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CHEMICAL COMPANY

March 31, 2015

Ms. Linda Hanson  
Professional Geologist  
Arkansas Department of Environmental Quality  
5301 Northshore Drive  
North Little Rock, Arkansas 72118-5317

Dear Ms. Hanson:

Please find the attached 2014 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,

  
Greg Withrow  
General Manager  
El Dorado Chemical Company

# 2014 ANNUAL GROUND WATER REPORT

Prepared For:

The logo for El Dorado features the word "ELDORADO" in a stylized, outlined font. The letter "D" is significantly larger than the other letters and contains a solid black triangle pointing upwards.

**El Dorado Chemical Company**

Prepared By:

The logo for Environmental Management Services, Inc. consists of the word "ENVIRONMENTAL" in a serif font, with a horizontal line underneath it. To the right of the line is a circular emblem containing a stylized leaf or flame. Below "ENVIRONMENTAL" is the text "MANAGEMENT SERVICES, INC." in a smaller, sans-serif font.

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March 30, 2015

**2014 ANNUAL GROUND WATER REPORT  
EL DORADO CHEMICAL COMPANY  
EL DORADO, ARKANSAS**

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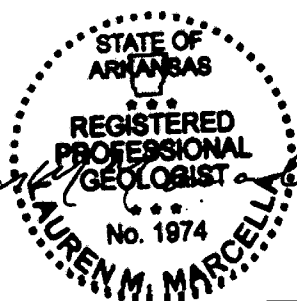
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**2014 ANNUAL GROUND WATER REPORT  
EL DORADO CHEMICAL COMPANY  
EL DORADO, ARKANSAS**

The report contained herein has been prepared by Environmental Management Services, Inc. (EMS) under the direct supervision of the environmental professional(s) indicated below. To the best of our knowledge all appropriate standards of care and practices were utilized to collect and report the data contained within this document. Services performed by EMS were conducted in a manner consistent with that degree of care and skill ordinarily exercised by reputable members of the same profession as EMS practicing in the same locality under similar conditions as exists at the time the service was provided. No other representation, express or implied, and no warranty or guarantee is included or intended in this proposal, or any report, opinion, document or otherwise as a result of, or part of the work by EMS, its subcontractors, or vendors.

Prepared By:

  
*Lauren M. Marcella*

Date: March 30, 2015

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**2014 ANNUAL GROUND WATER REPORT  
EL DORADO CHEMICAL COMPANY  
EL DORADO, ARKANSAS**

**1.0 INTRODUCTION**

This report presents the results of ground water sampling activities conducted at the El Dorado Chemical Company (EDCC) facility during 2014. Field sampling techniques, ground water flow, ground water quality and data analysis 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 Geostatigraphic 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 PROGRAM**

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

**3.1 MONITORING PARAMETERS**

In September 2005 statistical analyses were performed on ground water data to compare downgradient well data to upgradient (background) data and determine if the site constituents of concern are present at statistically significant levels. As a result of the statistical analyses, the monitoring program was revised in 2005 and implemented in 2006. 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.

Further revisions to the monitoring program 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 2007-2008 are as follows:

- **Lead and chromium:** These parameters were removed from the monitoring program during 2005; in 2007 ADEQ requested these parameters be sampled semiannually every two years to verify concentrations remain at the previously documented background levels.
- **Background Wells:** In 2004, data were used to establish the background levels of ammonia, nitrate, lead and chromium in the three upgradient wells ECMW-1, ECMW-2 and ECMW-3. These four parameters were dropped from the annual sampling list but are sampled semiannually every two years to verify concentrations remain at the previously documented background levels.
- **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 is sampled semiannually every two years. Nitrate will continue to be analyzed semiannually 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 is sampled semiannually every two years. 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 is sampled semiannually every two years. 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. ADEQ recommended that vanadium remain on the list in order to obtain enough data for statistical comparison.

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 for the evaluation of in situ remediation 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. In a letter to ADEQ dated June 3, 2011, EDCC requested additional changes to the monitoring program which included removal of these parameters from the list of constituents. The request was approved August 9, 2011 and was effective for the second half of 2011 sampling event.

### 3.2 FIELD SAMPLING

Ground water sampling events were conducted in June and November of 2014. 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 2014 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 2014 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 blind duplicates. Duplicates are required at a rate of one (1) duplicate per twenty (20) field samples. Four duplicates were collected in 2014 (two per period). Duplicate samples were tested for all parameters (ammonia, nitrate, sulfate, lead and chromium). The duplicate analyses are evaluated in Section 4.2.3.

### 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 in 2014 for the following constituents:

PARAMETER	ANALYTICAL METHODS
Ammonia-N	4500-NH3 D
Nitrate-N	EPA 300.0
Sulfate	EPA 300.0
Total and Dissolved Lead	EPA 200.7
Total and Dissolved Chromium	EPA 200.7
pH, Temperature, Specific Conductance	Field

### 4.0 SAMPLING RESULTS

The following sections present ground water flow and analytical data collected in 2014.

#### 4.1 GROUND WATER FLOW

Ground water elevations from June and November 2014 were used to construct the potentiometric maps included as Figures 2 and 3. The average ground water elevation was approximately 1.7 feet higher in June than in November. The general ground water flow direction is from northwest to southeast for both sampling events and is consistent with previous measurements.

## 4.2 GROUND WATER QUALITY

### 4.2.1 Field Parameters

Indicator parameter data collected during well purging are summarized on Table 3. In 2014, pH values ranged from 2.64 standard units in ECMW-16 to 7.26 standard units (s.u.) in ECMW-5, with an average of 4.56 s.u. The average of pH readings for 2014 (4.56 s.u.) was lower than in 2013 (5.32 s.u.). Specific conductance values ranged from 37.2 (ECMW-1) to 28,030 (ECMW-6) micro-Siemens/cm ( $\mu\text{S}/\text{cm}$ ) in 2014. The average of specific conductance readings for 2014 (3747  $\mu\text{S}/\text{cm}$ ) is similar to 2013 (4083  $\mu\text{S}/\text{cm}$ ) with the highest readings in Wells ECMW-6, ECMW-7 and ECMW-8.

### 4.2.2 Analytical Results

The analytical results are summarized in Tables 4 through 25 and the laboratory reports are provided in Appendix A. A discussion of each constituent is provided below:

#### Ammonia

During the year 2014, ammonia concentrations ranged from below the detection limit (0.5 mg/L) to 1110 mg/L (ECMW-6). As with previous years, results from ECMW-6, ECMW-7 and ECMW-8 exhibited the highest concentrations. Figures 4 and 5 were prepared to show the distribution of ammonia in groundwater at the facility. As shown on Figures 4 and 5, the highest ammonia concentrations continue to be located north of the acid and nitrate process areas known as the Production Area.

Trend graphs of ammonia concentrations through 2014 are provided in Appendix B. Well ECMW-6 shows an increasing trend. Well ECMW-16 shows a decreasing trend. Wells ECMW-4, ECMW-8 and ECMW-9 show an overall steady or decreasing trend, but with recent increases in concentration. Ammonia concentration trends in all other wells are relatively constant.

#### Nitrate

For the year 2014, nitrate concentrations ranged from below the detection limit (0.25 mg/L) to 3560 mg/L (ECMW-6). ECMW-6, ECMW-7 and ECMW-8 exhibited the highest concentrations throughout the year. Figures 6 and 7 were prepared to show the distribution of nitrate in groundwater at the facility. As shown on Figures 6 and 7, the highest nitrate concentrations continue to be located north of the acid and nitrate process areas known as the Production Area.

Trends graphs for nitrate are provided in Appendix B. Nitrate concentrations in ECMW-5, ECMW-6 and ECMW-11 show increasing trends. Wells ECMW-2, ECMW-4 and ECMW-8 show an overall steady or decreasing trend, but with recent increases in concentration.

Wells ECMW-1, ECMW-7, ECMW-10, ECMW-14, ECMW-15, ECMW-16 and ECMW-17 show decreasing trends. Nitrate concentration trends in the remaining wells are relatively constant.

### Sulfate

For the year 2014, sulfate concentrations ranged from 2.64 mg/L in ECMW-18 to 816 mg/L in ECMW-7. ECMW-4, ECMW-7, ECMW-8, ECMW-9 and ECMW-13 exhibited the highest concentrations throughout the year.

Figures 8 and 9 were prepared to show the distribution of sulfate in groundwater at the facility. As shown on Figures 8 and 9, the highest sulfate concentrations are located north of the acid and nitrate process areas known as the Production Area.

Trends graphs for sulfate are provided in Appendix B. Sulfate concentrations in Wells ECMW-6 and ECMW-7 show increasing trends. Wells ECMW-5 and ECMW-11 show decreasing trends. Sulfate concentration trends in the remaining wells are relatively constant.

### Chromium

The monitoring program requires results for total and dissolved chromium for all wells in even numbered years. All total and dissolved chromium analyses were non-detect in samples collected during 2014.

### Lead

Total and dissolved lead were only detected in ECMW-6 at concentrations of 0.036 and 0.031 mg/L, respectively. The concentrations detected are slightly above the EPA's Maximum Contaminant Level of 0.015 mg/L. However, this well is in the middle of the property located near the recovery wells and concentrations do not pose any risk to human health or the environment.

#### **4.2.3 Quality Assurance/Quality Control Results**

Precision is the degree of agreement among repeated measurements of the same characteristic on samples collected as close as possible in time and place. It tells how consistent and reproducible field and analytical methods are by showing how close the measurements are to each other. Precision is determined by analyzing blind duplicate samples. The Relative Percent Difference (RPD) is calculated to determine the precision of duplicate analyses as follows:

$$RPD = \frac{(X_1 - X_2)}{(X_1 + X_2)/2} \times 100\%$$

The smaller the relative percent difference, the more precise the analyses. EPA and state guidelines generally consider RPD values below 20-30% to be within acceptable limits.

Well and Duplicate	Date	Ammonia	Nitrate	Sulfate
		RPD		
ECMW-4	6/3/2014	ND	11.8	4.16
ECMW-16	6/4/2014	41.6	4.69	6.33
ECMW-4	11/4/2014	0	106.7	1.30
ECMW-15	11/5/2014	ND	5	0.832

The four duplicate samples collected in 2014 and analyzed for ammonia, nitrate and sulfate had RPD values shown on the above table. Lead and chromium were non-detect in all sample pairs.

## 5.0 GROUND WATER REMEDIATION

Recovery Wells ECRW #1 and ECRW #2 wells operated consistently throughout 2014. Approximately 78,840 gallons of water were recovered from ECRW #1 and 512,460 gallons from ECRW #2, with average recovery rates ranging from 0.3 to 1.0 gallon per minute.

