
5/24/2005	6.05	0.98	<0.5	11.8	200	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
10/18/2005	6.04	--	<0.5	--	--	--	--	--	--	<0.02	<0.02
4/12/2006	6.39	--	<0.5	--	--	--	--	--	--	<0.02	<0.02
11/1/2006	5.37	--	--	--	--	--	--	--	--	<0.02	--
5/23/2007	5.92	--	--	--	--	--	--	--	--	<0.02	--
11/6/2007	4.85	--	--	--	--	--	--	--	--	<0.02	--
5/21/2008	7.96	<0.5	<0.5	10.5	--	<0.015	--	<0.02	--	<0.02	--
11/5/2008	4.86	<0.5	<0.5	9.65	--	<0.015	--	<0.02	--	<0.02	--
4/22/2009	5.76	--	--	--	--	--	--	--	--	<0.02	--
4/22/2009		<0.5	<0.5	10.5	--	--	--	--	--	<0.02	--
10/20/2009	5.83	--	--	--	--	--	--	--	--	--	--

"--" - Parameter not analyzed

TABLE 7
ECMW-4 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

ECMW-4

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
3/14/1996	8.1	--	1.3	728	--	0.0025	< 0.002	< 0.005	< 0.005	--	--
8/8/2001	4.1	0.66	< 0.5	925	5100	< 0.04	--	< 0.02	--	--	--
10/30/2001	4.3	< 0.5	< 0.5	936	5200	0.06	--	0.04	--	--	--
6/3/2002	5.2	< 0.5	< 0.5	979	4862	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	4.8	< 0.5	0.62	756	4240	0.02	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	4.4	< 0.5	2.4	976	5360	< 0.015	< 0.015	< 0.02	< 0.02	--	--
5/20/2003	4.33	< 0.5	< 0.5	936	4800	< 0.015	< 0.015	< 0.02	< 0.02	--	--
5/20/2003	--	< 0.5	< 0.5	1000	5150	< 0.015	< 0.015	< 0.02	< 0.02	--	--
7/24/2003	9.08	< 0.5	< 0.5	978	5300	< 0.015	< 0.015	< 0.02	< 0.02	--	--
7/24/2003	--	< 0.5	< 0.5	958	5400	< 0.015	< 0.015	< 0.02	< 0.02	--	--
9/24/2003	4.78	< 0.5	2.42	989	5200	< 0.015	< 0.015	< 0.02	< 0.02	--	--
9/24/2003	--	< 0.5	2.31	952	5200	< 0.015	< 0.015	< 0.02	< 0.02	--	--
11/19/2003	4.13	< 0.5	2.05	848	5300	< 0.015	< 0.015	< 0.02	< 0.02	--	--
1/28/2004	3.88	<0.5	6.39	1040	5200	<0.015	<0.015	<0.02	<0.02	--	--
3/16/2004	4.1	<0.5	<0.5	919	5204	<0.015	<0.015	<0.02	<0.02	--	--
5/19/2004	4.05	<0.5	1.45	1040	5300	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	4.35	<0.5	<0.5	973	5500	<0.015	<0.015	<0.02	<0.02	--	--
9/14/2004	4.44	0.68	<0.5	943	5200	<0.015	<0.015	<0.02	<0.02	<0.02	--
11/16/2004	4.26	<0.5	<0.5	874	4600	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/25/2005	4.63	0.64	8.5	805	4700	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
5/24/2005	4.77	2.14	0.997	1020	4700	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
10/18/2005	4.06	--	0.517	--	--	--	--	--	--	<0.02	<0.02
4/12/2006	4.12	--	<0.5	--	--	--	--	--	--	<0.02	<0.02
11/1/2006	3.69	<0.5	<0.5	--	--	<0.015	--	<0.02	--	<0.02	--
5/23/2007	4.13	<0.5	0.099	779	--	--	--	--	--	<0.02	--
11/6/2007	3.76	<0.5	<0.5	1020	--	--	--	--	--	<0.02	--
5/21/2008	3.89	<0.5	<0.5	896	--	0.017	--	<0.02	--	<0.02	--
11/5/2008	3.87	<0.5	<0.5	758	--	<0.015	--	<0.02	--	<0.02	--
4/22/2009	4.17	<0.5	<0.5	68.3	--	--	--	--	--	<0.02	--
10/20/2009	3.62	<0.5	<0.5	830	--	--	--	--	--	--	--
10/20/2009		<0.5	<0.5	906	--	--	--	--	--	--	--

"--" - Parameter not analyzed

TABLE 8
ECMW-5 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

ECMW-5

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
3/13/1996	5.8	--	4.4	441	--	< 0.002	< 0.002	< 0.005	< 0.005	--	--
8/8/2001	4.6	< 0.5	3.54	657	1000	< 0.04	--	< 0.02	--	--	--
10/30/2001	4.7	< 0.5	3.27	526	980	< 0.04	--	< 0.02	--	--	--
6/3/2002	6.3	< 0.5	3.35	650	934	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	5.4	< 0.5	3.66	582	929	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	5.2	< 0.5	3.26	489	901	< 0.015	< 0.015	< 0.02	< 0.02	--	--
5/20/2003	4.75	< 0.5	3.60	654	845	< 0.015	< 0.015	< 0.02	< 0.02	--	--
7/24/2003	6.85	< 0.5	3.47	546	950	< 0.015	< 0.015	< 0.02	< 0.02	--	--
9/24/2003	4.82	< 0.5	3.53	560	950	< 0.015	< 0.015	< 0.02	< 0.02	--	--
11/19/2003	4.79	< 0.5	2.40	416	780	< 0.015	< 0.015	< 0.02	< 0.02	--	--
1/28/2004	5.03	<0.5	3.19	476	740	<0.015	<0.015	<0.02	<0.02	--	--
1/28/2004	--	<0.5	3.07	482	730	<0.015	<0.015	<0.02	<0.02	--	--
3/16/2004	5.13	<0.5	3.6	472	780	<0.015	<0.015	<0.02	<0.02	--	--
5/19/2004	5.85	<0.5	3.41	455	860	<0.015	<0.015	<0.02	<0.02	--	--
5/19/2004	--	<0.5	3.3	494	900	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	4.96	<0.5	3.75	511	910	<0.015	<0.015	<0.02	<0.02	--	--
9/14/2004	6.7	0.59	3.75	515	700	<0.015	<0.015	<0.02	<0.02	<0.02	--
11/16/2004	5.28	<0.5	3.33	502	850	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/25/2005	6.36	<0.5	3.18	461	870	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
5/24/2005	6.42	3.62	3.21	547	820	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
10/19/2005	4.96	--	--	--	--	--	--	--	--	<0.02	<0.02
10/19/2005	--	--	--	--	--	--	--	--	--	<0.02	<0.02
4/12/2006	4.39	--	--	--	--	--	--	--	--	<0.02	<0.02
11/1/2006	4.42	--	--	--	--	--	--	--	--	<0.02	--
5/23/2007	5.18	<0.5	3.53	476	--	--	--	--	--	<0.02	--
11/7/2007	4.64	<0.5	3.32	464	--	--	--	--	--	<0.02	--
5/21/2008	6.45	<0.5	4.17	308	--	<0.015	--	<0.02	--	<0.02	--
11/12/2008	2.4	0.55	4.15	163	--	<0.015	--	<0.02	--	<0.02	--
4/22/2009	5.06	<0.5	7.81	133	--	--	--	--	--	<0.02	--
6/3/2009	5.92	--	7.58	--	--	--	--	--	--	--	--
10/20/2009	4.98	<0.5	8.82	93.4	--	--	--	--	--	--	--

"--" - Parameter not analyzed

TABLE 9
ECMW-6 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

ECMW-6

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
3/13/1996	7.7	--	51.1	24	--	0.0026	< 0.002	< 0.005	< 0.005	--	--
8/8/2001	4.3	0.5	298	18.3	2100	< 0.04	--	< 0.02	--	--	--
10/30/2001	4.3	< 0.5	326	15.7	2700	< 0.04	--	< 0.02	--	--	--
6/3/2002	6.1	< 0.5	459	12.1	290	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	5.0	0.51	661	8.13	3840	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	4.6	< 0.5	580	7.15	3360	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	--	< 0.5	588	6.45	3280	< 0.015	< 0.015	< 0.02	< 0.02	--	--
5/21/2003	4.30	0.5	608	17.0	4020	< 0.015	< 0.015	< 0.02	< 0.02	--	--
7/24/2003	7.41	1.09	681	15.0	4600	< 0.015	< 0.015	< 0.02	< 0.02	--	--
9/24/2003	4.28	4.88	857	9.35	5100	< 0.015	< 0.015	< 0.02	< 0.02	--	--
11/19/2003	4.53	5.72	865	10.7	4700	< 0.015	< 0.015	< 0.02	< 0.02	--	--
11/19/2003	--	5.60	866	9.21	4900	< 0.015	< 0.015	< 0.02	< 0.02	--	--
1/28/2004	4.36	12.3	835	17.2	5300	<0.015	<0.015	<0.02	<0.02	--	--
3/16/2004	4.4	13	826	17.2	5106	<0.015	<0.015	<0.02	<0.02	--	--
5/19/2004	5.04	21.4	915	13.4	5800	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	4.74	17.9	995	11.7	6100	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	--	17.5	868	11.7	6200	<0.015	<0.015	<0.02	<0.02	--	--
9/14/2004	5.51	20	1130	3.84	6300	<0.015	<0.015	<0.02	<0.02	<0.02	--
11/16/2004	4.59	37.6	1140	4.4	7100	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/25/2005	5.36	43.1	1130	3.14	6600	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
5/24/2005	4.57	68.2	1410	5.19	6700	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
10/18/2005	4.43	110	1350	--	--	--	--	--	--	<0.02	<0.02
4/11/2006	4.45	154	1680	--	--	--	--	--	--	<0.02	<0.02
11/1/2006	3.94	170	2390	--	--	--	--	--	--	<0.02	--
5/23/2007	6.46	63.3	3550	44.9	--	--	--	--	--	<0.02	--
11/6/2007	5.15	35.7	941	54.1	--	--	--	--	--	<0.02	--
5/21/2008	4.5	59.1	1130	23.7	--	<0.015	--	<0.02	--	<0.02	--
5/21/2008		72.5	256	28.3	--	<0.015	--	<0.02	--	<0.02	--
11/5/2008	3.89	103	1060	26.1	--	<0.015	--	<0.02	--	<0.02	--
4/21/2009	4.47	135	1070	148	--	--	--	--	--	<0.02	--
10/20/2009	4.16	181	1330	24.7	--	--	--	--	--	--	--

"--" - Parameter not analyzed

TABLE 10
ECMW-7 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

ECMW-7

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
3/13/1996	8.1	--	282	380	--	0.0221	0.0185	0.0078	< 0.005	--	--
8/8/2001	9.7	184	336	316	1300	< 0.04	--	< 0.02	--	--	--
10/30/2001	3.5	< 0.5	189	322	1056	< 0.04	--	< 0.02	--	--	--
10/30/2001	--	< 0.5	186	325	1100	< 0.04	--	< 0.02	< 0.02	--	--
6/3/2002	4.4	190	361	363	1324	0.031	< 0.015	< 0.02	< 0.02	--	--
6/3/2002	--	205	358	360	1386	0.027	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	4.2	167	294	345	1080	0.017	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	3.7	180	344	275	1316	< 0.015	0.016	< 0.02	< 0.02	--	--
12/10/2002	--	149	349	276	1350	< 0.015	< 0.015	< 0.02	< 0.02	--	--
5/21/2003	3.66	244	563	298	1850	0.02	0.017	< 0.02	< 0.02	--	--
7/24/2003	7.05	95.1	141	378	1400	< 0.015	< 0.015	< 0.02	< 0.02	--	--
9/24/2003	3.84	116	953	341	1700	0.02	0.018	< 0.02	< 0.02	--	--
11/19/2003	4.03	124	152	476	1500	< 0.015	< 0.015	< 0.02	< 0.02	--	--
1/28/2004	3.99	147	300	644	1300	0.018	<0.015	<0.02	<0.02	--	--
3/16/2004	3.98	190	310	496	1280	0.018	0.017	<0.02	<0.02	--	--
5/19/2004	3.95	204	337	524	1500	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	3.99	73.4	150	498	1600	<0.015	<0.015	<0.02	<0.02	--	--
9/14/2004	4.45	26.5	75.5	142	1000	<0.015	<0.015	<0.02	<0.02	<0.02	--
9/14/2004	--	25.9	76	143	990	<0.015	<0.015	<0.02	<0.02	<0.02	--
11/16/2004	3.97	219	370	428	1700	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/25/2005	4.08	281	480	312	1700	0.016	<0.015	<0.02	<0.02	<0.02	<0.02
5/24/2005	4.21	323	595	349	1400	0.022	0.017	<0.02	<0.02	<0.02	<0.02
10/18/2005	3.9	14.3	91.6	--	--	<0.015	<0.015	--	--	<0.02	<0.02
4/11/2006	4.36	267	516	--	--	0.017	<0.015	--	--	<0.02	<0.02
11/1/2006	3.34	57.4	105	--	--	<0.015	--	--	--	<0.02	--
5/23/2007	4.3	96	181	798	--	--	--	--	--	<0.02	--
11/6/2007	3.58	49.9	85.3	906	--	--	--	--	--	<0.02	--
5/21/2008	2.81	55.2	153	936	--	<0.015	--	<0.02	--	<0.02	--
11/5/2008	3.4	115	237	962	--	<0.015		<0.02	--	<0.02	--
4/21/2009	4.13	77.8	126	895	--	--	--	--	--	<0.02	--
10/20/2009	3.55	51.2	49.9	1090	--	--	--	--	--	--	--

"--" - Parameter not analyzed

TABLE 11
ECMW-8 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

ECMW-8

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
3/13/1996	7.9	--	1010	68.3	--	0.0234	0.0238	< 0.005	< 0.005	--	--
10/30/2001	3.9	0.94	1030	81.1	5000	< 0.04	--	< 0.02	--	--	--
6/3/2002	5.4	551	1070	77.8	4246	< 0.02	< 0.02	< 0.02	< 0.02	--	--
6/3/2002	--	551	1200	70.4	4378	0.031	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	4.4	406	1330	151	4560	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	4.0	220	1080	46.2	5120	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	--	261	1030	47.6	5140	< 0.015	< 0.015	< 0.02	< 0.02	--	--
5/21/2003	3.99	214	1250	209	4200	0.019	0.019	< 0.02	< 0.02	--	--
5/21/2003	--	167	1270	162	4010	0.019	0.019	< 0.02	< 0.02	--	--
7/24/2003	6.04	179	472	904	3700	< 0.015	< 0.015	< 0.02	< 0.02	--	--
7/24/2003	--	177	478	913	3700	< 0.015	< 0.015	< 0.02	< 0.02	--	--
9/23/2003	3.93	157.5	524	870	3400	< 0.015	< 0.015	< 0.02	< 0.02	--	--
9/23/2003	--	153	539	899	3400	< 0.015	< 0.015	< 0.02	< 0.02	--	--
11/19/2003	4.99	206	464	738	3200	< 0.015	< 0.015	< 0.02	< 0.02	--	--
1/28/2004	4.29	45.7	142	854	1800	<0.015	<0.015	<0.02	<0.02	--	--
3/16/2004	4.18	88	203	805	2221	<0.015	<0.015	<0.02	<0.02	--	--
5/19/2004	4.07	120	298	789	2500	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	4.48	120	354	767	2600	<0.015	<0.015	<0.02	<0.02	--	--
9/14/2004	3.99	107	392	743	2400	<0.015	<0.015	<0.02	<0.02	<0.02	--
11/16/2004	4.01	82.1	304	808	2800	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/25/2005	4.09	48.9	126	1200	2700	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
5/24/2005	6.12	79.6	225	1220	2700	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
10/18/2005	4.03	84.8	246	--	--	--	--	--	--	<0.02	<0.02
4/11/2006	3.78	53.5	194	--	--	--	--	--	--	<0.02	<0.02
11/1/2006	3.44	74.5	224	--	--	--	--	--	--	<0.02	--
5/23/2007	4.11	122	<0.5	971	--	--	--	--	--	<0.02	--
11/6/2007	3.7	96.2	340	816	--	--	--	--	--	<0.02	--
5/21/2008	3.42	56.8	171	1000	--	<0.015	--	<0.02	--	<0.02	--
11/5/2008	3.61	70	181	719	--	<0.015	--	<0.02	--	<0.02	--
4/21/2009	4.88	53.6	108	839	--	--	--	--	--	<0.02	--
10/20/2009	3.79	45.8	116	937	--	--	--	--	--	--	--

"--" - Parameter not analyzed

TABLE 12
ECMW-9 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

ECMW-9

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
3/14/1996	9	--	37.3	621	--	0.004	< 0.002	< 0.005	< 0.005	--	--
6/27/2001	5.4	< 0.5	28.8	520	1600	< 0.04	--	< 0.02	--	--	--
10/30/2001	5.5	< 0.5	26.7	514	2600	< 0.04	--	< 0.02	--	--	--
6/3/2002	6	< 0.5	24.4	639	1597	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	6	18.8	59	655	1630	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	5.2	0.7	28.1	556	1680	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	--	< 0.5	31.5	555	1640	< 0.015	< 0.015	< 0.02	< 0.02	--	--
5/21/2003	5.33	< 0.5	26.3	568	1600	< 0.015	< 0.015	< 0.02	< 0.02	--	--
7/24/2003	7.05	< 0.5	28.4	547	1500	< 0.015	< 0.015	< 0.02	< 0.02	--	--
9/23/2003	5.24	< 0.5	146	531	1500	< 0.015	< 0.015	< 0.02	< 0.02	--	--
11/19/2003	5.72	< 0.5	28.0	532	1600	< 0.015	< 0.015	< 0.02	< 0.02	--	--
1/28/2004	5.53	<0.5	29.2	575	1500	<0.015	<0.015	<0.02	<0.02	--	--
3/16/2004	5.88	<0.5	30.6	528	1524	<0.015	<0.015	<0.02	<0.02	--	--
5/19/2004	5.47	<0.5	27.4	517	1600	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	6.87	<0.5	24.6	588	1600	<0.015	<0.015	<0.02	<0.02	--	--
9/14/2004	5.04	1.14	25.3	548	1500	<0.015	<0.015	<0.02	<0.02	<0.02	--
11/16/2004	5.67	0.7	24	549	580	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/25/2005	5.57	<0.5	26.3	518	1600	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
5/24/2005	5.77	<0.5	27.4	600	1600	0.018	<0.015	<0.02	<0.02	<0.02	<0.02
10/18/2005	5.64	--	29.9	--	--	--	--	--	--	<0.02	<0.02
4/11/2006	5.83	--	29.5	--	--	--	--	--	--	<0.02	<0.02
11/1/2006	5	--	40.2	--	--	--	--	--	--	<0.02	--
5/23/2007	5.57	2.91	32.8	420	--	--	--	--	--	<0.02	--
5/23/2007		1.48	31.2	502	--	--	--	--	--	<0.02	--
11/6/2007	4.94	3.59	30.6	642	--	--	--	--	--	<0.02	--
5/21/2008	6.04	<0.5	31.7	522	--	<0.015	--	<0.02	--	<0.02	--
11/5/2008	4.41	<0.5	23.7	391	--	<0.015	--	<0.02	--	<0.02	--
4/21/2009	5.91	<0.5	28	501	--	--	--	--	--	<0.02	--
10/20/2009	5.41	2.31	21	505	--	--	--	--	--	--	--

"--" - Parameter not analyzed

TABLE 13
ECMW-10 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

ECMW-10

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
3/13/1996	7.7	--	257	89	--	0.0052	0.0039	< 0.005	< 0.005	--	--
6/27/2001	4.4	< 0.5	156	100	1300	< 0.04	--	0.025	--	--	--
10/30/2001	3.9	< 0.5	153	134	1400	< 0.04	--	0.04	--	--	--
6/3/2002	5.3	< 0.5	138	84.9	1122	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	5.6	1.84	137	140	968	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	4.5	< 0.5	70.4	52.2	1120	< 0.015	< 0.015	< 0.02	< 0.02	--	--
5/21/2003	4.08	< 0.5	148	96.0	1140	< 0.015	< 0.015	< 0.02	< 0.02	--	--
7/24/2003	5.56	< 0.5	118	108	1000	< 0.015	< 0.015	< 0.02	< 0.02	--	--
9/23/2003	4.18	< 0.5	147	127	1000	< 0.015	< 0.015	< 0.02	< 0.02	--	--
11/19/2003	4.38	< 0.5	119	104	970	< 0.015	< 0.015	< 0.02	< 0.02	--	--
1/28/2004	4.6	<0.5	126	129	1000	<0.015	<0.015	<0.02	<0.02	--	--
3/16/2004	5.01	<0.5	135	128	1078	<0.015	<0.015	<0.02	<0.02	--	--
5/18/2004	5.07	<0.5	123	139	1055	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	4.54	<0.5	114	112	920	<0.015	<0.015	<0.02	<0.02	--	--
9/14/2004	4.7	0.77	123	137	1000	<0.015	<0.015	<0.02	<0.02	<0.02	--
11/16/2004	4.79	<0.5	94.4	71.1	800	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/25/2005	4.63	<0.5	115	114	1000	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
5/25/2005	4.93	1.45	120	142	990	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
10/18/2005	4.3	--	97.7	--	--	--	--	--	--	<0.02	<0.02
4/11/2006	4.4	--	97.5	--	--	--	--	--	--	<0.02	<0.02
4/11/2006	--	--	95.5	--	--	--				<0.02	<0.02
11/1/2006	3.83	--	71	--	--	<0.015	--	--	--	<0.02	--
5/23/2007	4.18	0.79	79.9	109	--	--	--	--	--	<0.02	--
11/6/2007	3.97	<0.5	65.9	121	--	--	--	--	--	<0.02	--
5/21/2008	5.11	<0.5	69.2	153	--	<0.015	--	<0.02	--	<0.02	--
11/5/2008	4.06	<0.5	40.9	105	--	<0.015	--	<0.02	--	<0.02	--
4/21/2009	4.58	12.7 outlier	48.9	155	--	--	--	--	--	<0.02	--
6/3/2009	6.35	<0.5	--	--	--	--	--	--	--	--	--
10/20/2009	4.57	<0.5	53.5	136	--	--	--	--	--	--	--

"--" - Parameter not analyzed

TABLE 14
ECMW-11 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

ECMW-11

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
3/13/1996	11.10	--	22.1	578	--	< 0.002	< 0.002	< 0.005	< 0.005	--	--
8/8/2001	4.30	4.21	7.99	611	1100	< 0.04	--	< 0.02	--	--	--
10/30/2001	4.00	< 0.5	21.9	334	610	< 0.04	--	< 0.02	--	--	--
6/3/2002	5.40	< 0.5	6.46	565	897	< 0.02	< 0.02	< 0.02	< 0.02	--	--
6/3/2002	--	3.9	5.81	586	968	< 0.02	< 0.015	< 0.02	< 0.02	--	--
10/30/2002	4.80	18	9.22	362	625	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	4.50	10.73	6.12	414	809	< 0.015	< 0.015	< 0.02	< 0.02	--	--
5/21/2003	4.45	7.84	6.02	333	576	< 0.015	< 0.015	< 0.02	< 0.02	--	--
7/24/2003	6.66	25.6	6.68	278	540	< 0.015	< 0.015	< 0.02	< 0.02	--	--
9/23/2003	4.29	5.25	4.24	397	660	< 0.015	< 0.015	< 0.02	< 0.02	--	--
11/19/2003	4.61	12.0	6.26	289	570	< 0.015	< 0.015	< 0.02	< 0.02	--	--
11/19/2003	--	14.3	6.85	276	340	< 0.015	< 0.015	< 0.02	< 0.02	--	--
1/28/2004	5.04	19.6	6.72	303	520	<0.015	<0.015	<0.02	<0.02	--	--
3/16/2004	5.00	15	9.63	262	511	<0.015	<0.015	<0.02	<0.02	--	--
3/16/2004	--	18	8.79	278	535	<0.015	<0.015	<0.02	<0.02	--	--
5/18/2004	5.17	19.9	13.5	228	452	<0.015	<0.015	<0.02	<0 02	--	--
7/13/2004	4.53	17.4	13.6	222	480	<0.015	<0.015	<0 02	<0.02	--	--
9/14/2004	4.61	14.5	9.85	247	480	<0 015	<0.015	<0.02	<0.02	<0.02	--
11/17/2004	4.86	19.1	11.1	209	450	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/25/2005	4.64	--	--	--	--	--	--	--	--	--	--
5/25/2005	5.05	20.6	1.12	3.58	410	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
10/18/2005	4.42	10.6	2.02	--	--	--	--	--	--	<0.02	<0.02
4/11/2006	4.63	10.9	6.01	--	--	--	--	--	--	<0.02	<0.02
11/1/2006	4.06	4.88	1.43	--	--	--	--	--	--	<0.02	--
5/23/2007	4.23	25.4	29.2	137	--	--	--	--	--	<0.02	--
5/23/2007		17.4	26.4	242	--	--	--	--	--	<0.02	--
11/6/2007	3.94	8.01	9.75	223	--	--	--	--	--	<0.02	--
5/21/2008	5.26	19.5	18.9	208	--	<0.015	--	<0.02	--	<0.02	--
11/5/2008	4.34	18.4	16.9	98.6	--	<0.015	--	<0.02	--	<0.02	--
4/21/2009	4.09	<0.5 outlier	14	119	--	--	--	--	--	<0.02	--
6/3/2009	6.10	17.7	--	--	--	--	--	--	--	--	--
10/20/2009	4.28	18.2	9.44	125	--	--	--	--	--	--	--

"--" - Parameter not analyzed

TABLE 15
ECMW-12 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

ECMW-12

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
3/13/1996	6.1	--	< 0.2	9.6	--	< 0.002	< 0.002	< 0.005	< 0.005	--	--
6/27/2001	5.9	2.2	< 0.5	13	330	< 0.04	--	< 0.02	--	--	--
6/4/2002	6	0.9	< 0.5	4.85	510	< 0.02	< 0.02	< 0.02	< 0.02	--	--
6/4/2002	--	1.4	< 0.5	6.01	500	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	6.1	4.2	< 0.5	21.6	382	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	5.8	2.3	< 0.5	12.5	424	< 0.015	< 0.015	< 0.02	< 0.02	--	--
5/21/2003	5.71	1.89	< 0.5	5.31	307	< 0.015	< 0.015	< 0.02	< 0.02	--	--
7/24/2003	4.76	1.74	< 0.5	18.7	380	< 0.015	< 0.015	< 0.02	< 0.02	--	--
9/24/2003	5.45	1.43	< 0.5	26	440	< 0.015	< 0.015	< 0.02	< 0.02	--	--
11/19/2003	5.79	1.83	< 0.5	30.6	460	< 0.015	< 0.015	< 0.02	< 0.02	--	--
1/28/2004	6.44	1.87	<0.5	6.76	320	<0.015	<0.015	<0.02	<0.02	--	--
3/16/2004	5.96	2.2	<0.5	4.04	252	<0.015	<0.015	<0.02	<0.02	--	--
5/19/2004	5.8	1.94	<0.5	5.11	360	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	6.78	1.2	<0.5	7.18	220	<0.015	<0.015	<0.02	<0.02	--	--
9/15/2004	5.8	2.38	<0.5	23	440	<0.015	<0.015	<0.02	<0.02	<0.02	--
11/16/2004	5.73	1.55	<0.5	18.5	340	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/26/2005	5.91	1.98	<0.5	4.88	360	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
5/25/2005	5.96	1.02	<0.5	11.2	370	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
10/20/2005	5.3	1.06	--	--	--	--	--	--	--	<0.02	<0.02
4/11/2006	6.12	1.58	--	--	--	--	--	--	--	<0.02	<0.02
11/1/2006	5.3	1.37	--	--	--	--	--	--	--	<0.02	--
5/23/2007	5.66	--	--	--	--	--	--	--	--	<0.02	--
11/6/2007	5.11	--	--	--	--	--	--	--	--	<0.02	--
5/21/2008	7.53	1.67	<0.5	7.14	--	<0.015	--	<0.02	--	<0.02	--
11/7/2008	5.75	1.17	<0.5	8.74	--	<0.015	--	<0.02	--	<0.02	--
4/21/2009	6.52	--	--	--	--	--	--	--	--	<0.02	--
10/21/2009	7.08	--	--	--	--	--	--	--	--	--	--

"--" - Parameter not analyzed

TABLE 16
ECMW-13 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

ECMW-13

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
3/13/1996	5.6	--	0.2	809	--	< 0.002	< 0.002	< 0.005	< 0.005	--	--
6/5/2001	5.6	< 0.5	< 0.5	538	1400	< 0.04	--	< 0.02	--	--	--
10/30/2001	5.3	< 0.5	< 0.5	606	1300	< 0.04	--	< 0.02	--	--	--
6/4/2002	5.7	< 0.5	< 0.5	372	718	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	6.1	1.28	< 0.5	538	1030	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	5.5	< 0.5	< 0.5	598	1320	< 0.015	< 0.015	< 0.02	< 0.02	--	--
5/20/2003	5.51	< 0.5	< 0.5	697	1330	< 0.015	< 0.015	< 0.02	< 0.02	--	--
7/23/2003	6.05	< 0.5	< 0.5	358	820	< 0.015	< 0.015	< 0.02	< 0.02	--	--
9/24/2003	4.70	0.71	< 0.5	458	920	< 0.015	< 0.015	< 0.02	< 0.02	--	--
11/19/2003	4.91	< 0.5	0.62	310	680	< 0.015	< 0.015	< 0.02	< 0.02	--	--
1/28/2004	5.02	<0.5	<0.5	565	1100	<0.015	<0.015	<0.02	<0.02	--	--
3/16/2004	5.19	<0.5	<0.5	550	1175	<0.015	<0.015	<0.02	<0.02	--	--
5/18/2004	5.27	<0.5	<0.5	296	647	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	6.02	<0.5	<0.5	510	1100	<0.015	<0.015	<0.02	<0.02	--	--
9/14/2004	5.03	0.5	<0.5	416	940	<0.015	<0.015	<0.02	<0.02	<0.02	--
9/14/2004	--	0.51	<0.5	425	960	<0.015	<0.015	<0.02	<0.02	<0.02	--
11/16/2004	4.83	<0.5	<0.5	250	1500	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/26/2005	4.86	<0.5	0.72	564	1200	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
5/25/2005	5.07	0.54	<0.5	302	580	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
10/19/2005	4.19	--	--	--	--	--	--	--	--	<0.02	<0.02
4/12/2006	4.97	--	--	--	--	--	--	--	--	<0.02	<0.02
11/2/2006	4.71	<0.5	<0.5	--	--	--	<0.015	<0.02	--	<0.02	--
5/23/2007	4.97	--	--	--	--	--	--	--	--	<0.02	--
11/7/2007	4.64	--	--	--	--	--	--	--	--	<0.02	--
5/21/2008	5.85	<0.5	<0.5	399	--	<0.015	--	<0.02	--	<0.02	--
5/21/2008	--	<0.5	<0.5	409	--	<0.015	--	<0.02	--	<0.02	--
11/7/2008	5.01	<0.5	<0.5	346	--	<0.015	--	<0.02	--	<0.02	--
4/21/2009	4.77	--	--	--	--	--	--	--	--	<0.02	--
10/21/2009	4.63	--	--	--	--	--	--	--	--	--	--

"--" - Parameter not analyzed

TABLE 17
ECMW-14 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

ECMW-14

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
3/13/1996	4.6	--	11.9	139	--	< 0.002	< 0.002	< 0.005	< 0.005	--	--
8/8/2001	4.3	< 0.5	75	175	1000	< 0.04	--	< 0.02	--	--	--
10/30/2001	4.5	< 0.5	25.2	211	790	< 0.04	--	< 0.02	--	--	--
6/4/2002	5.6	< 0.5	26.5	187	675	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	6.3	5.32	17	288	669	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	5.3	< 0.5	23.4	230	709	< 0.015	< 0.015	< 0.02	< 0.02	--	--
5/20/2003	4.85	< 0.5	44.9	227	865	< 0.015	< 0.015	< 0.02	< 0.02	--	--
7/23/2003	4.62	< 0.5	23.1	221	750	< 0.015	< 0.015	< 0.02	< 0.02	--	--
9/23/2003	5.00	< 0.5	20.3	275	700	< 0.015	< 0.015	< 0.02	< 0.02	--	--
11/19/2003	4.92	< 0.5	16.1	227	740	< 0.015	< 0.015	< 0.02	< 0.02	--	--
1/28/2004	5.19	<0.5	24.5	262	710	0.028	<0.015	0.022	<0.02	--	--
3/16/2004	5.34	<0.5	33.4	211	792	<0.015	<0.015	<0.02	<0.02	--	--
5/18/2004	5.23	<0.5	32.6	234	784	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	5.05	<0.5	45.7	226	820	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	--	<0.5	47.3	234	840	<0.015	<0.015	<0.02	<0.02	--	--
9/14/2004	4.72	<0.5	57.7	232	900	<0.015	<0.015	<0.02	<0.02	<0.02	--
11/16/2004	4.88	<0.5	21.7	168	660	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/26/2005	4.89	<0.5	62.4	204	930	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
5/25/2005	5.06	<0.5	31	204	700	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
10/19/2005	4.96	--	36	--	--	--	--	--	--	<0.02	<0.02
4/12/2006	4.72	--	48.2	--	--	--	--	--	--	<0.02	<0.02
4/12/2006	--	--	48.5	--	--	--	--	--	--	<0.02	<0.02
11/2/2006	4.15	--	13.6	--	--	--	--	--	--	<0.02	--
5/23/2007	4.6	<0.5	25.5	233	--	--	--	--	--	<0.02	--
11/7/2007	4.24	<0.5	12.6	229	--	--	--	--	--	<0.02	--
5/21/2008	5.69	<0.5	22.5	224	--	<0.015	--	<0.02	--	<0.02	--
11/5/2008	4.35	<0.5	11.1	137	--	<0.015	--	<0.02	--	<0.02	--
4/21/2009	4.36	0.72	13.2	200	--	--	--	--	--	<0.02	--
12/16/2009	5.53	<0.5	15.7	212	--	--	--	--	--	--	--

"--" - Parameter not analyzed

TABLE 18
ECMW-15 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

ECMW-15

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
3/13/1996	6.4	--	34.5	4.4	--	< 0.002	< 0.002	< 0.005	< 0.005	--	--
8/8/2001	4.3	< 0.5	19.1	7.8	140	< 0.04	--	< 0.02	--	--	--
10/30/2001	4.3	< 0.5	12.6	10.2	110	< 0.04	--	< 0.02	--	--	--
6/4/2002	5.4	< 0.5	10.7	11.1	100	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	5.4	1.16	18.2	9.22	120	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	5.8	0.5	12.2	10.8	120	< 0.015	< 0.015	< 0.02	< 0.02	--	--
5/20/2003	4.75	< 0.5	9.45	13	66	< 0.015	< 0.015	< 0.02	< 0.02	--	--
7/23/2003	4.77	< 0.5	7.63	12.8	100	< 0.015	< 0.015	< 0.02	< 0.02	--	--
9/23/2003	4.49	< 0.5	9.62	11.8	180	< 0.015	< 0.015	< 0.02	< 0.02	--	--
11/19/2003	4.89	< 0.5	9.81	12.6	100	< 0.015	< 0.015	< 0.02	< 0.02	--	--
1/28/2004	5.56	3.96	4.52	18.6	81	<0.015	<0.015	<0.02	<0.02	--	--
3/16/2004	5.68	<0.5	7.66	13.9	97	<0.015	<0.015	<0.02	<0.02	--	--
5/18/2004	5.75	<0.5	6.82	15.2	83	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	5.39	<0.5	9.52	11	110	<0.015	<0.015	<0.02	<0.02	--	--
9/14/2004	4.67	0.61	8.22	13.2	100	<0.015	<0.015	<0.02	<0.02	<0.02	--
11/16/2004	4.92	<0.5	7.42	11.8	110	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/25/2005	4.68	<0.5	7.62	11.8	110	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
5/25/2005	4.94	<0.5	5.79	16.1	79	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
10/19/2005	4.77	--	5.63	--	--	--	--	--	--	<0.02	<0.02
4/11/2006	4.95	--	1.6	--	--	--	--	--	--	<0.02	<0.02
11/2/2006	4.17	--	2.54	--	--	--	--	--	--	<0.02	--
5/23/2007	4.43	--	--	--	--	--	--	--	--	<0.02	--
11/7/2007	4.06	--	--	--	--	--	--	--	--	<0.02	--
5/21/2008	7.35	<0.5	1.52	15.9	--	<0.015	--	<0.02	--	<0.02	--
11/5/2008	5.18	<0.5	2.32	8.79	--	<0.015	--	<0.02	--	<0.02	--
4/21/2009	4.53	--	--	--	--	--	--	--	--	<0.02	--
10/20/2009	4.36	--	--	--	--	--	--	--	--	--	--

"--" - Parameter not analyzed

TABLE 19
ECMW-16 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

ECMW-16

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
3/13/1996	5.7	--	137	4.6	--	0.0036	0.0034	< 0.005	< 0.005	--	--
6/5/2001	4.3	4.61	134	5.09	1100	< 0.04	--	< 0.02	--	--	--
10/30/2001	3.9	< 0.5	58.4	6.44	330	< 0.04	--	< 0.02	--	--	--
6/4/2002	5.0	6.2	72.5	7.19	396	< 0.02	< 0.02	< 0.02	< 0.02	--	--
6/4/2002	--	5.0	72.6	6.82	404	< 0.02	< 0.015	< 0.02	< 0.02	--	--
10/30/2002	5.0	11.6	72	9.21	263	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	5.9	2.99	89.4	5.64	595	< 0.015	< 0.015	< 0.02	< 0.02	--	--
5/20/2003	4.42	3.69	90.8	6.55	555	< 0.015	< 0.015	< 0.02	< 0.02	--	--
7/23/2003	4.81	6.45	72.3	7.15	430	< 0.015	< 0.015	< 0.02	< 0.02	--	--
9/23/2003	4.31	5.97	72.8	7.09	400	< 0.015	< 0.015	< 0.02	< 0.02	--	--
11/19/2003	4.99	8.61	44.3	9.78	230	< 0.015	< 0.015	< 0.02	< 0.02	--	--
1/28/2004	5.61	5.66	59	9.84	280	<0.015	<0.015	<0.02	<0.02	--	--
3/16/2004	5.83	8.39	34.8	11.2	180	<0.015	<0.015	<0.02	<0.02	--	--
5/18/2004	5.95	10.4	31.9	13.3	167	<0.015	<0.015	<0.02	<0.02	--	--
5/18/2004	--	11.5	31.5	13.8	135	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	5.5	9.35	40.2	7.7	160	<0.015	<0.015	<0.02	<0.02	--	--
9/14/2004	4.49	8.57	47.1	7.83	190	<0.015	<0.015	<0.02	<0.02	<0.02	--
11/16/2004	5.08	6.49	38.2	8.11	310	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
11/16/2004	--	6.87	38.3	8.02	270	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/25/2005	4.54	4.15	43.1	8.13	310	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
5/25/2005	4.62	7.62	26.8	10.2	110	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
10/19/2005	4.66	6.28	17	--	--	--	--	--	--	<0.02	<0.02
4/11/2006	4.79	2.01	17	--	--	--	--	--	--	<0.02	<0.02
11/2/2006	4.27	2.16	24.8	--	--	--	--	--	--	<0.02	--
5/23/2007	4.25	2.21	12.8	14.4	--	--	--	--	--	<0.02	--
11/7/2007	4.3	1.77	19.6	12.6	--	--	--	--	--	<0.02	--
5/21/2008	6.08	3.35	14.8	15.9	--	<0.015	--	<0.02	--	<0.02	--
11/5/2008	6.5	1.92	11.4	10.4	--	<0.015	--	<0.02	--	<0.02	--
4/21/2009	4.66	3.25	8.85	14.5	--	--	--	--	--	<0.02	--
10/21/2009	4.38	0.88	13.1	12.1	--	--	--	--	--	--	--
10/21/2009	--	0.94	13.2	13	--	--	--	--	--	--	--

"--" - Parameter not analyzed

TABLE 20
ECMW-17 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

ECMW-17

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
3/13/1996	4.9	--	45	145	--	< 0.002	< 0.002	< 0.005	< 0.005	--	--
6/5/2001	4.4	1.16	54.2	87.7	600	< 0.04	--	< 0.02	--	--	--
10/30/2001	4.1	< 0.5	106	11.5	760	< 0.04	--	< 0.02	--	--	--
6/4/2002	5.1	< 0.5	83.4	8.04	603	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	5.1	2.36	92	9.53	540	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	5.6	1.22	101	28.2	751	< 0.015	< 0.015	< 0.02	< 0.02	--	--
5/20/2003	4.54	< 0.5	83.6	17.1	603	< 0.015	< 0.015	< 0.02	< 0.02	--	--
7/23/2003	4.74	0.58	74.7	9.31	548	< 0.015	< 0.015	< 0.02	< 0.02	--	--
9/23/2003	5.25	< 0.5	64.3	6.98	400	< 0.015	< 0.015	< 0.02	< 0.02	--	--
11/19/2003	5.28	0.55	77.3	11.8	530	< 0.015	< 0.015	< 0.02	< 0.02	--	--
1/28/2004	6.54	<0.5	81.3	42.8	560	<0.015	<0.015	<0.02	<0.02	--	--
3/16/2004	6.62	8.14	129	64	983	<0.015	<0.015	<0.02	<0.02	--	--
5/18/2004	6.73	8.05	134	60.1	944	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	6.57	<0.5	67.6	6.54	460	<0.015	<0.015	<0.02	<0.02	--	--
9/14/2004	4.4	1.42	78.4	3.14	570	<0.015	<0.015	<0.02	<0.02	<0.02	--
11/16/2004	5.41	9.55	219	54.8	1800	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/26/2005	4.54	1.79	53.3	12.2	360	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
5/25/2005	4.86	<0.5	56.4	19.1	390	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
5/25/2005	--	<0.5	58.4	4.27	440	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
10/20/2005	5.74	0.67	48.9	--	--	--	--	--	--	<0.02	<0.02
4/11/2006	3.35	1.15	66.6	--	--	--	--	--	--	<0.02	<0.02
11/2/2006	3.56	4.81	47.6	--	--	--	--	--	--	<0.02	--
5/23/2007	4.19	1.49	58.5	12.7	--	--	--	--	--	<0.02	--
11/7/2007	3.7	0.64	83.3	51.7	--	--	--	--	--	<0.02	--
5/21/2008	4.84	1.63	63.1	63	--	<0.015	--	<0.02	--	<0.02	--
11/5/2008	3.85	1.31	34.6	17.5	--	<0.015	--	<0.02	--	<0.02	--
4/21/2009	4.25	12.2 outlier	27.1	99.9	--	--	--	--	--	<0.02	--
6/3/2009	5.84	3.04	--	--	--	--	--	--	--	--	--
10/21/2009	4.68	11.2	14.4	87.1	--	--	--	--	--	--	--