**TABLES**

**TABLE 1**  
**MONITORING WELL CONSTRUCTION DETAILS**  
**2014 ANNUAL GROUND WATER REPORT**  
**EL DORADO CHEMICAL COMPANY**  
**EL DORADO, ARKANSAS**

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 diameter 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 diameter 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**  
**2014 ANNUAL GROUND WATER REPORT**  
**EL DORADO CHEMICAL COMPANY**  
**EL DORADO, ARKANSAS**

Monitor Well	Top of Casing Elevation (ft above Mean Sea Level)	Measurement Date			
		6/2-6/4/2014		11/3-11/4/2014	
		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	10.63	202.65	14.94	198.34
ECMW-2	196.25	0.00	196.25	1.44	194.81
ECMW-3	192.11	10.02	182.09	12.15	179.96
ECMW-4	194.84	8.96	185.88	9.78	185.06
ECMW-5	182.69	3.94	178.75	4.61	178.08
ECMW-6	191.87	5.96	185.91	6.88	184.99
ECMW-7	195.88	7.65	188.23	9.03	186.85
ECMW-8	197.34	7.52	189.82	8.59	188.75
ECMW-9	198.39	9.61	188.78	12.10	186.29
ECMW-10	205.75	11.99	193.76	15.32	190.43
ECMW-11	201.65	10.30	191.35	12.21	189.44
ECMW-12	184.97	6.71	178.26	6.70	178.27
ECMW-13	177.26	5.71	171.55	7.42	169.84
ECMW-14	178.48	7.54	170.94	10.19	168.29
ECMW-15	180.84	4.43	176.41	7.02	173.82
ECMW-16	180.14	4.83	175.31	6.81	173.33
ECMW-17	185.40	29.62	155.78	30.01	155.39
ECMW-18	155.46	5.51	149.95	6.68	148.78
ECMW-19	150.41	1.22	149.19	4.21	146.20
ECMW-20	192.77	30.13	162.64	29.83	162.95
ECMW-21	176.29	18.19	158.10	19.13	157.16
ECMW-22	173.55	6.78	166.77	9.06	164.49

**TABLE 3**  
**GROUNDWATER INDICATOR PARAMETER DATA**  
**2014 ANNUAL GROUND WATER REPORT**  
**EL DORADO CHEMICAL COMPANY**  
**EL DORADO, ARKANSAS**

WELL	TEMPERATURE (C)		pH (s.u.)		CONDUCTIVITY (uS)	
	Date		Date		Date	
	6/2-6/4/2014	11/3-11/4/2014	6/2-6/4/2014	11/3-11/4/2014	6/2-6/4/2014	11/3-11/4/2014
ECMW-1	17.5	18.7	4.74	3.97	37.2	47.5
ECMW-2	18.3	18.2	5.10	4.45	251.5	325.5
ECMW-3	18.8	18.6	5.86	4.97	187.8	249.3
ECMW-4	20.6	20.9	4.50	3.01	6540	6810
ECMW-5	19.4	20.7	7.26	4.13	488	510
ECMW-6	19.5	20.7	3.99	3.29	28030	27940
ECMW-7	19.9	20.6	5.24	4.56	20570	19280
ECMW-8	19.9	19.2	4.33	3.09	20790	20030
ECMW-9	20.6	19.9	5.47	4.81	2066	2114
ECMW-10	20.1	20.9	4.93	3.07	733	675
ECMW-11	19.1	21.5	4.18	3.08	577	655
ECMW-12	20.4	22.2	5.56	4.53	591	625
ECMW-13	18.2	20.7	5.33	4.03	1163	1211
ECMW-14	20.1	22.1	5.73	4.09	283.9	401.6
ECMW-15	22.2	21.7	5.36	2.75	67.1	70.5
ECMW-16	20.5	22.3	5.07	2.64	145.7	135.5
ECMW-17	20.5	18.5	4.62	2.73	217.3	228.6
ECMW-18	19.0	20.3	5.82	4.71	78	74.1
ECMW-19	19.7	18.5	5.92	5.05	74.5	80.6
ECMW-20	20	19.3	5.63	3.61	72.2	63.6
ECMW-21	20.5	20.2	5.22	3.81	47	56.7
ECMW-22	20.5	19.0	5.79	4.42	138	132.5



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

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	9.70	--	1.7	4.1	--	0.0037	< 0.002	< 0.005	< 0.005	--	--
5/29/2001	5.10	< 0.5	1.83	3.67	42	< 0.04	--	< 0.02	--	--	--
11/1/2001	4.80	< 0.5	2.74	3.34	43	< 0.04	--	< 0.02	--	--	--
6/3/2002	5.50	< 0.5	2.01	4.66	83	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	5.60	0.66	1.56	4.63	44	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	6.10	< 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	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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									
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	--	--	--	--	--	--	--	--	--	--
4/13/2010	4.53	<0.5	<0.5	6.46	--	<0.015	--	<0.02	--	--	--
11/2/2010	7.69	<0.5	1.31	5.55	--	<0.015	--	<0.01	--	--	--
4/26/2011	5.04	--	--	--	--	--	--	--	--	--	--
5/2/2012	5.48	<0.5	2.07	3.35	--	<0.015 E3	<0.015	<0.01 E3	<0.02	--	--
11/7/2012	6.43	<0.5	0.866	5.94	--	<0.015	<0.015	<0.01	<0.02	--	--
5/15/2013	5.03	--	--	--	--	--	--	--	--	--	--
11/4/2013	5.21	--	--	--	--	--	--	--	--	--	--
6/3/2014	4.74	<0.5	0.986	3.98	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/4/2014	3.97	<0.5	0.674	6.29	--	<0.0156	<0.015	<0.0104	<0.02	--	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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	9.70	--	< 0.2	17	--	0.018	< 0.002	0.0342	< 0.005	--	--
5/29/2001	5.40	< 0.5	< 0.5	19.6	340	< 0.04	--	0.032	--	--	--
11/1/2001	5.30	< 0.5	< 0.5	22.9	300	< 0.04	--	< 0.02	--	--	--
6/3/2002	6.00	< 0.5	< 0.5	20	396	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	6.10	< 0.5	< 0.5	25.7	517	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	6.70	< 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	5.20	< 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	5.40	< 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	5.20	--	--	--	--	--	--	--	--	< 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	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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									
4/22/2009	5.41	--	--	--	--	--	--	--	--	<0.02	--
10/20/2009	5.48	--	--	--	--	--	--	--	--	--	--
4/13/2010	5.23	<0.5	<0.5	16.9	--	<0.015	--	<0.02	--	--	--
11/2/2010	8.28	<0.5	<0.5	22.6	--	<0.015	--	<0.01	--	--	--
4/26/2011	5.51	--	--	--	--	--	--	--	--	--	--
5/2/2012	5.76	<0.5	<0.5	18.7	--	<0.015 E3	<0.015	<0.01 E3	<0.02	--	--
11/7/2012	6.57	<0.5	<0.5	22	--	<0.015	<0.015	<0.01	<0.02	--	--
5/15/2013	5.75	--	--	--	--	--	--	--	--	--	--
11/4/2013	5.91	--	--	--	--	--	--	--	--	--	--
6/3/2014	5.1	<0.5	3.95	30.7	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/4/2014	4.45	<0.5	0.635	21.9	--	<0.0156	<0.015	<0.0104	<0.02	--	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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	8.00	--	< 0.2	10	--	0.0027	< 0.002	< 0.005	< 0.005	--	--
5/29/2001	6.20	< 0.5	< 0.5	10.6	180	< 0.04	--	< 0.02	--	--	--
11/1/2001	5.40	< 0.5	< 0.5	22.5	240	< 0.04	--	< 0.02	--	--	--
6/3/2002	6.40	< 0.5	< 0.5	11.4	228	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	6.50	< 0.5	< 0.5	21.6	295	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	6.00	< 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	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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									
4/22/2009	--	<0.5	<0.5	10.5	--	--	--	--	--	<0.02	--
10/20/2009	5.83	--	--	--	--	--	--	--	--	--	--
4/13/2010	6.20	<0.5	<0.5	9.39	--	<0.015	--	<0.02	--	--	--
11/2/2010	6.97	<0.5	<0.5	17.5	--	<0.015	--	<0.01	--	--	--
4/27/2011	6.19	--	--	--	--	--	--	--	--	--	--
5/3/2012	6.28	<0.5	<0.5	8.87	--	<0.015 E3	<0.015	<0.01 E3	<0.02	--	--
11/7/2012	6.74	<0.5	<0.5	13.4	--	0.0169	<0.015	<0.01	<0.02	--	--
5/15/2013	6.29	--	--	--	--	--	--	--	--	--	--
11/4/2013	5.72	--	--	--	--	--	--	--	--	--	--
6/3/2014	5.86	<0.5	<0.25	9.14	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/4/2014	4.97	<0.5	0.239	12.8	--	<0.0156	<0.015	<0.0104	<0.02	--	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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	8.10	--	1.3	728	--	0.0025	< 0.002	< 0.005	< 0.005	--	--
8/8/2001	4.10	0.66	< 0.5	925	5100	< 0.04	--	< 0.02	--	--	--
10/30/2001	4.30	< 0.5	< 0.5	936	5200	0.06	--	0.04	--	--	--
6/3/2002	5.20	< 0.5	< 0.5	979	4862	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	4.80	< 0.5	0.62	756	4240	0.02	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	4.40	< 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	4.10	< 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	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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									
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	--	--	--	--	--	--	--
4/13/2010	3.75	<0.5	<0.5	655	--	0.029	--	<0.02	--	--	--
11/2/2010	6.57	<0.5	<0.5	745	--	<0.015	--	<0.01	--	--	--
11/2/2010	--	<0.5	<0.5	1000	--	<0.015	--	<0.01	--	--	--
4/27/2011	3.91	1.02	<0.5	845	--	--	--	--	--	--	--
11/30/2011	3.72	<0.5	<0.5	930	--	--	--	--	--	--	--
5/3/2012	4.12	<0.5	<0.5	865	--	<0.015 E3	<0.015	<0.01 E3	<0.02	--	--
11/7/2012	6.17	<0.5	<0.5	890	--	<0.015	<0.015	<0.01	<0.02	--	--
5/15/2013	4.03	2.12	0.37	856	--	--	--	--	--	--	--
11/5/2013	4.63	2.03	0.752	609	--	--	--	--	--	--	--
6/3/2014	4.5	<0.5	0.431	737	--	<0.0156	<0.016	<0.0104	<0.021	--	--
6/3/2014	--	0.69	0.383	707	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/4/2014	3.01	1.31	1.29	772	--	<0.0156	<0.015	<0.0104	<0.02	--	--
11/4/2014	--	1.31	4.24	762	--	<0.0156	<0.015	<0.0104	<0.02	--	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".



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

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	5.80	--	4.4	441	--	< 0.002	< 0.002	< 0.005	< 0.005	--	--
8/8/2001	4.60	< 0.5	3.54	657	1000	< 0.04	--	< 0.02	--	--	--
10/30/2001	4.70	< 0.5	3.27	526	980	< 0.04	--	< 0.02	--	--	--
6/3/2002	6.30	< 0.5	3.35	650	934	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	5.40	< 0.5	3.66	582	929	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	5.20	< 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	6.70	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	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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									
11/12/2008	2.40	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	--	--	--	--	--	--	--
4/13/2010	4.75	<0.5	7.96	105	--	<0.015	--	<0.02	--	--	--
11/2/2010	5.64	<0.5	11	94.7	--	<0.015	--	<0.01	--	--	--
4/27/2011	5.03	1.08	15	92.4	--	--	--	--	--	--	--
11/30/2011	4.67	<0.5	19	94.4	--	--	--	--	--	--	--
5/3/2012	5.13	<0.5	23.5	59.6	--	<0.015 E3	<0.015	<0.01 E3	<0.02	--	--
11/7/2012	6.43	<0.5	26.6	74.6	--	<0.015	<0.015	<0.01	<0.02	--	--
5/15/2013	5.07	<0.5	32.8	60.7	--	--	--	--	--	--	--
11/5/2013	7.23	0.56	34.7	66.5	--	--	--	--	--	--	--
11/5/2013	--	<0.5	35.5	62.8	--	--	--	--	--	--	--
6/3/2014	7.26	<0.5	38	65	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/4/2014	4.13	1	43.4	55.6	--	<0.0156	<0.015	<0.0104	<0.02	--	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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	7.70	--	51.1	24	--	0.0026	< 0.002	< 0.005	< 0.005	--	--
8/8/2001	4.30	0.5	298	18.3	2100	< 0.04	--	< 0.02	--	--	--
10/30/2001	4.30	< 0.5	326	15.7	2700	< 0.04	--	< 0.02	--	--	--
6/3/2002	6.10	< 0.5	459	12.1	290	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	5.00	0.51	661	8.13	3840	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	4.60	< 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	4.40	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	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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									
5/21/2008	4.50	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	--	--	--	--	--	--	--
4/13/2010	4.04	92.8	1660	29.2	--	<0.015	--	<0.02	--	--	--
4/13/2010	--	566	1640	25.7	--	0.023	--	<0.02	--	--	--
7/22/2010	--	246	1940	42.3	--	<0.015	--	<0.02	--	--	--
11/2/2010	5.71	311	1460	29.6	--	<0.015	--	0.011	--	--	--
4/27/2011	4.30	371	1680	46.8	--	--	--	--	--	--	--
6/16/2011	4.01	393	1620	207	--	--	--	--	--	--	--
11/30/2011	3.88	445	1970	60.5	--	--	--	--	--	--	--
11/30/2011	--	455	2060	63.8	--	--	--	--	--	--	--
5/3/2012	4.28	344	1850	456	--	0.0312 E3	0.032	<0.01	<0.02	--	--
5/3/2012	--	407	1740	36.5	--	0.0298 E3	0.028	<0.01 E3	<0.02	--	--
11/7/2012	6.20	620	2520	112	--	0.0185	0.017	<0.01	<0.02	--	--
11/7/2012	--	655	2430	113	--	0.0211	0.016	<0.01	<0.02	--	--
5/15/2013	4.15	521	3120	37.7	--	--	--	--	--	--	--
11/5/2013	4.49	935	3380	28.5	--	--	--	--	--	--	--
6/3/2014	3.99	1110	3560	28.9	--	0.0339	0.034	<0.0104	<0.021	--	--
11/4/2014	3.29	1110	3550	33.7	--	0.036	0.031	<0.0104	<0.02	--	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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	8.10	--	282	380	--	0.0221	0.0185	0.0078	< 0.005	--	--
8/8/2001	9.70	184	336	316	1300	< 0.04	--	< 0.02	--	--	--
10/30/2001	3.50	< 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	4.40	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	4.20	167	294	345	1080	0.017	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	3.70	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	3.90	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	4.30	96	181	798	--	--	--	--	--	< 0.02	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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									
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	3.40	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	--	--	--	--	--	--	--
4/13/2010	3.53	1000	1080	214	--	0.06	--	<0.02	--	--	--
7/22/2010	--	43.2	103	3490	--	<0.015	--	<0.02	--	--	--
11/2/2010	4.92	107	155	156	--	<0.015	--	<0.01	--	--	--
4/27/2011	4.47	1630	2640	248	--	--	--	--	--	--	--
6/16/2011	4.17	56.6	227	899	--	--	--	--	--	--	--
11/30/2011	4.18	132	192	259	--	--	--	--	--	--	--
5/3/2012	4.82	132	161	761	--	<0.015 E3	<0.015	<0.01 E3	<0.02	--	--
11/7/2012	6.31	187	153	692	--	<0.015	<0.015	<0.01	<0.02	--	--
5/15/2013	5.09	105	141	930	--	--	--	--	--	--	--
5/15/2013	--	110	145	921	--	--	--	--	--	--	--
11/5/2013	5.81	132	156	927	--	--	--	--	--	--	--
6/3/2014	5.24	100	169	858	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/4/2014	4.56	77	99.6	816	--	<0.0156	<0.015	<0.0104	<0.02	--	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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	7.90	--	1010	68.3	--	0.0234	0.0238	< 0.005	< 0.005	--	--
10/30/2001	3.90	0.94	1030	81.1	5000	< 0.04	--	< 0.02	--	--	--
6/3/2002	5.40	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	4.40	406	1330	151	4560	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	4.00	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	3.70	96.2	340	816	--	--	--	--	--	< 0.02	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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									
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	--	--	--	--	--	--	--
4/13/2010	4.56	62.1	52.2	737	--	<0.015	--	<0.02	--	--	--
11/2/2010	6.35	63.4	163	860	--	<0.015	--	<0.01	--	--	--
4/27/2011	3.85	1980	3310	106	--	--	--	--	--	--	--
6/29/2011	4.10	175	350	--	--	--	--	--	--	--	--
6/29/2011	--	168	352	--	--	--	--	--	--	--	--
11/30/2011	3.44	120	401	727	--	--	--	--	--	--	--
11/30/2011	--	101	361	637	--	--	--	--	--	--	--
5/3/2012	3.97	122	296	754	--	0.0159 E3	0.015	<0.01	<0.02	--	--
5/3/2012	--	111	287	762	--	<0.015 E3	<0.015	<0.01 E3	<0.02	--	--
11/7/2012	5.99	193	429	814	--	0.0166	<0.015	<0.01	<0.02	--	--
5/15/2013	3.97	172	551	614	--	--	--	--	--	--	--
11/5/2013	4.06	150	584	642	--	--	--	--	--	--	--
6/3/2014	4.33	157	712	516	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/4/2014	3.09	198	697	466	--	<0.0156	<0.015	<0.0104	<0.02	--	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".



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

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	9.00	--	37.3	621	--	0.004	< 0.002	< 0.005	< 0.005	--	--
6/27/2001	5.40	< 0.5	28.8	520	1600	< 0.04	--	< 0.02	--	--	--
10/30/2001	5.50	< 0.5	26.7	514	2600	< 0.04	--	< 0.02	--	--	--
6/3/2002	6.00	< 0.5	24.4	639	1597	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	6.00	18.8	59	655	1630	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	5.20	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	5.00	--	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	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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									
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	--	--	--	--	--	--	--
4/13/2010	5.44	<0.5	16.8	462	--	<0.015	--	<0.02	--	--	--
11/2/2010	7.04	<0.5	20	684	--	<0.015	--	<0.01	--	--	--
4/27/2011	5.74	2.96	32.1	542	--	--	--	--	--	--	--
11/30/2011	5.37	0.7	28.5	650	--	--	--	--	--	--	--
5/3/2012	5.71	<0.5	25.5	520	--	<0.015 E3	<0.015	<0.01 E3	<0.02	--	--
11/7/2012	6.50	0.68	32.5	568	--	<0.015	<0.015	<0.01	<0.02	--	--
5/15/2013	5.68	<0.5	30.1	514	--	--	--	--	--	--	--
11/5/2013	5.51	17	53.9	545	--	--	--	--	--	--	--
6/3/2014	5.47	3.23	35.6	525	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/4/2014	4.81	4.61	37.6	484	--	<0.0156	<0.015	<0.0104	<0.02	--	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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	7.70	--	257	89	--	0.0052	0.0039	< 0.005	< 0.005	--	--
6/27/2001	4.40	< 0.5	156	100	1300	< 0.04	--	0.025	--	--	--
10/30/2001	3.90	< 0.5	153	134	1400	< 0.04	--	0.04	--	--	--
6/3/2002	5.30	< 0.5	138	84.9	1122	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	5.60	1.84	137	140	968	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	4.50	< 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	4.60	< 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	4.70	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	4.30	--	97.7	--	--	--	--	--	--	< 0.02	< 0.02
4/11/2006	4.40	--	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	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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									
6/3/2009	6.35	<0.5	--	--	--	--	--	--	--	--	--
10/20/2009	4.57	<0.5	53.5	136	--	--	--	--	--	--	--
4/13/2010	4.08	0.8	44.7	170	--	<0.015	--	<0.02	--	--	--
11/2/2010	6.42	<0.5	41.9	164	--	<0.015	--	<0.01	--	--	--
4/27/2011	4.30	3.18	54.1	166	--	--	--	--	--	--	--
11/30/2011	3.97	<0.5	49.2	94.8	--	--	--	--	--	--	--
5/3/2012	4.39	<0.5	38.4	158	--	<0.015 E3	<0.015	<0.01 E3	<0.02	--	--
11/7/2012	6.13	<0.5	44.4	152	--	<0.015	<0.015	<0.01	<0.02	--	--
5/15/2013	4.44	<0.5	42.1	163	--	--	--	--	--	--	--
11/5/2013	4.91	<0.5	47.8	153	--	--	--	--	--	--	--
6/3/2014	4.93	2.2	50.6	136	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/4/2014	3.07	<0.5	39.8	172	--	<0.0156	<0.015	<0.0104	<0.02	--	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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									
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	--	--	--	--	--	--	--
4/13/2010	4.32	32.6	7.78	135	--	<0.015	--	<0.02	--	--	--
11/2/2010	5.67	3.17	4.52	325	--	<0.015	--	<0.01	--	--	--
4/27/2011	4.57	47	15.8	146	--	--	--	--	--	--	--
11/30/2011	4.11	2.19	3.56	318	--	--	--	--	--	--	--
5/3/2012	4.73	14.5	29.4	95.6	--	<0.015 E3	<0.015	<0.01 E3	<0.02	--	--
11/7/2012	5.92	33.2	23.8	161	--	<0.015	<0.015	<0.01	<0.02	--	--
5/15/2013	4.58	17	45.4	98	--	--	--	--	--	--	--
5/15/2013	--	15.7	40.7	102	--	--	--	--	--	--	--
11/5/2013	4.48	<0.5	30.5	125	--	--	--	--	--	--	--
6/3/2014	4.18	26	30.7	105	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/4/2014	3.08	13.9	30.5	117	--	<0.0156	<0.015	<0.0104	<0.02	--	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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	6.10	--	<0.2	9.6	--	<0.002	<0.002	<0.005	<0.005	--	--
6/27/2001	5.90	2.2	<0.5	13	330	<0.04	--	<0.02	--	--	--
6/4/2002	6.00	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	6.10	4.2	<0.5	21.6	382	<0.015	<0.015	<0.02	<0.02	--	--
12/10/2002	5.80	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	5.80	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	5.80	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	5.30	1.06	--	--	--	--	--	--	--	<0.02	<0.02
4/11/2006	6.12	1.58	--	--	--	--	--	--	--	<0.02	<0.02
11/1/2006	5.30	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	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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									
10/21/2009	7.08	--	--	--	--	--	--	--	--	--	--
4/13/2010	5.95	5.56	<0.5	2.14	--	<0.015	--	<0.02	--	--	--
11/3/2010	6.64	1.44	<0.5	21.5	--	<0.015	--	<0.01	--	--	--
11/3/2010	--	1.34	<0.5	20.5	--	<0.015	--	<0.01	--	--	--
4/27/2011	5.67	--	--	--	--	--	--	--	--	--	--
5/3/2012	6.02	1.81	<0.5	17	--	<0.015 E3	<0.015	<0.01 E3	<0.02	--	--
11/7/2012	6.49	3.55	<0.5	21.5	--	<0.015	<0.015	<0.01	<0.02	--	--
5/15/2013	6.02	--	--	--	--	--	--	--	--	--	--
11/4/2013	5.84	--	--	--	--	--	--	--	--	--	--
6/3/2014	5.56	3.11	0.334	5.04	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/4/2014	4.53	2.15	<0.25	20.6	--	<0.0156	<0.015	<0.0104	<0.02	--	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".