"--" - Parameter not analyzed

TABLE 21
ECMW-18 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

ECMW-18

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
3/14/1996	6.6	--	0.4	3.3	--	0.017	< 0.002	0.0194	< 0.005	--	--
10/30/2001	5.4	< 0.5	< 0.5	3.74	300	< 0.04	--	0.05	--	--	--
6/4/2002	6.2	< 0.5	< 0.5	8.38	796	0.115	< 0.02	0.147	0.137	--	--
10/30/2002	6.3	0.43	< 0.5	3.22	258	0.018	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	6.4	< 0.5	< 0.5	5.01	495	< 0.015	< 0.015	0.02	< 0.02	--	--
5/21/2003	6.01	0.59	< 0.5	7.08	786	0.029	< 0.015	0.02	< 0.02	--	--
7/23/2003	5.38	< 0.5	113	115	2000	0.029	< 0.015	0.047	< 0.02	--	--
9/24/2003	5.54	5.79	< 0.5	3.81	590	0.025	< 0.015	0.036	0.026	--	--
11/19/2003	5.90	< 0.5	< 0.5	9.68	300	< 0.015	< 0.015	< 0.02	< 0.02	--	--
1/28/2004	6.17	--	--	--	--	--	--	--	--	--	--
3/16/2004	6.4	<0.5	<0.5	7.01	666	0.021	<0.015	0.027	0.021	--	--
5/19/2004	6.43	<0.5	<0.5	5.63	720	0.063	<0.015	0.088	<0.02	--	--
7/13/2004	6.05	<0.5	<0.5	5.68	1100	0.033	<0.015	0.043	<0.02	--	--
9/15/2004	5.89	0.56	<0.5	3.88	1200	0.109	0.038	0.12	0.05	0.213	--
11/17/2004	5.96	<0.5	<0.5	4.61	1100	<0.015	<0.015	0.027	<0.02	0.045	<0.02
11/17/2004	--	<0.5	<0.5	4.85	1100	0.03	<0.015	0.043	<0.02	0.079	<0.02
1/26/2005	5.9	<0.5	<0.5	5.13	1000	0.056	<0.015	0.055	0.022	0.099	0.031
5/25/2005	6.04	<0.5	<0.5	5.18	700	0.018	<0.015	0.032	<0.02	0.048	0.03
10/19/2005	5.82	--	--	--	--	<0.015	<0.015	<0.02	0.052	<0.02	0.081
4/12/2006	1.34	--	--	--	--	<0.015	0.016	<0.02	0.065	<0.02	<0.02
11/2/2006	5.23	--	--	--	--	<0.015	--	<0.02	--	0.02	--
5/23/2007	5.34	--	0.98	--	--	--	--	--	--	<0.02	--
11/7/2007	5.03	--	<0.5	--	--	--	--	--	--	0.05	--
5/21/2008	7.82	<0.5	0.567	6.57	--	0.02	--	0.028	--	0.04	--
11/7/2008	5.05	<0.5	<0.5	1.52	--	0.032	--	0.025	--	0.05	--
4/22/2009	5.42	--	<0.5	--	--	--	--	--	--	0.03	--
10/21/2009	7.16	--	<0.5	--	--	--	--	--	--	--	--

"--" - Parameter not analyzed

TABLE 22
ECMW-19 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

ECMW-19

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
1/28/2004	6.73	0.64	<0.5	8.32	1400	0.122	0.045	0.077	0.077	--	--
3/16/2004	6.49	<0.5	<0.5	6.38	238	0.019	<0.015	<0.02	<0.02	--	--
3/16/2004	--	<0.5	<0.5	7.63	164	0.021	<0.015	<0.02	<0.02	--	--
5/19/2004	6.19	<0.5	<0.5	9.05	220	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	6.37	<0.5	<0.5	6.85	180	<0.015	<0.015	<0.02	<0.02	--	--
9/15/2004	6.23	0.54	<0.5	4.11	120	<0.015	<0.015	<0.02	<0.02	<0.02	--
11/17/2004	6.02	<0.5	<0.5	4.63	130	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/26/2005	5.82	<0.5	<0.5	3.67	100	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
5/25/2005	5.88	<0.5	<0.5	4.56	120	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
10/19/2005	6.27	<0.5	<0.5	--	--	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
4/12/2006	6.1	<0.5	<0.5	--	--	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
11/2/2006	5.51	<0.5	<0.5	--	--	<0.015	--	<0.02	--	<0.02	--
5/23/2007	5.8	--	--	--	--	--	--	--	--	<0.02	--
11/7/2007	5.18	--	--	--	--	--	--	--	--	<0.02	--
5/21/2008	8.17	<0.5	<0.5	3.18	--	<0.015	--	<0.02	--	<0.02	--
11/7/2008	5.9	<0.5	<0.5	2.04	--	<0.015	--	<0.02	--	<0.02	--
4/22/2009	5.66	--	--	--	--	--	--	--	--	<0.02	--
10/21/2009	7.82	--	--	--	--	--	--	--	--	--	--

"--" - Parameter not analyzed

TABLE 23
ECMW-20 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

ECMW-20

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
1/28/2004	5.93	<0.5	<0.5	11.4	730	0.024	<0.015	0.034	<0.02	--	--
3/16/2004	6.51	<0.5	<0.5	15.9	186	<0.015	<0.015	<0.02	<0.02	--	--
5/19/2004	6.23	<0.5	<0.5	10.6	140	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	5.8	<0.5	<0.5	17.2	130	<0.015	<0.015	<0.02	<0.02	--	--
9/15/2004	5.61	0.86	<0.5	17.2	120	<0.015	<0.015	<0.02	<0.02	<0.02	--
11/17/2004	5.36	<0.5	<0.5	13.5	160	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/26/2005	6.02	<0.5	<0.5	13.8	160	0.017	<0.015	<0.02	<0.02	<0.02	<0.02
5/26/2005	6.03	<0.5	1.86	7.72	85	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
10/20/2005	--	<0.5	<0.5	--	--	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
4/12/2006	--	3.58	6.29	--	--	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
11/2/2006	6.2	<0.5	1.21	--	--	<0.015	--	<0.02	--	<0.02	--
5/23/2007	6.06	--	--	--	--	--	--	--	--	<0.02	--
11/7/2007	5.52	--	--	--	--	--	--	--	--	<0.02	--
5/21/2008	8.6	<0.5	<0.5	8.94	--	<0.015	--	<0.02	--	<0.02	--
11/7/2008	6.36	<0.5	<0.5	7.94	--	0.016	--	<0.02	--	<0.02	--
4/22/2009	6.22	--	--	--	--	--	--	--	--	<0.02	--
10/21/2009	7.37	--	--	--	--	--	--	--	--	--	--

"--" - Parameter not analyzed

TABLE 24
ECMW-21 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

ECMW-21

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
1/28/2004	5.56	<0.5	1.63	8.17	82	0.169	<0.015	0.837	<0.02	--	--
3/16/2004	6.34	<0.5	0.54	3.62	130	<0.015	<0.015	0.028	<0.02	--	--
5/19/2004	6.75	<0.5	2.15	4.59	110	0.029	<0.015	0.07	<0.02	--	--
7/13/2004	6.39	<0.5	2.5	3.74	103	0.032	<0.015	0.056	<0.02	--	--
9/15/2004	5.47	0.81	4.65	4.15	150	<0.015	<0.015	0.029	<0.02	<0.02	--
11/17/2004	5.96	<0.5	2.97	3.14	110	<0.015	<0.015	0.047	<0.02	<0.02	<0.02
1/26/2005	5.37	4.06	3.23	2.88	77	0.02	<0.015	0.044	<0.02	<0.02	<0.02
5/26/2005	5.69	<0.5	3.17	3.64	76	0.063	<0.015	0.265	<0.02	0.092	<0.02
10/20/2005	4.17	<0.5	4.16	--	--	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
4/12/2006	--	<0.5	3.19	--	--	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
11/2/2006	--	<0.5	2.23	--	--	<0.015	--	<0.02	--	<0.02	--
5/23/2007	5.56	--	--	--	--	--	--	--	--	<0.02	--
11/7/2007	5.07	--	--	--	--	--	--	--	--	<0.02	--
5/21/2008	7.81	<0.5	1.85	5.18	--	<0.015	--	<0.02	--	<0.02	--
11/7/2008	5.32	<0.5	1.26	3	--	<0.015	--	<0.02	--	<0.02	--
4/22/2009	5.24	--	--	--	--	--	--	--	--	<0.02	--
10/21/2009	5.91	--	--	--	--	--	--	--	--	--	--

"--" - Parameter not analyzed

TABLE 25
ECMW-22 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

ECMW-22

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
1/28/2004	7.68	0.61	0.53	6.62	540	0.021	<0.015	0.021	<0.02	--	--
1/28/2004	--	<0.5	0.52	6.62	610	0.021	<0.015	0.023	<0.02	--	--
3/16/2004	6.65	<0.5	0.66	2.88	<1	<0.015	<0.015	<0.02	<0.02	--	--
5/18/2004	6.76	<0.5	0.95	3.74	136	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	6.74	<0.5	<0.5	3.8	140	<0.015	<0.015	<0.02	<0.02	--	--
9/14/2004	5.84	0.7	<0.5	2.94	170	<0.015	<0.015	<0.02	<0.02	<0.02	--
11/16/2004	6.95	<0.5	<0.5	2.51	180	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/26/2005	5.79	<0.5	1.09	3.56	140	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
5/25/2005	6.46	<0.5	1.12	3.61	130	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
10/19/2005	6.21	<0.5	<0.5	--	--	0.056	<0.015	<0.02	<0.02	<0.02	<0.02
4/11/2006	6.22	<0.5	2.56	--	--	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
11/2/2006	5.37	<0.5	1.07	--	--	<0.015	--	<0.02	--	<0.02	--
5/23/2007	5.67	--	--	--	--	--	--	--	--	<0.02	--
11/7/2007	5.01	--	--	--	--	--	--	--	--	<0.02	--
5/21/2008	7.93	<0.5	3.65	7.6	--	<0.015	--	<0.02	--	<0.02	--
11/5/2008	5.06	<0.5	1.87	4.7	--	<0.015	--	<0.02	--	<0.02	--
4/21/2009	5.8	--	--	--	--	--	--	--	--	<0.02	--
4/21/2009	--	<0.5	0.991	3.67	--	--	--	--	--	<0.02	--
10/21/2009	6.15	--	--	--	--	--	--	--	--	--	--

"--" - Parameter not analyzed

TABLE 26
IN SITU REMEDIATION PARAMETERS SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

Well	Sample Date	Alkalinity (mg/L)	Dissolved Oxygen (mg/L)	REDOX (mV)	Nitrite (mg/L)	Total Phosporus (mg/L)	Total Organic Carbon (mg/L)
ECMW-1	4/22/2009	<5	5.82	290.1	<0.5	<0.02	1.07
ECMW-1	10/20/2009	<5	3.7	209.2	<0.5	<0.02	<1
ECMW-3	4/22/2009	59	4.86	224.8	<0.5	0.25	2.49
ECMW-3	10/20/2009	64	3	87.7	<0.5	0.183	3.98
ECMW-3 D	4/22/2009	59	--	--	<0.5	0.241	1.93
ECMW-4	4/22/2009	<5	5.76	347.5	<0.5	<0.02	19.3
ECMW-4	10/20/2009	<5	2.5	435.8	<0.5	<0.02	24.2
ECMW-4 D	10/20/2009	<5	--	--	<0.5	<0.02	25.2
ECMW-5	4/22/2009	9	4.59	228.5	<0.5	<0.02	1.4
ECMW-5	10/20/2009	8	1.6	212.1	<0.5	<0.02	1.25
ECMW-6	4/21/2009	<5	0.03	265.8	<0.5	<0.02	1.36
ECMW-6	10/20/2009	<5	4.4	177.4	<0.5	<0.02	1.65
ECMW-7	4/21/2009	<5	0.06	358.8	<0.5	<0.02	16
ECMW-7	10/20/2009	<5	3.4	389.3	<0.5	<0.02	16.4
ECMW-8	4/21/2009	254	0.05	354	<0.5	<0.02	13.8
ECMW-8	10/20/2009	148	3.7	247.8	<0.5	<0.02	12.1
ECMW-9	4/21/2009	30	6.23	285.2	<0.5	0.103	22.2
ECMW-9	10/20/2009	28	3.4	138.3	<0.5	0.078	20.6
ECMW-10	4/21/2009	<5	4.39	281.4	<0.5	<0.02	7.92
ECMW-10	10/20/2009	10	1.5	247.2	<0.5	<0.02	6.41
ECMW-11	4/21/2009	<5	3.82	350.4	<0.5	<0.02	8.46
ECMW-11	10/20/2009	<5	1.5	259.4	<0.5	<0.02	9.35
ECMW-12	4/21/2009	205	3.38	58.1	<0.5	<0.02	9.18
ECMW-12	10/21/2009	146	1.8	-41.6	<0.5	0.056	19.4
ECMW-13	4/21/2009	<5	3.61	333.4	<0.5	0.027	6.14
ECMW-13	10/21/2009	<5	2	270.6	<0.5	<0.02	7.53
ECMW-14	4/21/2009	10	2.59	312.9	<0.5	<0.02	13.6
ECMW-14	12/16/2009	5	2.45	160.1	<0.5	<0.02	12.5

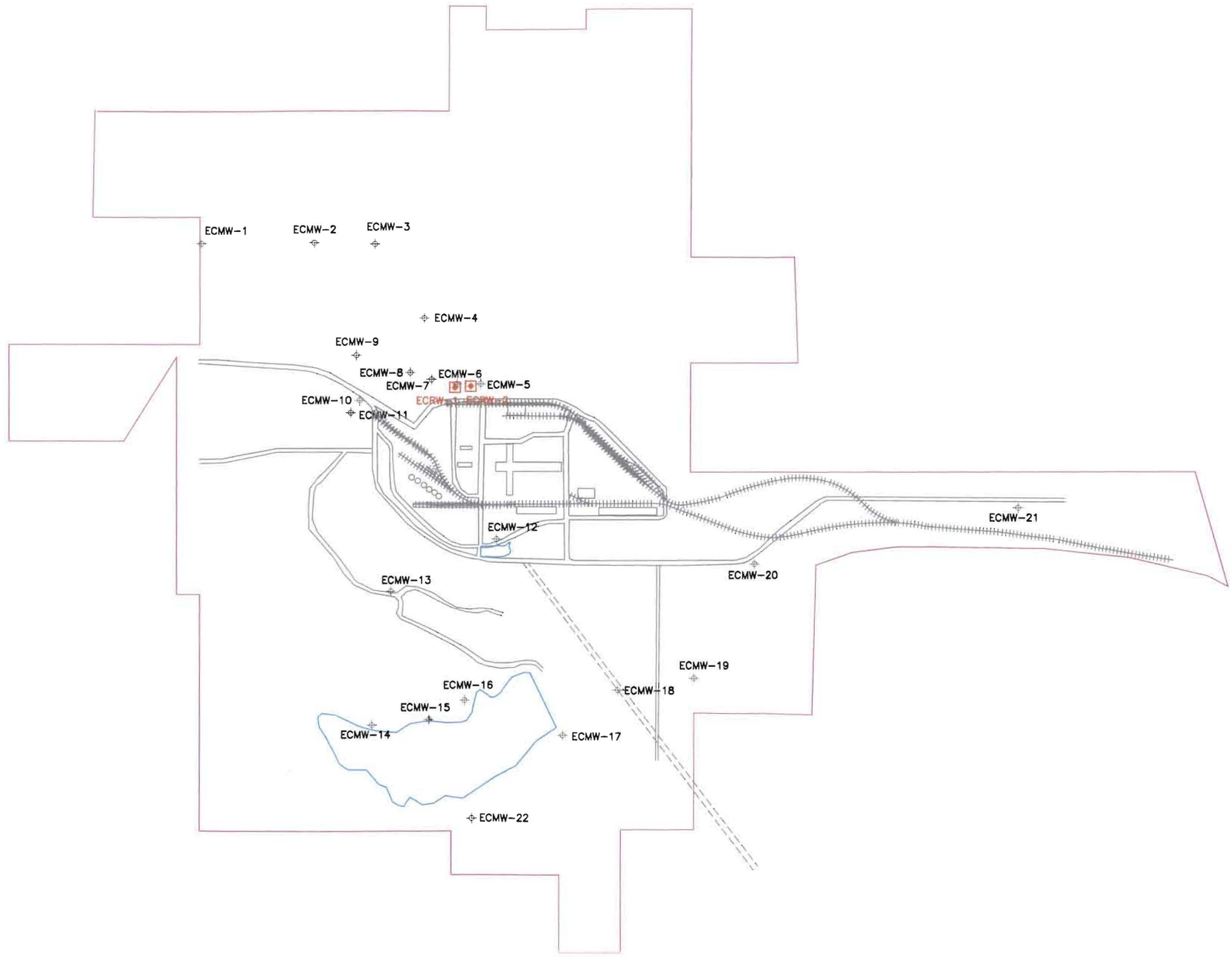
"--" - Parameter not analyzed

TABLE 26
IN SITU REMEDIATION PARAMETERS SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

Well	Sample Date	Alkalinity (mg/L)	Dissolved Oxygen (mg/L)	REDOX (mV)	Nitrite (mg/L)	Total Phosporus (mg/L)	Total Organic Carbon (mg/L)
ECMW-15	4/21/2009	<5	3.08	354.8	<0.5	<0.02	1.51
ECMW-15	10/20/2009	<5	2	262.5	<0.5	<0.02	1.34
ECMW-16	4/21/2009	<5	3.43	372.1	<0.5	<0.02	2.78
ECMW-16	10/21/2009	<5	1.9	252.5	<0.5	<0.02	2.05
ECMW-16 D	10/21/2009	<5	--	--	<0.5	<0.02	2.21
ECMW-17	4/21/2009	<5	3.47	349.2	<0.5	<0.02	2.34
ECMW-17	10/21/2009	<5	2.8	281	<0.5	<0.02	2.36
ECMW-18	4/22/2009	16	6.47	49.6	<0.5	0.308	<1
ECMW-18	10/21/2009	20	2.2	88.4	<0.5	0.235	<1
ECMW-19	4/22/2009	27	4.05	177.1	<0.5	0.06	1.65
ECMW-19	10/21/2009	32	3.2	-13.4	<0.5	0.037	<1
ECMW-2	4/22/2009	17	2.99	239.2	<0.5	0.055	2.4
ECMW-2	10/20/2009	20	3.2	108.2	<0.5	0.056	2.2
ECMW-20	4/22/2009	33	3.53	138.2	<0.5	0.037	<1
ECMW-20	10/21/2009	30	3	51.5	<0.5	0.037	<1
ECMW-21	4/22/2009	7	7.44	218.2	<0.5	<0.02	<1
ECMW-21	10/21/2009	10	2.5	74.5	<0.5	<0.02	1.74
ECMW-22	4/21/2009	45	3.22	180.1	<0.5	0.034	1.04
ECMW-22	10/21/2009	48	2.6	93.2	<0.5	0.061	<1
ECMW-22 D	4/21/2009	46	--	--	<0.5	0.093	1.01

"--" - Parameter not analyzed

FIGURES



LEGEND

- MONITOR WELLS
- RECOVERY WELLS
- PROPERTY BOUNDARY

N

0 600 1200
SCALE IN FEET

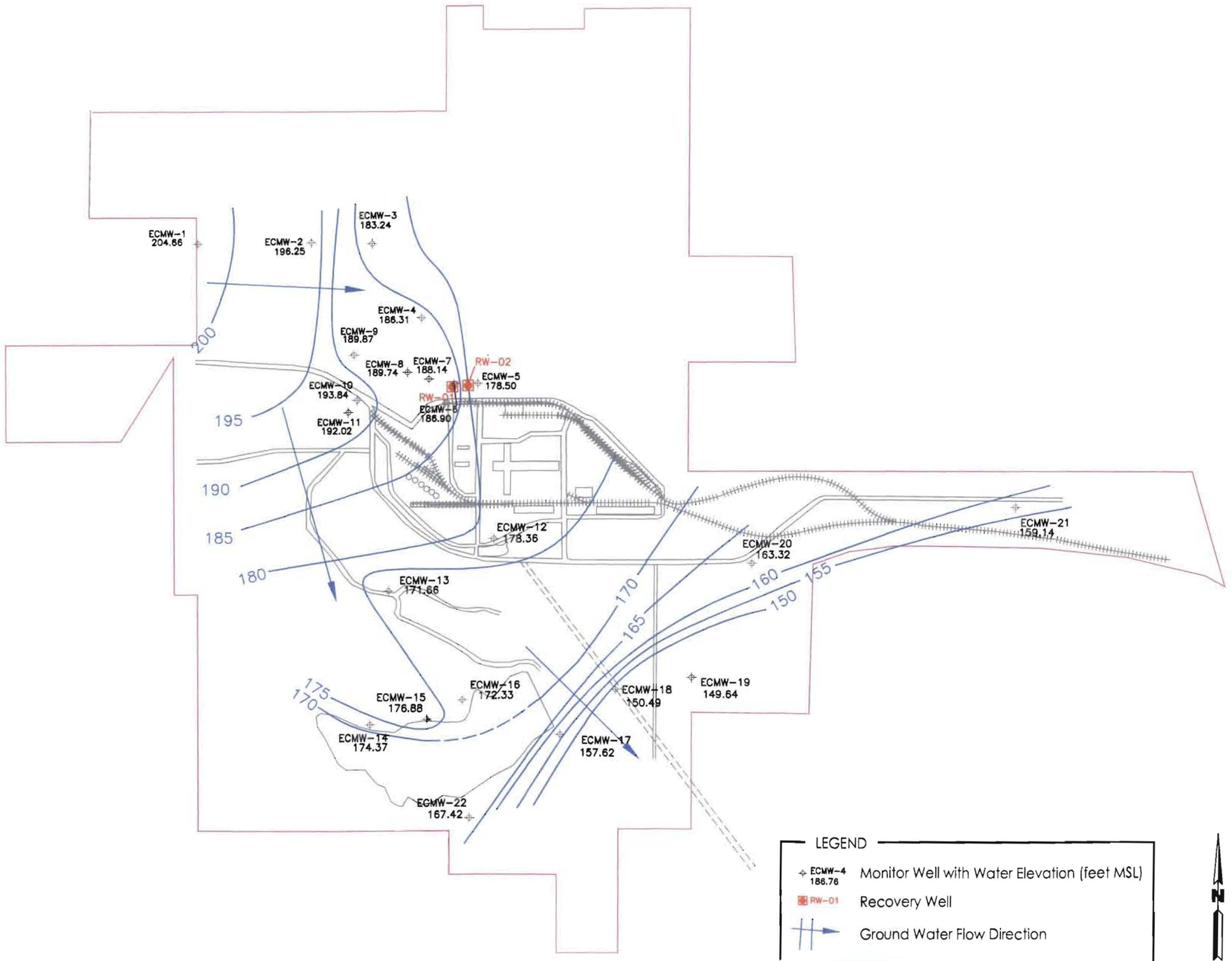
EL DORADO

SITE MAP
2009 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

DATE: 03/19/2010	APPROVED: BY: SB DATE: 3/22/10	DRAWN BY: LMM
SCALE: see above		CAD NO. 02EC0100

ENVIRONMENTAL MANAGEMENT SERVICES, INC.

FIGURE 1



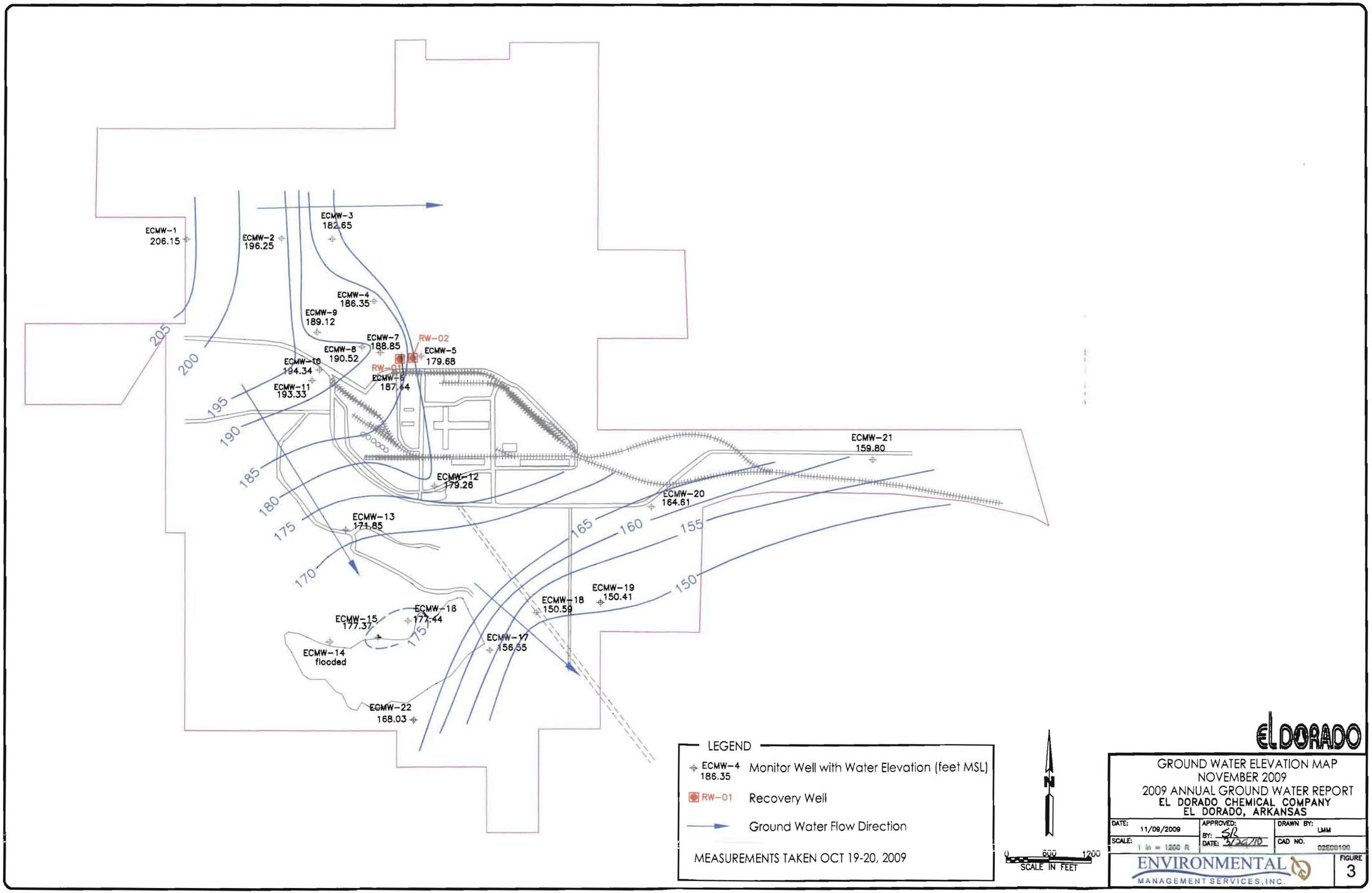
ELDORADO

GROUND WATER ELEVATION MAP
APRIL 2009
2009 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

DATE:	APPROVED:	DRAWN BY:
08/30/2009	BY: SR	LMM
SCALE: see above	DATE: 9/22/09	CAD NO. 02EC0100

ENVIRONMENTAL MANAGEMENT SERVICES, INC.

FIGURE 2



EL DORADO

GROUND WATER ELEVATION MAP
NOVEMBER 2009
2009 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

DATE: 11/09/2009	APPROVED: BY: SR DATE: 3/24/10	DRAWN BY: LMM
SCALE: 1 in = 1200 ft		CAD NO. 02EC0100

ENVIRONMENTAL MANAGEMENT SERVICES, INC.

FIGURE 3

APPENDIX A

SAMPLING FORMS AND LABORATORY ANALYTICAL REPORTS

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. ECMW-1
Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	4-21-09 1255	Method of Evacuation	ELEC. PUMP
Top of casing to water level	8.62 ft	Gallons per well volume	8.8
Top of casing to bottom	22.1 ft	Total gallons evacuated	26.4
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	4-22-09 0910	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Diss.	Oxygen[%]	Redox Turbidity[NTU]
23.9	4.45	773 ms		7.44	303.6
20.4	4.54	388		6.41	283.1
17.3	4.57	299		5.82	290.1

GENERAL INFORMATION

Weather conditions at time of sampling CLEAR/WARM
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
R. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	5"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGUI

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No ECMW-2
Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation Date/Time	4-21-09 1320	Method of Evacuation	ELEC. PUMP
Top of casing to water level	0.00 ft	Gallons per well volume	13.1
Top of casing to bottom	30.2 ft	Total gallons evacuated	39.3
Water level after evacuation	ft	Elevation, Top of casing	
Sampling Date/Time	4.22-09 0930	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Press.	Oxygen[%]	~~Redox~~ Redox [mV]
21.6	5.17	464 us		3.76	255.6
18.3	5.37	354		3.03	247.4
17.8	5.41	350		2.99	239.2

GENERAL INFORMATION

Weather conditions at time of sampling CLEAR/WARM
Sample characteristics: CLEAR
Containers and preservatives
Comments and observations
Recommendations

Certification
R. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGUR

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. ECMW-3 + DUP
Collector K. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	4-21-09 13:50	Method of Evacuation	ELEC. PUMP
Top of casing to water level	8.87 ft	Gallons per well volume	11.8
Top of casing to bottom	27.1 ft	Total gallons evacuated	35.4
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	4-22-09 0850	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature [°C]	pH	Conductivity [µS]	Diss.	Oxygen [%]	REDOX Turbidity [NT]
24.8	5.33	287		6.26	233.1
20.3	5.73	262		5.11	227.2
18.9	5.76	268		4.86	224.8

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/WARM
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification
K. Durham

Well Casing Volumes [gal./ft.]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL City EL DORADO, AR Well No. ECMW-4
Colle R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	4-21-09 12:30	Method of Evacuation	ELEC. PUMP
Top of casing to water level	8.53 ft	Gallons per well volume	8.8
Top of casing to bottom	22.1 ft	Total gallons evacuated	26.4
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	4-22-09 0820	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D

Temperature[°C]	pH	Conductivity[µS]	Diss.	Oxygen[%]	REDOX Turbidity[NTU]
23.7	4.16	731 MR		9.09	312.4
19.6	4.18	762		6.49	331.9
17.8	4.17	874		5.76	347.5

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/WARM
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
K. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGUR

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL El Dorado, AR Well No. ECMW-5
Colle R. DURHAM

MONITORING WELL INFORMATION

Evacuation, Date/Time	4-21-09 1625	Method of Evacuation	ELEC. PUMP
Top of casing to water level	4.19 ft	Gallons per well volume	8.8
Top of casing to bottom	17.7 ft	Total gallons evacuated	26.4
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	4-22-09 1015	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Diss. Oxygen[%]	Redox Turbidity [NT]
22.6	5.67	304 ms	3.80	166.2
18.5	5.34	264	2.56	207.2
17.8	5.06	266	4.59	228.5

GENERAL INFORMATION

Weather conditions at time of sampling CLEAR / WARM
Sample characteristics CLEAR
Containers and preservatives
Comments and observations:
Recommendations

Certification:
K. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.45

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. ELMW-5
Colle R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	6-2-09 11:05	Method of Evacuation	ELEC. PUMP
Top of casing to water level	4.62 ft	Gallons per well volume	8.5
Top of casing to bottom	17.7 ft	Total gallons evacuated	25.5
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	6-3-09 9:15	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Disso	Oxygen[%]	Turbidity [NT
23.2	5.95	488 us			
22.5	5.97	397 us			
20.2	5.92	382 us			

GENERAL INFORMATION

Weather conditions at time of sampling: WARM/CLEAR
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
K. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: EL DORADO CHEMICAL Facility: EL DORADO, AR Well No.: EDMW-6
Collector: R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	4-20-09 7:35	Method of Evacuation	ELEC. PUMP
Top of casing to water level	4.97 ft	Gallons per well volume	16.1
Top of casing to bottom	22.0 ft	Total gallons evacuated	33.3
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	4-21-09 11:00	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Diss. Oxygen[%]	ReDox Turbidity[NTU]
17.5	4.98	740 us	.02	263.7
17.1	4.49	810 us	.04	263.8
17.2	4.47	800 us	.03	265.8

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/WARM
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
K. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL St. EL DORADO, AR Well No ECMW-7
Collr R. DURHAM

MONITORING WELL INFORMATION

Evacuation Date/Time	4-20-09	7:55		Method of Evacuation	ELEC. PUMP
Top of casing to water level	7.74	ft		Gallons per well volume	10.5
Top of casing to bottom	23.9	ft		Total gallons evacuated	31.5
Water level after evacuation		ft		Elevation, Top of casing	
Sampling: Date/Time	4-21-09	10:40		Elevation of well water	
Top of casing to water level		ft		Method of Sampling	PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[µS]	Diss. Oxygen[%]	Eh/Redox Turbidity[NTU]
18.9	4.21	552 mv	.08	331.7
18.4	4.06	560 mv	.09	345.6
18.2	4.13	571 mv	.06	358.8

GENERAL INFORMATION

Weather conditions at time of sampling CLEAR/WARM
Sample characteristics: CLEAR

Containers and preservatives

Comments and observations:

Recommendations

Certification

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.25	3 1/2"=0.50	6"=1.46

FIGURE

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No EC MW-8 + FIELD BLANK
Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation Date/Time	4-20-09 8:20	Method of Evacuation	ELEC. PUMP
Top of casing to water level	7.60 ft	Gallons per well volume	14.5
Top of casing to bottom	29.9 ft	Total gallons evacuated	43.5
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	4-21-09 10:15	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [mg/L]	Turbidity [NTU]
20.9	4.32	657 ms	.03	363.7
19.3	4.46	654 "	.02	360.3
18.6	4.88	660 ms	.05	354.0

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/WARM
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.45

FIGUR

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No ECMW-9
Coile R. DURHAM

MONITORING WELL INFORMATION

Evacuation Date/Time	4-20-09 8:45	Method of Evacuation	ELEC. PUMP
Top of casing to water level	8.52 ft	Gallons per well volume	14.0
Top of casing to bottom	30.0 ft	Total gallons evacuated	42.0
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	4-21-09 9:50	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLED

Temperature [°C]	pH	Conductivity [µS]	Diss. Oxygen [%]	Redox Turbidity [NTU]
19.4	6.01	918	8.24	300.2
18.5	5.88	860	7.99	293.3
18.1	5.91	869	6.23	285.2

GENERAL INFORMATION

Weather conditions at time of sampling CLEAR/WARM
Sample characteristics: CLEAR
Containers and preservatives
Comments and observations:
Recommendations

Certification:

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGUR

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site El Dorado Chemical Facility El Dorado, AR Well No ECMW-10
Collector R. Durham

MONITORING WELL INFORMATION

Evacuation Date/Time	4-20-09 9:20	Method of Evacuation	Elec. Pump
Top of casing to water level	11.91 ft	Gallons per well volume	6.9
Top of casing to bottom	22.6 ft	Total gallons evacuated	20.7
Water level after evacuation	ft	Elevation, Top of casing	
Sampling Date/Time	4-21-09 9:35	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC Bailer

SAMPLE D.

Temperature [°C]	pH	Conductivity [µS/cm]	Dissolved Oxygen [mg/L]	Redox Potential [mV]
20.0	4.97	756 µs	5.06	271.2
19.2	4.69	829	4.90	277.6
18.7	4.58	663	4.39	281.4

GENERAL INFORMATION

Weather conditions at time of sampling Clear/Warm
Sample characteristics: Clear
Containers and preservatives
Comments and observations
Recommendations

Certification:
R. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.25	3 1/2"=0.50	6"=1.46

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. ECMW-1D
Colle R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	6-2-09 9:05	Method of Evacuation	ELEC. PUMP
Top of casing to water level	11.93 ft	Gallons per well volume	6.9
Top of casing to bottom	22.6 ft	Total gallons evacuated	20.7
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	6-3-09 9:25	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Diss. Oxygen[mg/l]	Turbidity[NT
23.6	6.47	739 mS		
22.4	6.39	701 "		
21.2	6.35	638		

GENERAL INFORMATION

Weather conditions at time of sampling WARM / CLEAR
Sample characteristics: CLEAR

Containers and preservatives:

Comments and observations:

Recommendations:

Certification:
R. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGUI

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Field: EL DORADO, AR Well No. ECMW-11
Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	4-20-09	9:55	Method of Evacuation	ELEC. PUMP	
Top of casing to water level	9.63	ft	Gallons per well volume	6.6	
Top of casing to bottom	19.8	ft	Total gallons evacuated	19.8	
Water level after evacuation		ft	Elevation, Top of casing		
Sampling: Date/Time	4-21-09	9:15	Elevation of well water		
Top of casing to water level		ft	Method of Sampling	PVC BAILER	

SAMPLE D.

Temperature[°C]	pH	Conductance[uS]	Dis.	Oxygen[%]	Turbidity[NT]
21.5	3.95	836 uS		5.41	374.3
18.9	4.09	836 uS		4.23	347.0
18.2	4.09	825 uS		3.82	350.4

Roof

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/WARM
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certified by:

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGURE

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. ECMW-11
Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	6.2.09 9:30	Method of Evacuation	ELEC. PUMP
Top of casing to water level	9.92 ft	Gallons per well volume	6.4
Top of casing to bottom	19.8 ft	Total gallons evacuated	19.2
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	6.3.09 9:35	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Diss. Oxygen[%]	Turbidity [NT
28.5	6.26	601 uS		
23.9	6.18	548		
21.4	6.10	468		

GENERAL INFORMATION

Weather conditions at time of sampling: WARM / CLEAR
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
R. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGUI

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL El Dorado, AR Well No. ECMW-12
Collected R. DURHAM

MONITORING WELL INFORMATION

Evacuation Date/Time	4.20.09 10:50	Method of Evacuation	ELEC. PUMP
Top of casing to water level	6.61 ft	Gallons per well volume	8.6
Top of casing to bottom	19.9 ft	Total gallons evacuated	25.8
Water level after evacuation	ft	Elevation, Top of casing	
Sampling Date/Time	4.21.09 11:20	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D

Temperature[°C]	pH	Conductivity[µS	Diss.	Oxygen[%]	Turbidity[N
20.5	6.10	946 00		5.49	11.1
19.1	6.13	925		2.89	75.1
18.2	6.52	886		3.38	58.1

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/WARM
Sample characteristics: CLOUDY
Containers and preservatives:
Comments and observations:
Recommendations:

Certificate of

Well Casing Volumes [gal/ft]			
1 1/4"=0.07	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGUR

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: EL DORADO CHEMICAL Facility: EL DORADO, AR Well No: ECMW-13
Collector: R. DURHAM

MONITORING WELL INFORMATION

Evacuation Date/Time	4-20-09 9:10	Method of Evacuation	ELEC. PUMP
Top of casing to water level	5.60 ft	Gallons per well volume	9.2
Top of casing to bottom	19.8 ft	Total gallons evacuated	27.6
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	4-21-09 8:50	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Dissolved Oxygen[%]	Redox Potential[mV]
24.2	4.90	609 us	5.04	325.9
20.5	4.82	640	3.52	329.1
19.3	4.77	649	3.61	333.4

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR / WARM
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGUI

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No ECMW-14
Colle R. DURHAM

MONITORING WELL INFORMATION

Evacuation Date/Time	4-20-09 1:15	Method of Evacuation	ELEC. PUMP
Top of casing to water level	4.11 ft	Gallons per well volume	9.2
Top of casing to bottom	18.2 ft	Total gallons evacuated	27.6
Water level after evacuation	ft	Elevation, Top of casing	
Sampling Date/Time	4-21-09 8:30	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D

Temperature [°C]	pH	Conductivity [uS]	Date	Oxygen [%]	Turbidity [NT]
23.8	5.04	395 uos		3.91	254.6
19.2	4.54	376		2.55	292.5
17.8	4.36	351		2.59	312.9

GENERAL INFORMATION

Weather conditions at time of sampling CLEAR/WARM
Sample characteristics CLEAR
Containers and preservatives
Comments and observations
Recommendations

Certification

Well Casing Volumes [gal./ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6" 1.46

FIGUR

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No ECMW-15
Collr R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	4-20-09 1:50	Method of Evacuation	ELEC. PUMP
Top of casing to water level	3.96 ft	Gal ons per well volume	8.5
Top of casing to bottom	17.0 ft	Total gallons evacuated	25.5
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	4-4-09 8:10	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D

Temperature[°C]	pH	Conductivity[uS]	D.O.	Oxygen[%]	REDOX ~~Turbidity[NT~~
18.6	4.67	334 uS		5.44	350.4
17.9	4.58	329		3.32	355.1
17.2	4.53	328		3.08	354.8

GENERAL INFORMATION

Weather conditions at time of sampling CLEAR/WARM
Sample characteristics: CLEAR

Containers and preservatives

Comments and observations

Recommendations

Certification
K. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGUR

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: EL DORADO CHEMICAL Facility: EL DORADO, AR Well No: ECMW-16
Collector: R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	4.20.09	2:20	Method of Evacuation	ELEC. PUMP	
Top of casing to water level	7.81	ft	Gallons per well volume	7.5	
Top of casing to bottom	19.3	ft	Total gallons evacuated	22.5	
Water level after evacuation		ft	Elevation, Top of casing		
Sampling: Date/Time	4.21.09	7:50	Elevation of well water		
Top of casing to water level		ft	Method of Sampling	PVC BAILER	

SAMPLE D

Temperature [°C]	pH	Conductivity [uS]	Diss.	Oxygen [%]	Redox / Turbidity [NTU]
22.8	4.55	700 uS		2.52	342.4
19.9	4.65	610		2.71	344.6
18.7	4.66	570		3.43	372.1

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/WARM
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
R. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.45

FIGUR

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No ECMW-17
Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	4-20-09 11:45		Method of Evacuation	ELEC. PUMP	
Top of casing to water level	27.78	ft	Gallons per well volume	4.5	
Top of casing to bottom	34.70	ft	Total gallons evacuated	13.5	
Water level after evacuation		ft	Elevation, Top of casing		
Sampling: Date/Time	4-21-09 7:15		Elevation of well water		
Top of casing to water level		ft	Method of Sampling	PVC BAILER	

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Diss. Oxygen[mg/L]	Redox Turbidity[NTU]
20.4	4.74	379 us	3.03	318.9
18.9	4.29	507	3.84	348.2
18.4	4.25	510	3.47	349.2

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/WARM
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. ECMW-17
Colle : R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	6-2-09 10:10	Method of Evacuation	ELEC. PUMP
Top of casing to water level	17.23 ft	Gallons per well volume	4.9
Top of casing to bottom	34.7 ft	Total gallons evacuated	14.7
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	6-3-09 9:45	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Diss.	Oxygen[%]	Turbidity [NT
21.8	5.86	367 uS			
23.3	5.85	351 uS			
20.9	5.84	350 uS			

GENERAL INFORMATION

Weather conditions at time of sampling: WARM/CLEAR
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
R. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No ECMW-18
Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	4-21-09 1520	Method of Evacuation	ELEC. PUMP
Top of casing to water level	4.97 ft	Gallons per well volume	7.9
Top of casing to bottom	17.2 ft	Total gallons evacuated	23.7
Water level after evacuation	ft	Elevation, Top of casing	
Sampling Date/Time	4-22-09 1035	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[µS]	Diss. Oxygen[%]	Redox Turbidity[NTU]
21.6	5.98	295 mS	5.85	178.7
18.4	5.74	284	6.69	192.3
16.9	5.42	260	6.47	29.6

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/WARM
Sample characteristics: ~~CLEAR~~ CLOUDY
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2" 0.24	3 1/2"=0.50	6"=1.46

FIGUR

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No ECMW-19
Collc R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	4.21.09	1550		Method of Evacuation	ELEC. PUMP
Top of casing to water level	0.77	ft		Gallons per well volume	9.7
Top of casing to bottom	6.5	ft		Total gallons evacuated	29.1
Water level after evacuation		ft		Elevation, Top of casing	
Sampling: Date/Time	4-22-09	1055		Elevation of well water	
Top of casing to water level		ft		Method of Sampling	PVC BAILER

SAMPLE D.