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

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	5.60	--	0.2	809	--	< 0.002	< 0.002	< 0.005	< 0.005	--	--
6/5/2001	5.60	< 0.5	< 0.5	538	1400	< 0.04	--	< 0.02	--	--	--
10/30/2001	5.30	< 0.5	< 0.5	606	1300	< 0.04	--	< 0.02	--	--	--
6/4/2002	5.70	< 0.5	< 0.5	372	718	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	6.10	1.28	< 0.5	538	1030	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	5.50	< 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	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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									
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	--	--	--	--	--	--	--	--	--	--
4/14/2010	4.75	<0.5	<0.5	470	--	<0.015	--	<0.02	--	--	--
11/3/2010	6.44	<0.5	<0.5	589	--	<0.015	--	<0.01	--	--	--
4/26/2011	4.68	--	--	--	--	--	--	--	--	--	--
5/2/2012	5.23	<0.5	<0.5	505	--	<0.015 E3	<0.015	<0.01 E3	<0.02	--	--
11/6/2012	6.25	<0.5	<0.5	593	--	<0.015	<0.015	<0.01	<0.02	--	--
5/15/2013	5.19	--	--	--	--	--	--	--	--	--	--
11/4/2013	4.83	--	--	--	--	--	--	--	--	--	--
6/4/2014	5.33	<0.5	0.255	374	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/5/2014	4.03	<0.5	<0.25	425	--	<0.0156	<0.015	<0.0104	<0.02	--	--

--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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	4.60	--	11.9	139	--	< 0.002	< 0.002	< 0.005	< 0.005	--	--
8/8/2001	4.30	< 0.5	75	175	1000	< 0.04	--	< 0.02	--	--	--
10/30/2001	4.50	< 0.5	25.2	211	790	< 0.04	--	< 0.02	--	--	--
6/4/2002	5.60	< 0.5	26.5	187	675	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	6.30	5.32	17	288	669	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	5.30	< 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	4.60	< 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	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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									
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	--	--	--	--	--	--	--
4/14/2010	4.54	0.5	24.3	166	--	<0.015	--	<0.02	--	--	--
12/21/2010	5.68	<0.5	12.7	152	--	<0.015	--	<0.01	--	--	--
4/26/2011	5.04	<0.5	10.7	159	--	--	--	--	--	--	--
11/30/2011	4.50	<0.5	8.09	156	--	--	--	--	--	--	--
5/2/2012	5.20	<0.5	17.4	139	--	<0.015 E3	<0.015	<0.01 E3	<0.02	--	--
11/6/2012	6.25	<0.5	8.03	140	--	<0.015	<0.015	<0.01	<0.02	--	--
5/15/2013	5.20	<0.5	6.17	108	--	--	--	--	--	--	--
11/5/2013	5.46	7.52	6.92	91.6	--	--	--	--	--	--	--
6/4/2014	5.73	<0.5	4.31	54.2	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/5/2014	4.09	<0.5	5.12	98.3	--	<0.0156	<0.015	<0.0104	<0.02	--	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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	6.40	--	34.5	4.4	--	< 0.002	< 0.002	< 0.005	< 0.005	--	--
8/8/2001	4.30	< 0.5	19.1	7.8	140	< 0.04	--	< 0.02	--	--	--
10/30/2001	4.30	< 0.5	12.6	10.2	110	< 0.04	--	< 0.02	--	--	--
6/4/2002	5.40	< 0.5	10.7	11.1	100	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	5.40	1.16	18.2	9.22	120	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	5.80	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	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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									
10/20/2009	4.36	--	--	--	--	--	--	--	--	--	--
4/14/2010	4.39	<0.5	2.99	10.7	--	<0.015	--	<0.02	--	--	--
11/3/2010	5.30	<0.5	1.9	13.2	--	<0.015	--	<0.01	--	--	--
4/26/2011	4.86	--	--	--	--	--	--	--	--	--	--
5/2/2012	4.88	<0.5	1.08	13.9	--	<0.015 E3	<0.015	<0.01 E3	<0.02	--	--
11/6/2012	6.22	<0.5	1.26	13	--	<0.015	<0.015	<0.01	<0.02	--	--
5/15/2013	6.21	--	--	--	--	--	--	--	--	--	--
11/4/2013	4.56	--	--	--	--	--	--	--	--	--	--
6/4/2014	5.36	<0.5	1.74	12.4	--	<0.0156	<0.016	0.0122	<0.021	--	--
11/5/2014	2.75	<0.5	3.07	9.58	--	<0.0156	<0.015	<0.0104	<0.02	--	--
11/5/2014	--	<0.5	2.92	9.66	--	<0.0156	<0.015	<0.0104	<0.02	--	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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	5.70	--	137	4.6	--	0.0036	0.0034	< 0.005	< 0.005	--	--
6/5/2001	4.30	4.61	134	5.09	1100	< 0.04	--	< 0.02	--	--	--
10/30/2001	3.90	< 0.5	58.4	6.44	330	< 0.04	--	< 0.02	--	--	--
6/4/2002	5.00	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	5.00	11.6	72	9.21	263	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	5.90	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	5.50	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	4.30	1.77	19.6	12.6	--	--	--	--	--	< 0.02	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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									
5/21/2008	6.08	3.35	14.8	15.9	--	<0.015	--	<0.02	--	<0.02	--
11/5/2008	6.50	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	--	--	--	--	--	--	--
4/14/2010	4.42	2.38	4.73	15.3	--	<0.015	--	<0.02	--	--	--
11/3/2010	5.98	0.96	19.2	13.4	--	<0.015	--	<0.01	--	--	--
4/26/2011	4.50	3.56	7.5	15.8	--	--	--	--	--	--	--
11/30/2011	4.12	0.84	11.6	17.9	--	--	--	--	--	--	--
5/2/2012	4.66	0.81	10.7	15.4	--	<0.015 E3	<0.015	<0.01 E3	<0.02	--	--
11/6/2012	6.09	1.19	9.94	14.6	--	<0.015	<0.015	<0.01	<0.02	--	--
5/15/2013	4.79	3.91	12.2	13	--	--	--	--	--	--	--
11/5/2013	4.60	1.58	10.3	13.3	--	--	--	--	--	--	--
6/4/2014	5.07	1.8	10.9	10.7	--	<0.0156	<0.016	<0.0104	<0.021	--	--
6/4/2014	--	1.18	10.4	11.4	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/5/2014	2.64	1.27	9.2	11.2	--	<0.0156	<0.015	<0.0104	<0.02	--	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".



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

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	4.90	--	45	145	--	< 0.002	< 0.002	< 0.005	< 0.005	--	--
6/5/2001	4.40	1.16	54.2	87.7	600	< 0.04	--	< 0.02	--	--	--
10/30/2001	4.10	< 0.5	106	11.5	760	< 0.04	--	< 0.02	--	--	--
6/4/2002	5.10	< 0.5	83.4	8.04	603	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	5.10	2.36	92	9.53	540	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	5.60	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	4.40	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	3.70	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	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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									
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	--	--	--	--	--	--	--
4/14/2010	4.07	<0.5	15.9	6.73	--	<0.015	--	<0.02	--	--	--
11/3/2010	7.02	1.94	27.2	13.1	--	<0.015	--	<0.01	--	--	--
4/26/2011	4.34	10.1	4.03	40.2	--	--	--	--	--	--	--
11/30/2011	4.65	2.75	5.95	36.1	--	--	--	--	--	--	--
5/2/2012	4.75	2.51	8.13	20.9	--	<0.015 E3	<0.015	<0.01 E3	<0.02	--	--
11/6/2012	6.21	3.82	1.82	39.2	--	<0.015	<0.015	<0.01	<0.02	--	--
11/6/2012	--	5.67	1.51	37.3	--	<0.015	<0.015	0.0174	<0.02	--	--
5/15/2013	4.70	1.41	3.6	34.5	--	--	--	--	--	--	--
11/5/2013	4.77	<0.5	1.24	39.6	--	--	--	--	--	--	--
6/4/2014	4.62	2.46	7.19	29.3	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/5/2014	2.73	3.46	7.5	34.3	--	<0.0156	<0.015	<0.0104	<0.02	--	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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	6.60	--	0.4	3.3	--	0.017	<0.002	0.0194	<0.005	--	--
10/30/2001	5.40	<0.5	<0.5	3.74	300	<0.04	--	0.05	--	--	--
6/4/2002	6.20	<0.5	<0.5	8.38	796	0.115	<0.02	0.147	0.137	--	--
10/30/2002	6.30	0.43	<0.5	3.22	258	0.018	<0.015	<0.02	<0.02	--	--
12/10/2002	6.40	<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	6.40	<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	5.90	<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	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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									
10/21/2009	7.16	--	<0.5	--	--	--	--	--	--	--	--
4/14/2010	5.50	<0.5	<0.5	2.82	--	<0.015	--	<0.02	--	--	--
11/3/2010	8.22	<0.5	<1	3.65	--	<0.015	--	<0.01	--	--	--
4/26/2011	5.77	--	--	--	--	--	--	--	--	--	--
6/30/2011	5.71	--	<0.5	--	--	--	--	--	--	--	--
11/30/2011	5.64	--	<0.5	--	--	--	--	--	--	--	--
5/2/2012	5.89	<0.5	<0.5	2.17	--	<0.015 E3	<0.015	<0.01 E3	<0.02	--	--
11/6/2012	6.61	<0.5	<0.5	2.99	--	<0.015	<0.015	<0.01	<0.02	--	--
5/15/2013	5.96	<0.5	0.328	6.25	--	--	--	--	--	--	--
11/5/2013	6.28	9.64	<0.25	6.3	--	--	--	--	--	--	--
6/4/2014	5.82	<0.5	0.299	7.15	--	0.0274	<0.016	0.0531	<0.021	--	--
11/5/2014	4.71	<0.5	0.254	2.64	--	<0.0156	<0.015	<0.0104	<0.02	--	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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	6.10	<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	5.80	--	--	--	--	--	--	--	--	<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	5.90	<0.5	<0.5	2.04	--	<0.015	--	<0.02	--	<0.02	--
4/22/2009	5.66	--	--	--	--	--	--	--	--	<0.02	--
10/21/2009	7.82	--	--	--	--	--	--	--	--	--	--
4/14/2010	5.62	<0.5	<0.5	2.46	--	<0.015	--	<0.02	--	--	--
4/14/2010	--	<0.5	<0.5	2.43	--	<0.015	--	<0.02	--	--	--
11/3/2010	6.87	<0.5	<0.5	2.97	--	<0.015	--	<0.01	--	--	--
4/26/2011	5.82	--	--	--	--	--	--	--	--	--	--
5/2/2012	5.98	<0.5	<0.5	2.31	--	<0.015 E3	<0.015	<0.01 E3	<0.02	--	--
11/6/2012	6.68	<0.5	<0.5	2.88	--	<0.015	<0.015	<0.01	<0.02	--	--
5/14/2013	6.13	--	--	--	--	--	--	--	--	--	--
11/5/2013	6.73	--	--	--	--	--	--	--	--	--	--
6/4/2014	5.92	<0.5	<0.25	2.78	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/5/2014	5.05	<0.5	<0.25	2.97	--	<0.0156	<0.015	<0.0104	<0.02	--	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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	5.80	<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	6.20	<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	8.60	<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	--	--	--	--	--	--	--	--	--	--
4/14/2010	5.64	<0.5	<0.5	10.1	--	<0.015	--	<0.02	--	--	--
12/21/2010	5.02	<0.5	<0.5	8.95	--	<0.015	--	<0.01	--	--	--
4/26/2011	6.03	--	--	--	--	--	--	--	--	--	--
5/2/2012	5.96	<0.5	<0.5	7.82	--	<0.015 E3	<0.015	<0.01 E3	<0.02	--	--
11/6/2012	6.74	<0.5	<0.5	9.31	--	<0.015	<0.015	<0.01	<0.02	--	--
5/14/2013	5.29	--	--	--	--	--	--	--	--	--	--
11/5/2013	6.00	--	--	--	--	--	--	--	--	--	--
6/4/2014	5.63	<0.5	<0.25	8.17	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/5/2014	3.61	<0.5	0.262	9.87	--	<0.0156	<0.015	<0.0104	<0.02	--	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

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	--	--	--	--	--	--	--	--	--	--
4/14/2010	4.88	<0.5	2.24	3.7	--	<0.015	--	<0.02	--	--	--
11/3/2010	7.13	<0.5	1.8	6.07	--	<0.015	--	<0.01	--	--	--
4/26/2011	5.85	--	--	--	--	--	--	--	--	--	--
5/2/2012	5.68	<0.5	1.4	3.94	--	<0.015 E3	<0.015	<0.01 E3	<0.02	--	--
11/6/2012	6.48	<0.5	1.1	6.28	--	<0.015	<0.015	<0.01	<0.02	--	--
5/15/2013	6.09	--	--	--	--	--	--	--	--	--	--
11/5/2013	5.68	--	--	--	--	--	--	--	--	--	--
6/4/2014	5.22	<0.5	1.63	4.57	--	<0.0156	<0.016	0.0105	<0.021	--	--
11/5/2014	3.81	<0.5	1.62	5.25	--	<0.0156	<0.015	<0.0104	<0.02	--	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".

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

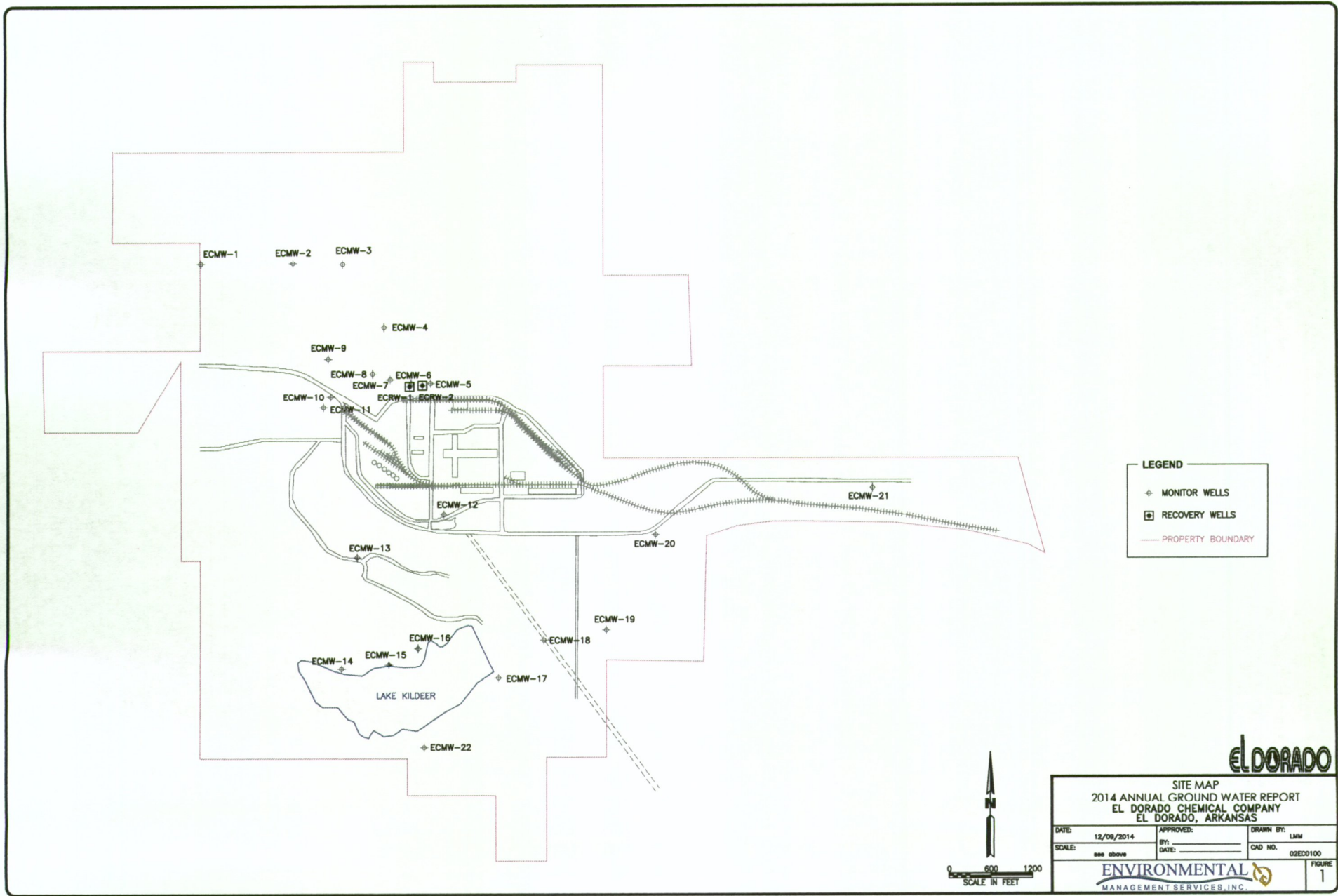
Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
1/28/2004	7.68	0.61	0.53	6.62	540	0.021	<0.015	0.021	<0.02	--	--
1/28/2004	--	<0.5	0.52	6.62	610	0.021	<0.015	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	5.80	--	--	--	--	--	--	--	--	<0.02	--
4/21/2009	--	<0.5	0.991	3.67	--	--	--	--	--	<0.02	--
10/21/2009	6.15	--	--	--	--	--	--	--	--	--	--
4/14/2010	5.84	<0.5	1.13	7.73	--	<0.015	--	<0.02	--	--	--
11/3/2010	8.15	<0.5	1.31	6.68	--	<0.015	--	<0.01	--	--	--
4/26/2011	6.05	--	--	--	--	--	--	--	--	--	--
5/2/2012	6.10	<0.5	1.15	4.99	--	<0.015 E3	<0.015	<0.01 E3	<0.02	--	--
11/6/2012	6.73	<0.5	1.74	7.01	--	<0.015	<0.015	<0.01	<0.02	--	--
5/14/2013	6.19	--	--	--	--	--	--	--	--	--	--
11/4/2013	5.64	--	--	--	--	--	--	--	--	--	--
6/4/2014	5.79	<0.5	1.75	5.05	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/5/2014	4.42	0.61	2.58	5.66	--	<0.0156	<0.015	<0.0104	<0.02	--	--

"--" - Parameter not analyzed

E3 - Incorrect preservation, results qualified as "estimated".



**FIGURES**



**LEGEND**

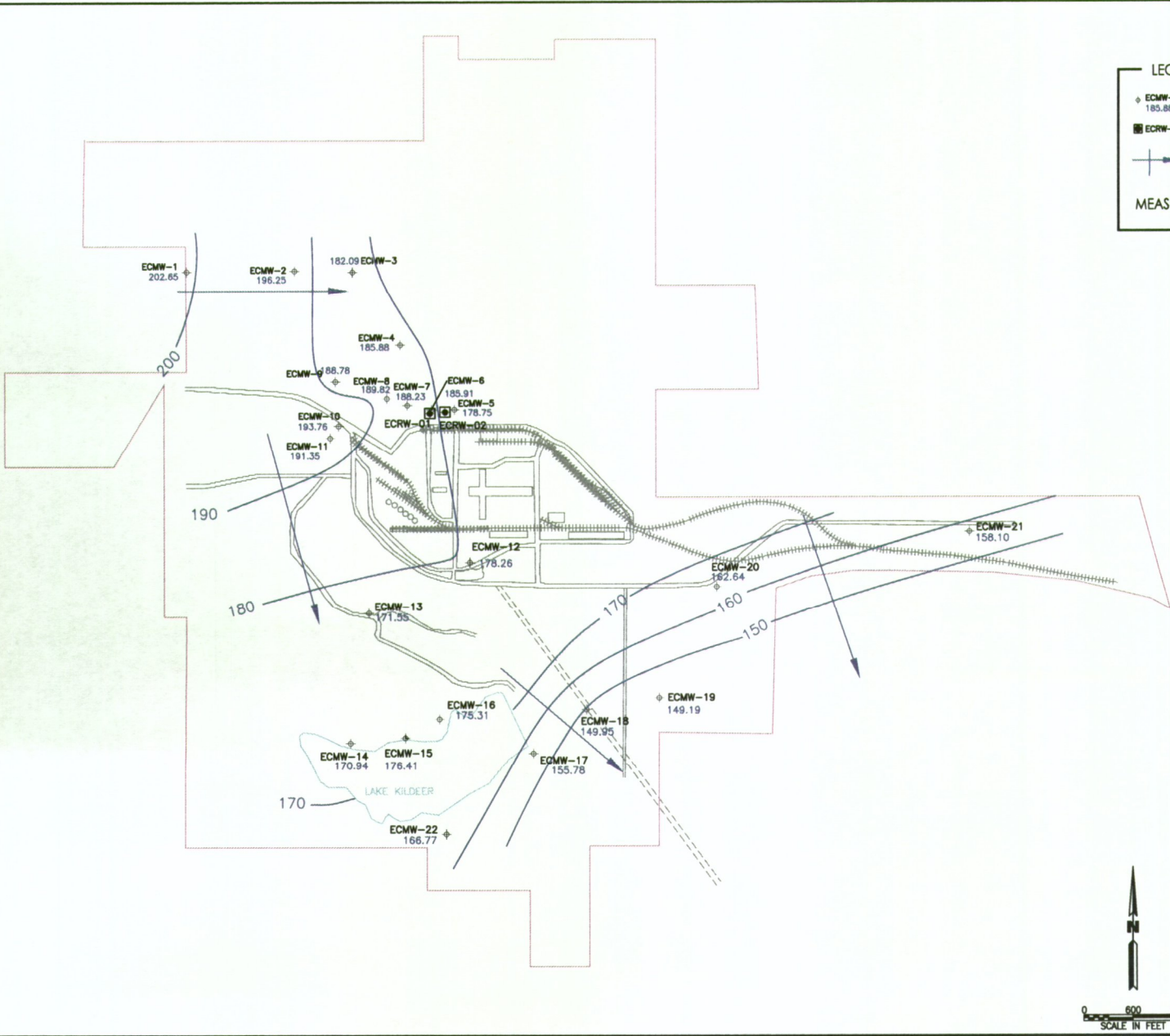
- ◆ MONITOR WELLS
- ▣ RECOVERY WELLS
- PROPERTY BOUNDARY

<b>EL DORADO</b>		
SITE MAP 2014 ANNUAL GROUND WATER REPORT EL DORADO CHEMICAL COMPANY EL DORADO, ARKANSAS		
DATE: 12/09/2014	APPROVED: BY: _____ DATE: _____	DRAWN BY: LMM
SCALE: see above	CAD NO. 02E0100	FIGURE 1
<b>ENVIRONMENTAL</b> MANAGEMENT SERVICES, INC.		