ORP

Temperature[°C]	pH	Conductivity[uS]	Diss.	Oxygen[%]	Turbidity[N]
22.4	6.36	266mg		5.36	159.9
19.1	6.13	247		4.68	165.7
17.6	5.66	184		4.05	177.1

GENERAL INFORMATION

Weather conditions at time of sampling: Clear/Warm
Sample characteristics: Clear
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
R. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGURE

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: EL DORADO CHEMICAL Facility: EL DORADO, AR Well No: ECMW-20
Collector: R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	4-21-09 14:15	Method of Evacuation	ELEC. PUMP
Top of casing to water level	29.45 ft	Gallons per well volume	
Top of casing to bottom	57.4 ft	Total gallons evacuated	PUMPED DRY
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	4-22-09 0805	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D

Temperature[°C]	pH	Conductivity[µS]	Diss. Oxygen[mg/L]	Turbidity[NT
26.2	6.48	153.3 MS	4.48	134.1
22.1	6.22	178.6	3.53	138.2
DRY				

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/WARM
Sample characteristics: CLOUDY
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
R. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGUR

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: EL DORADO CHEMICAL Facility: EL DORADO, AR Well No.: ECMW-21
Collector: R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	4-21-09 1440		Method of Evacuation	ELEC. PUMP	
Top of casing to water level	17.15	ft	Gallons per well volume	1.2	
Top of casing to bottom	34.9	ft	Total gallons evacuated	3.6	
Water level after evacuation		ft	Elevation, Top of casing		
Sampling: Date/Time	4-22-09 0745		Elevation of well water		
Top of casing to water level		ft	Method of Sampling	PVC BAILER	

SAMPLE D.

Readings

Temperature [°C]	pH	Conductivity [µS]	Dissolved Oxygen [mg/L]	Turbidity [NTU]
22.7	5.69	269	7.21	182.8
18.8	5.46	251	7.59	198.6
18.3	5.24	238	7.44	218.2

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/WARM
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
R. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.45

FIGUR

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site E. DORADO CHEMICAL Facility: E. DORADO, AR Well No EEMW-22 + DUP
Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	4-20-09 12:35		Method of Evacuation	ELEC. PUMP	
Top of casing to water level	6.13	ft	Gallons per well volume	11.8	
Top of casing to bottom	79.8	ft	Total gallons evacuated	35.4	
Water level after evacuation		ft	Elevation, Top of casing		
Sampling: Date/Time	4-21-09 7:30		Elevation of well water		
Top of casing to water level		ft	Method of Sampling	PVC BAILER	

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Diss.	Oxygen[ ]	Redox Potential[mV]
21.8	5.49	502 uS		9.31	249.1
19.9	5.61	480		6.13	259.3
19.1	5.80	475		3.22	180.1

GENERAL INFORMATION

Weather conditions at time of sampling CLEAR/WARM
Sample characteristics: CLEAR
Containers and preservatives
Comments and observations
Recommendations:

Certification
R. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. ECMW-1
Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation Date/Time	10-19-09	10:45	Method of Evacuation	ELEC. PUMP	
Top of casing to water level	7.13	ft	Gallons per well volume	9.7	
Top of casing to bottom	22.1	ft	Total gallons evacuated	29.1	
Water level after evacuation		ft	Elevation, Top of casing		
Sampling: Date/Time	10-20-09	7:55	Elevation of well water		
Top of casing to water level		ft	Method of Sampling	PVC BAILER	

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Diss. Oxygen[%]	Turbidity[NT]
18.73	5.28	0.267 MS	50.37	189.6
18.89	4.90	0.047 MS	45.61	208.6
19.15	4.68	0.037	44.62	209.2

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/COOL
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
R. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: EL DORADO CHEMICAL Facility: EL DORADO, AR Well No: EcMW-2
Collector: R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	10-19-09	11:20	Method of Evacuation	ELEC. PUMP	
Top of casing to water level	0.00	ft	Gallons per well volume	13.1	
Top of casing to bottom	20.2	ft	Total gallons evacuated	39.3	
Water level after evacuation		ft	Elevation, Top of casing		
Sampling: Date/Time	10-20-09	8:10	Elevation of well water		
Top of casing to water level		ft	Method of Sampling	PVC BAILER	

SAMPLE D.

Temperature [°C]	pH	Conductivity [µS]	Diss. Oxygen [mg/L]	Turbidity [NTU]
18.42	6.13	0.370	74.02	70.2
18.95	5.49	0.285	42.73	98.1
19.06	5.48	0.270	40.12	108.2

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/COOL
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
R. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGUI

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No ECMW-3
Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	10-19-09	11:50	Method of Evacuation	ELEC. PUMP	
Top of casing to water level	9.46	ft	Gallons per well volume	11.5	
Top of casing to bottom	27.1	ft	Total gallons evacuated	34.5	
Water level after evacuation		ft	Elevation, Top of casing		
Sampling: Date/Time	10-20-09	8:20	Elevation of well water		
Top of casing to water level		ft	Method of Sampling	PVC BAILER	

SAMPLE D.

Temperature [°C]	pH	Conductivity [µS]	Diss. Oxygen [%]	Turbidity [NT
18.36	5.96	0.258 mS	43.22	83.9
18.54	5.84	0.238	41.04	89.6
19.20	5.83	0.236	36.23	87.7

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/COOL
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
R. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. ECMW-4 + DUP
Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	10-19-09	10:15	Method of Evacuation	ELEC. PUMP	
Top of casing to water level	8.49	ft	Gallons per well volume	8.8	
Top of casing to bottom	22.1	ft	Total gallons evacuated	26.4	
Water level after evacuation		ft	Elevation, Top of casing		
Sampling: Date/Time	10-20-09	8:40	Elevation of well water		
Top of casing to water level		ft	Method of Sampling	PVC BAILER	

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [%]	Turbidity [NT
19.47	3.80	6.734	34.55	324.9
20.19	3.81	6.619	33.82	395.9
21.12	3.62	5.904	32.26	435.8

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/COOL
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
K. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGURE

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: EL DORADO CHEMICAL Facility: EL DORADO, AR Well No.: ECMW-5
Collector: R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	10-19-09	4:05	Method of Evacuation	ELEC. PUMP	
Top of casing to water level	3.01	ft	Gallons per well volume	9.5	
Top of casing to bottom	17.7	ft	Total gallons evacuated	28.5	
Water level after evacuation		ft	Elevation, Top of casing		
Sampling: Date/Time	10-20-09	10:05	Elevation of well water		
Top of casing to water level		ft	Method of Sampling	PVC BAILER	

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Diss. Oxygen[mg/L]	REDOX Turbidity[NTU]
19.95	4.99	0.450 mS	23.15	231.2
20.13	4.98	0.415	21.78	218.3
20.07	4.98	0.409	20.12	212.1

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/COOL
Sample characteristics: CLEAR
Containers and preservatives:
Conditions and observations:
Recommendations:

Certification:
K. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGUR

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Event EL DORADO, AR Well No ECMW-6
Collector K. DURHAM

MONITORING WELL INFORMATION

Evacuation Date/Time	10-19-09 7:45	Method of Evacuation	ELEC PUMP
Top of casing to water level	4.43 ft	Gallons per well volume	11.4
Top of casing to bottom	22.0 ft	Total gallons evacuated	34.2
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	10-20-09 9:05	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Diss. Oxygen[%]	ORP[mV]
19.40	4.17	12.03	47.06	206.6
19.24	4.21	11.52	48.40	193.7
19.97	4.16	11.32	54.24	177.4

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/COOL
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
K. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGUR

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No ECMW-7
Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation Date/Time	10-19-09 8:10	Method of Evacuation	ELEC PUMP
Top of casing to water level	7.03 ft	Gallons per well volume	11.0
Top of casing to bottom	23.9 ft	Total gallons evacuated	33.0
Water level after evacuation	ft	Elevation, Top of casing	
Sampling Date/Time	10-20-09 9:15	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[mS]	Dissolved Oxygen[%]	Turbidity[NT]
19.56	3.65	14.14	43.02	293.3
20.04	3.60	14.86	43.33	361.6
20.32	3.55	15.99	41.79	389.3

GENERAL INFORMATION

Weather conditions at time of sampling CLEAR/COOL
Sample characteristics CLEAR
Containers and preservatives
Comments and observations
Recommendations

Certification
R. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: EL DORADO CHEMICAL Facility: EL DORADO, AR Well No: ECMW-8
Collector: K. DURHAM

MONITORING WELL INFORMATION

Evacuation Date/Time	10-19-09 8:45	Method of Evacuation	ELEC. PUMP
Top of casing to water level	6.82 ft	Gallons per well volume	15.0
Top of casing to bottom	29.9 ft	Total gallons evacuated	45.0
Water level after evacuation	ft	Elevation, Top of casing	
Sampling Date/Time	10-20-09 9:25	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[µS]	Diss. Oxygen[%]	Turbidity [NT
18.60	3.77	14.56	45.34	271.2
18.76	3.76	14.08	43.78	257.7
18.78	3.79	13.87	45.24	247.8

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/Cool
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
K. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGUI

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: E. DORADO CHEMICAL Facility: EL DORADO, AR Well No: ECMW-9
Collector: R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	10.19.09	9:25	Method of Evacuation		ELEC. PUMP
Top of casing to water level	9.27	ft	Gallons per well volume		13.5
Top of casing to bottom	28.0	ft	Total gallons evacuated		40.5
Water level after evacuation		ft	Elevation, Top of casing		
Sampling: Date/Time	10-20-09	9:45	Elevation of well water		
Top of casing to water level		ft	Method of Sampling		PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[µS]	Diss. Oxygen[%]	Turbidity[NT]
19.09	5.41	2,302 mS	42.42	146.5
19.00	5.42	1988 mS	41.30	141.7
19.10	5.41	1.975 mS	40.78	138.3

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/COOL
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:

Well Casing Volumes [gal./ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGUI

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No ECMW-10
Colle R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	10-19-09	3:30	Method of Evacuation	ELEC PUMP	
Top of casing to water level	11.41	ft	Gallons per well volume	7.3	
Top of casing to bottom	22.6	ft	Total gallons evacuated	21.9	
Water level after evacuation		ft	Elevation, Top of casing		
Sampling: Date/Time	10-20-09	10:20	Elevation of well water		
Top of casing to water level		ft	Method of Sampling	PVC BAILER	

SAMPLE D.

Temperature[°C]	pH	Conductivity[µS]	Diss. Oxygen[ ]	REDOX Turbidity [NT]
20.78	4.18	0.727 MS	19.06	290.1
21.62	4.36	0.590	19.18	267.5
22.26	4.57	0.579	19.41	247.2

GENERAL INFORMATION

Weather conditions at time of sampling CLEAR/COOL
Sample characteristics: CLEAR
Containers and preservatives
Comments and observations:
Recommendations

Certification

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGUR

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No ECMW-11
Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation Date/Time	10-19-09 3:05	Method of Evacuation	ELEC. PUMP
Top of casing to water level	8.52 ft	Gallons per well volume	7.5
Top of casing to bottom	19.8 ft	Total gallons evacuated	22.5
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	10-20-09 10:35	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Diss. Oxygen[%]	REDOX Turbidity
21.45	4.27	0.597 mS	19.20	278.7
21.59	4.35	0.540	20.71	268.4
21.72	4.28	0.518	18.84	269.4

GENERAL INFORMATION

Weather conditions at time of sampling CLEAR/COOL
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
R. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: EL DORADO CHEMICAL Facility: EL DORADO, AR Well No: ECMW-12
Collector: R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	10-20-09 12:45	Method of Evacuation	ELEC. PUMP
Top of casing to water level	5.71 ft	Gallons per well volume	9.2
Top of casing to bottom	19.9 ft	Total gallons evacuated	27.6
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	10-21-09 9:20	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature [°C]	pH	Conductivity [µS]	Diss. Oxygen [%]	Turbidity [N]
22.52	7.42	0.579	29.04	-47.7
22.76	7.14	0.548	25.26	-45.2
22.87	7.08	0.532	24.44	-41.6

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/COOL
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
R. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. ECMW-18
Collector K. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	10-19-09 2:40	Method of Evacuation	ELEC. PUMP
Top of casing to water level	5.41 ft	Gallons per well volume	9.4
Top of casing to bottom	19.8 ft	Total gallons evacuated	28.2
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	10-21-09 9:05	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[µS]	Diss. Oxygen[%]	Turbidity [NT
20.08	4.84	1.387MS	22.40	224.4
20.34	4.71	1.013	25.58	242.3
20.88	4.63	0.737	26.11	270.6

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/COOL
Sample characteristics: CLEAR
Containers and preservatives:
Conditions and observations:
Recommendations:

Certification:
K. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGUR

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Field EL DORADO, AR Well No EC MW-14
Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation Date/Time	12-16-09	9:50		Method of Evacuation	ELEC. PUMP
Top of casing to water level	6.59	ft		Gallons per well volume	7.5
Top of casing to bottom	18.2	ft		Total gallons evacuated	22.5
Water level after evacuation		ft		Elevation, Top of casing	
Sampling Date/Time	12-16-09	10:55		Elevation of well water	
Top of casing to water level		ft		Method of Sampling	PVC BAILER

SAMPLE D.

Temperature [°C]	pH	Conductivity [µS]	Diss. Oxygen [%]	ORP [mV]
17.07	6.39	.647 MS	5.71	119.3
17.51	5.72	.648	3.42	136.5
18.09	5.53	.64	2.45	160.1

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/COLD
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certified by:

Well Casing Volumes [gal./ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGUI

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No EC MW-15
Collector K. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	10-19-09 2:10	Method of Evacuation	ELEC PUMP
Top of casing to water level	3.47 ft	Gallons per well volume	8.8
Top of casing to bottom	17.0 ft	Total gallons evacuated	26.4
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	10-20-09 10:50	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Diss. Oxygen[%]	Turbidity[N]
21.22	4.59	0.082M	27.64	267.2
21.45	4.40	0.077	25.62	266.5
21.61	4.36	0.077	24.76	262.5

GENERAL INFORMATION

Weather conditions at time of sampling CLEAR/COOL
Sample characteristics CLEAR
Containers and preservatives
Comments and observations: THIS ~~WELL~~ WELL COULD BE IMPACTED BY HIGH LAKE LEVEL
Recommendations

Certification
K. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No EC MW-16 + DUP
Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation Date/Time	10-19-09 1:30	Method of Evacuation	ELEC. PUMP
Top of casing to water level	2.70 ft	Gallons per well volume	10.8
Top of casing to bottom	19.3 ft	Total gallons evacuated	32.4
Water level after evacuation	ft	Elevation, Top of casing	
Sampling Date/Time	10-21-09 8:40	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Diss. Oxygen[%]	Turbidity[N]
24.83	4.80	0.190MS	23.17	225.7
≈1.98	4.48	0.197	23.04	247.1
22.48	4.38	0.199	22.74	252.5

GENERAL INFORMATION

Weather conditions at time of sampling CLEAR/COOL
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations: THIS WELL COULD BE IMPACTED BY HIGH LAKE LEVEL
Recommendations:

Certification:

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: EL DORADO CHEMICAL Facility: EL DORADO, AR Well No: ELMW-17
Collector: R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	10-19-09 12:25	Method of Evacuation	ELEC. PUMP
Top of casing to water level	28.85 ft	Gallons per well volume	3.8
Top of casing to bottom	34.7 ft	Total gallons evacuated	14.4
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	10-21-09 8:20	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Diss. Oxygen[%]	Turbidity [NT
19.05	4.80	0.441	41.80	270.6
~~18.25~~ ~~16.46~~	~~4.67~~ 4.74	~~0.000~~ 8.444	~~44.52~~ 36.28	~~294.8~~ 279.3
18.20	4.68	0.443	33.39	281.0

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/Cool
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
K. Durham

Well Casing Volumes [gal./ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: EL DORADO CHEMICAL Facility: EL DORADO, AR Well No: ECMW-18
Crew: R. DURHAM

MONITORING WELL INFORMATION

Evacuation Date/Time	10-20-09	1:45		Method of Evacuation	ELEC. PUMP
Top of casing to water level	4.87	ft		Gallons per well volume	8.0
Top of casing to bottom	17.2	ft		Total gallons evacuated	24.0
Water level after evacuation		ft		Elevation, Top of casing	
Sampling: Date/Time	10-21-09	10:00		Elevation of well water	
Top of casing to water level		ft		Method of Sampling	PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Diss. Oxygen[mg/l]	Turbidity [NT]
20.46	7.51	0.069	32.29	50.9
20.79	7.04	0.069	26.37	94.3
20.54	7.16	0.076	27.73	88.4

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/COOL
Sample characteristics: CLOUDY
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
K. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: EL DORADO CHEMICAL Facility: EL DORADO, AR Well No.: ELMW-19
Collector: R. DURHAM

MONITORING WELL INFORMATION

Evacuation Date/Time	10-20-09 2:15	Method of Evacuation	ELEC PUMP
Top of casing to water level	20.4 ft	Gallons per well volume	9.8
Top of casing to bottom	61.5 ft	Total gallons evacuated	29.4
Water level after evacuation	ft	Elevation, Top of casing	
Sampling Date/Time	10-21-09 10:25	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	D.ss. Oxygen [%]	Turbidity [NT
18.35	8.12	0.079	94.05	-4.8
17.96	7.88	0.082	38.30	-8.7
17.90	7.82	0.084	38.17	-13.4

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/COOL
Sample characteristics: CLEAR ~~[illegible]~~

Containers and preservatives:

Comments and observations:

Recommendations:

Certification:
R. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGUI

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: EL DORADO CHEMICAL Facility: EL DORADO, AR Well No.: ECMW-20
Collector: R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	10-20-09 1:10	Method of Evacuation	ELEC PUMP
Top of casing to water level	28.17 ft	Gallons per well volume	4.2
Top of casing to bottom	54.4 ft	Total gallons evacuated	12.6
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	10-21-09 9:40	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [%]	Turbidity [NT
18.91	8.09	0.148	30.74	-5.1
18.89	7.39	0.081	27.53	31.2
18.14	7.37	0.075	34.48	51.5

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/COOL
Sample characteristics: CLOUDY
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
R. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No EC MW-21
Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	10-20-09	12:20	Method of Evacuation	ELEC PUMP	
Top of casing to water level	16.49	ft	Gallons per well volume	1.3	
Top of casing to bottom	34.9	ft	Total gallons evacuated	3.9	
Water level after evacuation		ft	Elevation, Top of casing		
Sampling: Date/Time	10-21-09	11:05	Elevation of well water		
Top of casing to water level		ft	Method of Sampling	PVC BAILER	

SAMPLE D.

Temperature[°C]	pH	Conductivity[mS]	Dissolved Oxygen[mg/l]	Turbidity [NT
29.11	5.78	0.046	36.05	68.4
19.95	6.50	0.047	33.73	81.4
19.48	5.91	0.046	31.29	74.5

GENERAL INFORMATION

Weather conditions at time of sampling: CLEAR/COOL
Sample characteristics: CLEAR
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
R. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No EC MW-22
Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation Date/Time	10-19-09 1:05		Method of Evacuation	ELEC. PUMP	
Top of casing to water level	5.52	ft	Gallons per well volume	11.9	
Top of casing to bottom	29.8	ft	Total gallons evacuated	35.7	
Water level after evacuation		ft	Elevation, Top of casing		
Sampling: Date/Time	10-21-09 8:05		Elevation of well water		
Top of casing to water level		ft	Method of Sampling	PVC BAILER	

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Diss. Oxygen[%]	Turbidity[NT
18.83	6.39	0.124 MS	38.37	195.2
19.38	6.12	0.121	28.72	164.6
18.63	6.15	0.121	31.52	93.2

GENERAL INFORMATION

Weather conditions at time of sampling CLEAR/COOL
Sample characteristics CLEAR
Containers and preservatives
Comments and observations:
Recommendations:

Certification
K. Durham

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGUI

Arkansas Analytical Inc.

11701 I-30 Bldg 1, Ste 115 - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

29 April 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731

RE: Groundwaters
SDG Number: 0904215

Enclosed are the results of analyses for samples received by the laboratory on 21-Apr-09 14:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Norma James
President

29 April 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 21-Apr-09 14:20

ANALYTICAL RESULTS

Lab Number: 0904215-01
Sample Name: MW-12
Date/Time Collected: 4/21/09 11:20
Sample Matrix: Water

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrite as N	mg/L	< 0.500	4/22/09 10:53	A904214	300.0/9056
Total Metals	**Units**	**Result**	**Date/Time Analyzed**	**Batch**	**Method**
Vanadium	mg/L	< 0.02	4/23/09 13:50	A904220	200.7
Wet Chemistry	**Units**	**Result**	**Date/Time Analyzed**	**Batch**	**Method**
TOC	mg/L	**9.18**	4/24/09 9:14	A904242	5310/9060A
Total Alkalinity	mg/L	**205**	4/27/09 14:52	A904273	2320 B
Total Phosphorus	mg/L	< 0.020	4/28/09 9:19	A904256	4500-P B5,E

ANALYTICAL RESULTS

Lab Number: 0904215-02
Sample Name: MW-6
Date/Time Collected: 4/21/09 11:00
Sample Matrix: Water

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**148**	4/23/09 16:50	A904214	300.0/9056
Nitrate as N	mg/L	**1070**	4/22/09 17:10	A904214	300.0/9056
Nitrite as N	mg/L	< 0.500	4/22/09 11:15	A904214	300.0/9056
Total Metals	**Units**	**Result**	**Date/Time Analyzed**	**Batch**	**Method**
Vanadium	mg/L	< 0.02	4/23/09 13:57	A904220	200.7
Wet Chemistry	**Units**	**Result**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	**135**	4/23/09 8:10	A904212	4500-NH3D
TOC	mg/L	**1.36**	4/24/09 9:14	A904242	5310/9060A
Total Alkalinity	mg/L	< 5.0	4/27/09 14:52	A904273	2320 B
Total Phosphorus	mg/L	< 0.020	4/28/09 9:19	A904256	4500-P B5,E

29 April 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 21-Apr-09 14:20

ANALYTICAL RESULTS

Lab Number: 0904215-03
Sample Name: MW-7
Date/Time Collected: 4/21/09 10:40
Sample Matrix: Water

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**895**	4/23/09 17:13	A904214	300.0/9056
Nitrate as N	mg/L	**126**	4/22/09 17:31	A904214	300.0/9056
Nitrite as N	mg/L	< 0.500	4/22/09 11:37	A904214	300.0/9056

Total Metals	Units	Result	Date/Time Analyzed	Batch	Method
Vanadium	mg/L	< 0.02	4/23/09 13:59	A904220	200.7

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	**77.8**	4/23/09 8:10	A904212	4500-NH3D
TOC	mg/L	**16.0**	4/24/09 9:14	A904242	5310/9060A
Total Alkalinity	mg/L	< 5.0	4/27/09 14:52	A904273	2320 B
Total Phosphorus	mg/L	< 0.020	4/28/09 9:19	A904256	4500-P B5,E

ANALYTICAL RESULTS

Lab Number: 0904215-04
Sample Name: MW-8
Date/Time Collected: 4/21/09 10:15
Sample Matrix: Water

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**839**	4/23/09 18:19	A904214	300.0/9056
Nitrate as N	mg/L	**108**	4/22/09 17:54	A904214	300.0/9056
Nitrite as N	mg/L	< 0.500	4/22/09 12:00	A904214	300.0/9056

Total Metals	Units	Result	Date/Time Analyzed	Batch	Method
Vanadium	mg/L	< 0.02	4/23/09 14:01	A904220	200.7

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	**53.6**	4/23/09 8:10	A904212	4500-NH3D
TOC	mg/L	**13.8**	4/24/09 9:14	A904242	5310/9060A
Total Alkalinity	mg/L	**254**	4/27/09 14:52	A904273	2320 B
Total Phosphorus	mg/L	< 0.020	4/28/09 9:19	A904256	4500-P B5,E

29 April 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 21-Apr-09 14:20

ANALYTICAL RESULTS

Lab Number: 0904215-05
Sample Name: MW-9
Date/Time Collected: 4/21/09 9:50
Sample Matrix: Water

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**501**	4/23/09 18:41	A904214	300.0/9056
Nitrate as N	mg/L	**28.0**	4/22/09 19:01	A904214	300.0/9056
Nitrite as N	mg/L	< 0.500	4/22/09 12:22	A904214	300.0/9056
Total Metals	**Units**	**Result**	**Date/Time Analyzed**	**Batch**	**Method**
Vanadium	mg/L	< 0.02	4/23/09 14:03	A904220	200.7
Wet Chemistry	**Units**	**Result**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50	4/23/09 8:10	A904212	4500-NH3D
TOC	mg/L	**22.2**	4/24/09 9:14	A904242	5310/9060A
Total Alkalinity	mg/L	**30.0**	4/27/09 14:52	A904273	2320 B
Total Phosphorus	mg/L	**0.103**	4/28/09 9:19	A904256	4500-P B5,E

ANALYTICAL RESULTS

Lab Number: 0904215-06
Sample Name: MW-10
Date/Time Collected: 4/21/09 9:35
Sample Matrix: Water

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**155**	4/22/09 19:23	A904214	300.0/9056
Nitrate as N	mg/L	**48.9**	4/22/09 19:23	A904214	300.0/9056
Nitrite as N	mg/L	< 0.500	4/22/09 12:44	A904214	300.0/9056
Total Metals	**Units**	**Result**	**Date/Time Analyzed**	**Batch**	**Method**
Vanadium	mg/L	< 0.02	4/23/09 14:05	A904220	200.7
Wet Chemistry	**Units**	**Result**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	**12.7**	4/23/09 8:10	A904212	4500-NH3D
TOC	mg/L	**7.92**	4/24/09 9:14	A904242	5310/9060A
Total Alkalinity	mg/L	< 5.0	4/27/09 14:52	A904273	2320 B
Total Phosphorus	mg/L	< 0.020	4/28/09 9:19	A904256	4500-P B5,E

29 April 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 21-Apr-09 14:20

ANALYTICAL RESULTS

Lab Number: 0904215-07
Sample Name: MW-11
Date/Time Collected: 4/21/09 9:15
Sample Matrix: Water

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**119**	4/23/09 19:03	A904214	300.0/9056
Nitrate as N	mg/L	**14.0**	4/22/09 19:45	A904214	300.0/9056
Nitrite as N	mg/L	< 0.500	4/22/09 13:06	A904214	300.0/9056

Total Metals	Units	Result	Date/Time Analyzed	Batch	Method
Vanadium	mg/L	< 0.02	4/23/09 14:35	A904220	200.7

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	< 0.50	4/23/09 8:10	A904212	4500-NH3D
TOC	mg/L	**8.46**	4/24/09 9:14	A904242	5310/9060A
Total Alkalinity	mg/L	< 5.0	4/27/09 14:52	A904273	2320 B
Total Phosphorus	mg/L	< 0.020	4/28/09 9:19	A904256	4500-P B5,E

ANALYTICAL RESULTS

Lab Number: 0904215-08
Sample Name: MW-13
Date/Time Collected: 4/21/09 8:50
Sample Matrix: Water

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrite as N	mg/L	< 0.500	4/22/09 13:28	A904214	300.0/9056

Total Metals	Units	Result	Date/Time Analyzed	Batch	Method
Vanadium	mg/L	< 0.02	4/23/09 14:37	A904220	200.7

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
TOC	mg/L	**6.14**	4/24/09 9:14	A904242	5310/9060A
Total Alkalinity	mg/L	< 5.0	4/27/09 14:52	A904273	2320 B
Total Phosphorus	mg/L	**0.027**	4/28/09 9:19	A904256	4500-P B5,E

29 April 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 21-Apr-09 14:20

ANALYTICAL RESULTS

Lab Number: 0904215-09
Sample Name: MW-14
Date/Time Collected: 4/21/09 8:30
Sample Matrix: Water

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**200**	4/23/09 19:25	A904214	300.0/9056
Nitrate as N	mg/L	**13.2**	4/22/09 20:08	A904214	300.0/9056
Nitrite as N	mg/L	< 0.500	4/22/09 14:34	A904214	300.0/9056

Total Metals	Units	Result	Date/Time Analyzed	Batch	Method
Vanadium	mg/L	< 0.02	4/23/09 14:39	A904220	200.7

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	**0.72**	4/23/09 8:10	A904212	4500-NH3D
TOC	mg/L	**13.6**	4/24/09 9:14	A904242	5310/9060A
Total Alkalinity	mg/L	**10.0**	4/27/09 14:52	A904273	2320 B
Total Phosphorus	mg/L	< 0.020	4/28/09 9:19	A904256	4500-P B5,E

ANALYTICAL RESULTS

Lab Number: 0904215-10
Sample Name: MW-15
Date/Time Collected: 4/21/09 8:10
Sample Matrix: Water

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrite as N	mg/L	< 0.500	4/22/09 14:57	A904214	300.0/9056

Total Metals	Units	Result	Date/Time Analyzed	Batch	Method
Vanadium	mg/L	< 0.02	4/23/09 14:41	A904220	200.7

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
TOC	mg/L	**1.51**	4/24/09 9:14	A904242	5310/9060A
Total Alkalinity	mg/L	< 5.0	4/27/09 14:52	A904273	2320 B
Total Phosphorus	mg/L	< 0.020	4/28/09 9:19	A904256	4500-P B5,E

29 April 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 21-Apr-09 14:20

ANALYTICAL RESULTS

Lab Number:	**0904215-11**
Sample Name:	**MW-16**
Date/Time Collected:	**4/21/09 7:50**
Sample Matrix:	**Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**14.5**	4/22/09 20:30	A904214	300.0/9056
Nitrate as N	mg/L	**8.85**	4/22/09 20:30	A904214	300.0/9056
Nitrite as N	mg/L	< 0.500	4/22/09 15:19	A904214	300.0/9056

Total Metals	Units	Result	Date/Time Analyzed	Batch	Method
Vanadium	mg/L	< 0.02	4/23/09 14:43	A904220	200.7

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	**3.25**	4/23/09 8:10	A904212	4500-NH3D
TOC	mg/L	**2.78**	4/24/09 9:14	A904242	5310/9060A
Total Alkalinity	mg/L	< 5.0	4/27/09 14:52	A904273	2320 B
Total Phosphorus	mg/L	< 0.020	4/28/09 9:19	A904256	4500-P B5,E

ANALYTICAL RESULTS

Lab Number:	**0904215-12**
Sample Name:	**MW-22**
Date/Time Collected:	**4/21/09 7:30**
Sample Matrix:	**Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrite as N	mg/L	< 0.500	4/22/09 16:47	A904214	300.0/9056

Total Metals	Units	Result	Date/Time Analyzed	Batch	Method
Vanadium	mg/L	< 0.02	4/23/09 14:45	A904220	200.7

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
TOC	mg/L	**1.04**	4/24/09 9:14	A904242	5310/9060A
Total Alkalinity	mg/L	**45.0**	4/27/09 14:52	A904273	2320 B
Total Phosphorus	mg/L	**0.034**	4/28/09 9:19	A904256	4500-P B5,E

29 April 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 21-Apr-09 14:20

ANALYTICAL RESULTS

Lab Number: 0904215-13
Sample Name: MW-17
Date/Time Collected: 4/21/09 7:15
Sample Matrix: Water

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**99.9**	4/22/09 20:52	A904214	300.0/9056
Nitrate as N	mg/L	**27.1**	4/22/09 20:52	A904214	300.0/9056
Nitrite as N	mg/L	< 0.500	4/22/09 15:41	A904214	300.0/9056

Total Metals	Units	Result	Date/Time Analyzed	Batch	Method
Vanadium	mg/L	< 0.02	4/23/09 14:47	A904220	200.7

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	**12.2**	4/23/09 8:10	A904212	4500-NH3D
TOC	mg/L	**2.34**	4/24/09 9:14	A904242	5310/9060A
Total Alkalinity	mg/L	< 5.0	4/27/09 14:52	A904273	2320 B
Total Phosphorus	mg/L	< 0.020	4/28/09 9:19	A904256	4500-P B5,E

ANALYTICAL RESULTS

Lab Number: 0904215-14
Sample Name: Field Blank
Date/Time Collected: 4/21/09 10:15
Sample Matrix: Water

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	< 0.500	4/22/09 16:03	A904214	300.0/9056
Nitrate as N	mg/L	< 0.500	4/22/09 16:03	A904214	300.0/9056
Nitrite as N	mg/L	< 0.500	4/22/09 16:03	A904214	300.0/9056

Total Metals	Units	Result	Date/Time Analyzed	Batch	Method
Vanadium	mg/L	< 0.02	4/23/09 14:49	A904220	200.7

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	< 0.50	4/23/09 8:10	A904212	4500-NH3D
TOC	mg/L	< 1.00	4/24/09 9:14	A904242	5310/9060A
Total Alkalinity	mg/L	< 5.0	4/27/09 14:52	A904273	2320 B
Total Phosphorus	mg/L	< 0.020	4/28/09 9:19	A904256	4500-P B5,E

29 April 2009

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El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 21-Apr-09 14:20

ANALYTICAL RESULTS

Lab Number:	**0904215-15**
Sample Name:	**Dup**
Date/Time Collected:	**4/21/09 0:00**
Sample Matrix:	**Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**3.67**	4/22/09 16:25	A904214	300.0/9056
Nitrate as N	mg/L	**0.991**	4/22/09 16:25	A904214	300.0/9056
Nitrite as N	mg/L	< 0.500	4/22/09 16:25	A904214	300.0/9056

Total Metals	Units	Result	Date/Time Analyzed	Batch	Method
Vanadium	mg/L	< 0.02	4/23/09 14:51	A904220	200.7

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	< 0.50	4/23/09 8:10	A904212	4500-NH3D
TOC	mg/L	**1.01**	4/24/09 9:14	A904242	5310/9060A
Total Alkalinity	mg/L	**46.0**	4/27/09 14:52	A904273	2320 B
Total Phosphorus	mg/L	**0.093**	4/28/09 9:19	A904256	4500-P B5,E

29 April 2009

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El Dorado, AR 71731
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Date Received: 21-Apr-09 14:20

QUALITY CONTROL RESULTS

Wet Chemistry -- Batch: A904212 (Water)
Prepared: 23-Apr-09 08:10 By: SB -- Analyzed: 23-Apr-09 08:10 By: SB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Ammonia as N	<0.50 mg/L	104% / NA	98.0% / 99.0%		0.757%	

Anions -- Batch: A904214 (Water)
Prepared: 22-Apr-09 08:34 By: MG -- Analyzed: 23-Apr-09 10:33 By: MEL

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Nitrate as N	<0.500 mg/L	92.9% / NA	93.9% / 92.3%		1.67%	
Nitrite as N	<0.500 mg/L	98.8% / NA	100% / 98.6%		1.46%	
Sulfate as SO4	<0.500 mg/L	96.3% / NA	115% / 114%		0.758%	

Total Metals -- Batch: A904220 (Water)
Prepared: 23-Apr-09 09:45 By: TT -- Analyzed: 23-Apr-09 13:54 By: RH

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Vanadium	<0.02 mg/L	93.1% / NA	104% / 95.7%		8.06%	

Wet Chemistry -- Batch: A904242 (Water)
Prepared: 24-Apr-09 09:14 By: SB -- Analyzed: 24-Apr-09 09:14 By: SB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
TOC	<1.00 mg/L	95.7% / NA	137% / 132%		3.16%	MBA

Wet Chemistry -- Batch: A904256 (Water)
Prepared: 27-Apr-09 07:54 By: KP -- Analyzed: 28-Apr-09 09:19 By: KP

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Total Phosphorus	<0.020 mg/L	98.4% / NA	103% / 101%		1.72%	

Wet Chemistry -- Batch: A904273 (Water)
Prepared: 27-Apr-09 14:52 By: SB -- Analyzed: 27-Apr-09 14:52 By: SB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Total Alkalinity	<5.0 mg/L	100% / 100%	NA / NA		0.00%	

QUALIFIER(S)

*MBA: Masked By Analyte

29 April 2009

Brent Parker
El Dorado Chemical Inc.
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El Dorado, AR 71731
Project: Groundwaters

Date Received: 21-Apr-09 14:20

All Analysis performed according to EPA approved methodology when available:
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods, 20th Edition.
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by: Norma James

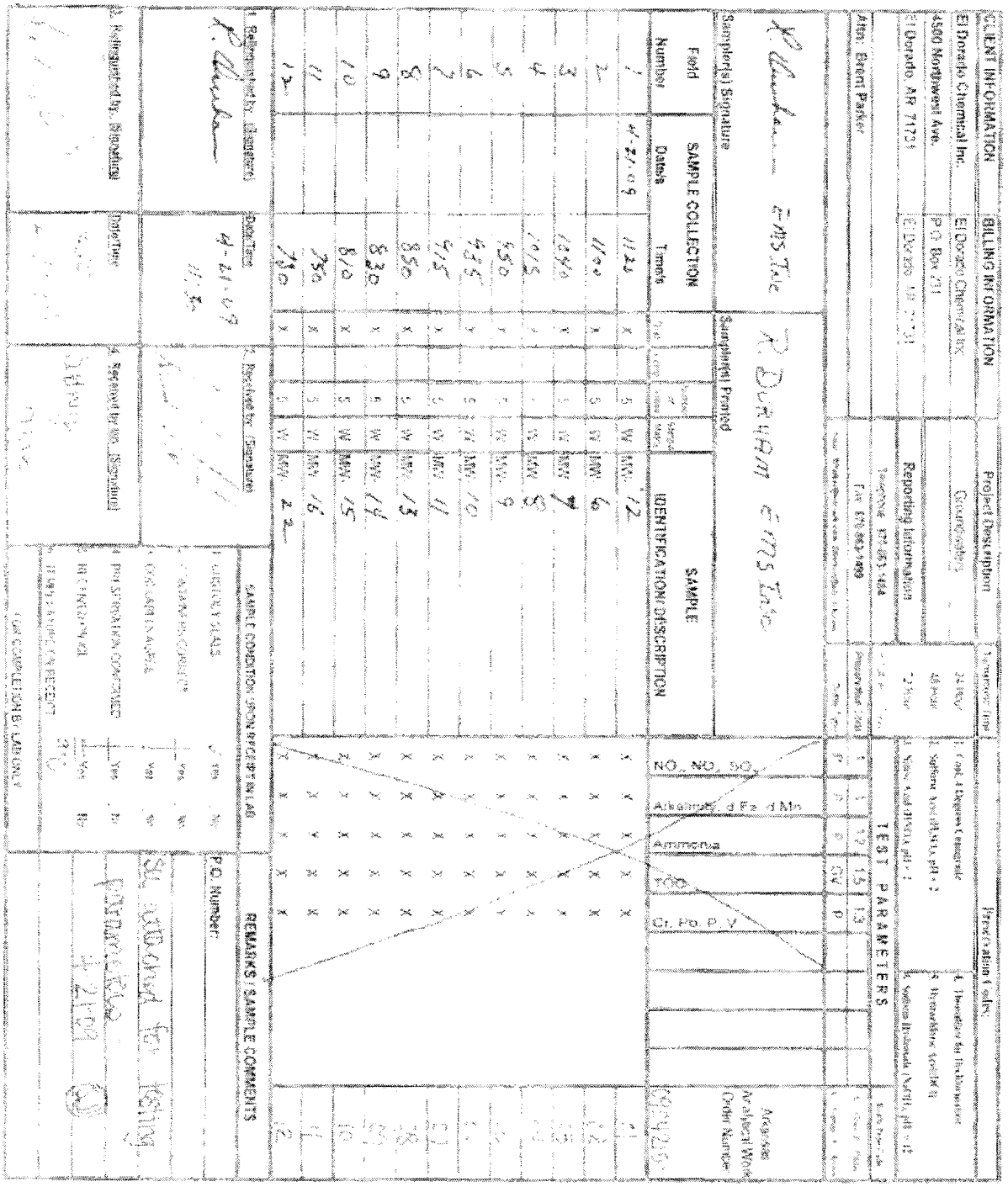
Norma James
President

29 April 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 21-Apr-09 14:20

CHAIN OF CUSTODY FORM(S)