**LEGEND**

- ◊ ECMW-4 185.88 Monitor Well with Water Elevation (feet MSL)
- ECRW-01 Recovery Well
- Ground Water Flow Direction

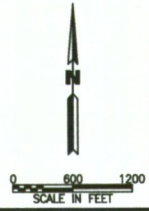
MEASUREMENTS TAKEN JUNE 2-3, 2014



**EL DORADO**

JUNE 2014 GROUND WATER ELEVATION MAP  
 2014 ANNUAL GROUND WATER REPORT  
 EL DORADO CHEMICAL COMPANY  
 EL DORADO, ARKANSAS

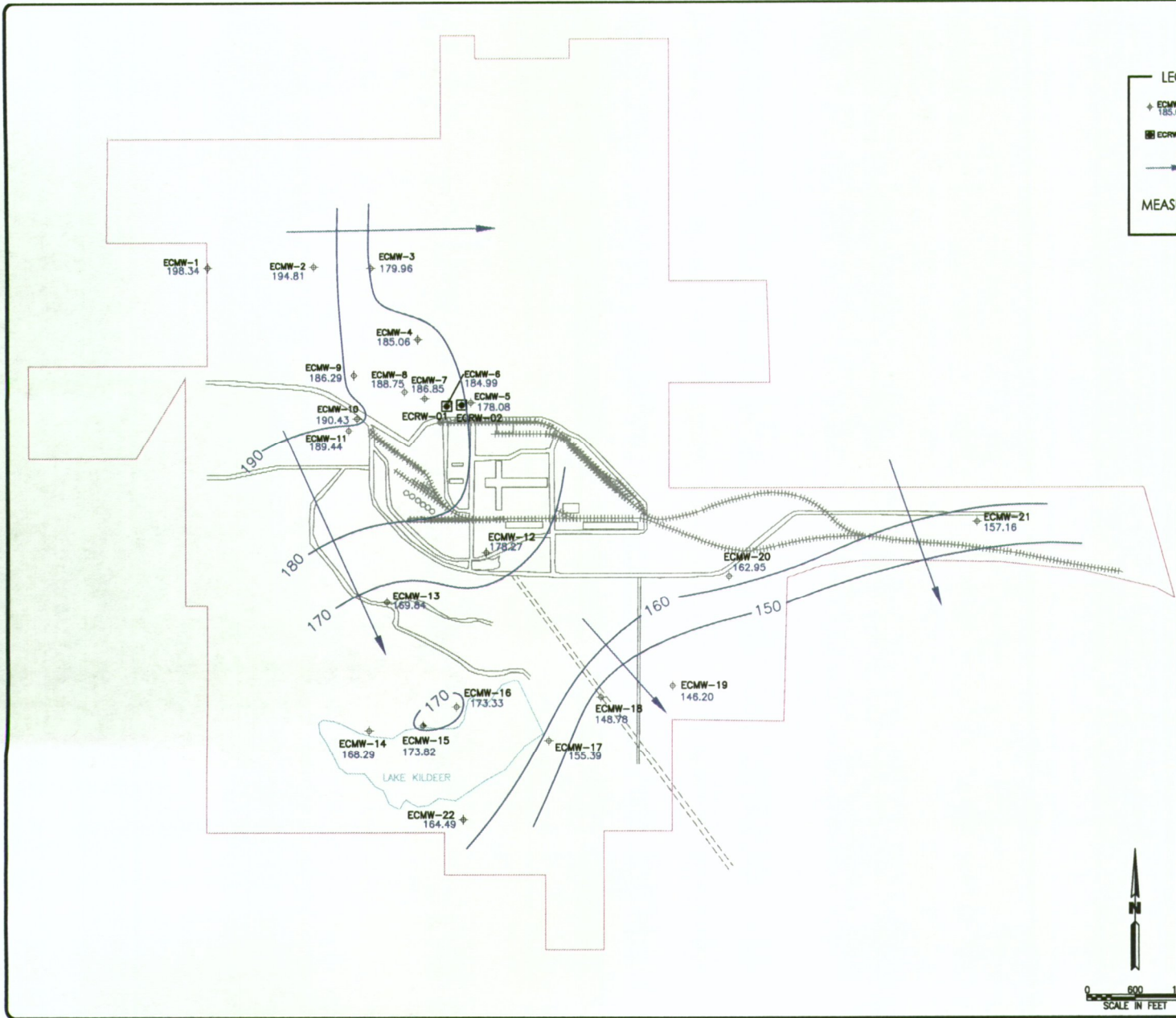
DATE: 06/30/2014	APPROVED:	DRAWN BY: LMM
SCALE: as shown	BY:	CAD NO. 02E00100
ENVIRONMENTAL MANAGEMENT SERVICES, INC.		FIGURE 2



**LEGEND**

- ◆ ECMW-4 185.06 Monitor Well with Water Elevation (feet MSL)
- ECRW-01 Recovery Well
- ➔ Ground Water Flow Direction

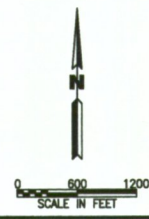
MEASUREMENTS TAKEN NOVEMBER 3-4, 2014

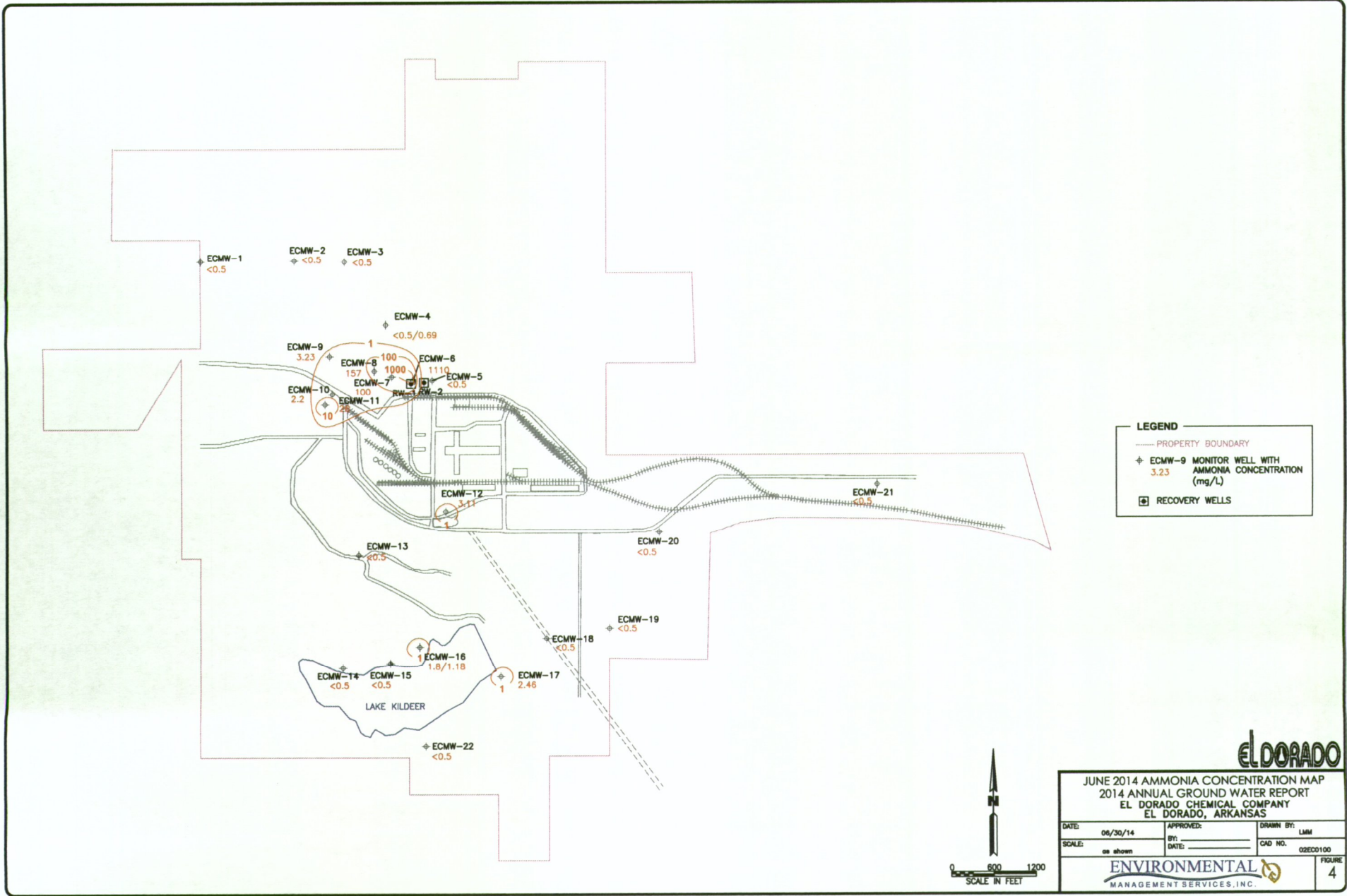


**EL DORADO**

NOVEMBER 2014 GROUND WATER ELEVATION MAP  
2014 ANNUAL GROUND WATER REPORT  
EL DORADO CHEMICAL COMPANY  
EL DORADO, ARKANSAS

DATE: 12/08/2014	APPROVED:	DRAWN BY: LMM	
SCALE: as shown	BY:	DATE:	CAD NO. 02EC0100
<b>ENVIRONMENTAL</b> MANAGEMENT SERVICES, INC.			FIGURE <b>3</b>





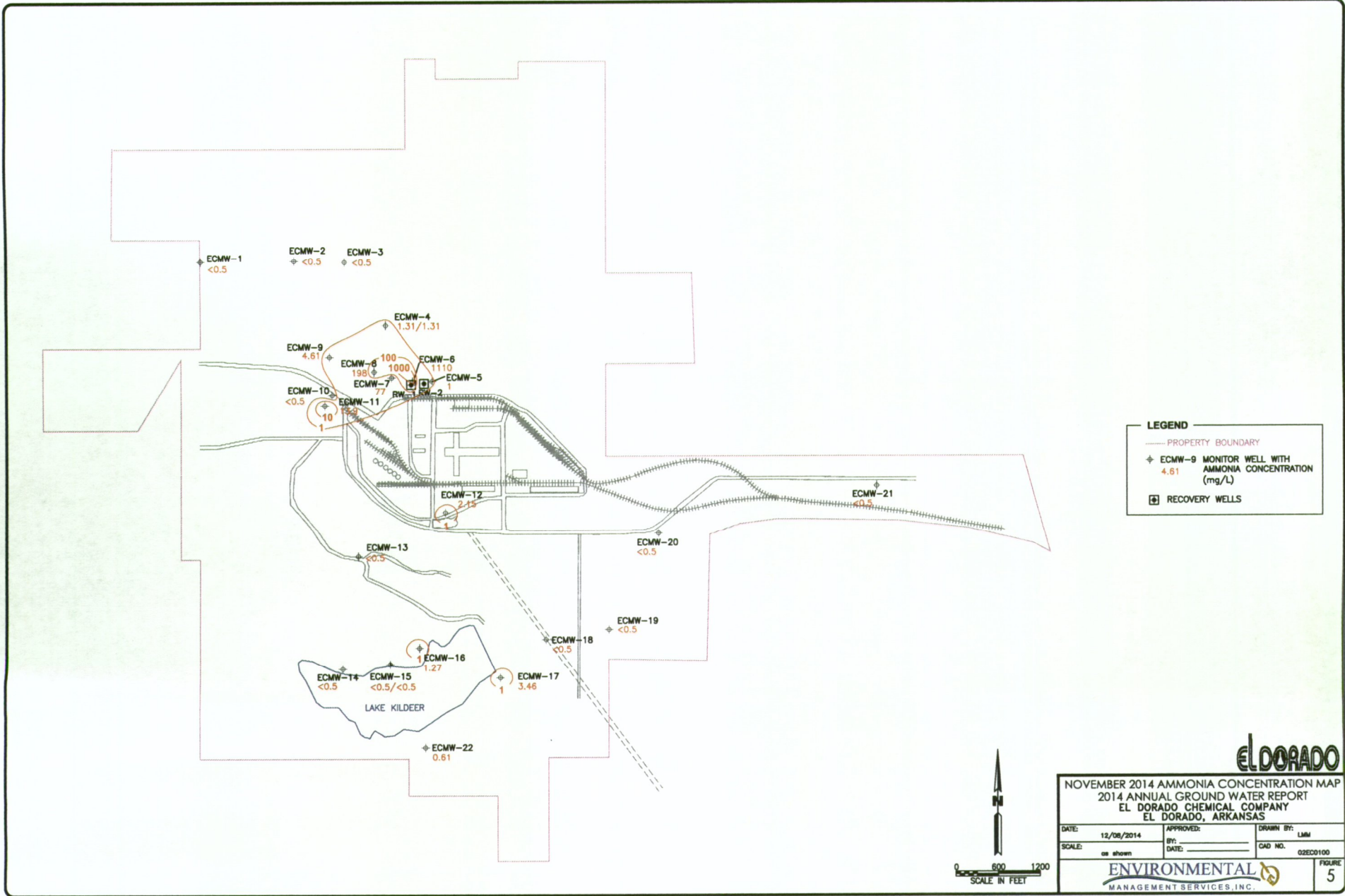
**LEGEND**

- PROPERTY BOUNDARY
- ⊕ ECMW-9 MONITOR WELL WITH AMMONIA CONCENTRATION (mg/L)
- ☐ RECOVERY WELLS

**EL DORADO**

**JUNE 2014 AMMONIA CONCENTRATION MAP  
2014 ANNUAL GROUND WATER REPORT  
EL DORADO CHEMICAL COMPANY  
EL DORADO, ARKANSAS**

DATE: 06/30/14	APPROVED: _____	DRAWN BY: LMM
SCALE: as shown	BY: _____	DATE: _____
ENVIRONMENTAL MANAGEMENT SERVICES, INC.		CAD NO. 02EC0100
		FIGURE 4



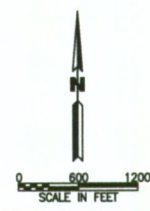
**EL DORADO**

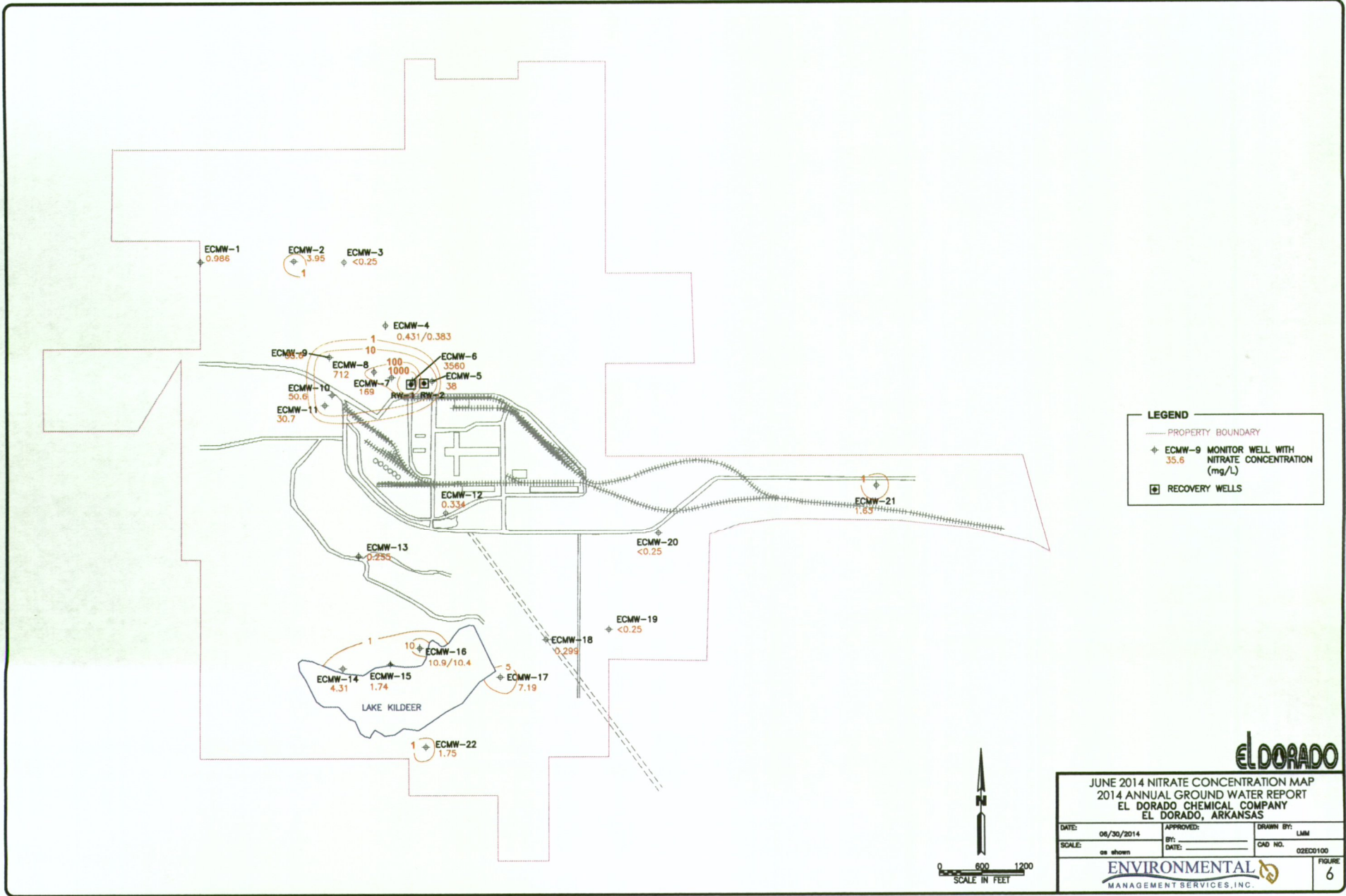
NOVEMBER 2014 AMMONIA CONCENTRATION MAP  
 2014 ANNUAL GROUND WATER REPORT  
 EL DORADO CHEMICAL COMPANY  
 EL DORADO, ARKANSAS

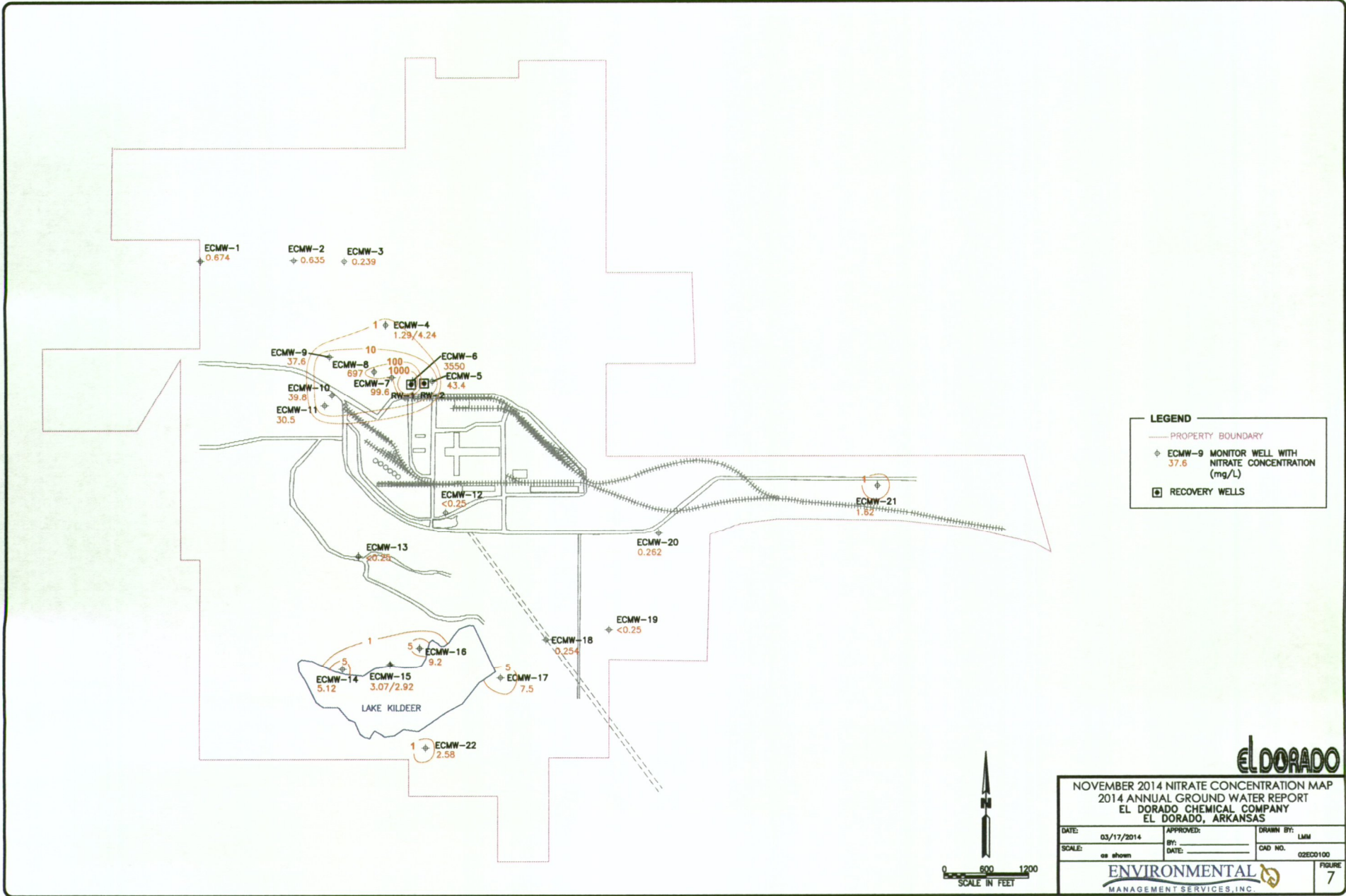
DATE: 12/08/2014	APPROVED:	DRAWN BY: LMM
SCALE: as shown	BY:	CAD NO. 02EC0100