29 April 2009

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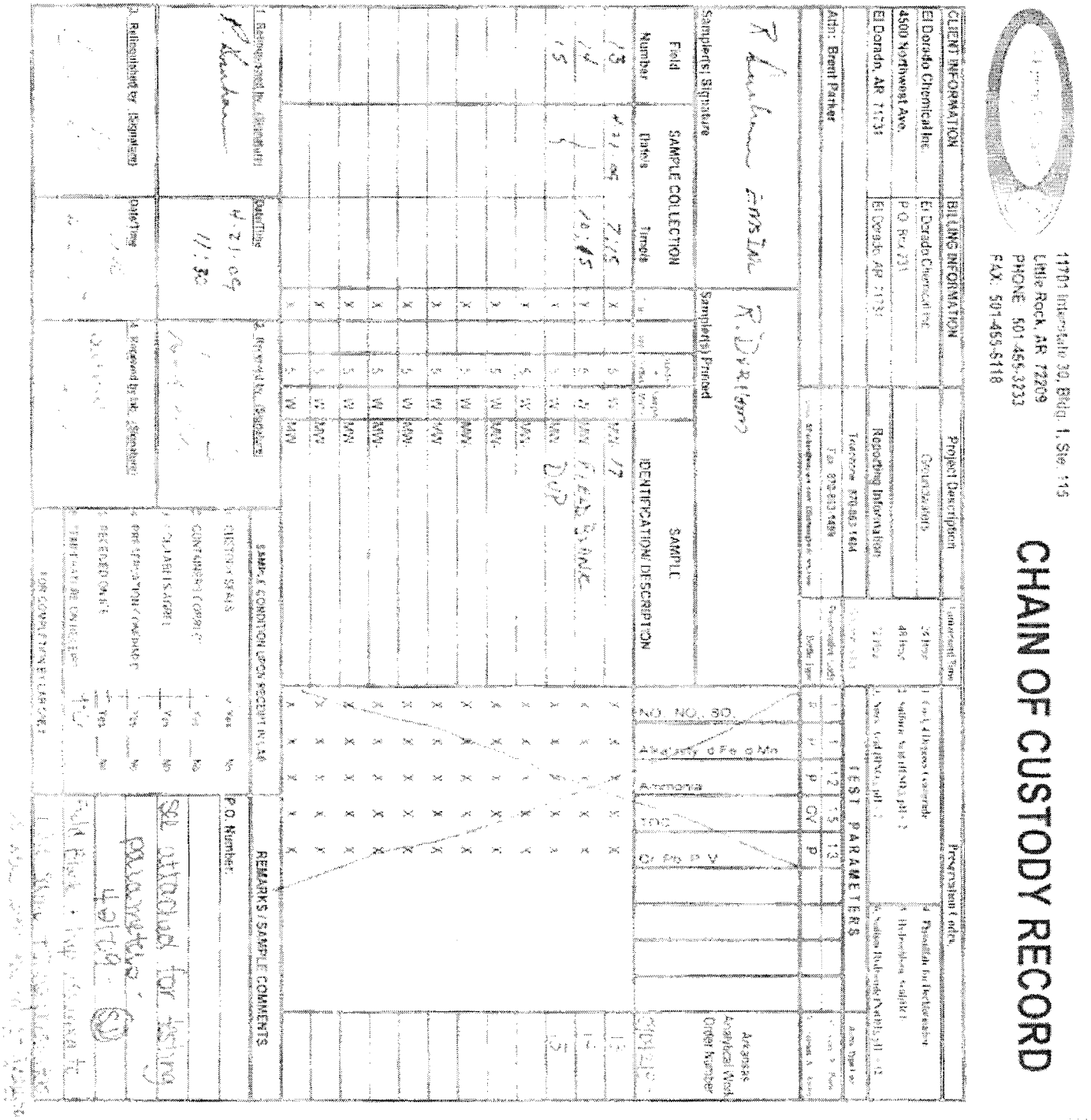
Project: Groundwaters

Date Received: 21-Apr-09 14:20



29 April 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 21-Apr-09 14:20

0421

MW-12 01
Every Year
Nitrate, Alkalinity, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years: 2008, 2010, etc.)
Nitrate, Sulfate, Ammonia, Lead, Chromium, d Lead, d Manganese

MW-6 02
Every Year
Nitrate, Nitrite, Sulfate, Alkalinity, Ammonia, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years: 2008, 2010, etc.)
Lead, Chromium, d Lead, d Manganese

MW-7 03
Every Year
Nitrate, Nitrite, Sulfate, Alkalinity, Ammonia, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years: 2008, 2010, etc.)
Lead, Chromium, d Lead, d Manganese

MW-8 04
Every Year
Nitrate, Nitrite, Sulfate, Alkalinity, Ammonia, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years: 2008, 2010, etc.)
Lead, Chromium, d Lead, d Manganese

MW-9 05
Every Year
Nitrate, Nitrite, Sulfate, Alkalinity, Ammonia, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years: 2008, 2010, etc.)
Lead, Chromium, d Lead, d Manganese

MW-10 06
Every Year
Nitrate, Nitrite, Sulfate, Alkalinity, Ammonia, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years: 2008, 2010, etc.)
Lead, Chromium, d Lead, d Manganese

MW-11 07
Every Year
Nitrate, Nitrite, Sulfate, Alkalinity, Ammonia, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years: 2008, 2010, etc.)
Lead, Chromium, d Lead, d Manganese

MW-13 08
Every Year
Nitrate, Alkalinity, Total Phosphorus, TOC, Vanadium

29 April 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 21-Apr-09 14:20

0421

Every Other Year (Even Years: 2008, 2010, etc.)
Nitrate, Sulfate, Ammonia, Lead, Chromium, d Lead, d Manganese

MW-14 03
Every Year:
Nitrate, Nitrite, Sulfate, Alkalinity, Ammonia, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years: 2008, 2010, etc.)
Lead, Chromium, d Lead, d Manganese

MW-15 10
Every Year:
Nitrate, Alkalinity, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years: 2008, 2010, etc.)
Nitrate, Sulfate, Ammonia, Lead, Chromium, d Lead, d Manganese

MW-16 11
Every Year:
Nitrate, Nitrite, Sulfate, Alkalinity, Ammonia, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years: 2008, 2010, etc.)
Lead, Chromium, d Lead, d Manganese

MW-22 12
Every Year:
Nitrate, Alkalinity, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years: 2008, 2010, etc.)
Nitrate, Sulfate, Ammonia, Lead, Chromium, d Lead, d Manganese

MW-17 13
Every Year:
Nitrate, Nitrite, Sulfate, Alkalinity, Ammonia, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years: 2008, 2010, etc.)
Lead, Chromium, d Lead, d Manganese

Field Blank 14
Every Year:
Nitrate, Nitrite, Sulfate, Alkalinity, Ammonia, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years: 2008, 2010, etc.)
Lead, Chromium, d Lead, d Manganese

Dup 15
Every Year:
Nitrate, Nitrite, Sulfate, Alkalinity, Ammonia, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years: 2008, 2010, etc.)
Lead, Chromium, d Lead, d Manganese

Arkansas Analytical Inc.

11701 I-30 Bldg 1, Ste 115 - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

01 May 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731

RE: Groundwaters
SDG Number: 0904231

Enclosed are the results of analyses for samples received by the laboratory on 22-Apr-09 14:25. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Norma James
President

01 May 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 22-Apr-09 14:25

ANALYTICAL RESULTS

Lab Number: **0904231-01**
Sample Name: **MW-19**
Date/Time Collected: **4/22/09 10:55**
Sample Matrix: **Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrite as N	mg/L	< 0.500	4/23/09 14:37	A904217	300.0/9056

Total Metals	Units	Result	Date/Time Analyzed	Batch	Method
Vanadium	mg/L	< 0.02	4/23/09 15:02	A904221	200.7

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
TOC	mg/L	**1.65**	4/27/09 16:09	A904277	5310/9060A
Total Alkalinity	mg/L	**27.0**	4/28/09 9:40	A904286	2320 B
Total Phosphorus	mg/L	**0.060**	4/28/09 9:34	A904257	4500-P B5 E

ANALYTICAL RESULTS

Lab Number: **0904231-02**
Sample Name: **MW-18**
Date/Time Collected: **4/22/09 10:35**
Sample Matrix: **Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrate as N	mg/L	< 0.500	4/23/09 10:55	A904217	300.0/9056
Nitrite as N	mg/L	< 0.500	4/23/09 10:55	A904217	300.0/9056

Total Metals	Units	Result	Date/Time Analyzed	Batch	Method
Vanadium	mg/L	**0.03**	4/23/09 15:33	A904221	200.7

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
TOC	mg/L	< 1.00	4/27/09 16:09	A904277	5310/9060A
Total Alkalinity	mg/L	**16.0**	4/28/09 9:40	A904286	2320 B
Total Phosphorus	mg/L	**0.308**	4/28/09 9:34	A904257	4500-P B5,E

01 May 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 22-Apr-09 14:25

ANALYTICAL RESULTS

Lab Number: **0904231-03**
Sample Name: **MW-3**
Date/Time Collected: **4/22/09 9:50**
Sample Matrix: **Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrite as N	mg/L	< 0.500	4/23/09 14:59	A904217	300.0/9056

Total Metals	Units	Result	Date/Time Analyzed	Batch	Method
Vanadium	mg/L	< 0.02	4/23/09 15:10	A904221	200.7

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
TOC	mg/L	**2.49**	4/27/09 16:09	A904277	5310/9060A
Total Alkalinity	mg/L	**59.0**	4/28/09 9:40	A904286	2320 B
Total Phosphorus	mg/L	**0.250**	4/28/09 9:34	A904257	4500-P B5,E

ANALYTICAL RESULTS

Lab Number: **0904231-04**
Sample Name: **MW-2**
Date/Time Collected: **4/22/09 9:30**
Sample Matrix: **Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrite as N	mg/L	< 0.500	4/23/09 15:22	A904217	300.0/9056

Total Metals	Units	Result	Date/Time Analyzed	Batch	Method
Vanadium	mg/L	< 0.02	4/23/09 15:12	A904221	200.7

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
TOC	mg/L	**2.40**	4/27/09 16:09	A904277	5310/9060A
Total Alkalinity	mg/L	**17.0**	4/28/09 9:40	A904286	2320 B
Total Phosphorus	mg/L	**0.055**	4/28/09 9:34	A904257	4500-P B5,E

01 May 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 22-Apr-09 14:25

ANALYTICAL RESULTS

Lab Number: **0904231-05**
Sample Name: **MW-1**
Date/Time Collected: **4/22/09 9:10**
Sample Matrix: **Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrite as N	mg/L	< 0.500	4/23/09 15:44	A904217	300.0/9056

Total Metals	Units	Result	Date/Time Analyzed	Batch	Method
Vanadium	mg/L	< 0.02	4/23/09 15:14	A904221	200.7

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
TOC	mg/L	**1.07**	4/27/09 16:09	A904277	5310/9060A
Total Alkalinity	mg/L	< 5.0	4/28/09 9:40	A904286	2320 B
Total Phosphorus	mg/L	< 0.020	4/28/09 9:34	A904257	4500-P B5,E

ANALYTICAL RESULTS

Lab Number: **0904231-06**
Sample Name: **MW-5**
Date/Time Collected: **4/22/09 10:15**
Sample Matrix: **Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**133**	4/23/09 11:17	A904217	300.0/9056
Nitrate as N	mg/L	**7.81**	4/23/09 11:17	A904217	300.0/9056
Nitrite as N	mg/L	< 0.500	4/23/09 11:17	A904217	300.0/9056

Total Metals	Units	Result	Date/Time Analyzed	Batch	Method
Vanadium	mg/L	< 0.02	4/23/09 15:16	A904221	200.7

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	< 0.50	4/28/09 15:00	A904263	4500-NH3D
TOC	mg/L	**1.40**	4/27/09 16:09	A904277	5310/9060A
Total Alkalinity	mg/L	**9.0**	4/28/09 9:40	A904286	2320 B
Total Phosphorus	mg/L	< 0.020	4/28/09 9:34	A904257	4500-P B5,E

01 May 2009

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El Dorado, AR 71731
Project: Groundwaters

Date Received: 22-Apr-09 14:25

ANALYTICAL RESULTS

Lab Number:	**0904231-07**
Sample Name:	**MW-4**
Date/Time Collected:	**4/22/09 8:20**
Sample Matrix:	**Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**68.3**	4/23/09 11:39	A904217	300.0/9056
Nitrate as N	mg/L	< 0.500	4/23/09 11:39	A904217	300.0/9056
Nitrite as N	mg/L	< 0.500	4/23/09 11:39	A904217	300.0/9056
Total Metals	**Units**	**Result**	**Date/Time Analyzed**	**Batch**	**Method**
Vanadium	mg/L	< 0.02	4/23/09 15:22	A904221	200.7
Wet Chemistry	**Units**	**Result**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50	4/28/09 15:00	A904263	4500-NH3D
TOC	mg/L	**19.3**	4/27/09 16:09	A904277	5310/9060A
Total Alkalinity	mg/L	< 5.0	4/28/09 9:40	A904286	2320 B
Total Phosphorus	mg/L	< 0.020	4/28/09 9:34	A904257	4500-P B5.E

ANALYTICAL RESULTS

Lab Number:	**0904231-08**
Sample Name:	**MW-20**
Date/Time Collected:	**4/22/09 8:05**
Sample Matrix:	**Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrite as N	mg/L	< 0.500	4/23/09 16:06	A904217	300.0/9056
Total Metals	**Units**	**Result**	**Date/Time Analyzed**	**Batch**	**Method**
Vanadium	mg/L	< 0.02	4/23/09 15:24	A904221	200.7
Wet Chemistry	**Units**	**Result**	**Date/Time Analyzed**	**Batch**	**Method**
TOC	mg/L	< 1.00	4/27/09 16:09	A904277	5310/9060A
Total Alkalinity	mg/L	**33.0**	4/28/09 9:40	A904286	2320 B
Total Phosphorus	mg/L	**0.037**	4/28/09 9:34	A904257	4500-P B5.E

01 May 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 22-Apr-09 14:25

ANALYTICAL RESULTS

Lab Number:	**0904231-09**
Sample Name:	**MW-21**
Date/Time Collected:	**4/22/09 7:45**
Sample Matrix:	**Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrite as N	mg/L	< 0.500	4/23/09 16:28	A904217	300.0/9056

Total Metals	Units	Result	Date/Time Analyzed	Batch	Method
Vanadium	mg/L	< 0.02	4/23/09 15:26	A904221	200.7

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
TOC	mg/L	< 1.00	4/27/09 16:09	A904277	5310/9060A
Total Alkalinity	mg/L	**7.0**	4/28/09 9:40	A904286	2320 B
Total Phosphorus	mg/L	< 0.020	4/28/09 9:34	A904257	4500-P B5,E

ANALYTICAL RESULTS

Lab Number:	**0904231-10**
Sample Name:	**Dup**
Date/Time Collected:	**4/22/09 0:00**
Sample Matrix:	**Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**10.5**	4/23/09 12:01	A904217	300.0/9056
Nitrate as N	mg/L	< 0.500	4/23/09 12:01	A904217	300.0/9056
Nitrite as N	mg/L	< 0.500	4/23/09 12:01	A904217	300.0/9056

Total Metals	Units	Result	Date/Time Analyzed	Batch	Method
Vanadium	mg/L	< 0.02	4/23/09 15:28	A904221	200.7

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	< 0.50	4/30/09 16:42	A904328	4500-NH3D
TOC	mg/L	**1.93**	4/27/09 16:09	A904277	5310/9060A
Total Alkalinity	mg/L	**59.0**	4/28/09 9:40	A904286	2320 B
Total Phosphorus	mg/L	**0.241**	4/28/09 9:34	A904257	4500-P B5,E

01 May 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 22-Apr-09 14:25

QUALITY CONTROL RESULTS

Anions -- Batch: A904217 (Water)
Prepared: 24-Apr-09 09:00 By: MG -- Analyzed: 24-Apr-09 14:31 By: MEL

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Nitrate as N	<0.500 mg/L	93.8% / NA	90.9% / 90.6%		0.386%	
Nitrite as N	<0.500 mg/L	98.5% / NA	95.9% / 95.7%		0.209%	
Sulfate as SO4	<0.500 mg/L	104% / NA	100% / 97.7%		2.49%	

Total Metals -- Batch: A904221 (Water)
Prepared: 23-Apr-09 09:45 By: TT -- Analyzed: 23-Apr-09 15:06 By: RH

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Vanadium	<0.02 mg/L	98.0% / NA	103% / 107%		3.56%	

Wet Chemistry -- Batch: A904257 (Water)
Prepared: 27-Apr-09 07:55 By: KP -- Analyzed: 28-Apr-09 09:34 By: KP

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Total Phosphorus	<0.020 mg/L	100% / NA	88.4% / 93.6%		4.52%	

Wet Chemistry -- Batch: A904263 (Water)
Prepared: 28-Apr-09 15:00 By: SB -- Analyzed: 28-Apr-09 15:00 By: SB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Ammonia as N	<0.50 mg/L	102% / NA	97.4% / 97.9%		0.397%	

Wet Chemistry -- Batch: A904277 (Water)
Prepared: 27-Apr-09 16:09 By: SB -- Analyzed: 27-Apr-09 16:09 By: SB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
TOC	<1.00 mg/L	106% / NA	108% / 106%		2.15%	

Wet Chemistry -- Batch: A904286 (Water)
Prepared: 28-Apr-09 09:40 By: SB -- Analyzed: 28-Apr-09 09:40 By: SB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Total Alkalinity	<5.0 mg/L	99.0% / 99.0%	NA / NA		0.00%	

Wet Chemistry -- Batch: A904328 (Water)
Prepared: 30-Apr-09 16:42 By: SB -- Analyzed: 30-Apr-09 16:42 By: SB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Ammonia as N	<0.50 mg/L	95.1% / NA	97.2% / 98.0%		0.780%	

01 May 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 22-Apr-09 14:25

All Analysis performed according to EPA approved methodology when available.
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods, 20th Edition.
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by: _____

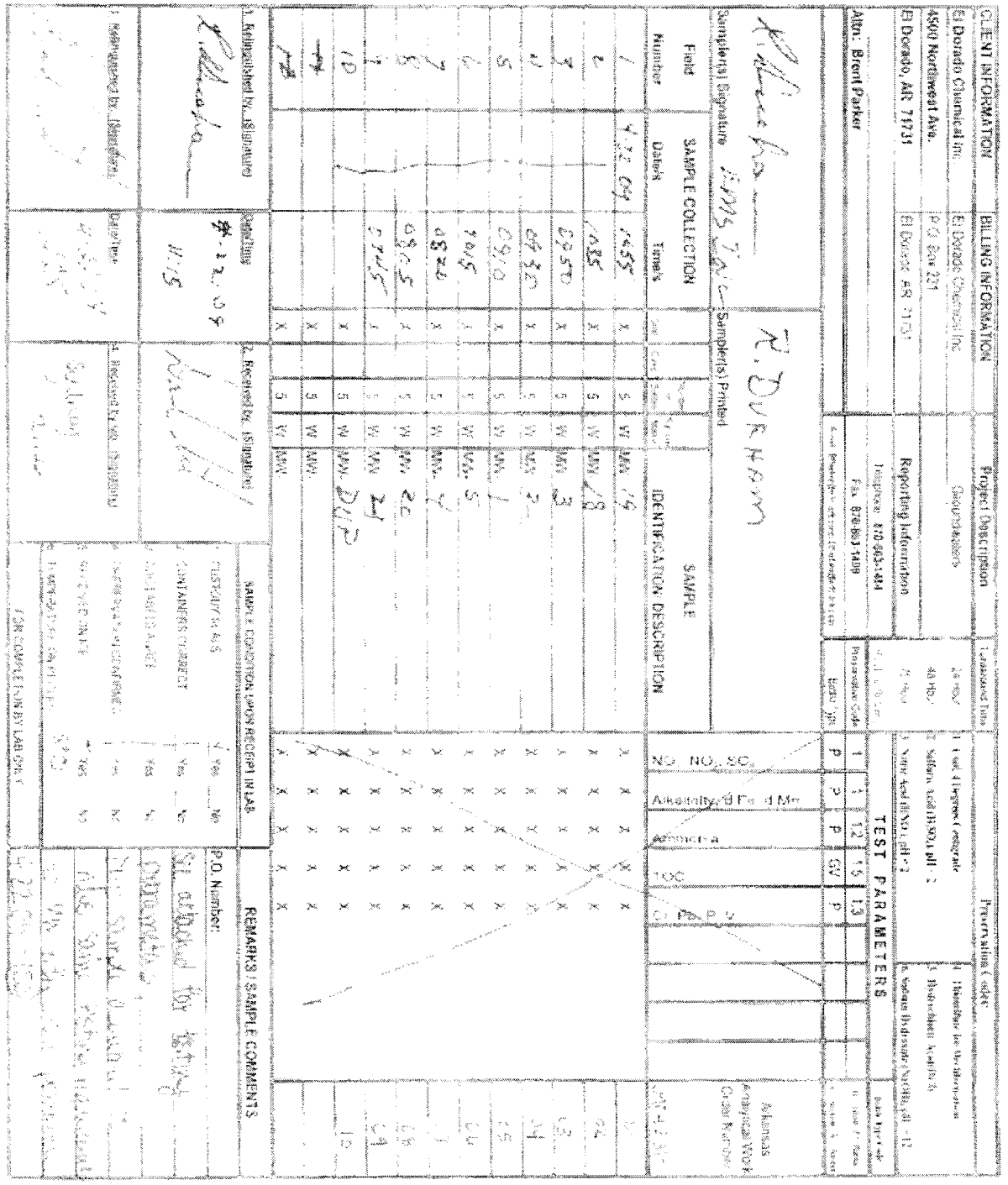
Norma James
President

01 May 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 22-Apr-09 14:25

CHAIN OF CUSTODY FORM(S)



01 May 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 22-Apr-09 14:25

0423

MW-19 01
Every Year
Nitrite, Alkalinity, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years: 2008, 2010, etc.)
Nitrate, Sulfate, Ammonia, Lead, Chromium, d Lead, d Manganese

MW-18 02
Every Year
Nitrate, Nitrite, Alkalinity, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years: 2008, 2010, etc.)
Sulfate, Ammonia, Lead, Chromium, d Lead, d Manganese

MW-3 03
Every Year
Nitrite, Alkalinity, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years: 2008, 2010, etc.)
Nitrate, Sulfate, Ammonia, Lead, Chromium, d Lead, d Manganese

MW-2 04
Every Year
Nitrite, Alkalinity, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years: 2008, 2010, etc.)
Nitrate, Sulfate, Ammonia, Lead, Chromium, d Lead, d Manganese

MW-1 05
Every Year
Nitrite, Alkalinity, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years: 2008, 2010, etc.)
Nitrate, Sulfate, Ammonia, Lead, Chromium, d Lead, d Manganese

MW-5 06
Every Year
Nitrate, Nitrite, Sulfate, Alkalinity, Ammonia, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years: 2008, 2010, etc.)
Lead, Chromium, d Lead, d Manganese

MW-4 07
Every Year
Nitrate, Nitrite, Sulfate, Alkalinity, Ammonia, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years: 2008, 2010, etc.)
Lead, Chromium, d Lead, d Manganese

MW-20 08
Every Year
Nitrite, Alkalinity, Total Phosphorus, TOC, Vanadium

01 May 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 22-Apr-09 14:25

04-24

Every Other Year (Even Years, 2008, 2010, etc.)
Nitrate, Sulfate, Ammonia, Lead, Chromium, d Lead, d Manganese

MW-21 04
Every Year
Nitrite, Alkalinity, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years, 2008, 2010, etc.)
Nitrate, Sulfate, Ammonia, Lead, Chromium, d Lead, d Manganese

Dup 15
Every Year
Nitrate, Nitrite, Sulfate, Alkalinity, Ammonia, Total Phosphorus, TOC, Vanadium

Every Other Year (Even Years, 2008, 2010, etc.)
Lead, Chromium, d Lead, d Manganese

Arkansas Analytical Inc.

11701 I-30 Bldg 1, Ste 115 - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

10 June 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731

RE: Groundwaters

SDG Number: 0906049

Enclosed are the results of analyses for samples received by the laboratory on 04-Jun-09 09:14. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✔
Containers Intact	✔
COC/Labels Agree	✔
Preservation Confirmed	✔
Received On Ice	✔
Temperature on Receipt	4.0°C

Sincerely,

Norma James
President

10 June 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 04-Jun-09 09:14

ANALYTICAL RESULTS

Lab Number:	**0906049-01**
Sample Name:	**ECMW-5**
Date/Time Collected:	**6/3/09 9:15**
Sample Matrix:	**Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrate as N	mg/L	**7.58**	6/4/09 16:52	A906032	300.0/9056

ANALYTICAL RESULTS

Lab Number:	**0906049-02**
Sample Name:	**ECMW-10**
Date/Time Collected:	**6/3/09 9:25**
Sample Matrix:	**Water**

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	< 0.50	6/4/09 14:39	A906039	4500-NH3D

ANALYTICAL RESULTS

Lab Number:	**0906049-03**
Sample Name:	**ECMW-11**
Date/Time Collected:	**6/3/09 9:35**
Sample Matrix:	**Water**

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	**17.7**	6/4/09 14:39	A906039	4500-NH3D

ANALYTICAL RESULTS

Lab Number:	**0906049-04**
Sample Name:	**ECMW-17**
Date/Time Collected:	**6/3/09 9:45**
Sample Matrix:	**Water**

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	**3.04**	6/4/09 14:39	A906039	4500-NH3D

10 June 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 04-Jun-09 09:14

QUALITY CONTROL RESULTS

Anions -- Batch: A906032 (Water)
Prepared: 03-Jun-09 10:00 By: MG -- Analyzed: 03-Jun-09 11:39 By: MEL

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Nitrate as N	<0.500 mg/L	100% / NA	98.9% / 99.7%		0.776%	

Wet Chemistry -- Batch: A906039 (Water)
Prepared: 04-Jun-09 08:56 By: SB -- Analyzed: 04-Jun-09 14:39 By: SB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Ammonia as N	<0.50 mg/L	102% / NA	99.4% / 99.8%		0.397%	

All Analysis performed according to EPA approved methodology when available:
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods, 20th Edition.
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by: Norma James

Norma James
President

10 June 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 04-Jun-09 09:14

CHAIN OF CUSTODY FORM(S)

El Dorado Chemical Company

4500 Northwest Ave
El Dorado, Arkansas 71730

EDC3

Client/Billing Information	
Client	David Sartain
Company	EDCC
Address	4500 Northwest Ave
	El Dorado, AR 71730
Phone No	870-863-1400
Fax No.	870-863-1499

SPECIAL INSTRUCTIONS/PRECAUTIONS:

Project Name / Number:

Parameters for Analysis/Methods

Sample ID	Sample Description	Date	Time	Matrix S=Sed/Soil W=Water	Number of Containers	Composite or Grab	Nitrate	Ammonia	
1	ECMW-5	6-3-09	9:15		1	GRAB	✓		01
2	ECMW-10		9:25		1	—		✓	02
3	ECMW-11		9:35		1	—		✓	03
4	ECMW-12		9:45		1	—		✓	04

Preservative: (Sulfuric acid =S Nitric acid =N NaOH =B Ice =I)

Sampler(s): R. Parker

Shipment Method

Turnaround Time Required: Normal

COC Completed by: GRQ Date: 6-3-09 Time: 10:00

COC Checked by ______ Date ______ Time ______

Relinquished by: R. Parker Date: 6-3-09 Time: 10:00

Received by: B. Parker Date: 6-3-09 Time: [illegible]

Relinquished by: B. Parker Date: 6-3-09 Time: 1500

Received in lab by: Sarah E Pruitt Date: 6-4-09 Time: 9:14

LABORATORY USE ONLY: delivered via Fed Ex — Received @4°C

V1 2/28/09

Arkansas Analytical Inc.

11701 I-30 Bldg 1, Ste 115 - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

30 November 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731

RE: Groundwaters

SDG Number: 0910282

Enclosed are the results of analyses for samples received by the laboratory on 20-Oct-09 14:47. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✔
Containers Intact	✔
COC/Labels Agree	✔
Preservation Confirmed	✔
Received On Ice	✔
Temperature on Receipt	10.0°C

Sincerely,

Norma James
President

30 November 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 20-Oct-09 14:47

CASE NARRATIVE

SAMPLE DELIVERY GROUP 0910282:

At client request, the nitrate result for sample 0910282-11 (MW-11) was validated. A data entry error was discovered in which the incorrect reporting limit was entered for this sample. The corrected result appears in this revised report. The results are summarized below.

0910282-11 (MW-11): Nitrate result reported 10/28/09: < 0.10 mg/L
Nitrate result reported 11/30/09: 9.44 mg/L

30 November 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 20-Oct-09 14:47

ANALYTICAL RESULTS

Lab Number: **0910282-01**
Sample Name: **MW-1**
Date/Time Collected: **10/20/09 7:55**
Sample Matrix: **Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrite as N	mg/L	< 0.500	10/21/09 19:14	A910287	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
TOC	mg/L	< 1.00	10/22/09 15:58	A910317	5310/9060A
Total Alkalinity	mg/L	< 5.0	10/27/09 9:23	A910372	2320 B
Total Phosphorus	mg/L	< 0.020	10/22/09 15:27	A910310	4500-P B5,E

ANALYTICAL RESULTS

Lab Number: **0910282-02**
Sample Name: **MW-2**
Date/Time Collected: **10/20/09 8:10**
Sample Matrix: **Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrite as N	mg/L	< 0.500	10/21/09 19:36	A910287	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
TOC	mg/L	**2.20**	10/22/09 15:58	A910317	5310/9060A
Total Alkalinity	mg/L	**20.0**	10/27/09 9:23	A910372	2320 B
Total Phosphorus	mg/L	**0.056**	10/22/09 15:27	A910310	4500-P B5,E

ANALYTICAL RESULTS

Lab Number: **0910282-03**
Sample Name: **MW-3**
Date/Time Collected: **10/20/09 8:20**
Sample Matrix: **Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrite as N	mg/L	< 0.500	10/21/09 19:58	A910287	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
TOC	mg/L	**3.98**	10/22/09 15:58	A910317	5310/9060A
Total Alkalinity	mg/L	**64.0**	10/27/09 9:23	A910372	2320 B
Total Phosphorus	mg/L	**0.183**	10/22/09 15:27	A910310	4500-P B5,E

30 November 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 20-Oct-09 14:47

ANALYTICAL RESULTS

Lab Number: 0910282-04
Sample Name: MW-4
Date/Time Collected: 10/20/09 8:40
Sample Matrix: Water

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**830**	10/22/09 0:24	A910287	300.0/9056A
Nitrate as N	mg/L	< 0.500	10/21/09 20:21	A910287	300.0/9056A
Nitrite as N	mg/L	< 0.500	10/21/09 20:21	A910287	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	< 0.50	10/23/09 11:08	A910296	4500-NH3D
TOC	mg/L	**24.2**	10/22/09 15:58	A910317	5310/9060A
Total Alkalinity	mg/L	< 5.0	10/27/09 9:23	A910372	2320 B
Total Phosphorus	mg/L	< 0.020	10/22/09 15:27	A910310	4500-P B5,E

ANALYTICAL RESULTS

Lab Number: 0910282-05
Sample Name: MW-6
Date/Time Collected: 10/20/09 9:05
Sample Matrix: Water

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**24.7**	10/22/09 0:46	A910287	300.0/9056A
Nitrate as N	mg/L	**1330**	10/22/09 8:54	A910287	300.0/9056A
Nitrite as N	mg/L	< 0.500	10/22/09 0:02	A910287	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	**181**	10/23/09 11:08	A910296	4500-NH3D
TOC	mg/L	**1.65**	10/22/09 15:58	A910317	5310/9060A
Total Alkalinity	mg/L	< 5.0	10/27/09 9:23	A910372	2320 B
Total Phosphorus	mg/L	< 0.020	10/22/09 15:27	A910310	4500-P B5,E

30 November 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 20-Oct-09 14:47

ANALYTICAL RESULTS

Lab Number:	**0910282-06**
Sample Name:	**MW-7**
Date/Time Collected:	**10/20/09 9:15**
Sample Matrix:	**Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**1090**	10/22/09 1:53	A910287	300.0/9056A
Nitrate as N	mg/L	**49.9**	10/22/09 1:53	A910287	300.0/9056A
Nitrite as N	mg/L	< 0.500	10/21/09 22:33	A910287	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	**51.2**	10/23/09 11:08	A910296	4500-NH3D
TOC	mg/L	**16.4**	10/22/09 15:58	A910317	5310/9060A
Total Alkalinity	mg/L	< 5.0	10/27/09 9:23	A910372	2320 B
Total Phosphorus	mg/L	< 0.020	10/22/09 15:27	A910310	4500-P B5,E

ANALYTICAL RESULTS

Lab Number:	**0910282-07**
Sample Name:	**MW-8**
Date/Time Collected:	**10/20/09 9:25**
Sample Matrix:	**Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**937**	10/22/09 2:15	A910287	300.0/9056A
Nitrate as N	mg/L	**116**	10/22/09 2:15	A910287	300.0/9056A
Nitrite as N	mg/L	< 0.500	10/21/09 22:56	A910287	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	**45.8**	10/23/09 11:08	A910296	4500-NH3D
TOC	mg/L	**12.1**	10/23/09 8:34	A910342	5310/9060A
Total Alkalinity	mg/L	**148**	10/27/09 9:23	A910372	2320 B
Total Phosphorus	mg/L	< 0.020	10/22/09 15:27	A910310	4500-P B5,E

30 November 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 20-Oct-09 14:47

ANALYTICAL RESULTS

Lab Number: **0910282-08**
Sample Name: **MW-9**
Date/Time Collected: **10/20/09 9:45**
Sample Matrix: **Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**505**	10/22/09 2:37	A910287	300.0/9056A
Nitrate as N	mg/L	**21.0**	10/22/09 2:37	A910287	300.0/9056A
Nitrite as N	mg/L	< 0.500	10/21/09 23:18	A910287	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	**2.31**	10/23/09 11:08	A910296	4500-NH3D
TOC	mg/L	**20.6**	10/23/09 8:34	A910342	5310/9060A
Total Alkalinity	mg/L	**28.0**	10/27/09 9:23	A910372	2320 B
Total Phosphorus	mg/L	**0.078**	10/22/09 15:27	A910310	4500-P B5,E

ANALYTICAL RESULTS

Lab Number: **0910282-09**
Sample Name: **MW-5**
Date/Time Collected: **10/20/09 10:05**
Sample Matrix: **Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**93.4**	10/22/09 2:59	A910287	300.0/9056A
Nitrate as N	mg/L	**8.82**	10/21/09 21:27	A910287	300.0/9056A
Nitrite as N	mg/L	< 0.500	10/21/09 21:27	A910287	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	< 0.50	10/23/09 11:08	A910296	4500-NH3D
TOC	mg/L	**1.25**	10/23/09 8:34	A910342	5310/9060A
Total Alkalinity	mg/L	**8.0**	10/27/09 9:23	A910372	2320 B
Total Phosphorus	mg/L	< 0.020	10/22/09 15:27	A910310	4500-P B5,E

30 November 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 20-Oct-09 14:47

ANALYTICAL RESULTS

Lab Number: 0910282-10
Sample Name: MW-10
Date/Time Collected: 10/20/09 10:20
Sample Matrix: Water

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**136**	10/22/09 3:21	A910287	300.0/9056A
Nitrate as N	mg/L	**53.5**	10/22/09 3:21	A910287	300.0/9056A
Nitrite as N	mg/L	< 0.500	10/21/09 23:40	A910287	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	< 0.50	10/23/09 11:08	A910296	4500-NH3D
TOC	mg/L	**6.41**	10/23/09 8:34	A910342	5310/9060A
Total Alkalinity	mg/L	**10.0**	10/27/09 9:23	A910372	2320 B
Total Phosphorus	mg/L	< 0.020	10/22/09 15:27	A910310	4500-P B5,E

ANALYTICAL RESULTS

Lab Number: 0910282-11
Sample Name: MW-11
Date/Time Collected: 10/20/09 10:35
Sample Matrix: Water

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**125**	10/22/09 9:16	A910287	300.0/9056A
Nitrate as N	mg/L	**9.44**	10/22/09 9:16	A910287	300.0/9056A
Nitrite as N	mg/L	< 0.500	10/21/09 21:49	A910287	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	**18.2**	10/23/09 11:08	A910296	4500-NH3D
TOC	mg/L	**9.35**	10/23/09 8:34	A910342	5310/9060A
Total Alkalinity	mg/L	< 5.0	10/27/09 9:23	A910372	2320 B
Total Phosphorus	mg/L	< 0.020	10/22/09 15:27	A910310	4500-P B5,E

ANALYTICAL RESULTS

Lab Number: 0910282-12
Sample Name: MW-15
Date/Time Collected: 10/20/09 10:50
Sample Matrix: Water

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrite as N	mg/L	< 0.500	10/21/09 22:11	A910287	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
TOC	mg/L	**1.34**	10/23/09 8:34	A910342	5310/9060A
Total Alkalinity	mg/L	< 5.0	10/27/09 9:23	A910372	2320 B
Total Phosphorus	mg/L	< 0.020	10/22/09 15:27	A910310	4500-P B5,E

30 November 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 20-Oct-09 14:47

ANALYTICAL RESULTS

Lab Number:	**0910282-13**
Sample Name:	**DUP**
Date/Time Collected:	**10/20/09 0:00**
Sample Matrix:	**Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**906**	10/22/09 3:43	A910301	300.0/9056A
Nitrate as N	mg/L	< 0.500	10/21/09 12:32	A910301	300.0/9056A
Nitrite as N	mg/L	< 0.500	10/21/09 12:32	A910301	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	< 0.50	10/23/09 11:08	A910296	4500-NH3D
TOC	mg/L	**25.2**	10/23/09 8:34	A910342	5310/9060A
Total Alkalinity	mg/L	< 5.0	10/27/09 9:23	A910372	2320 B
Total Phosphorus	mg/L	< 0.020	10/22/09 15:27	A910310	4500-P B5,E

30 November 2009

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El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 20-Oct-09 14:47

QUALITY CONTROL RESULTS

Anions -- Batch: A910287 (Water)
Prepared: 21-Oct-09 07:26 By: MG -- Analyzed: 22-Oct-09 07:25 By: MEL

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Nitrate as N	<0.500 mg/L	91.4% / NA	90.5% / 86.7%		4.28%	
Nitrite as N	<0.500 mg/L	99.2% / NA	97.4% / 95.1%		2.39%	
Sulfate as SO4	<0.500 mg/L	109% / NA	116% / 116%		0.171%	

Wet Chemistry -- Batch: A910296 (Water)
Prepared: 21-Oct-09 09:17 By: SB -- Analyzed: 23-Oct-09 11:08 By: SB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Ammonia as N	<0.50 mg/L	105% / NA	103% / 104%		0.384%	

Anions -- Batch: A910301 (Water)
Prepared: 21-Oct-09 12:30 By: MG -- Analyzed: 23-Oct-09 01:47 By: MEL

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Nitrate as N	<0.500 mg/L	90.2% / NA	86.4% / 86.7%		0.347%	
Nitrite as N	<0.500 mg/L	97.0% / NA	95.0% / 95.0%		0.00%	
Sulfate as SO4	<0.500 mg/L	109% / NA	104% / 109%		4.77%	

Wet Chemistry -- Batch: A910310 (Water)
Prepared: 22-Oct-09 08:05 By: KP -- Analyzed: 22-Oct-09 15:27 By: KP

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Total Phosphorus	<0.020 mg/L	98.8% / NA	105% / 103%		1.48%	

Wet Chemistry -- Batch: A910317 (Water)
Prepared: 22-Oct-09 07:36 By: SB -- Analyzed: 22-Oct-09 15:58 By: SB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
TOC	<1.00 mg/L	101% / NA	104% / 102%		0.961%	

Wet Chemistry -- Batch: A910342 (Water)
Prepared: 23-Oct-09 08:34 By: SB -- Analyzed: 23-Oct-09 08:34 By: SB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
TOC	<1.00 mg/L	99.8% / NA	102% / 104%		1.50%	

Wet Chemistry -- Batch: A910372 (Water)
Prepared: 27-Oct-09 09:22 By: SB -- Analyzed: 27-Oct-09 09:23 By: SB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Total Alkalinity	<5.0 mg/L	NA / NA	NA / NA		0.00%	

30 November 2009

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El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 20-Oct-09 14:47

All Analysis performed according to EPA approved methodology when available:
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods, 20th Edition.
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by: Norma James

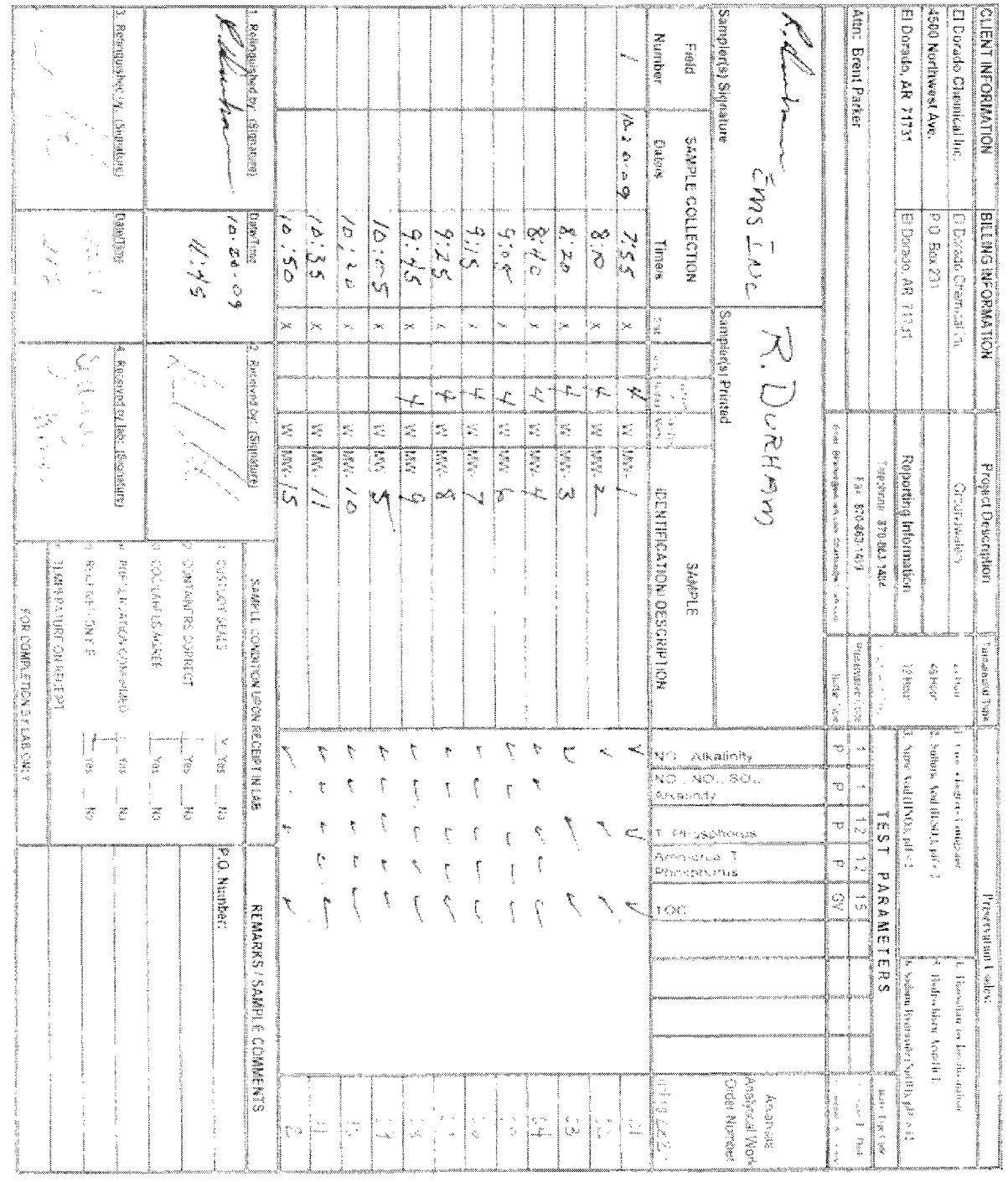
Norma James
President

30 November 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 20-Oct-09 14:47

CHAIN OF CUSTODY FORM(S)



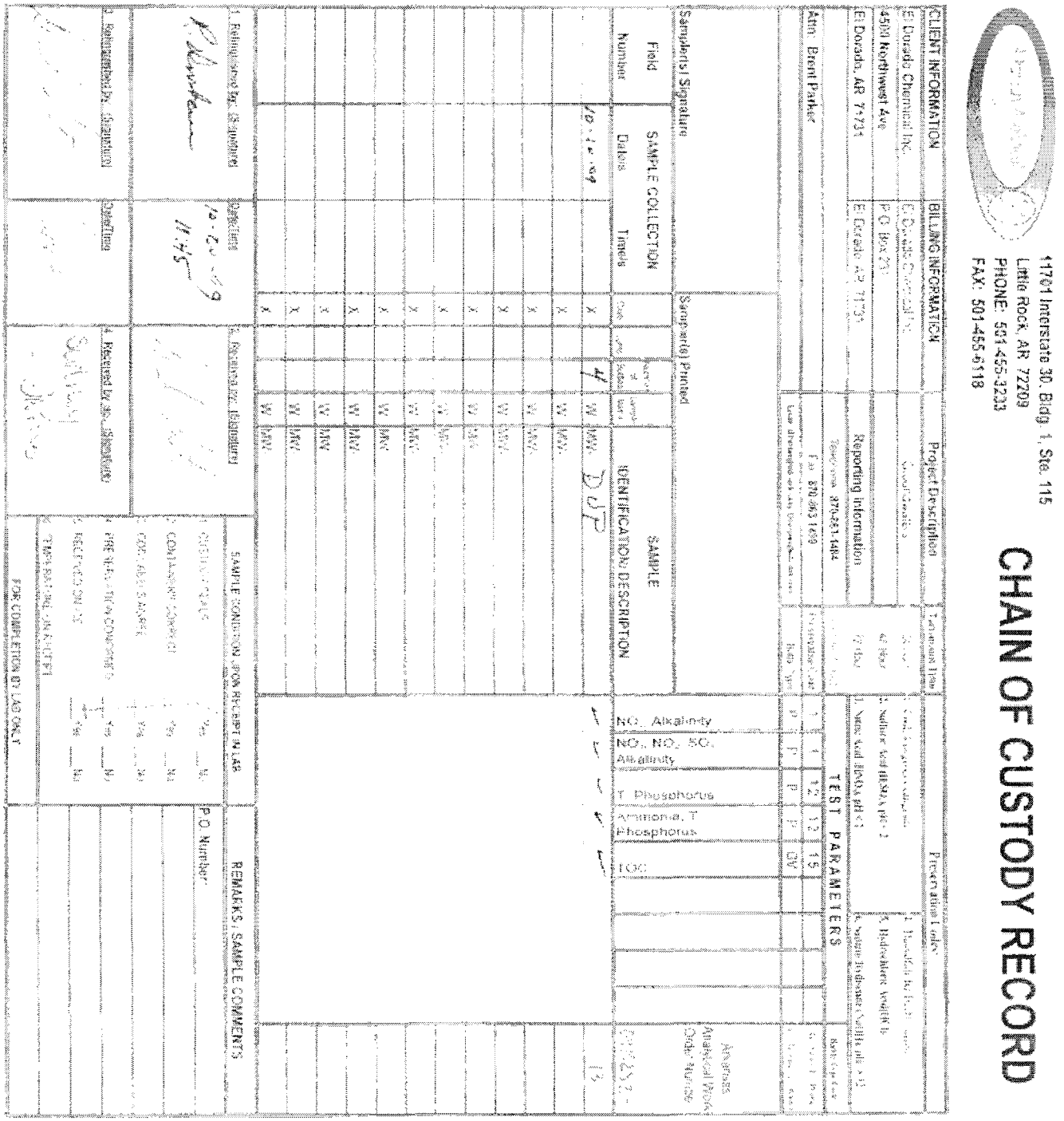
Arkansas Analytical Inc.
11701 Interstate 30 Bldg. 1, Ste. 115
Little Rock, AR 72209
PHONE: 501-455-3233
FAX: 501-455-6118

CHAIN OF CUSTODY RECORD

30 November 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 20-Oct-09 14:47



Arkansas Analytical Inc.

11701 I-30 Bldg 1, Ste 115 - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

29 October 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731

RE: Groundwaters

SDG Number: 0910305

Enclosed are the results of analyses for samples received by the laboratory on 21-Oct-09 15:32. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✔
Containers Intact	✔
COC/Labels Agree	✔
Preservation Confirmed	✔
Received On Ice	✔
Temperature on Receipt	4.0°C

Sincerely,

Norma James
President

29 October 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 21-Oct-09 15:32

CASE NARRATIVE

SAMPLE DELIVERY GROUP 0910305-01:

Quality control excursions resulting in data qualification are discussed below.

NITRATE ANALYSIS:
Samples 0910305-08 (MW-16), 0910305-09 (MW-17) and 0910305-11 (Duplicate): Each sample was analyzed 10/22/09 within the 48 hour holding time for nitrate. The nitrate amount in each was above the calibration range of the instrument and required dilution for accurate quantitation. Analysis of the diluted samples occurred outside of holding time; therefore, the nitrate result for each sample was qualified as "estimated."

29 October 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 21-Oct-09 15:32

ANALYTICAL RESULTS

Lab Number:	**0910305-01**
Sample Name:	**Field Blank**
Date/Time Collected:	**10/21/09 10:20**
Sample Matrix:	**Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	< 0.500	10/22/09 23:56	A910326	300.0/9056A
Nitrate as N	mg/L	< 0.500	10/22/09 23:56	A910326	300.0/9056A
Nitrite as N	mg/L	< 0.500	10/22/09 23:56	A910326	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	< 0.50	10/28/09 8:21	A910389	4500-NH3D
TOC	mg/L	< 1.00	10/23/09 8:34	A910342	5310/9060A
Total Alkalinity	mg/L	**5.0**	10/27/09 9:23	A910372	2320 B
Total Phosphorus	mg/L	< 0.020	10/23/09 14:14	A910311	4500-P B5,E

ANALYTICAL RESULTS

Lab Number:	**0910305-02**
Sample Name:	**MW-21**
Date/Time Collected:	**10/21/09 11:05**
Sample Matrix:	**Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrite as N	mg/L	< 0.500	10/22/09 23:34	A910326	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
TOC	mg/L	**1.74**	10/23/09 8:34	A910342	5310/9060A
Total Alkalinity	mg/L	**10.0**	10/27/09 9:23	A910372	2320 B
Total Phosphorus	mg/L	< 0.020	10/23/09 14:14	A910311	4500-P B5,E

ANALYTICAL RESULTS

Lab Number:	**0910305-03**
Sample Name:	**MW-19**
Date/Time Collected:	**10/21/09 10:20**
Sample Matrix:	**Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrite as N	mg/L	< 0.500	10/22/09 22:28	A910326	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
TOC	mg/L	< 1.00	10/23/09 8:34	A910342	5310/9060A
Total Alkalinity	mg/L	**32.0**	10/27/09 9:23	A910372	2320 B
Total Phosphorus	mg/L	**0.037**	10/23/09 14:14	A910311	4500-P B5,E

29 October 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 21-Oct-09 15:32

ANALYTICAL RESULTS

Lab Number:	**0910305-04**
Sample Name:	**MW-18**
Date/Time Collected:	**10/21/09 10:00**
Sample Matrix:	**Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrate as N	mg/L	< 0.500	10/22/09 22:05	A910326	300.0/9056A
Nitrite as N	mg/L	< 0.500	10/22/09 22:05	A910326	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
TOC	mg/L	< 1.00	10/23/09 8:34	A910342	5310/9060A
Total Alkalinity	mg/L	**20.0**	10/27/09 9:23	A910372	2320 B
Total Phosphorus	mg/L	**0.235**	10/23/09 14:14	A910311	4500-P B5,E

ANALYTICAL RESULTS

Lab Number:	**0910305-05**
Sample Name:	**MW-20**
Date/Time Collected:	**10/21/09 9:10**
Sample Matrix:	**Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrite as N	mg/L	< 0.500	10/22/09 21:43	A910326	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
TOC	mg/L	< 1.00	10/23/09 8:34	A910342	5310/9060A
Total Alkalinity	mg/L	**30.0**	10/27/09 9:23	A910372	2320 B
Total Phosphorus	mg/L	**0.037**	10/23/09 14:14	A910311	4500-P B5,E

ANALYTICAL RESULTS

Lab Number:	**0910305-06**
Sample Name:	**MW-12**
Date/Time Collected:	**10/21/09 9:20**
Sample Matrix:	**Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrite as N	mg/L	< 0.500	10/22/09 21:21	A910326	300 0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
TOC	mg/L	**19.4**	10/23/09 8:34	A910342	5310/9060A
Total Alkalinity	mg/L	**146**	10/27/09 9:23	A910372	2320 B
Total Phosphorus	mg/L	**0.056**	10/23/09 14:14	A910311	4500-P B5,E

29 October 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 21-Oct-09 15:32

ANALYTICAL RESULTS

Lab Number: 0910305-07
Sample Name: MW-13
Date/Time Collected: 10/21/09 9:05
Sample Matrix: Water

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrite as N	mg/L	< 0.500	10/22/09 20:59	A910326	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
TOC	mg/L	**7.53**	10/23/09 8:34	A910342	5310/9060A
Total Alkalinity	mg/L	< 5.0	10/27/09 9:23	A910372	2320 B
Total Phosphorus	mg/L	< 0.020	10/23/09 14:14	A910311	4500-P B5.E

ANALYTICAL RESULTS

Lab Number: 0910305-08
Sample Name: MW-16
Date/Time Collected: 10/21/09 8:40
Sample Matrix: Water

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**12.1**	10/23/09 9:08	A910326	300.0/9056A
Nitrate as N	mg/L	**13.1 *E2**	10/23/09 9:08	A910326	300.0/9056A
Nitrite as N	mg/L	< 0.500	10/22/09 20:37	A910326	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	**0.88**	10/28/09 8:21	A910389	4500-NH3D
TOC	mg/L	**2.05**	10/23/09 8:34	A910342	5310/9060A
Total Alkalinity	mg/L	< 5.0	10/27/09 9:26	A910373	2320 B
Total Phosphorus	mg/L	< 0.020	10/23/09 14:14	A910311	4500-P B5.E

ANALYTICAL RESULTS

Lab Number: 0910305-09
Sample Name: MW-17
Date/Time Collected: 10/21/09 8:20
Sample Matrix: Water

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**87.1**	10/23/09 8:24	A910326	300.0/9056A
Nitrate as N	mg/L	**14.4 *E2**	10/23/09 8:24	A910326	300.0/9056A
Nitrite as N	mg/L	< 0.500	10/22/09 20:14	A910326	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	**11.2**	10/28/09 8:21	A910389	4500-NH3D
TOC	mg/L	**2.36**	10/23/09 8:34	A910342	5310/9060A
Total Alkalinity	mg/L	< 5.0	10/27/09 9:26	A910373	2320 B
Total Phosphorus	mg/L	< 0.020	10/23/09 14:14	A910311	4500-P B5.E

29 October 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 21-Oct-09 15:32

ANALYTICAL RESULTS

Lab Number: 0910305-10
Sample Name: MW-22
Date/Time Collected: 10/21/09 8:05
Sample Matrix: Water

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Nitrite as N	mg/L	< 0.500	10/22/09 19:52	A910326	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
TOC	mg/L	< 1.00	10/23/09 8:34	A910342	5310/9060A
Total Alkalinity	mg/L	**48.0**	10/27/09 9:26	A910373	2320 B
Total Phosphorus	mg/L	**0.061**	10/23/09 14:14	A910311	4500-P B5,E

ANALYTICAL RESULTS

Lab Number: 0910305-11
Sample Name: Duplicate
Date/Time Collected: 10/21/09 0:00
Sample Matrix: Water

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**13.0**	10/23/09 8:46	A910326	300.0/9056A
Nitrate as N	mg/L	**13.2 *E2**	10/23/09 8:46	A910326	300.0/9056A
Nitrite as N	mg/L	< 0.500	10/22/09 19:30	A910326	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	**0.94**	10/28/09 8:21	A910389	4500-NH3D
TOC	mg/L	**2.21**	10/23/09 8:34	A910342	5310/9060A
Total Alkalinity	mg/L	< 5.0	10/27/09 9:26	A910373	2320 B
Total Phosphorus	mg/L	< 0.020	10/23/09 14:14	A910311	4500-P B5,E

29 October 2009

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El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 21-Oct-09 15:32

QUALITY CONTROL RESULTS

Wet Chemistry -- Batch: A910311 (Water)
Prepared: 22-Oct-09 08:10 By: KP -- Analyzed: 23-Oct-09 14:14 By: KP

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Total Phosphorus	<0.020 mg/L	98.8% / NA	104% / 99.2%		4.34%	

Anions -- Batch: A910326 (Water)
Prepared: 22-Oct-09 14:43 By: MG -- Analyzed: 23-Oct-09 09:56 By: MEL

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Nitrate as N	<0.500 mg/L	91.6% / NA	88.7% / 86.0%		3.03%	
Nitrite as N	<0.500 mg/L	97.8% / NA	95.9% / 95.0%		0.942%	
Sulfate as SO4	<0.500 mg/L	108% / NA	100% / 103%		2.79%	

Wet Chemistry -- Batch: A910342 (Water)
Prepared: 23-Oct-09 08:34 By: SB -- Analyzed: 23-Oct-09 08:34 By: SB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
TOC	<1.00 mg/L	99.8% / NA	102% / 104%		1.50%	

Wet Chemistry -- Batch: A910372 (Water)
Prepared: 27-Oct-09 09:22 By: SB -- Analyzed: 27-Oct-09 09:23 By: SB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Total Alkalinity	<5.0 mg/L	NA / NA	NA / NA		0.00%	

Wet Chemistry -- Batch: A910373 (Water)
Prepared: 27-Oct-09 09:26 By: SB -- Analyzed: 27-Oct-09 09:26 By: SB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Total Alkalinity	<5.0 mg/L	NA / NA	NA / NA		0.995%	

Wet Chemistry -- Batch: A910389 (Water)
Prepared: 28-Oct-09 08:21 By: SB -- Analyzed: 28-Oct-09 08:21 By: SB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Ammonia as N	<0.50 mg/L	103% / NA	84.6% / 84.6%		0.00%	

QUALIFIER(S)

*E2: Estimated Result; Analyzed Outside of Holding Time

29 October 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 21-Oct-09 15:32

All Analysis performed according to EPA approved methodology when available:
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods, 20th Edition.
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by: Norma James

Norma James
President

29 October 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 21-Oct-09 15:32

CHAIN OF CUSTODY FORM(S)

11701 Interstate 30, Bldg. 1, Ste. 115
Little Rock, AR 72209
PHONE: 501-455-3233
FAX: 501-455-6118

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION	BILLING INFORMATION	Project Description
El Dorado Chemical Inc.	El Dorado Chemical Inc.	Groundwaters
4500 Northwest Ave.	P.O. Box 231	
El Dorado, AR 71731	El Dorado, AR 71731	Reporting Information
		Telephone 870-863-1484
Attn: Brent Parker		Fax 870-863-1499

TEST PARAMETERS: NO_3 Alkalinity; NO_3, NO_2, SO_4, Alkalinity; T. Phosphorus; Ammonia, T. Phosphorus; TOC

Sampler(s) Signature: [signature] EMS Inc. — Sampler(s) Printed: R. Durham

Field Number	Date/s	Time/s	Grab	Comp	No. of Bottles	Sample Matrix	Sample Identification/ Description	Arkansas Analytical Work Order Number
1	10-21-09	10:30	x		4	W	MW- Field Blank	01
2		11:05	x		4	W	MW 21	02
3		10:20	x		4	W	MW 19	03
4		10:00	x		4	W	MW 18	04
5		9:40	x		4	W	MW 20	05
6		9:20	x		4	W	MW 12	06
7		9:05	x		4	W	MW 13	07
8		8:40	x		4	W	MW 16	08
9		8:20	x		4	W	MW 17	09
10		8:05	x		4	W	MW 22	10
11			x		4	W	MW- DUP	11
			x			W	MW-	

1. Relinquished by: (Signature) [signature] — Date/Time 10-21-09 11:20
2. Received by: (Signature) [signature]
3. Relinquished by: (Signature) [signature]
4. Received by lab: (Signature) [signature]

SAMPLE CONDITION UPON RECEIPT IN LAB: Custody seals; Containers correct; COC labels agree; Preservation confirmed; Received on ice; Temperature on receipt. FOR COMPLETION BY LAB ONLY

REMARKS / SAMPLE COMMENTS
P.O. Number
Changed analysis for MW 19, bottle labels were incorrect - 10-21-09 [illegible]

This report must be reproduced in its entirety.

Arkansas Analytical Inc.

11701 I-30 Bldg 1, Ste 115 - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

22 December 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731

RE: Groundwaters

SDG Number: 0912248

Enclosed are the results of analyses for samples received by the laboratory on 17-Dec-09 08:45. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✔
Containers Intact	✔
COC/Labels Agree	✔
Preservation Confirmed	✔
Received On Ice	✔
Temperature on Receipt	3.0°C

Sincerely,

Norma James
President

22 December 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 17-Dec-09 08:45

ANALYTICAL RESULTS

Lab Number:	**0912248-01**
Sample Name:	**MW-14**
Date/Time Collected:	**12/16/09 10:55**
Sample Matrix:	**Water**

Anions	Units	Result	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**212**	12/17/09 13:38	A912227	300.0/9056A
Nitrate as N	mg/L	**15.7**	12/17/09 11:48	A912227	300.0/9056A
Nitrite as N	mg/L	< 0.500	12/17/09 11:48	A912227	300.0/9056A

Wet Chemistry	Units	Result	Date/Time Analyzed	Batch	Method
Ammonia as N	mg/L	< 0.50	12/22/09 8:56	A912323	4500-NH3D
TOC	mg/L	**12.5**	12/17/09 13:55	A912219	5310/9060A
Total Alkalinity	mg/L	**5.0**	12/21/09 14:45	A912318	2320 B
Total Phosphorus	mg/L	< 0.020	12/21/09 14:47	A912309	4500-P B5,E

22 December 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 17-Dec-09 08:45

QUALITY CONTROL RESULTS

Wet Chemistry -- Batch: A912219 (Water)
Prepared: 16-Dec-09 12:00 By: SB -- Analyzed: 17-Dec-09 07:26 By: SB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
TOC	<1.00 mg/L	97.1% / NA	99.2% / 97.3%		1.91%	

Anions -- Batch: A912227 (Water)
Prepared: 16-Dec-09 10:00 By: MG -- Analyzed: 16-Dec-09 14:41 By: MG

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Nitrate as N	<0.500 mg/L	90.9% / NA	89.9% / 90.0%		0.106%	
Nitrite as N	<0.500 mg/L	93.2% / NA	85.8% / 86.0%		0.175%	
Sulfate as SO4	<0.500 mg/L	106% / NA	97.7% / 97.6%		0.121%	

Wet Chemistry -- Batch: A912309 (Water)
Prepared: 21-Dec-09 07:55 By: KP -- Analyzed: 21-Dec-09 14:47 By: KP

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Total Phosphorus	<0.020 mg/L	101% / NA	106% / 105%		1.13%	

Wet Chemistry -- Batch: A912318 (Water)
Prepared: 21-Dec-09 14:45 By: SB -- Analyzed: 21-Dec-09 14:45 By: SB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Total Alkalinity	<5.0 mg/L	102% / 100%	NA / NA		1.98%	

Wet Chemistry -- Batch: A912323 (Water)
Prepared: 22-Dec-09 08:56 By: SB -- Analyzed: 22-Dec-09 08:56 By: SB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Ammonia as N	<0.50 mg/L	105% / NA	103% / 96.9%		3.92%	

All Analysis performed according to EPA approved methodology when available:
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods, 20th Edition.
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by: Norma James

Norma James
President

22 December 2009

Brent Parker
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwaters

Date Received: 17-Dec-09 08:45

CHAIN OF CUSTODY FORM(S)

11701 Interstate 30, Bldg. 1, Ste. 115
Little Rock, AR 72209
PHONE: 501-455-3233
FAX: 501-455-6118

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION	BILLING INFORMATION	Project Description
El Dorado Chemical Inc.	El Dorado Chemical Inc	Groundwaters
4500 Northwest Ave.	P.O. Box 231	
El Dorado, AR 71731	El Dorado AR 71731	Reporting Information
		Telephone 870-863-1484
Attn: Brent Parker		Fax 870-863-1499

Turnaround Time: 24 Hour / 48 Hour / 72 Hour

Preservation Codes: 1. Cool, 4 Degrees Centigrade; 2. Sulfuric Acid (H_2SO_4), pH < 2; 3. Nitric Acid (HNO_3), pH < 2; 4. Thiosulfate for Dechlorination; 5. Hydrochloric Acid (HCl); 6. Sodium Hydroxide (NaOH), pH > 12

TEST PARAMETERS

	NO_3 Alkalinity	NO_2 NO_3 SO_4 Alkalinity	T. Phosphorus	Ammonia, T. Phosphorus	TOC
Preservative Code	1	1	1,2	1,2	1,5
Bottle Type	P	P	P	P	GV

Sampler(s) Signature: [signature] EMS Inc

Sampler(s) Printed: R. Durham

Field Number	Dates	Times	Grab	Comp	Number of Bottles	Sample Matrix	Sample Identification/Description
1	12-16-09	10:55	X		4	W	MW 14
			X			W	MW-
			X			W	MW-
			X			W	MW-
			X			W	MW-
			X			W	MW-
			X			W	MW-
			X			W	MW-
			X			W	MW-
			X			W	MW-
			X			W	MW-
			X			W	MW-

Arkansas Analytical Work Order Number: C912346

1. Relinquished by: (Signature)	Date/Time	2. Received by: (Signature)
[signature]	12-16-09 11:20	Fed. Ex
3. Relinquished by: (Signature)	Date/Time	4. Received by lab: (Signature)
Fed Ex	12-17-09 08:45	Sarah E. [signature]

SAMPLE CONDITION UPON RECEIPT IN LAB

1. CUSTODY SEALS ✓ Yes ___ No
2. CONTAINERS CORRECT ✓ Yes ___ No
3. COC LABELS AGREE ✓ Yes ___ No
4. PRESERVATION CONFIRMED ✓ Yes ___ No
5. RECEIVED ON ICE ✓ Yes ___ No
6. TEMPERATURE ON RECEIPT 3.6

FOR COMPLETION BY LAB ONLY

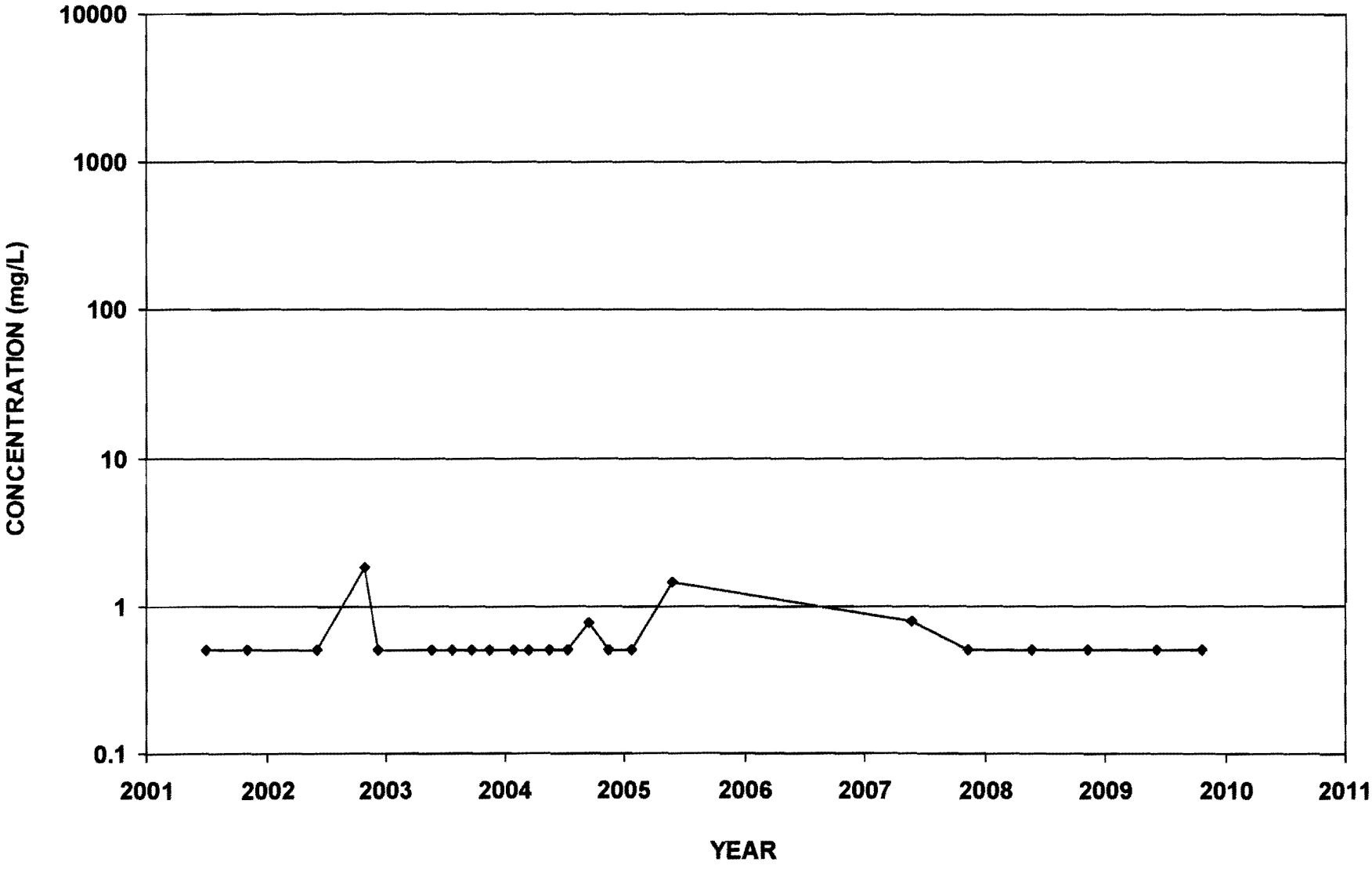
REMARKS / SAMPLE COMMENTS

P.O. Number:

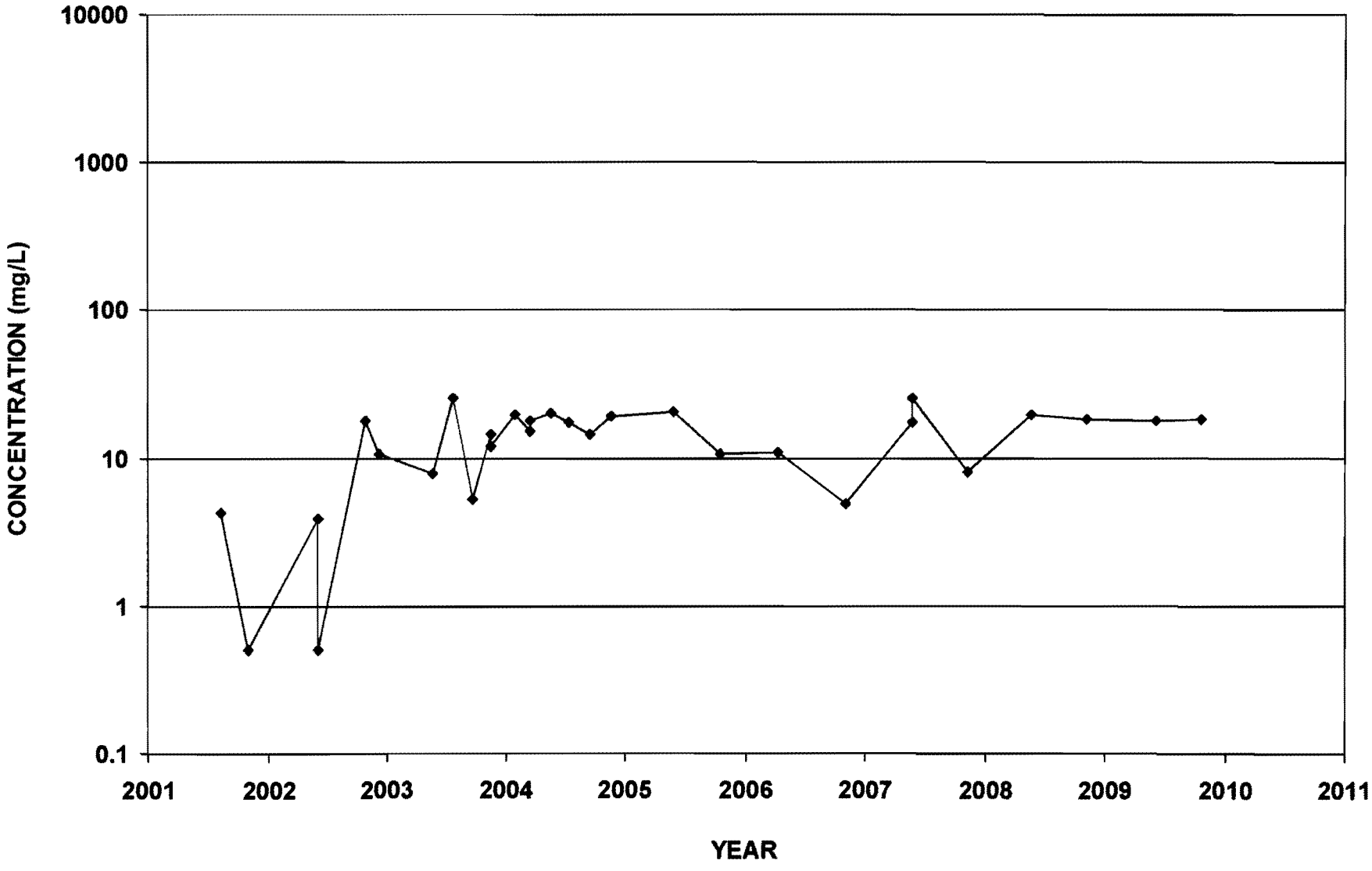
APPENDIX B

TREND GRAPHS

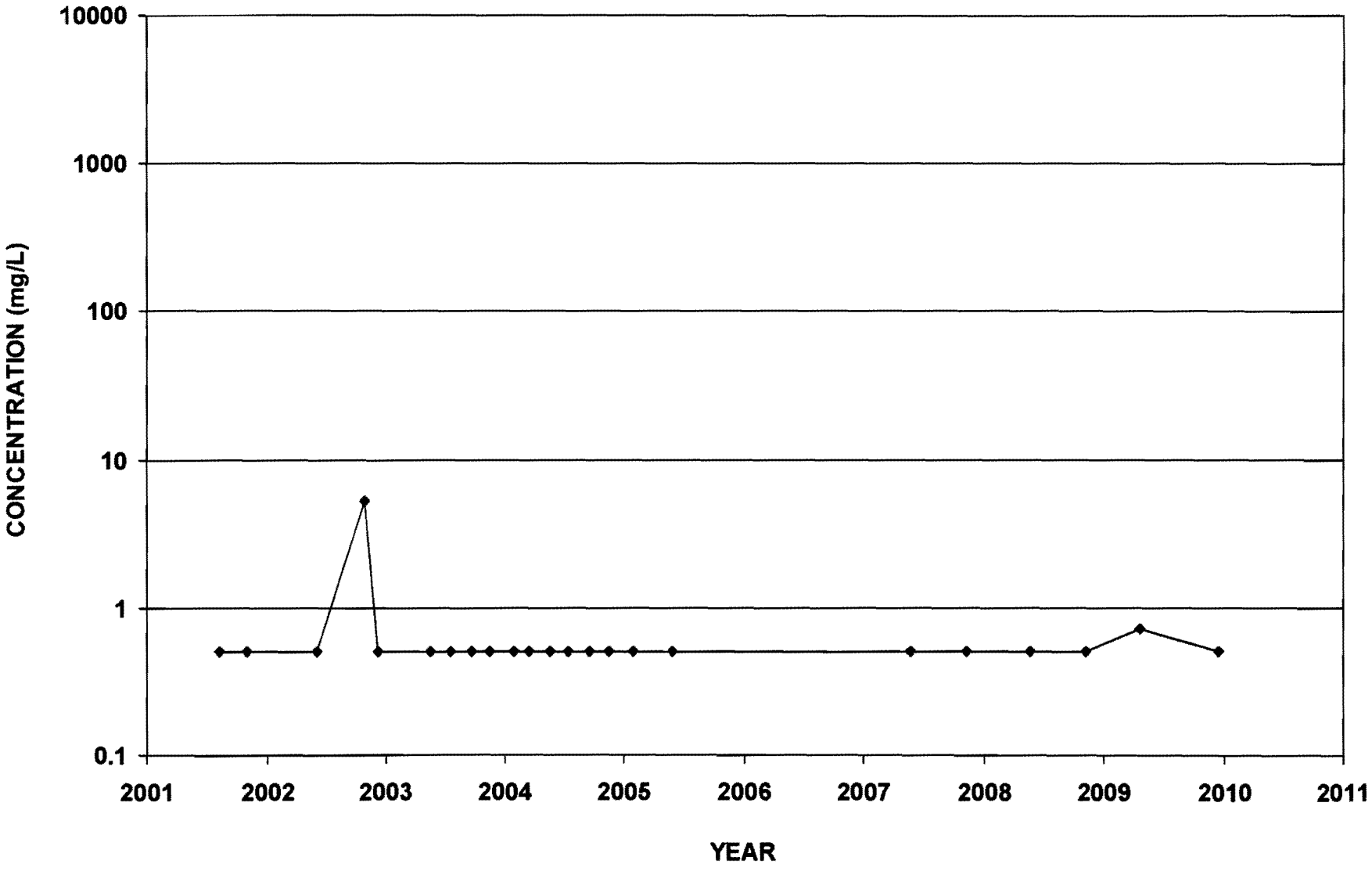
ECMW-10
Ammonia-N



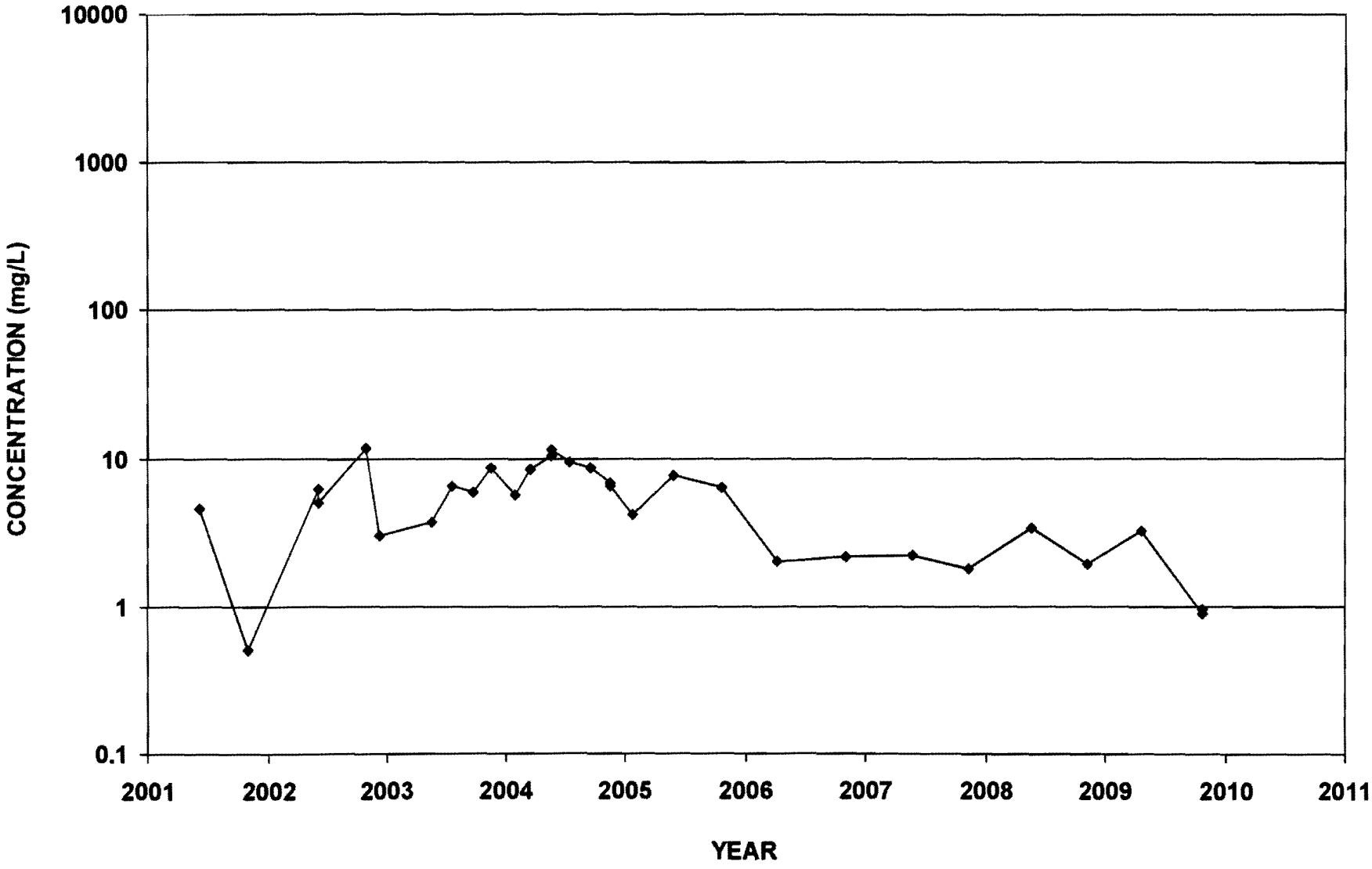
ECMW-11
Ammonia-N



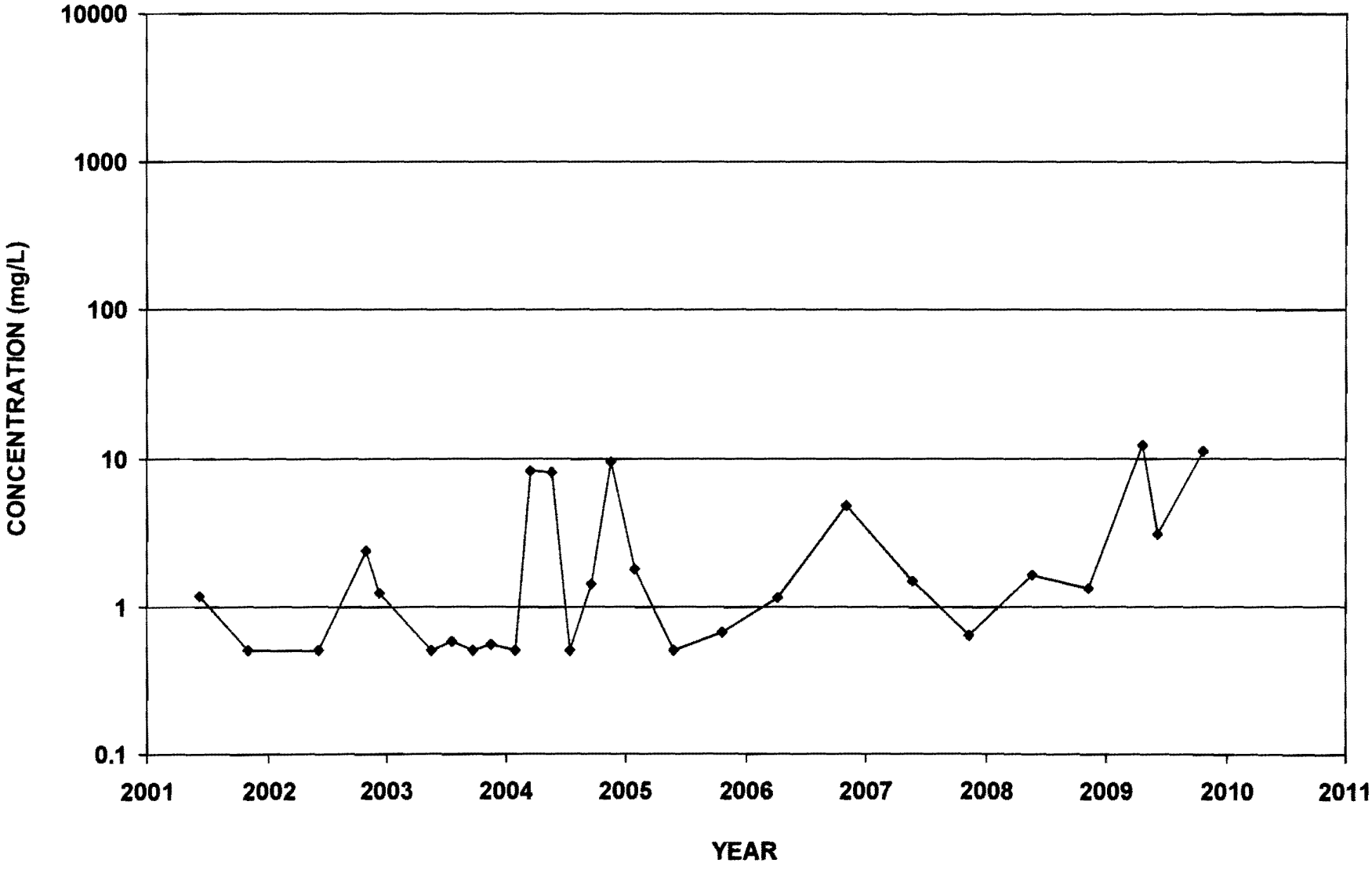
ECMW-14
Ammonia-N



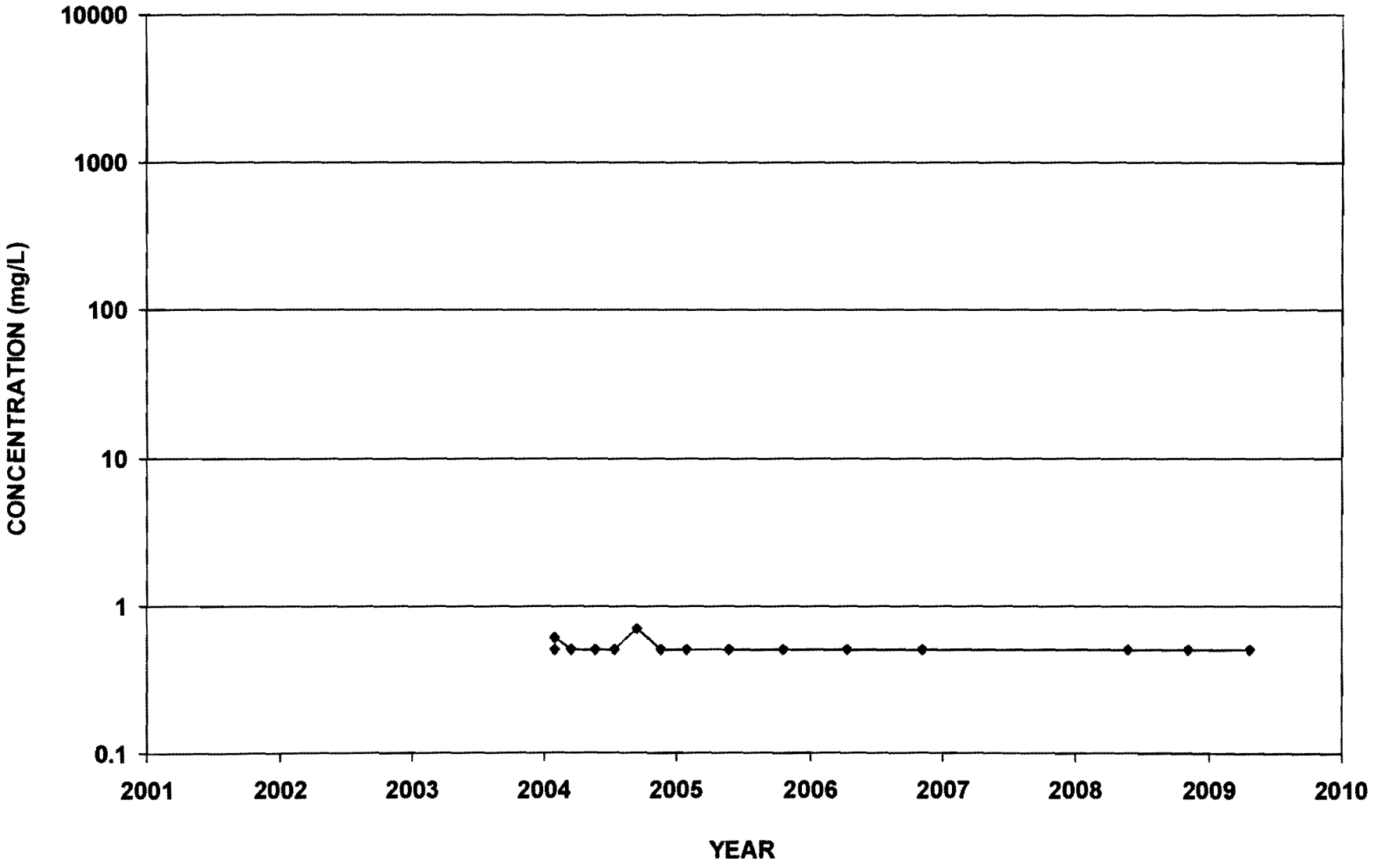
ECMW-16
Ammonia-N



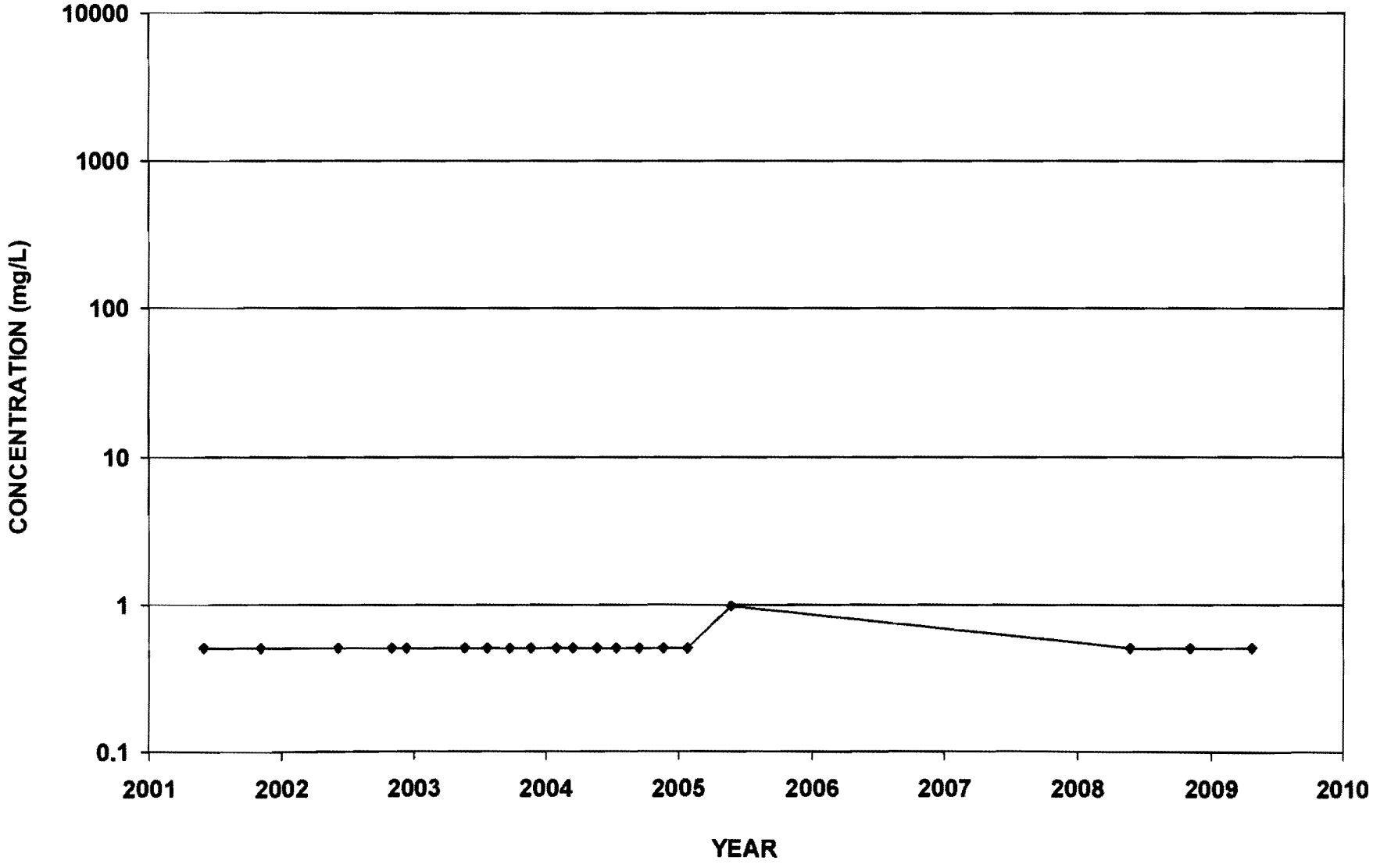
ECMW-17
Ammonia-N

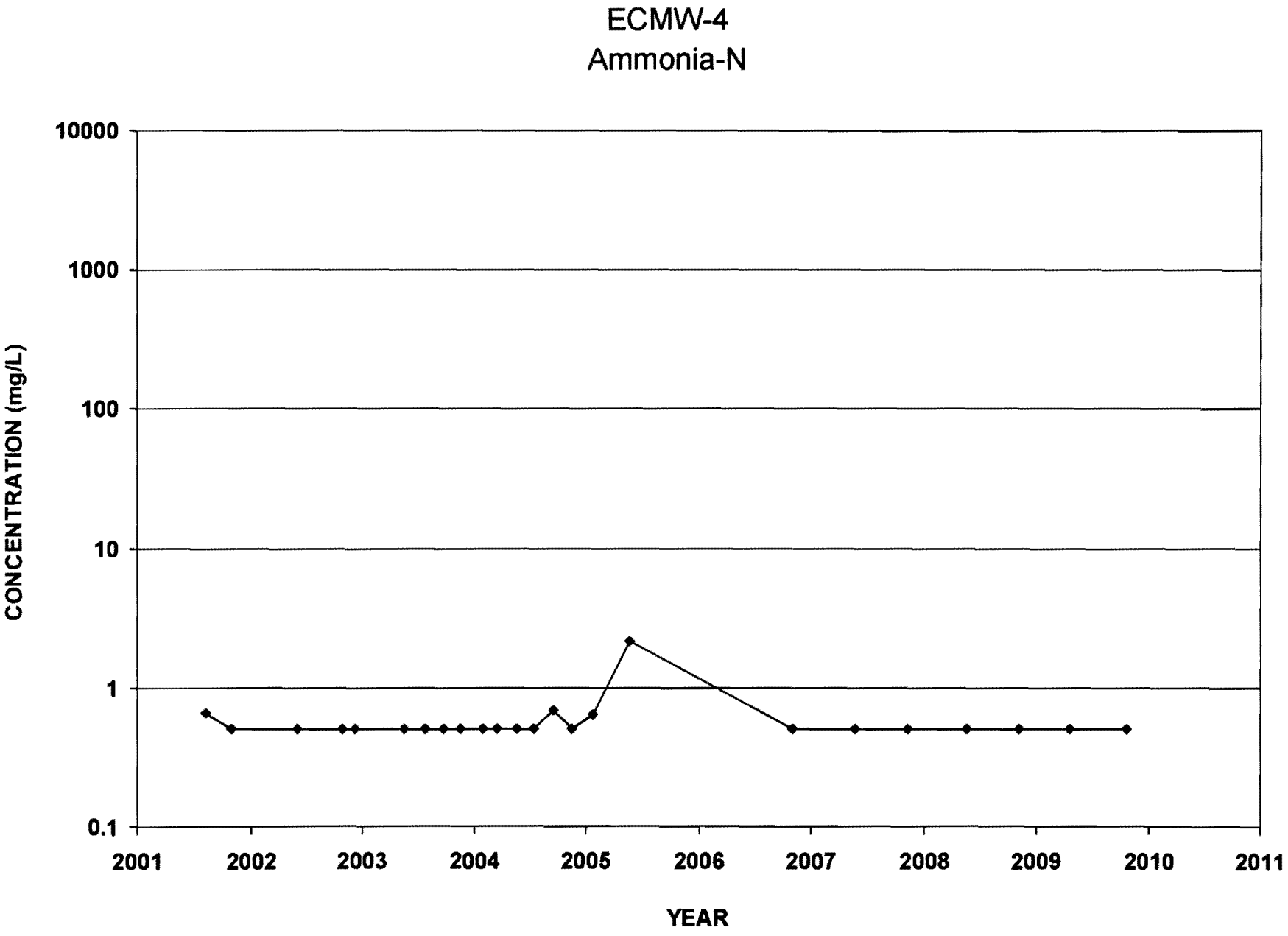


ECMW-22
Ammonia-N

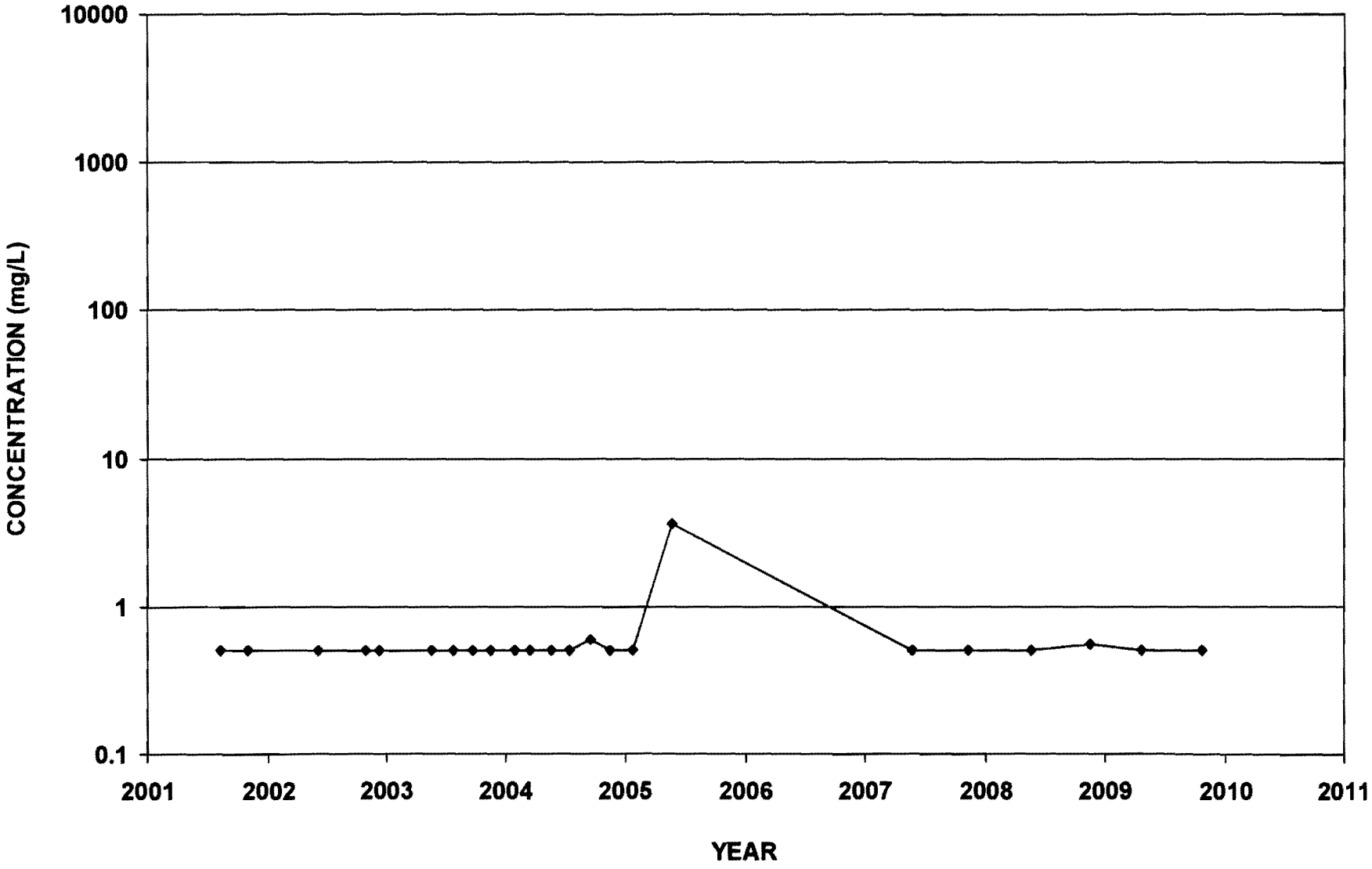


ECMW-3
Ammonia-N

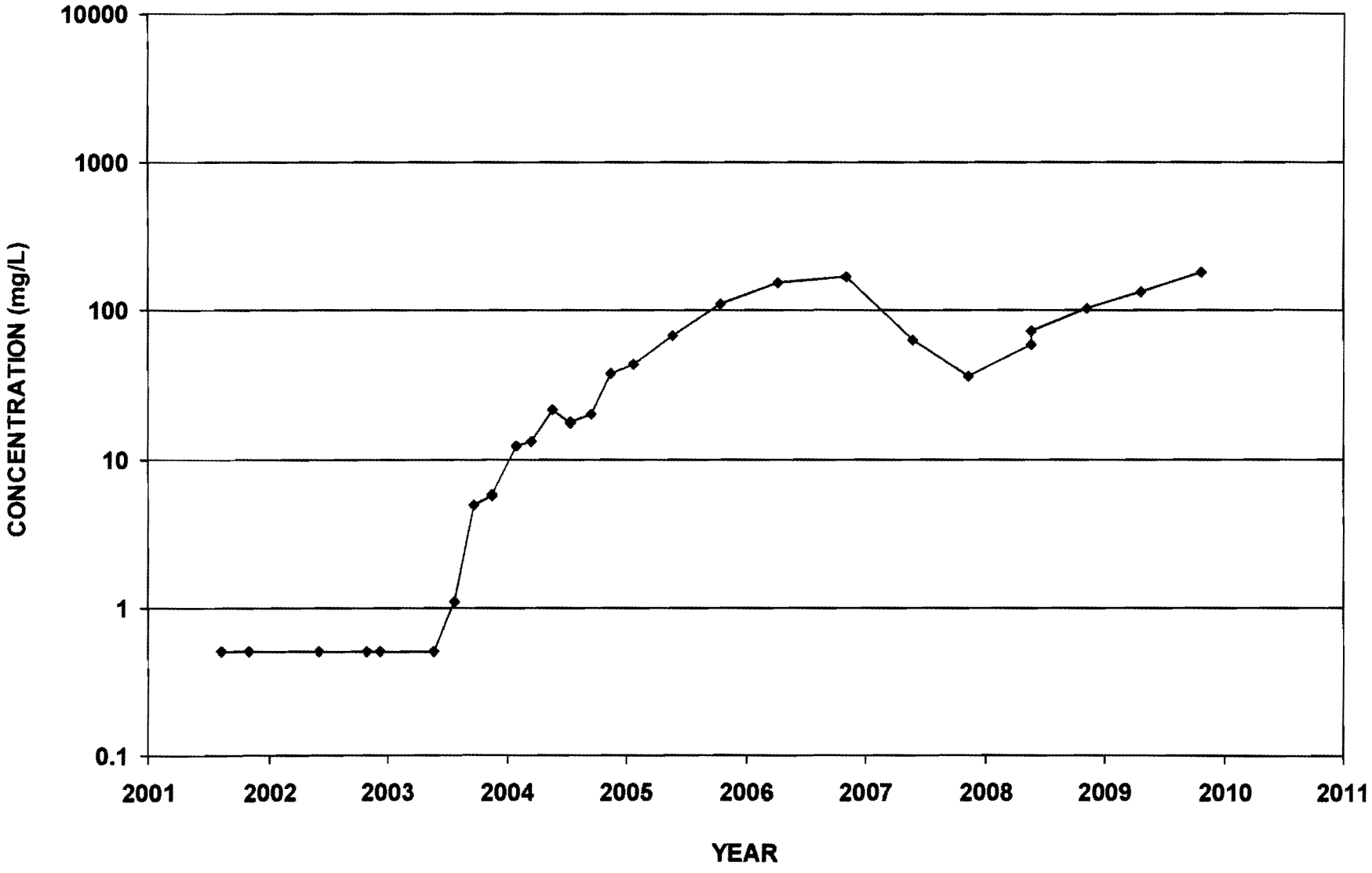



ECMW-4
Ammonia-N
10000
1000
100
10
1
0.1
CONCENTRATION (mg/L)
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
YEAR

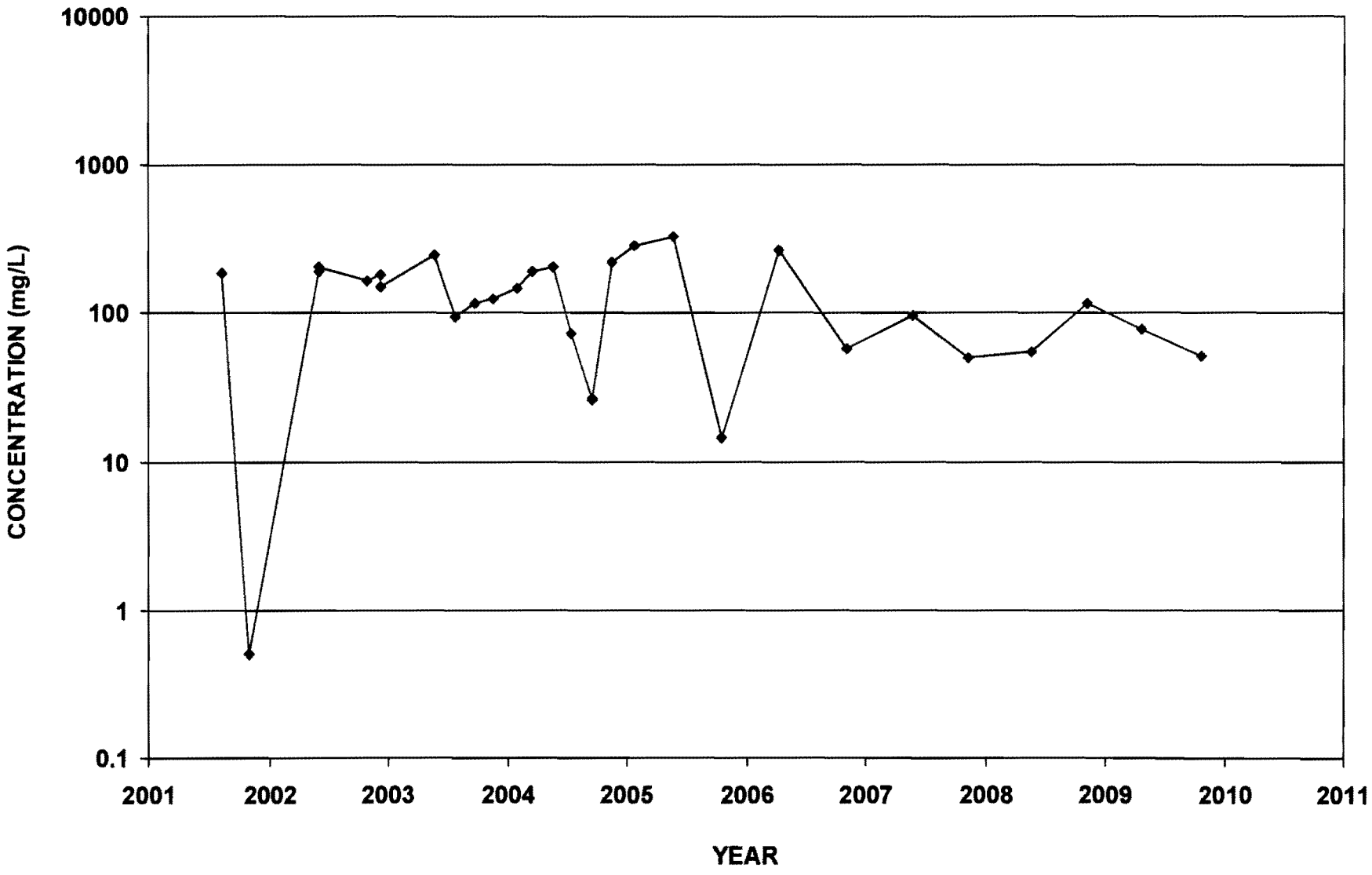
ECMW-5
Ammonia-N



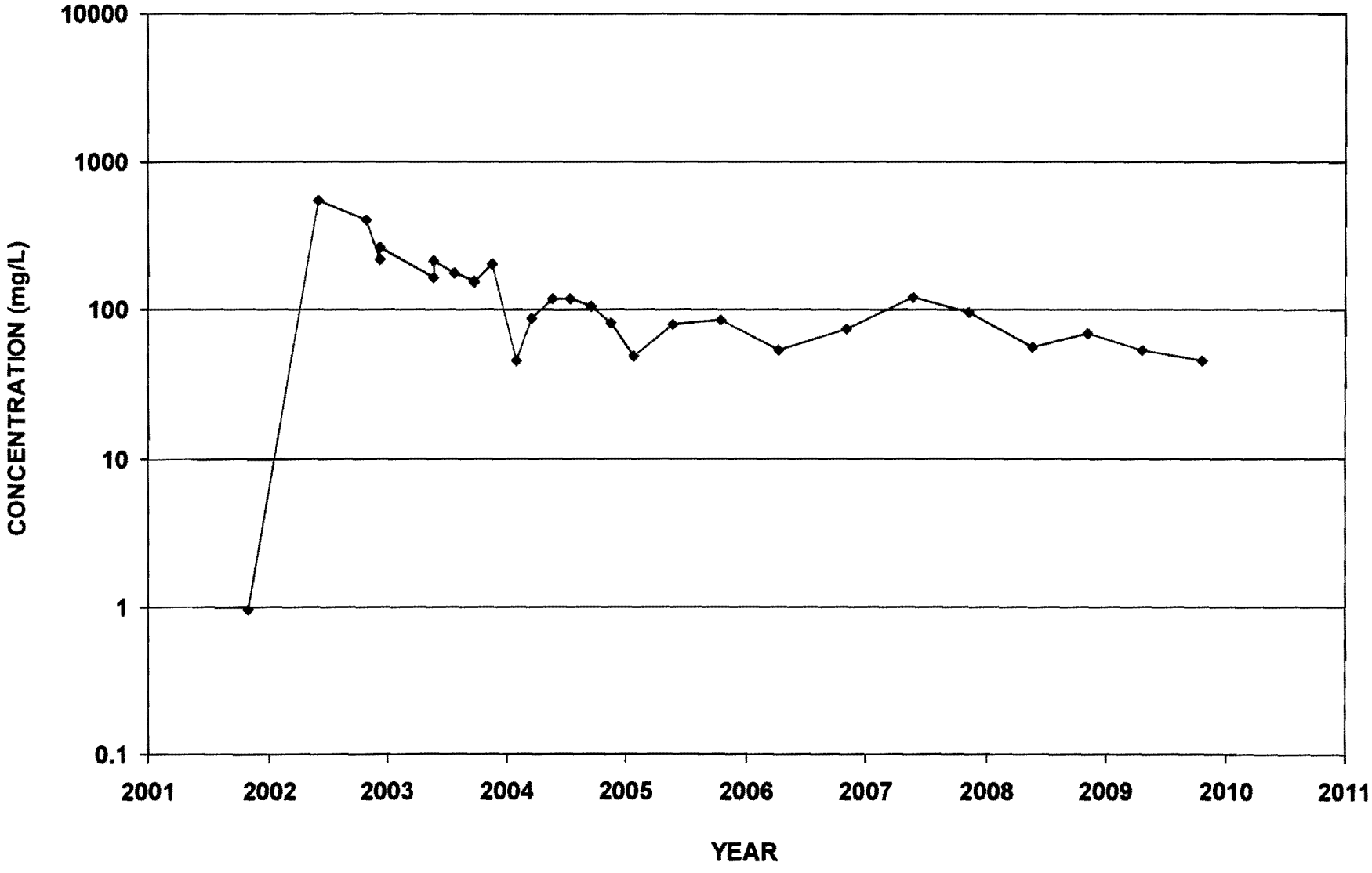
ECMW-6
Ammonia-N



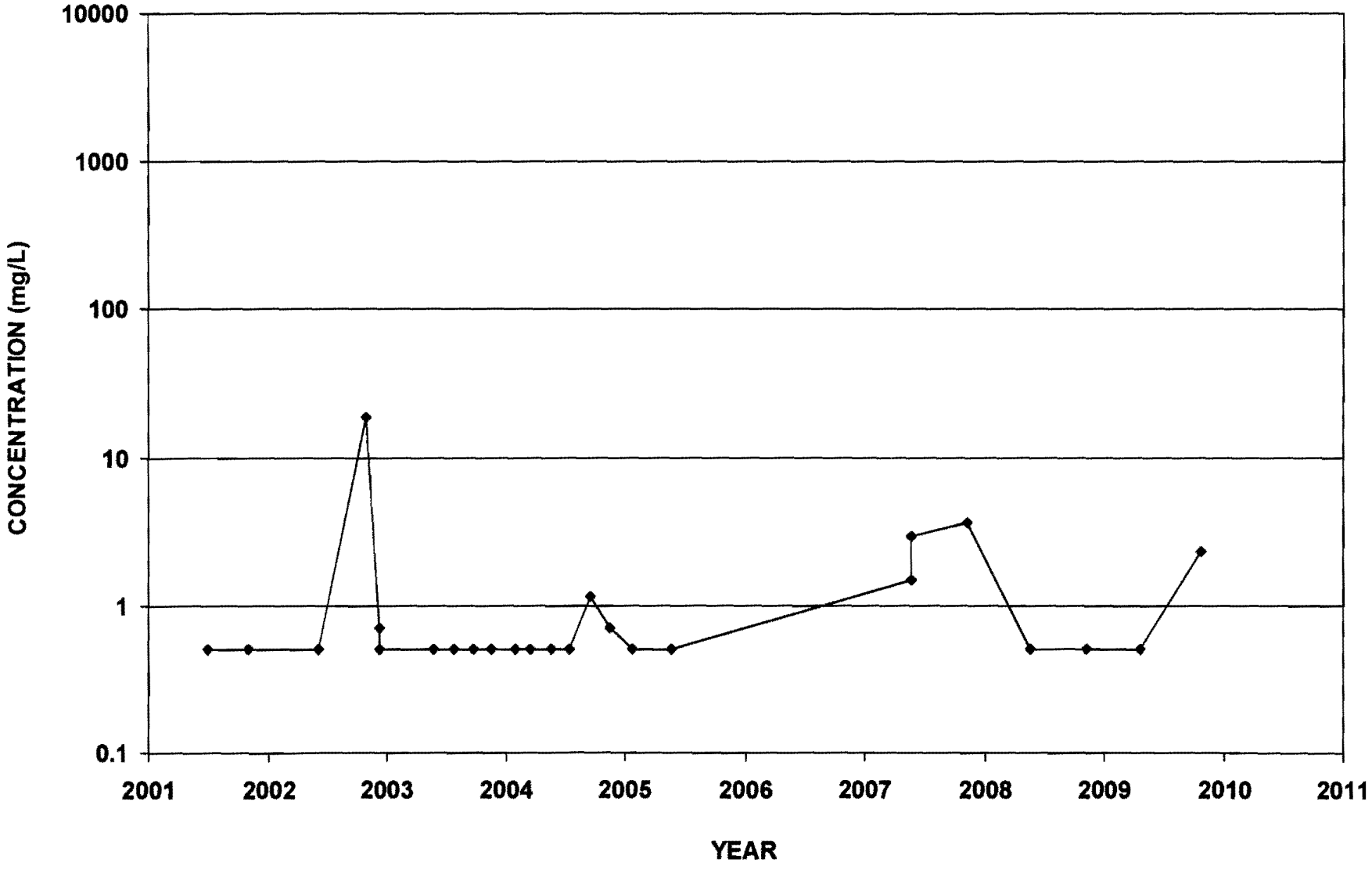
ECMW-7
Ammonia-N



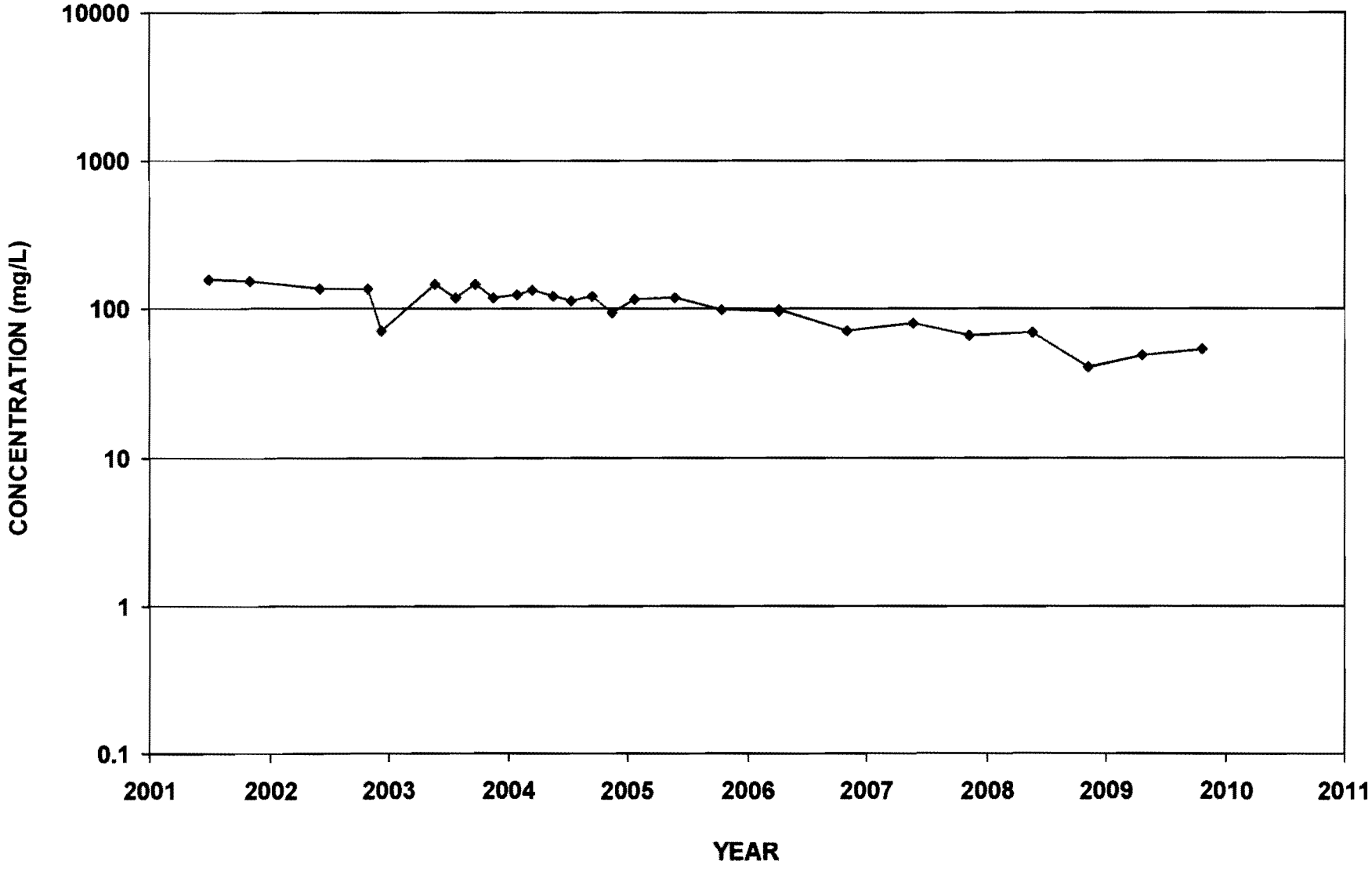
ECMW-8
Ammonia-N



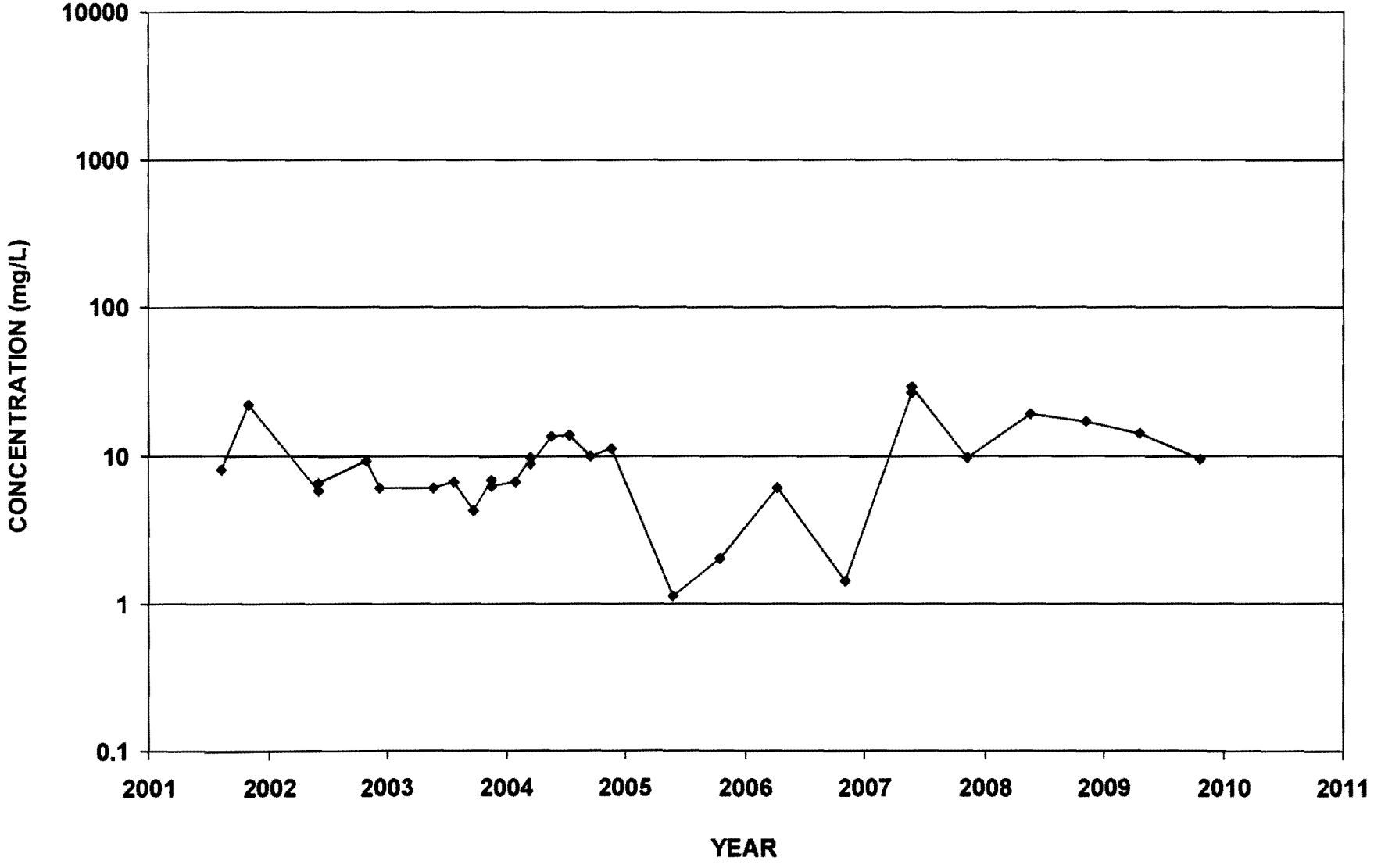
ECMW-9
Ammonia-N



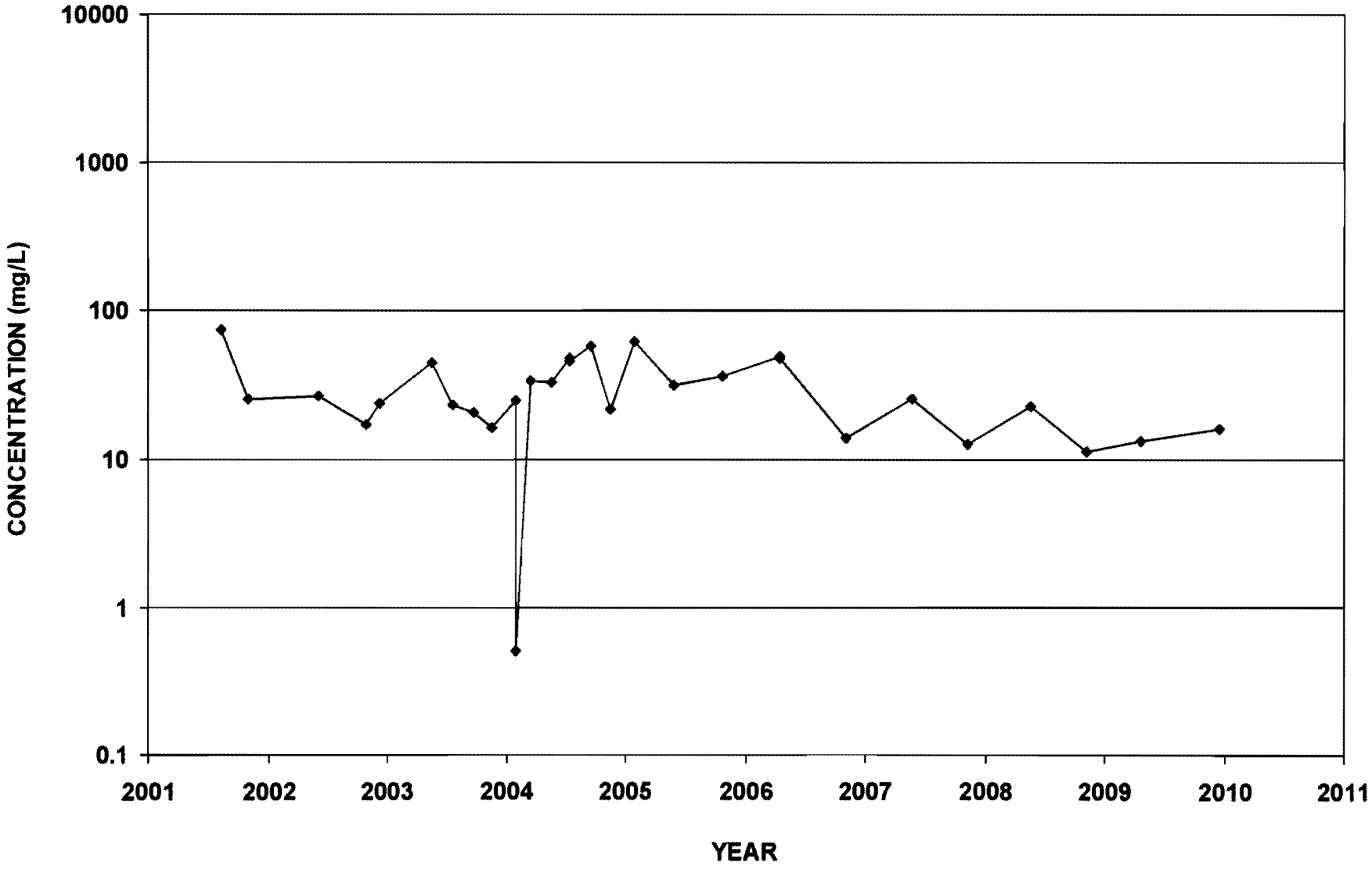
ECMW-10
Nitrate-N



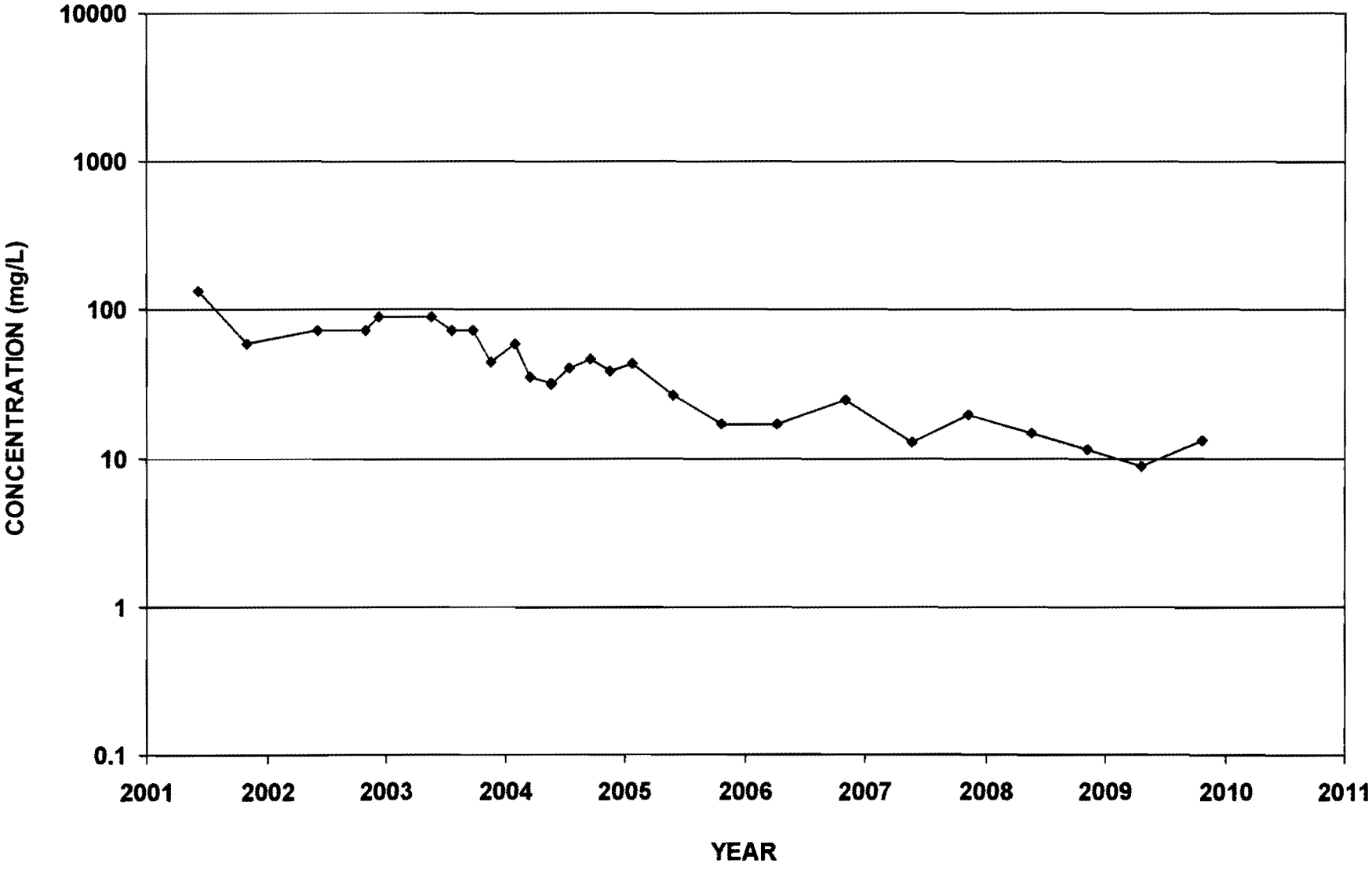
ECMW-11
Nitrate-N



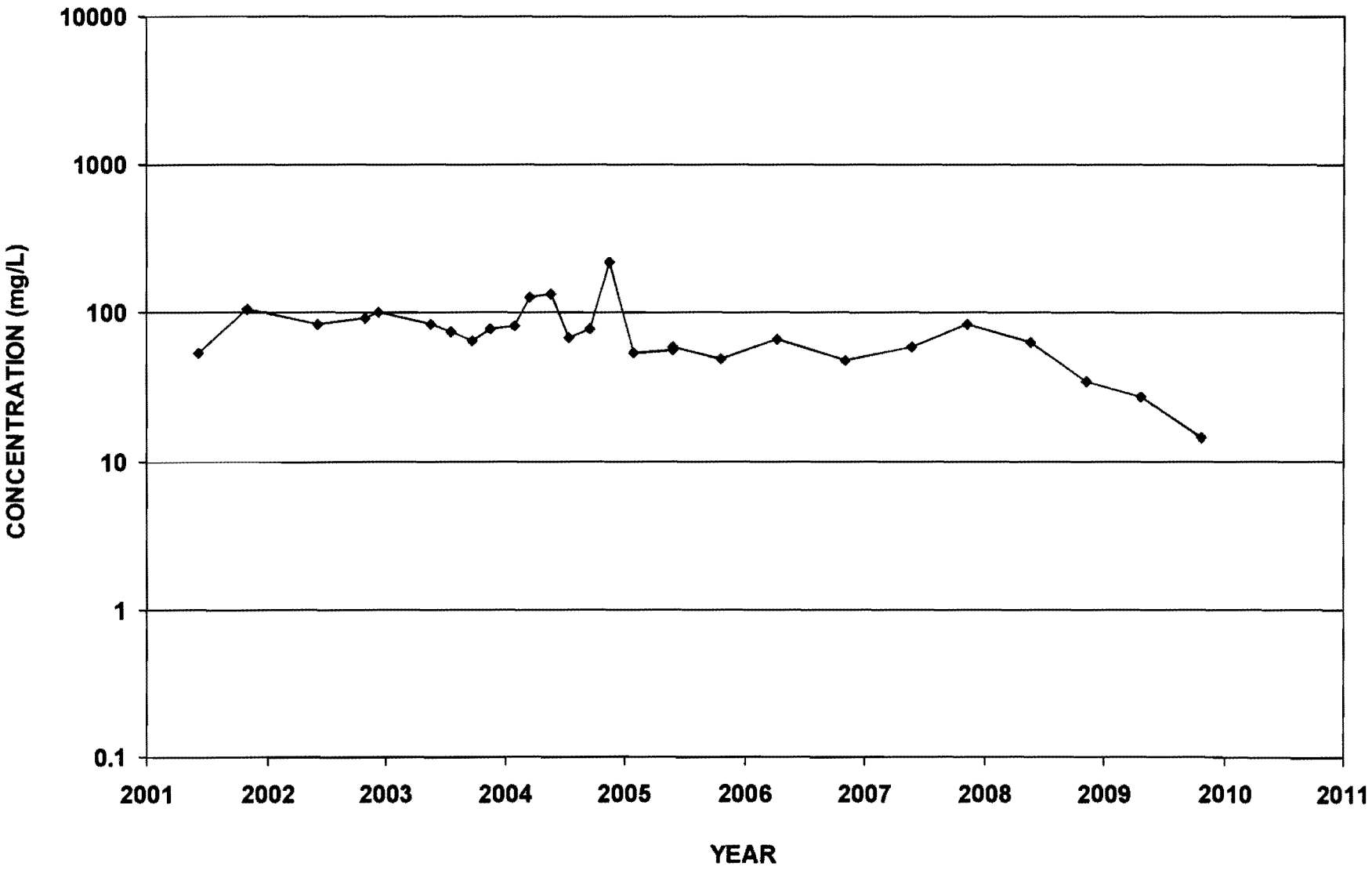
ECMW-14
Nitrate-N



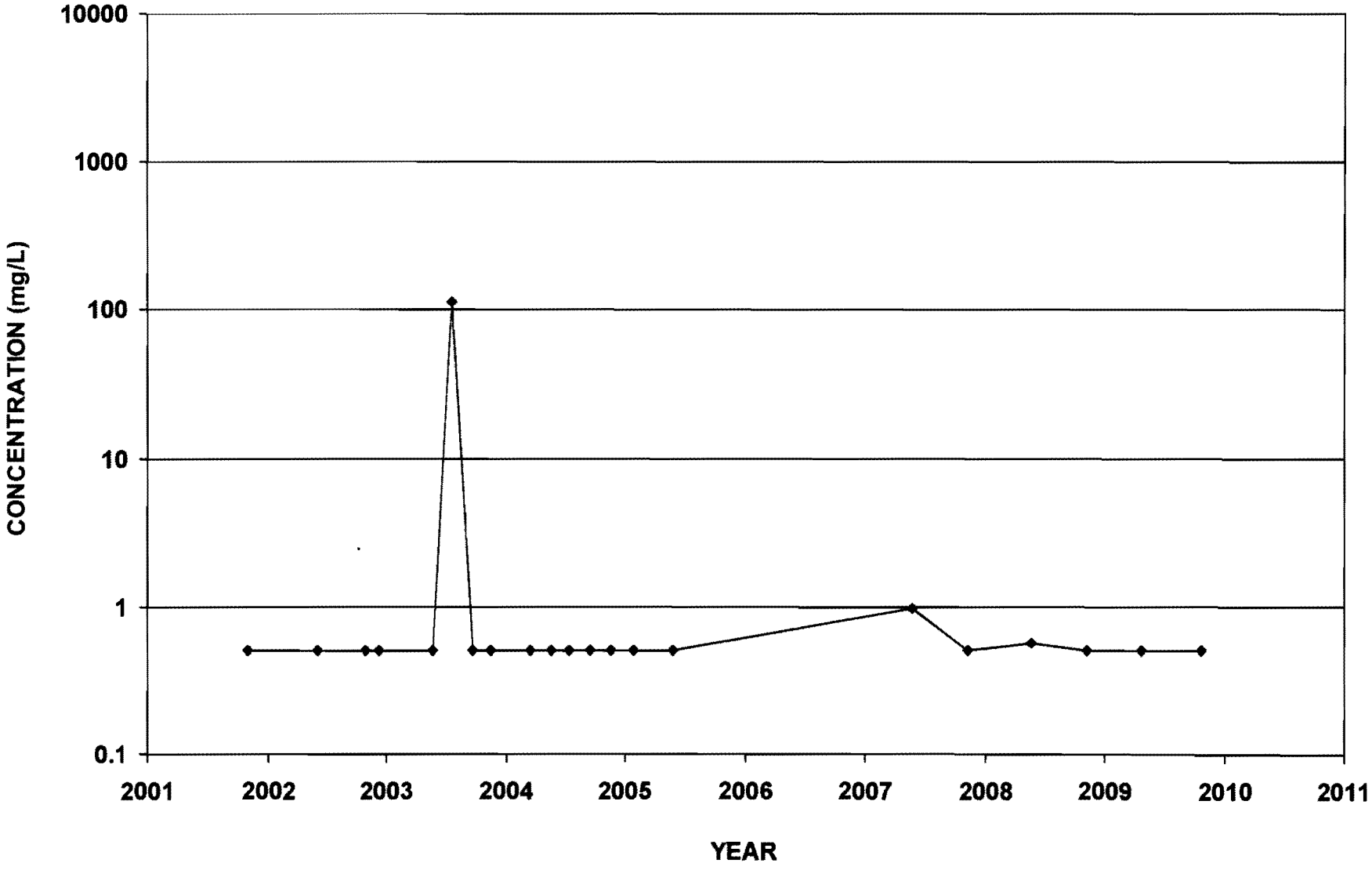
ECMW-16
Nitrate-N



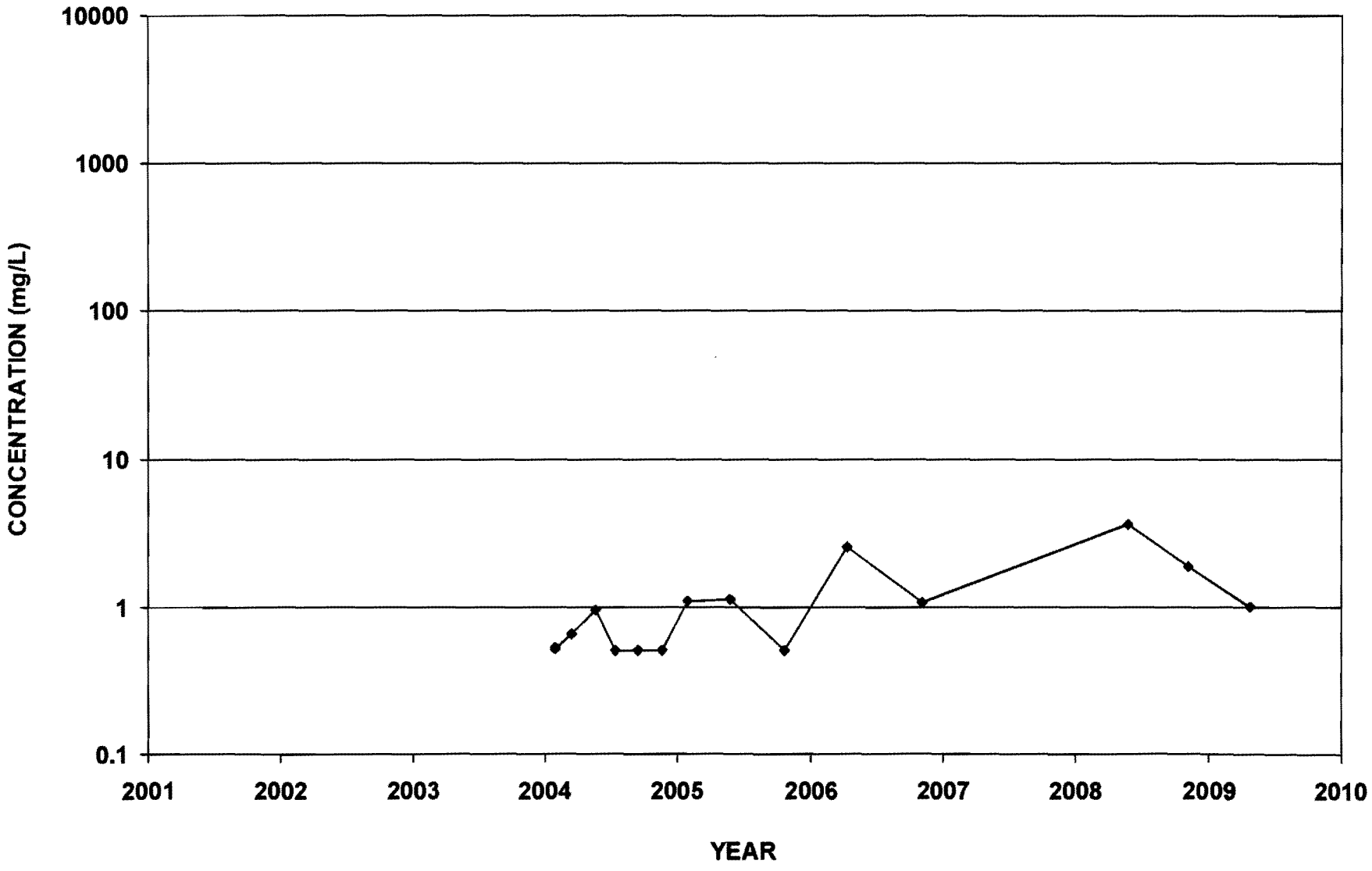
ECMW-17
Nitrate-N



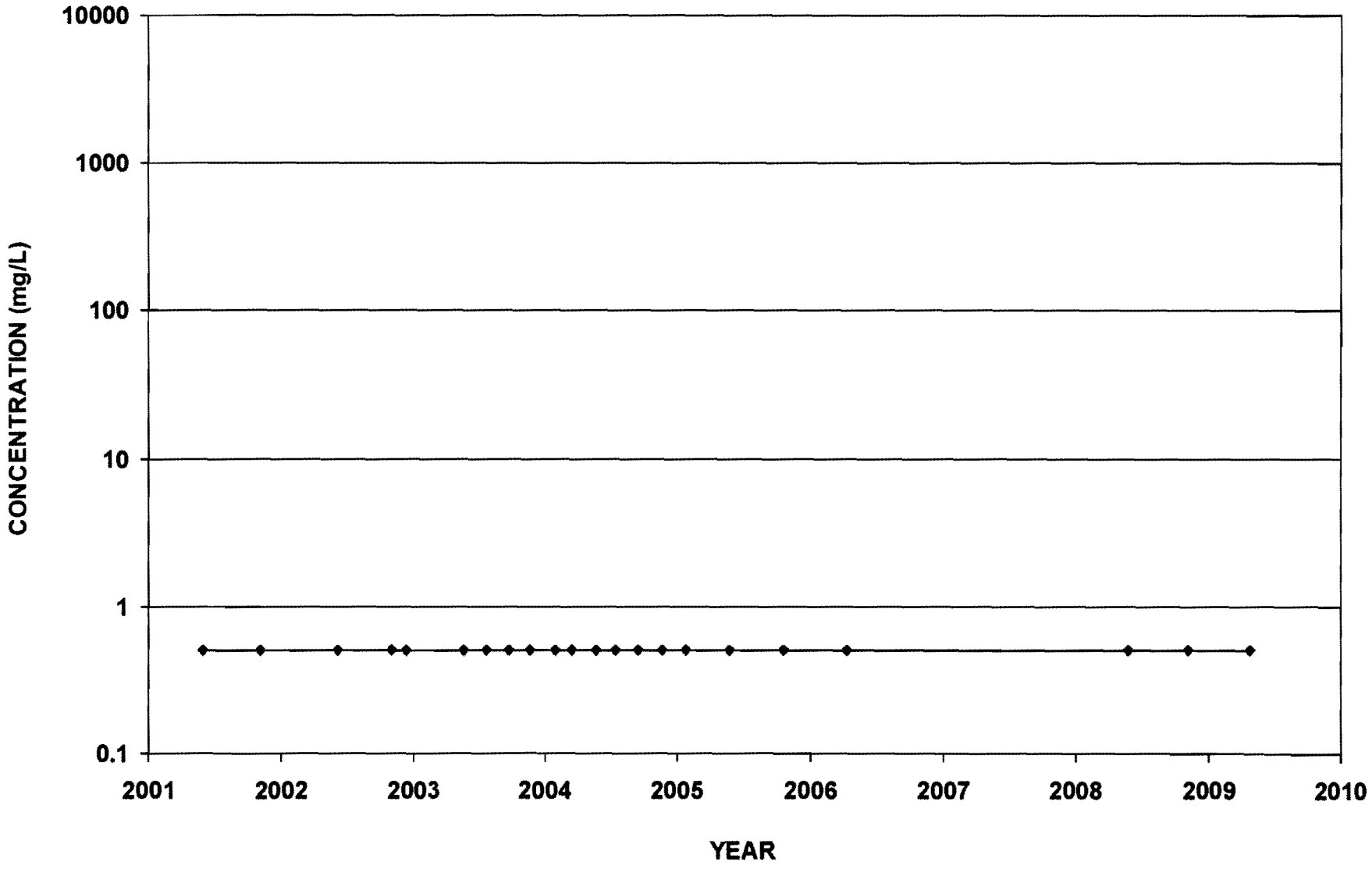
ECMW-18
Nitrate-N



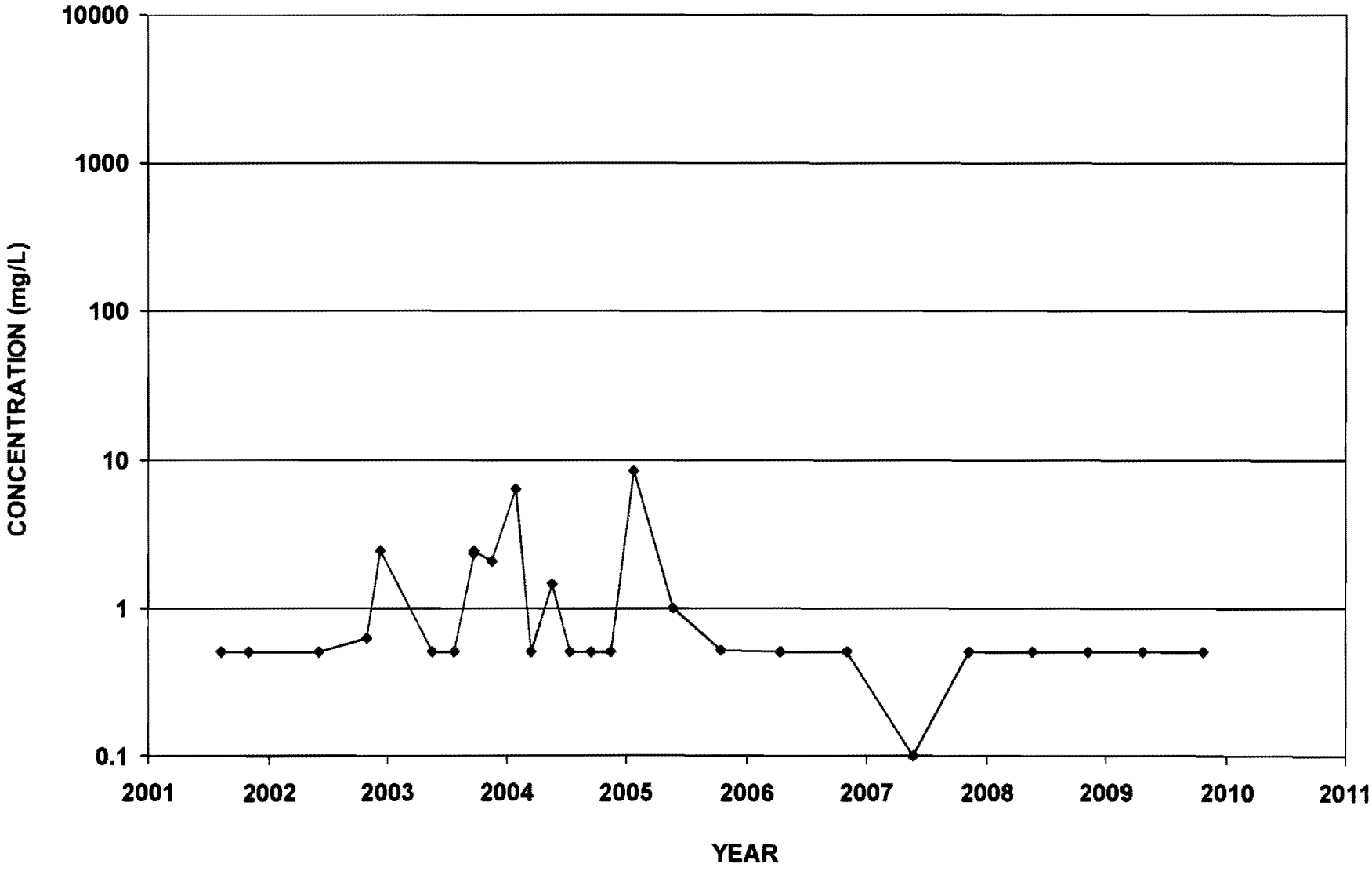
ECMW-22
Nitrate-N



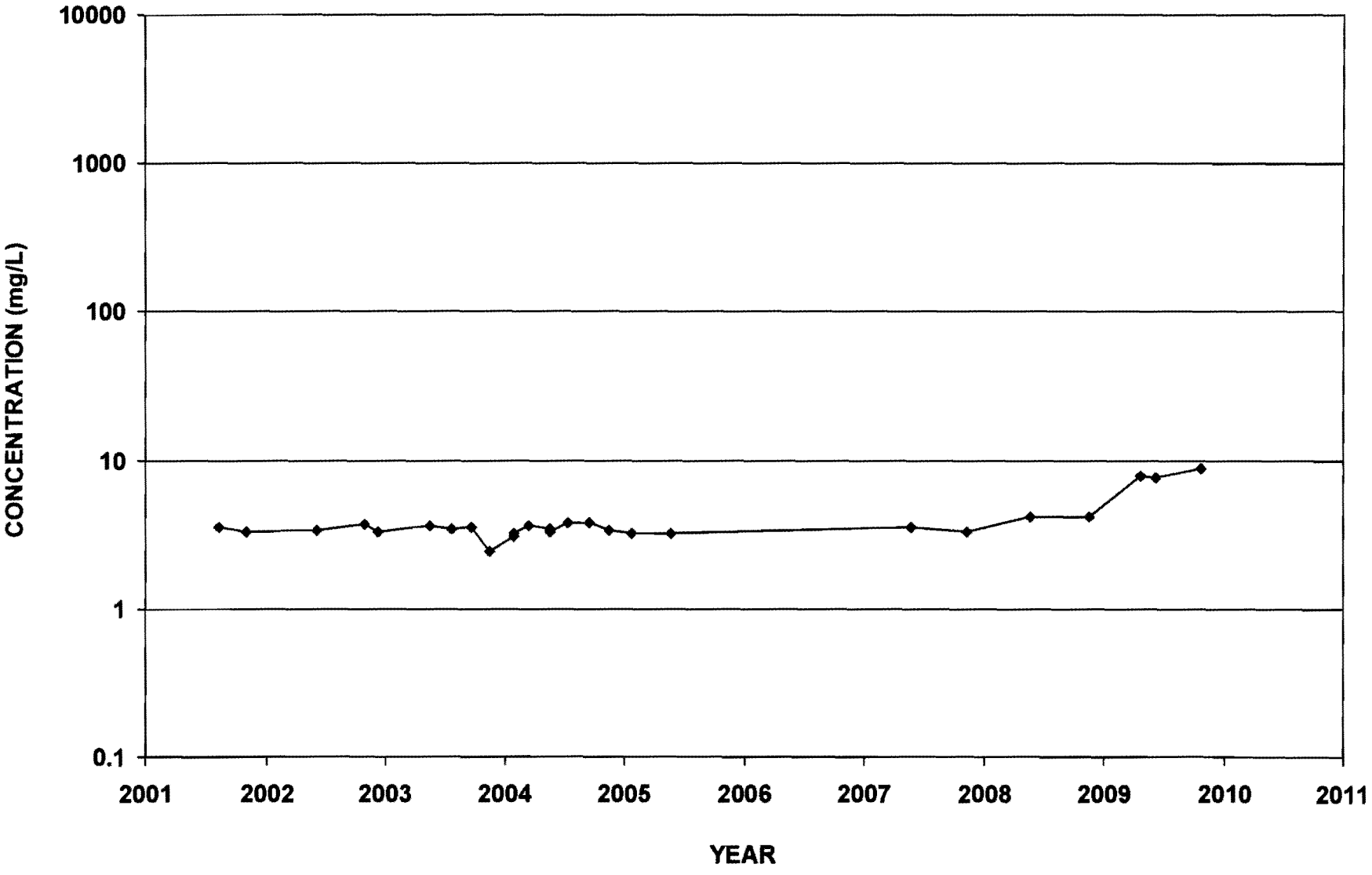
ECMW-3
Nitrate-N



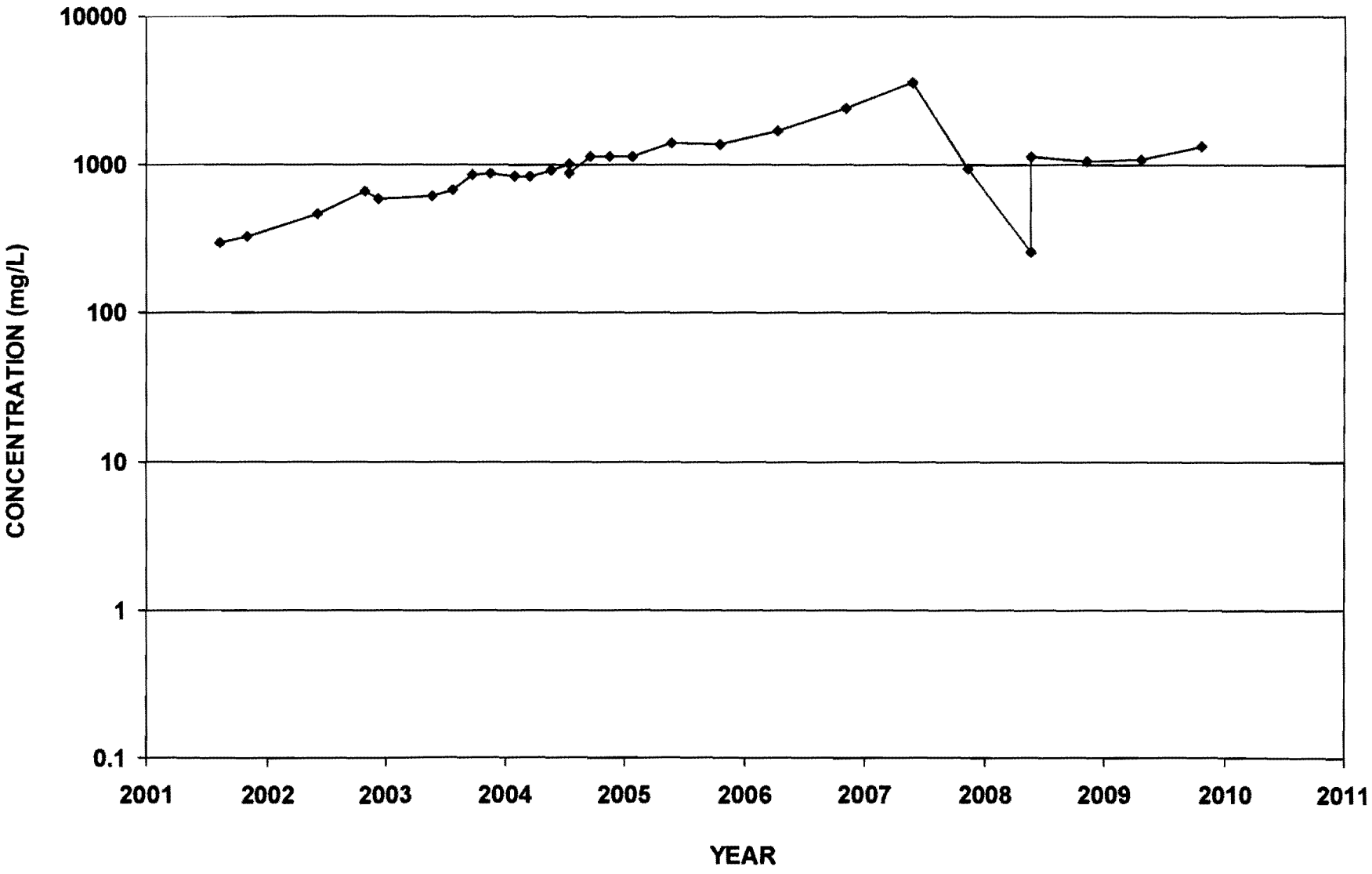
ECMW-4
Nitrate-N



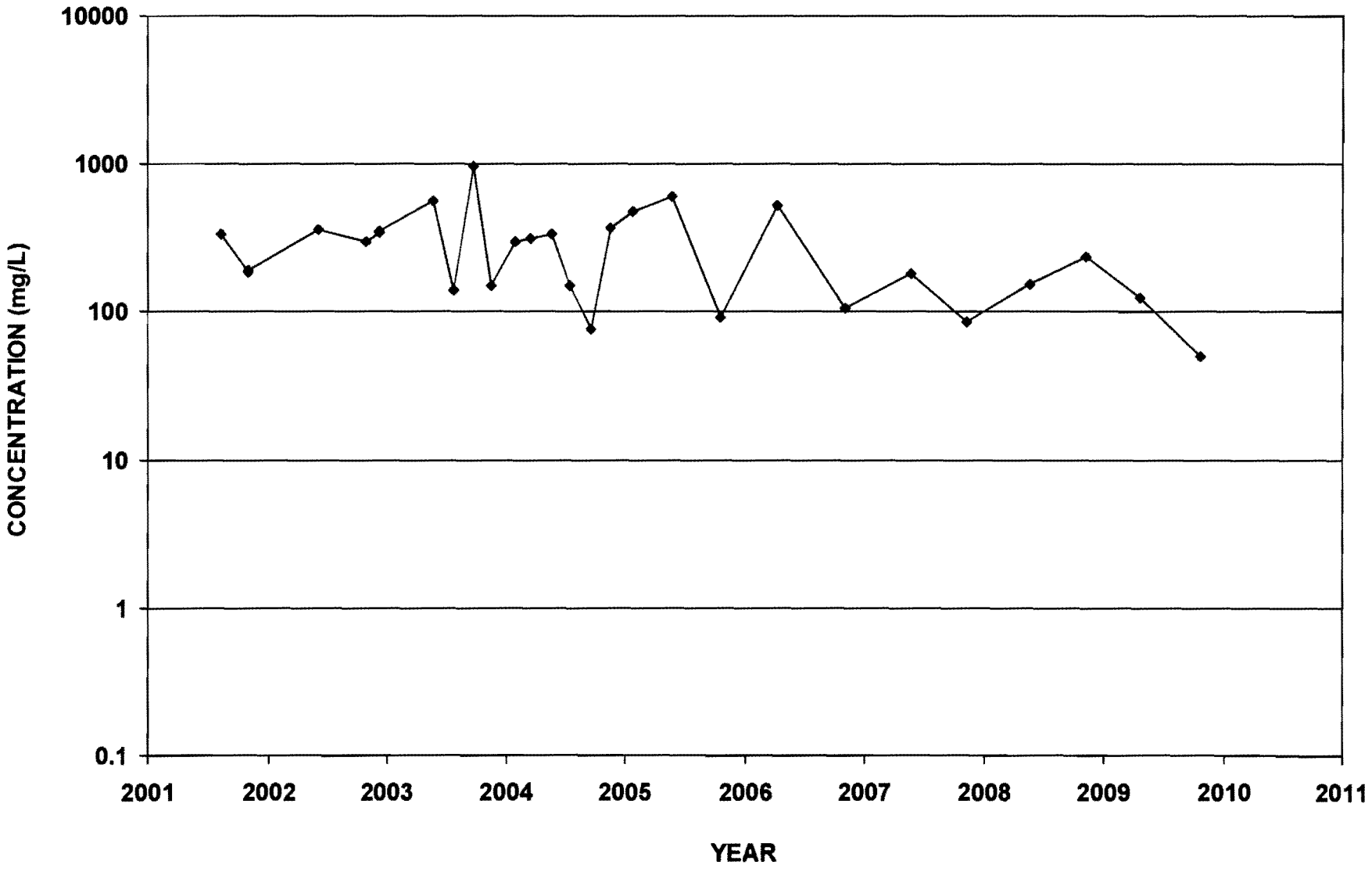
ECMW-5
Nitrate-N



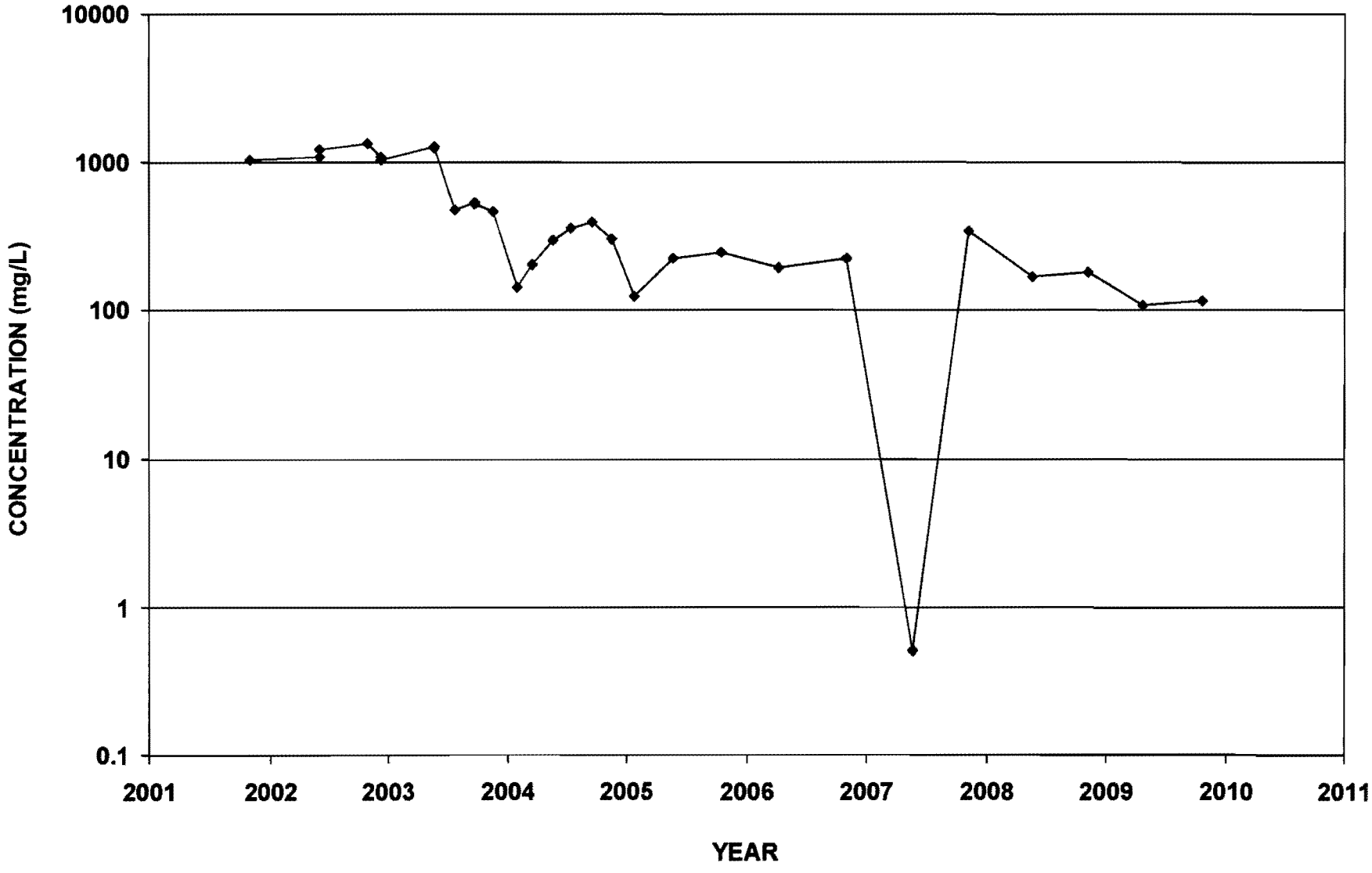
ECMW-6
Nitrate-N



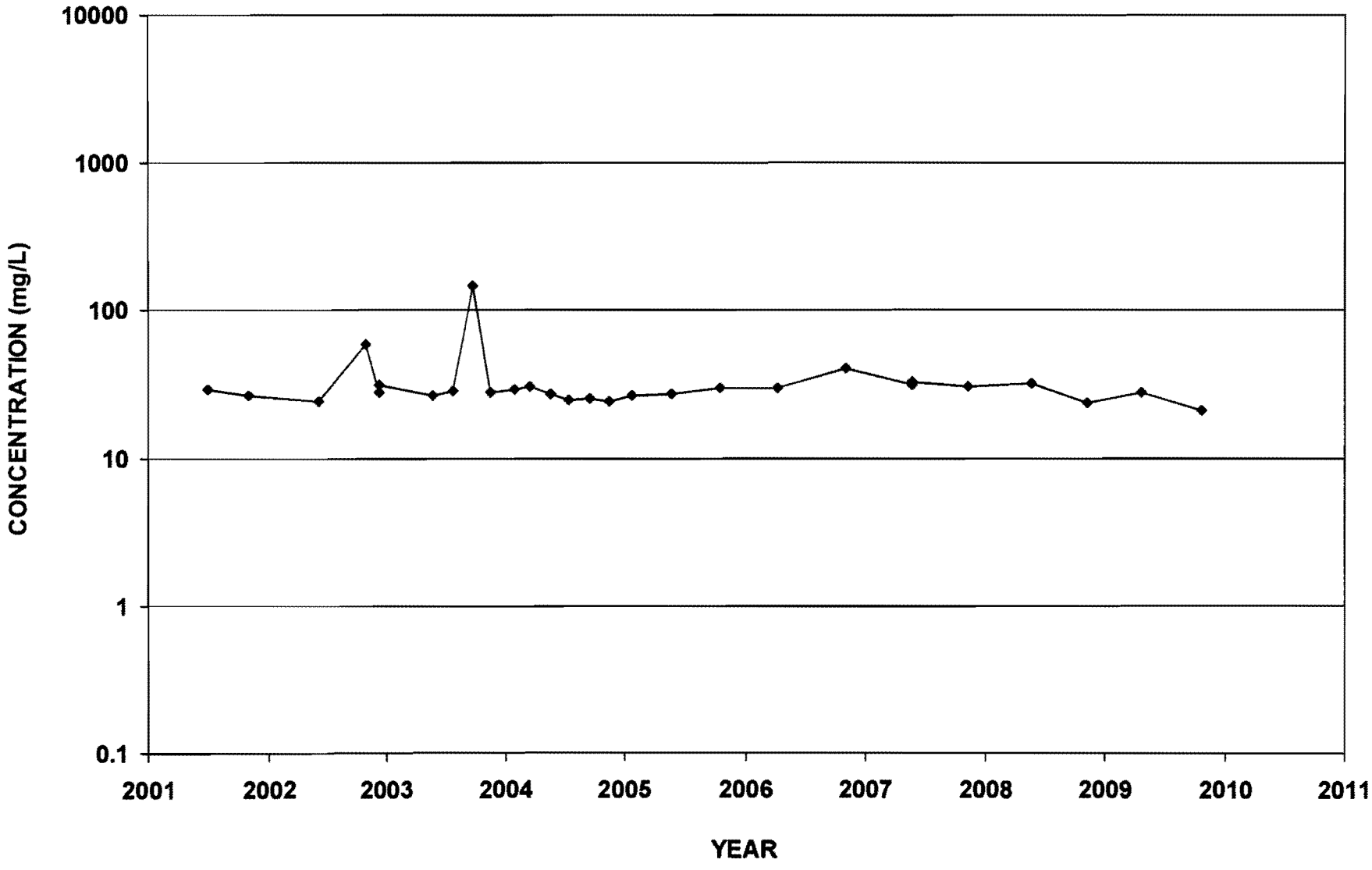
ECMW-7
Nitrate-N



ECMW-8
Nitrate-N



ECMW-9
Nitrate-N



P.O. BOX 1373 • OKLAHOMA CITY, OKLAHOMA 73101 • 405-235-4546

EL DORADO
CHEMICAL COMPANY

July 12, 2007

Mr. Dennis Benson
Technical Assistance Manager
NPDES Permits Section - Water Division
Arkansas Department of Environmental Quality
8001 National Drive
Little Rock, Arkansas 72219-8913

RE: Quarterly Report – Second Quarter 2007, CAO LIS 98-119

Dear Mr. Benson:

This letter serves as the referenced Quarterly Report. During this quarter there continued to be significant actions regarding the NPDES permit for El Dorado Chemical Company (EDCC). As related in previous quarterly reports, these actions centered on projects and studies related to compliance with our current NPDES permit as well as the continued development of the project to construct a pipeline to the Ouachita River. The following paragraphs present details regarding these activities.

1. Hydrologic Study

As related in previous quarterly reports, EDCC submitted a hydrologic study plan for the storm water outfalls. This plan was approved by ADEQ and then subsequently revised to modify the location of the background monitor for Outfalls 006 and 007. During the 3rd quarter of 2006 the hydrologic study was completed and the final report submitted to the ADEQ. During the 1st quarter of 2007, EDCC received comments dated January 5, 2007 and met with ADEQ to discuss those comments. Subsequent to that meeting, GBMc received a permitting options letter for which EDCC responded. During the second quarter of 2007 the ADEQ did not propose a modification to the NPDES permit regarding Outfall 006 and 007 based on the hydrologic study.

2. Retention Basin Temperature Study

Pursuant to the requirements of the final NPDES permit, EDCC submitted a temperature study plan for the purpose of determining the influence of ambient conditions on the temperature regime of the retention basin at EDCC. The study report was completed and submitted to the ADEQ during the 4th quarter of 2005. During the 2nd quarter of 2007, there continued to be no permitting action based on

the final study report. However, EDCC received approval of the temperature study in a letter dated January 5, 2007 and the temperature limit will be removed from the permit upon renewal or modification of the existing permit. That modification or renewal was not proposed by ADEQ during the 2nd quarter of 2007.

3. Storm Water Outfall Compliance

During the 2nd quarter of 2007 the following activities were accomplished or continue to effectuate compliance with storm water discharges from Outfalls 004, 005, 006 and 007.

- The construction activities to redirect rainfall from selected areas of the Outfalls 006 and 007 drainage areas for routing to the wastewater treatment system was completed during the 2nd quarter of 2007.

- As mentioned in earlier reports, Outfall 004 has been plugged and is no longer operative. The pumps diverting the Outfall 004 water continue to transport stormwater to the wastewater treatment system via Lake Lee. ADEQ deleted Outfall 004 from our existing NPDES permit effective January 5, 2007.

- As mentioned in earlier reports, the stormwater runoff from the industrial areas of Outfall 005 and part of Outfall 006 continue to be routed into Lake Lee.

- Outfall 005 was physically eliminated and a request to delete it from our NPDES permit was sent to the ADEQ during the first quarter of 2006. ADEQ has deleted Outfall 005 from our existing NPDES permit effective January 5, 2007.

- During the 1st quarter of 2007, EDCC addressed identified storm water sampling issues and met with ADEQ to discuss resolution of those issues. Subsequently, a proposed CAO was developed and submitted to ADEQ for consideration to resolve the issues.

- During the 2nd quarter of 2007, EDCC continued to use the automated sampling system for Outfalls 006 and 007 to ensure the collection of samples representative of flow resulting from rain events. Analytical results from the 2nd quarter show substantial improvement in storm water quality at Outfalls 006 and 0007.

- During the 2nd quarter of 2007, EDCC proposed a plan for a hydrologic study for a new outfall location which would combine Outfalls 006 and 007 and create a new Outfall for NPDES sampling. This study plan was approved by the ADEQ and the flow monitoring equipment was set in place and activated during the 2nd quarter.

4. Source Reduction Activities

   During the 2nd quarter of 2007, source reduction activities continued, including:

   - Process improvements in the Nitrate Plant and Acid Plant areas continue to be implemented to reduce waste loading to the wastewater system. These efforts have paid-off with major reductions in the nitrate and ammonia concentrations in the wastewater measured in Lake Lee. In the 2nd quarter of 2007, Lake Lee effluent averaged 14.36 mg/L Ammonia-N and 30.07 mg/L Nitrate-N. In the 2nd quarter of 2007, Outfall 001 averaged 5.79 mg/L Ammonia-N and 16.00 mg/L Nitrate-N compared to the June 1, 2007 daily average permit limits of 12 mg/L and 26.3 mg/L respectively.

   - Efforts continue to identify and repair piping and collection sumps in the Nitrate Plant area and Acid Plant area to reduce waste loading to the wastewater system.

5. Wastewater System

   During the 2nd quarter of 2007, EDCC continued use of the AquaMats in Lake Lee and Lake Kildeer. AquaMats are membranes for sustaining colonies of nitrifying and denitrifying bacteria.

6. Wastewater Treatment Bio-augmentation

   As discussed in previous quarterly reports, during the 2nd quarter of 2007, EDCC continued implementation of the alternative wastewater treatment technology. We continue the collection of performance data to determine the efficacy of the organisms in our wastewater treatment system.

The data that EDCC has collected so far indicates that the addition of various microbes has had a positive impact on the wastewater treatment system. The biomonitoring results from Outfall 001 continue to demonstrate improvement with the 2nd quarter 2007 tests passing at 100% effluent water for lethality. The concentrations of contaminants such as ammonia-nitrogen and nitrate also continue to decline as well.

The charts attached show the source reduction the plant has accomplished to date.

7. Ground Water Study

During the 2nd quarter of 2007, EDCC continued groundwater activities as directed by CAO LIS No. 06-153 which was finalized on Nov. 16, 2006.

8. Joint Pipeline Activities

During the 2nd quarter of 2007, EDCC, in support of the joint pipeline, continued to be active in the finalization of the joint pipeline related NPDES permits by supplying additional Ouachita River dissolved oxygen modeling information to ADEQ through GBMc & Associates. This information was requested by ADEQ to address concerns raised by the State of Louisiana. The NPDES permits related to the joint pipeline were finalized during the 1st quarter of 2007.

9. Water Quality (4g) Study for Dissolved Minerals

During the 2nd quarter of 2007, there was significant action on EDCC's Third Party Rulemaking request to amend the dissolved minerals criteria and the designated domestic water supply use for the unnamed tributary into which Outfall 001 discharges.

During this quarter, the Third Party Rulemaking was approved by the Arkansas Pollution Control and Ecology Commission. It is anticipated that the amended Water Quality Standards will be sent to USEPA during the 3rd quarter of 2007 and an amended NPDES permit issued after its approval by that agency.

Hopefully, this letter has adequately explained the status of our NPDES compliance efforts during the 2nd quarter of 2007. Should you have any questions, please feel free to call me at (405) 235-4546.

Sincerely,

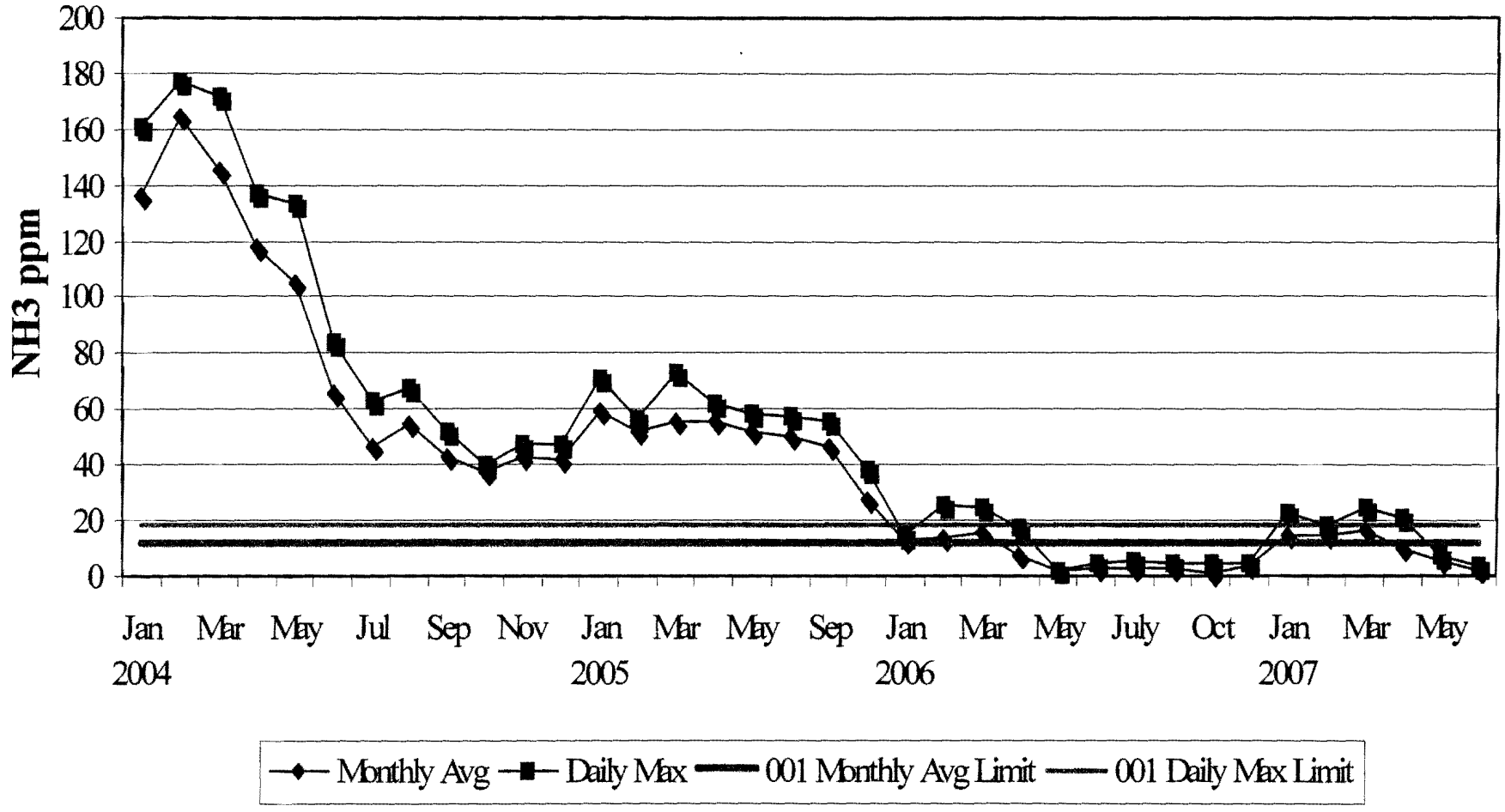
John M. Carver

John M. Carver
Vice President Safety and
Environmental Compliance

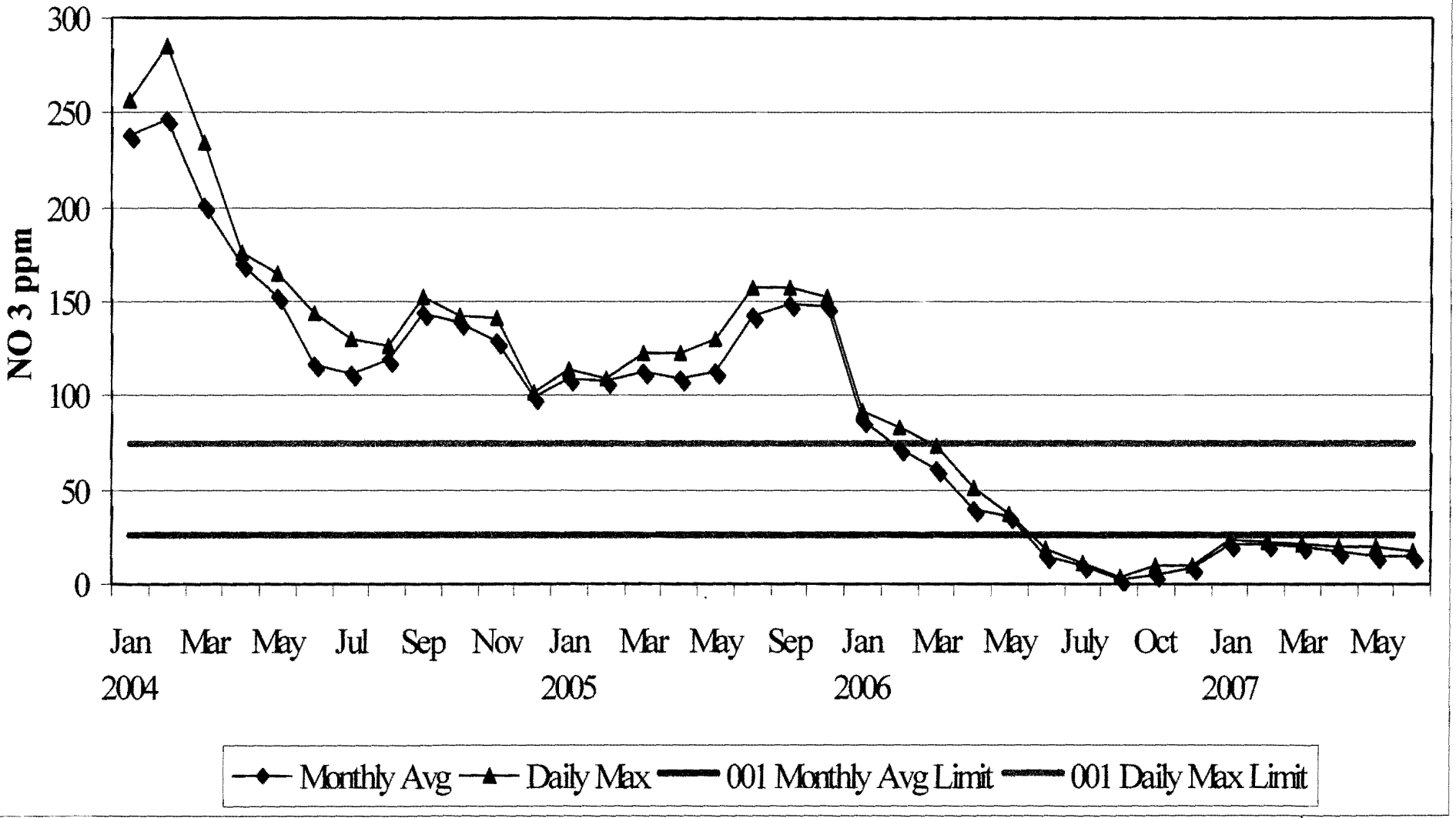
JMC/ymq

cc: Steve Drown, Acting Water Division Chief, ADEQ

NH3 Compared to 001 Outfall Limits
The Limits Below Are Effective June 2007



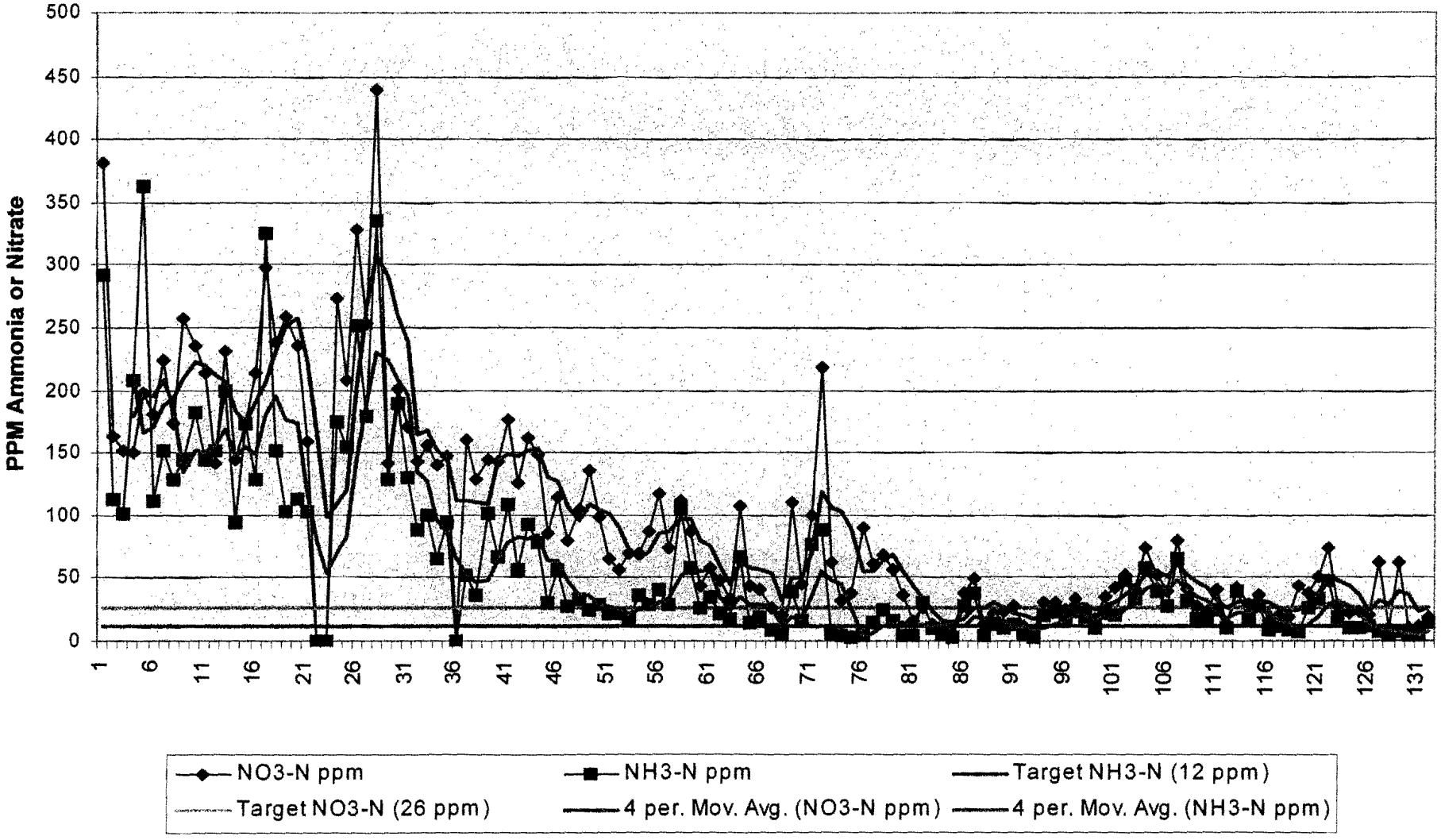
NO3 Compared to 001 Outfall Limits
The Limits Below Are Effective June 2007



EL Dorado Chemcial

Lake Lee Weekly Average - The Limits are Effective June 2007

January 2005 - June 2007



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EL DORADO
CHEMICAL COMPANY

July 12, 2007

Mr. Dennis Benson
Technical Assistance Manager
NPDES Permits Section - Water Division
Arkansas Department of Environmental Quality
8001 National Drive
Little Rock, Arkansas 72219-8913

RE: Quarterly Report – Second Quarter 2007, CAO LIS 98-119

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During the 2nd quarter of 2007 the following activities were accomplished or continue to effectuate compliance with storm water discharges from Outfalls 004, 005, 006 and 007.

- The construction activities to redirect rainfall from selected areas of the Outfalls 006 and 007 drainage areas for routing to the wastewater treatment system was completed during the 2nd quarter of 2007.

- As mentioned in earlier reports, Outfall 004 has been plugged and is no longer operative. The pumps diverting the Outfall 004 water continue to transport stormwater to the wastewater treatment system via Lake Lee. ADEQ deleted Outfall 004 from our existing NPDES permit effective January 5, 2007.

- As mentioned in earlier reports, the stormwater runoff from the industrial areas of Outfall 005 and part of Outfall 006 continue to be routed into Lake Lee.

- Outfall 005 was physically eliminated and a request to delete it from our NPDES permit was sent to the ADEQ during the first quarter of 2006. ADEQ has deleted Outfall 005 from our existing NPDES permit effective January 5, 2007.

- During the 1st quarter of 2007, EDCC addressed identified storm water sampling issues and met with ADEQ to discuss resolution of those issues. Subsequently, a proposed CAO was developed and submitted to ADEQ for consideration to resolve the issues.

- During the 2nd quarter of 2007, EDCC continued to use the automated sampling system for Outfalls 006 and 007 to ensure the collection of samples representative of flow resulting from rain events. Analytical results from the 2nd quarter show substantial improvement in storm water quality at Outfalls 006 and 0007.

- During the 2nd quarter of 2007, EDCC proposed a plan for a hydrologic study for a new outfall location which would combine Outfalls 006 and 007 and create a new Outfall for NPDES sampling. This study plan was approved by the ADEQ and the flow monitoring equipment was set in place and activated during the 2nd quarter.

4. Source Reduction Activities

   During the 2nd quarter of 2007, source reduction activities continued, including:

   - Process improvements in the Nitrate Plant and Acid Plant areas continue to be implemented to reduce waste loading to the wastewater system. These efforts have paid-off with major reductions in the nitrate and ammonia concentrations in the wastewater measured in Lake Lee. In the 2nd quarter of 2007, Lake Lee effluent averaged 14.36 mg/L Ammonia-N and 30.07 mg/L Nitrate-N. In the 2nd quarter of 2007, Outfall 001 averaged 5.79 mg/L Ammonia-N and 16.00 mg/L Nitrate-N compared to the June 1, 2007 daily average permit limits of 12 mg/L and 26.3 mg/L respectively.

   - Efforts continue to identify and repair piping and collection sumps in the Nitrate Plant area and Acid Plant area to reduce waste loading to the wastewater system.

5. Wastewater System

   During the 2nd quarter of 2007, EDCC continued use of the AquaMats in Lake Lee and Lake Kildeer. AquaMats are membranes for sustaining colonies of nitrifying and denitrifying bacteria.

6. Wastewater Treatment Bio-augmentation

   As discussed in previous quarterly reports, during the 2nd quarter of 2007, EDCC continued implementation of the alternative wastewater treatment technology. We continue the collection of performance data to determine the efficacy of the organisms in our wastewater treatment system.

The data that EDCC has collected so far indicates that the addition of various microbes has had a positive impact on the wastewater treatment system. The biomonitoring results from Outfall 001 continue to demonstrate improvement with the 2nd quarter 2007 tests passing at 100% effluent water for lethality. The concentrations of contaminants such as ammonia-nitrogen and nitrate also continue to decline as well.

The charts attached show the source reduction the plant has accomplished to date.

7. Ground Water Study

During the 2nd quarter of 2007, EDCC continued groundwater activities as directed by CAO LIS No. 06-153 which was finalized on Nov. 16, 2006.

8. Joint Pipeline Activities

During the 2nd quarter of 2007, EDCC, in support of the joint pipeline, continued to be active in the finalization of the joint pipeline related NPDES permits by supplying additional Ouachita River dissolved oxygen modeling information to ADEQ through GBMc & Associates. This information was requested by ADEQ to address concerns raised by the State of Louisiana. The NPDES permits related to the joint pipeline were finalized during the 1st quarter of 2007.

9. Water Quality (4g) Study for Dissolved Minerals

During the 2nd quarter of 2007, there was significant action on EDCC's Third Party Rulemaking request to amend the dissolved minerals criteria and the designated domestic water supply use for the unnamed tributary into which Outfall 001 discharges.

During this quarter, the Third Party Rulemaking was approved by the Arkansas Pollution Control and Ecology Commission. It is anticipated that the amended Water Quality Standards will be sent to USEPA during the 3rd quarter of 2007 and an amended NPDES permit issued after its approval by that agency.

Hopefully, this letter has adequately explained the status of our NPDES compliance efforts during the 2nd quarter of 2007. Should you have any questions, please feel free to call me at (405) 235-4546.

Sincerely,

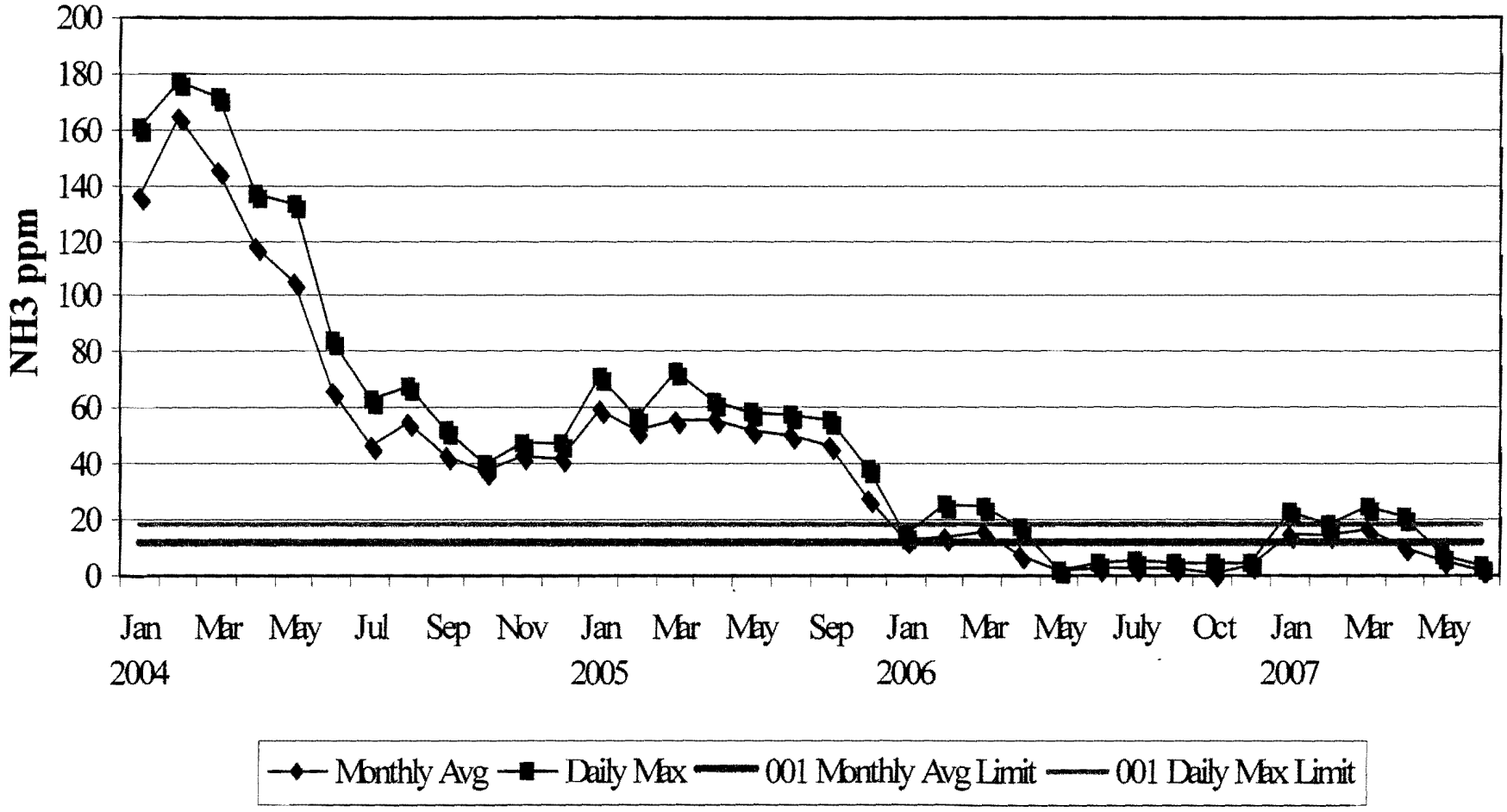
John M. Carver

John M. Carver
Vice President Safety and
Environmental Compliance

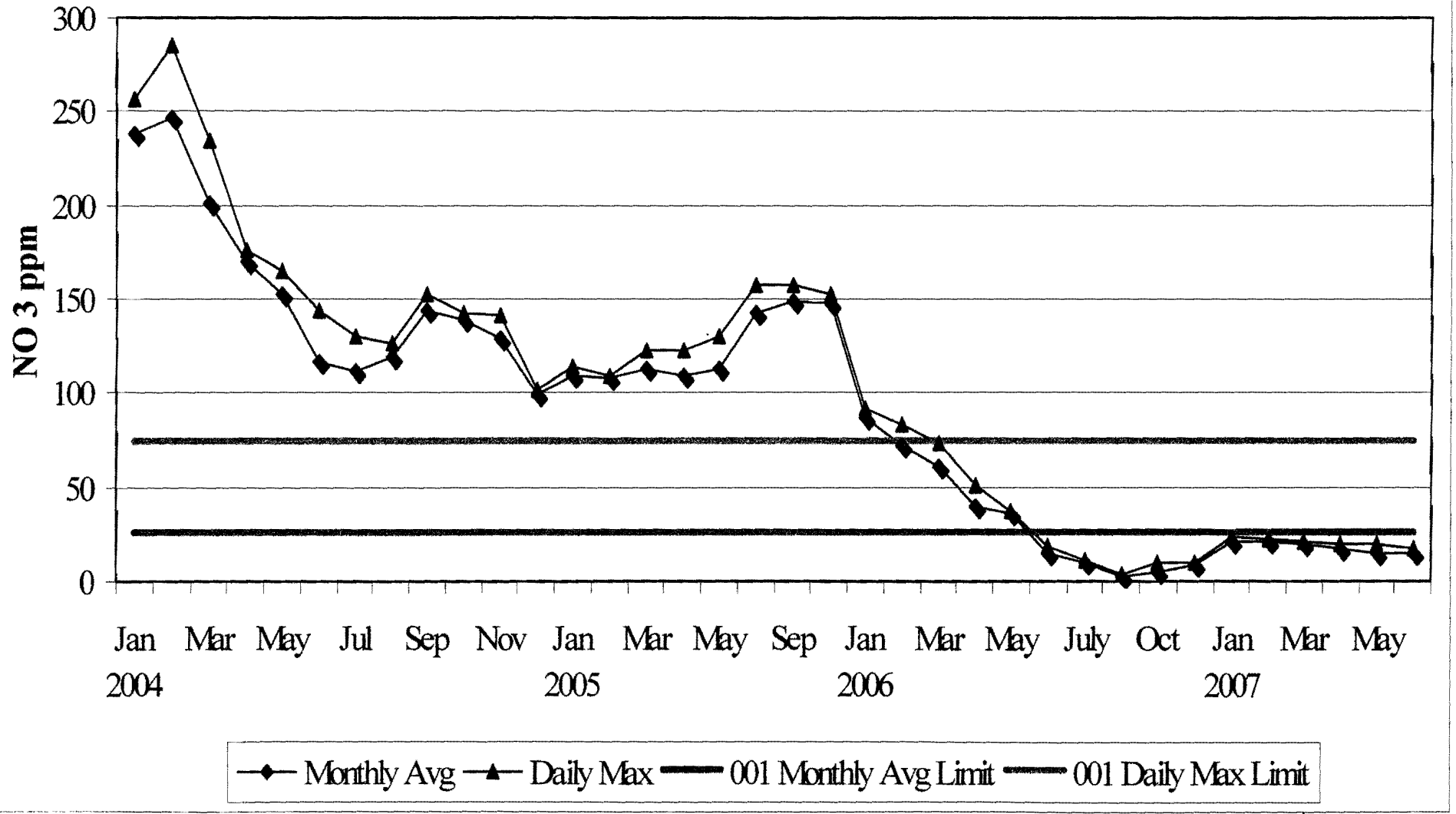
JMC/ymq

cc: Steve Drown, Acting Water Division Chief, ADEQ

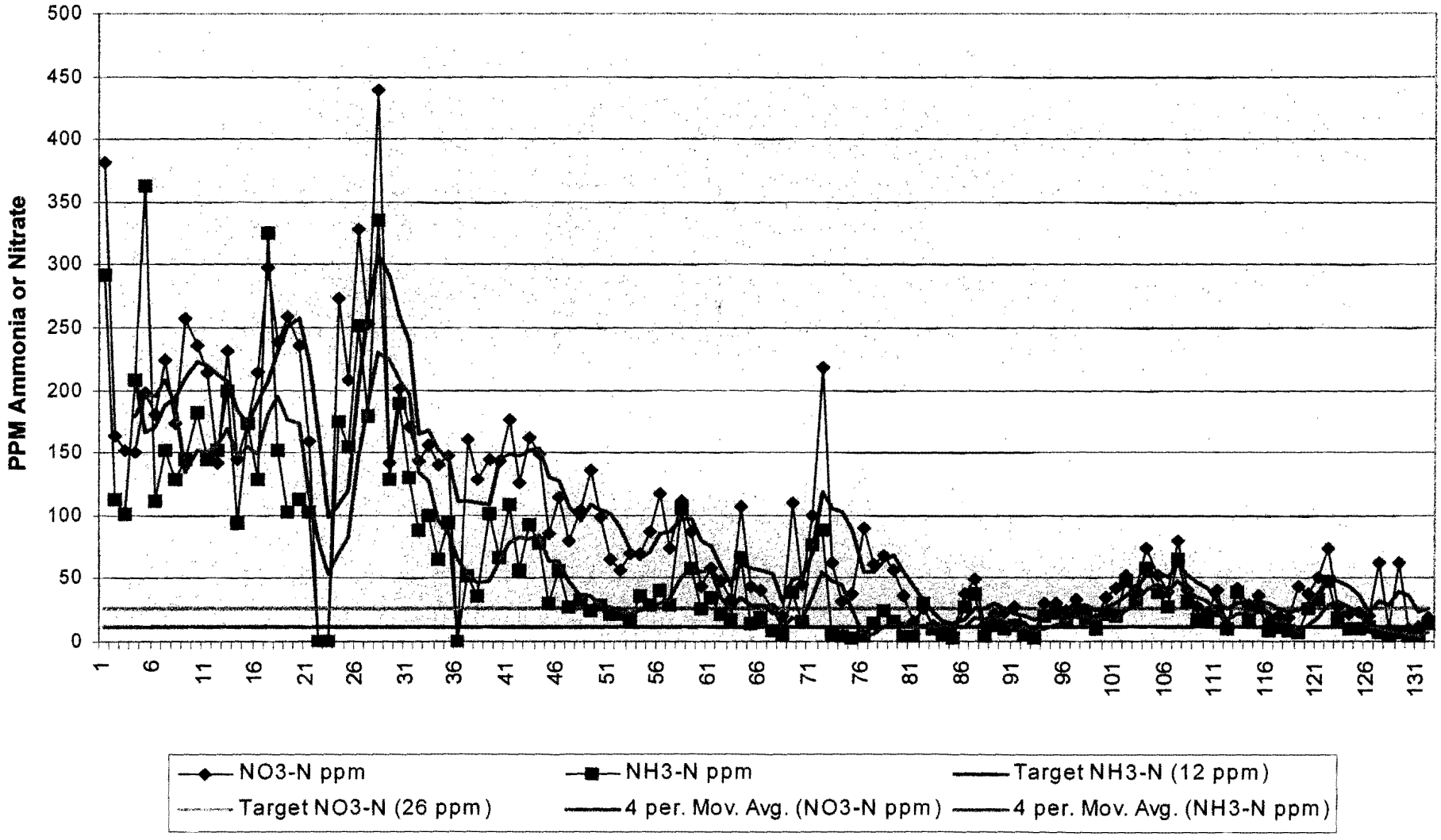
NH3 Compared to 001 Outfall Limits
The Limits Below Are Effective June 2007



NO3 Compared to 001 Outfall Limits
The Limits Below Are Effective June 2007



EL Dorado Chemcial
Lake Lee Weekly Average - The Limits are Effective June 2007
January 2005 - June 2007



SUMMARIES of REMEDIATION PROJECTS

1) **El Dorado Chemical Co. (EDCC) – see separate document for history of EDCC**
   - PAR LIS 03-067 required a risk assessment to address the ground water contamination. However, this PAR was signed to address an NPDES permit and did not take into account the existing activities that were ongoing to obtain site data and recommend a site-specific action, primarily an active recovery system or similar operation. The PAR required a CAO to address gw and evaluate nitrates, conduct a risk assessment and implement action to address the risks. A CAO pertaining specifically to gw began draft in 2004 and continued until its approval in Nov. 2006 (CAO LIS 06-153). A risk assessment and remedial action plan are part of the CAO and are to be submitted in accordance with the CAO schedule.
   - In 10/2005, changes were made to the semi-annual sampling parameter list for the background wells. Background wells MW-1, MW-2 and MW-3 were moved to sample once every three years, ammonia was removed from MW-4, MW-5, MW-9, MW-10, MW-13, MW-14, MW-15, and MW-18; Nitrate removed from MW-4, MW-5, MW-12, MW-13 and MW-18; Chromium removed from all wells but MW-18; Lead was removed from all wells but MW-7 and MW-18; and sulfate and TDS was removed from all wells. pH, Temperature, specific conductivity, DO, redox, alkalinity, nitrite, dissolved manganese, dissolved iron, total phosphorus and TOC was added to all wells beginning 2006.
   - In 6/2006, EDCC installed 2 recovery wells near MW-7 and MW-8 to a total depth of around 30' and 39' bgs along the north boundary of the plant where some of the highest nitrate levels occur. Both wells are active during 2006 and into 2007. A report detailing the system installation was submitted 1/2007. Summary of the system is to be submitted with the annual reports.
   - Annual reports are due by April 1 of each year, per the CAO (LIS 06-153).
   - A Remedial Action Work Plan (RAP) is to be prepared and submitted by Nov. 2007 (one year of effective date of CAO).