**ENVIRONMENTAL**  
MANAGEMENT SERVICES, INC.

FIGURE 5



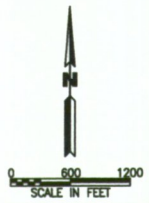




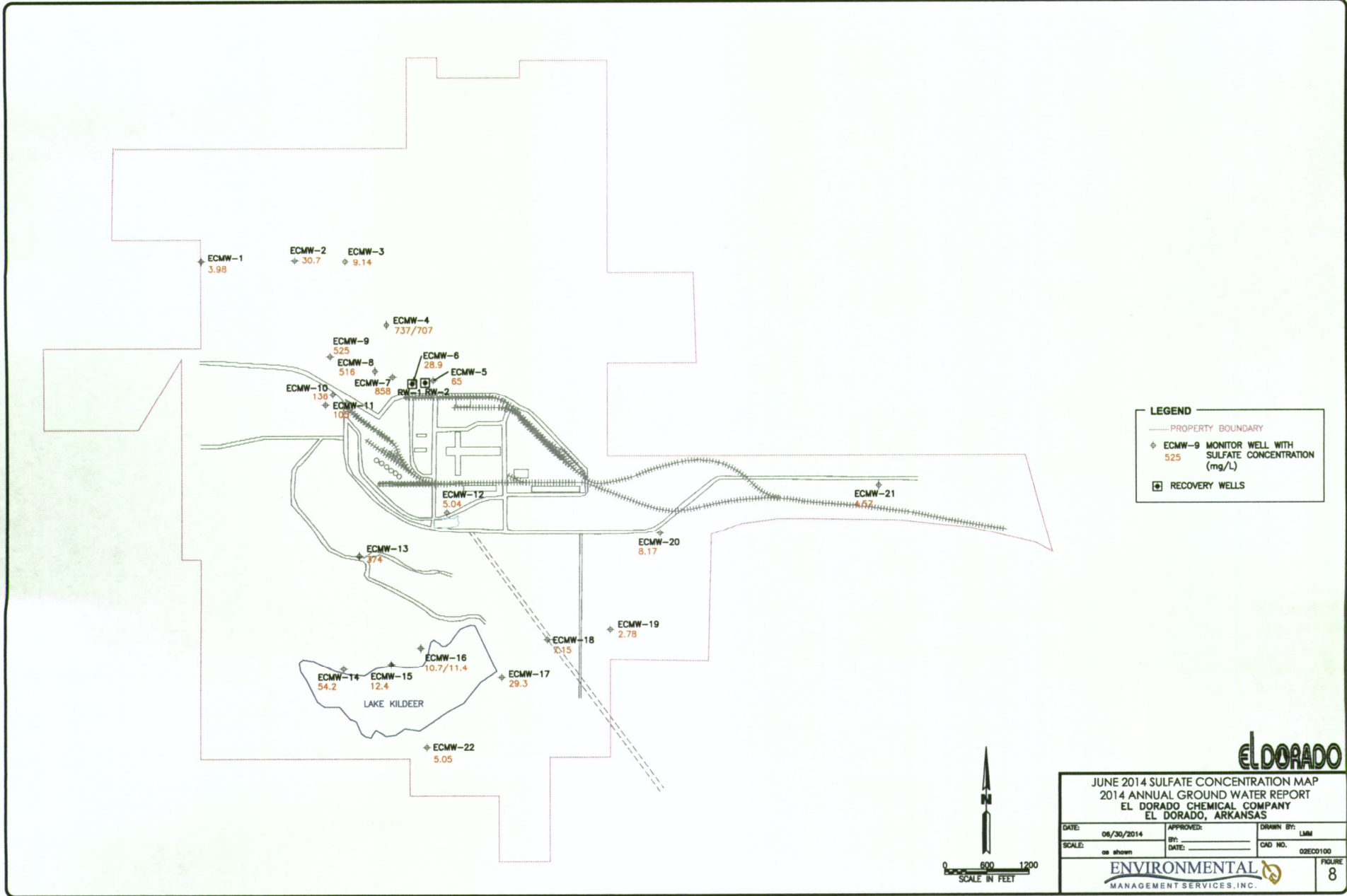
**EL DORADO**

NOVEMBER 2014 NITRATE CONCENTRATION MAP  
2014 ANNUAL GROUND WATER REPORT  
EL DORADO CHEMICAL COMPANY  
EL DORADO, ARKANSAS

DATE: 03/17/2014	APPROVED: _____	DRAWN BY: LMM
SCALE: as shown	BY: _____	CAD NO. 02EC0100
<b>ENVIRONMENTAL</b> MANAGEMENT SERVICES, INC.		FIGURE <b>7</b>







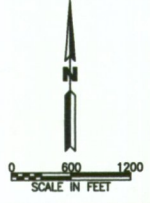
**LEGEND**

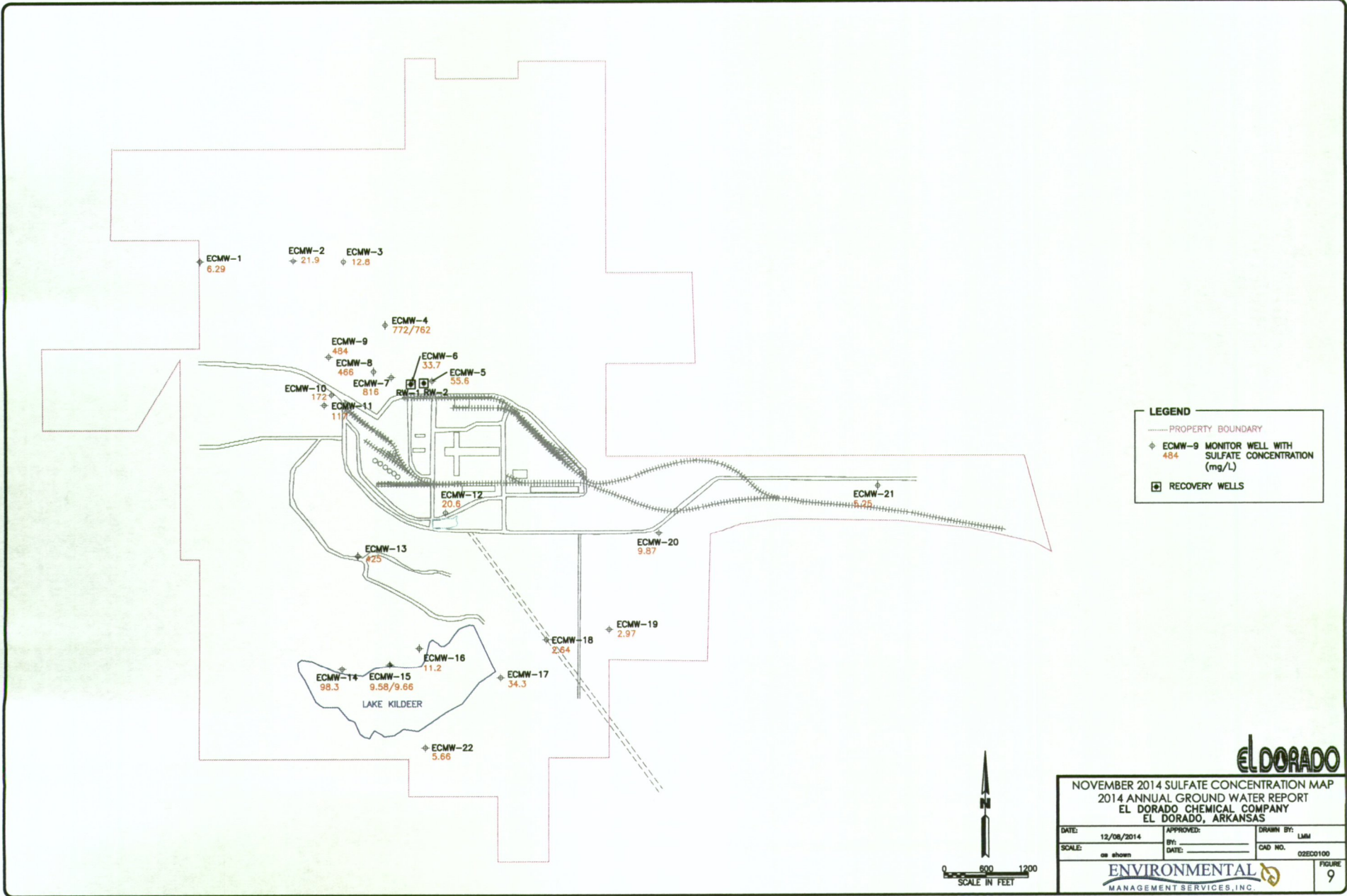
- PROPERTY BOUNDARY
- ◆ ECMW-9 MONITOR WELL WITH SULFATE CONCENTRATION (mg/L)
- ☐ RECOVERY WELLS

**EL DORADO**

JUNE 2014 SULFATE CONCENTRATION MAP  
2014 ANNUAL GROUND WATER REPORT  
EL DORADO CHEMICAL COMPANY  
EL DORADO, ARKANSAS

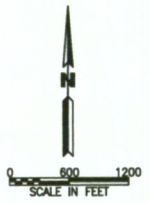
DATE: 06/30/2014	APPROVED: _____	DRAWN BY: LMM
SCALE: as shown	BY: _____	DATE: _____
ENVIRONMENTAL MANAGEMENT SERVICES, INC.		FIGURE 8





**LEGEND**

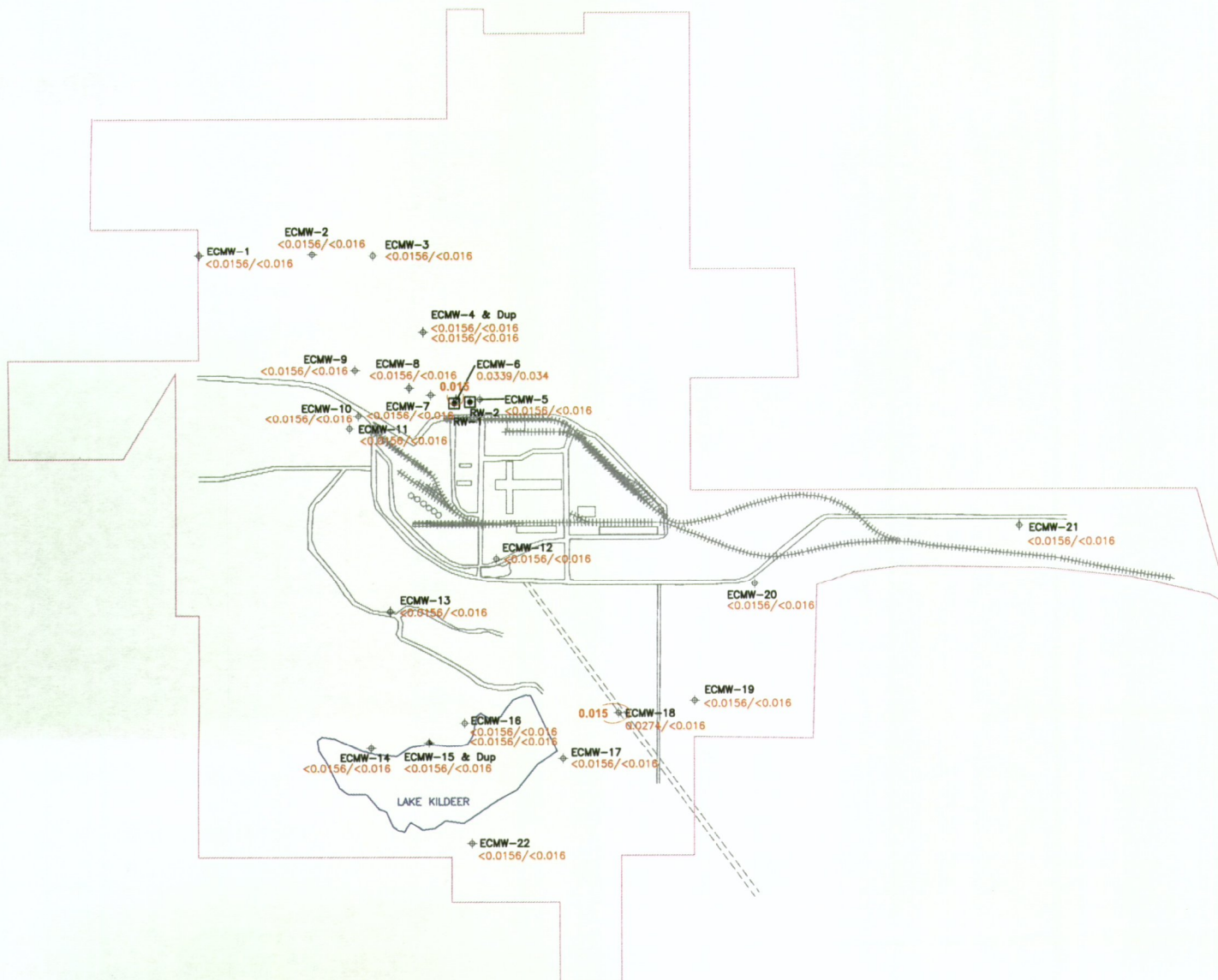
- PROPERTY BOUNDARY
- ◆ ECMW-9 MONITOR WELL WITH SULFATE CONCENTRATION (mg/L)  
484
- ☒ RECOVERY WELLS



**EL DORADO**

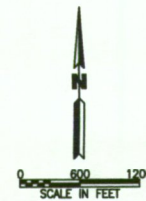
NOVEMBER 2014 SULFATE CONCENTRATION MAP  
2014 ANNUAL GROUND WATER REPORT  
EL DORADO CHEMICAL COMPANY  
EL DORADO, ARKANSAS

DATE: 12/08/2014	APPROVED: _____	DRAWN BY: LMM
SCALE: as shown	BY: _____	DATE: _____
<b>ENVIRONMENTAL</b> MANAGEMENT SERVICES, INC.		FIGURE <b>9</b>



**LEGEND**

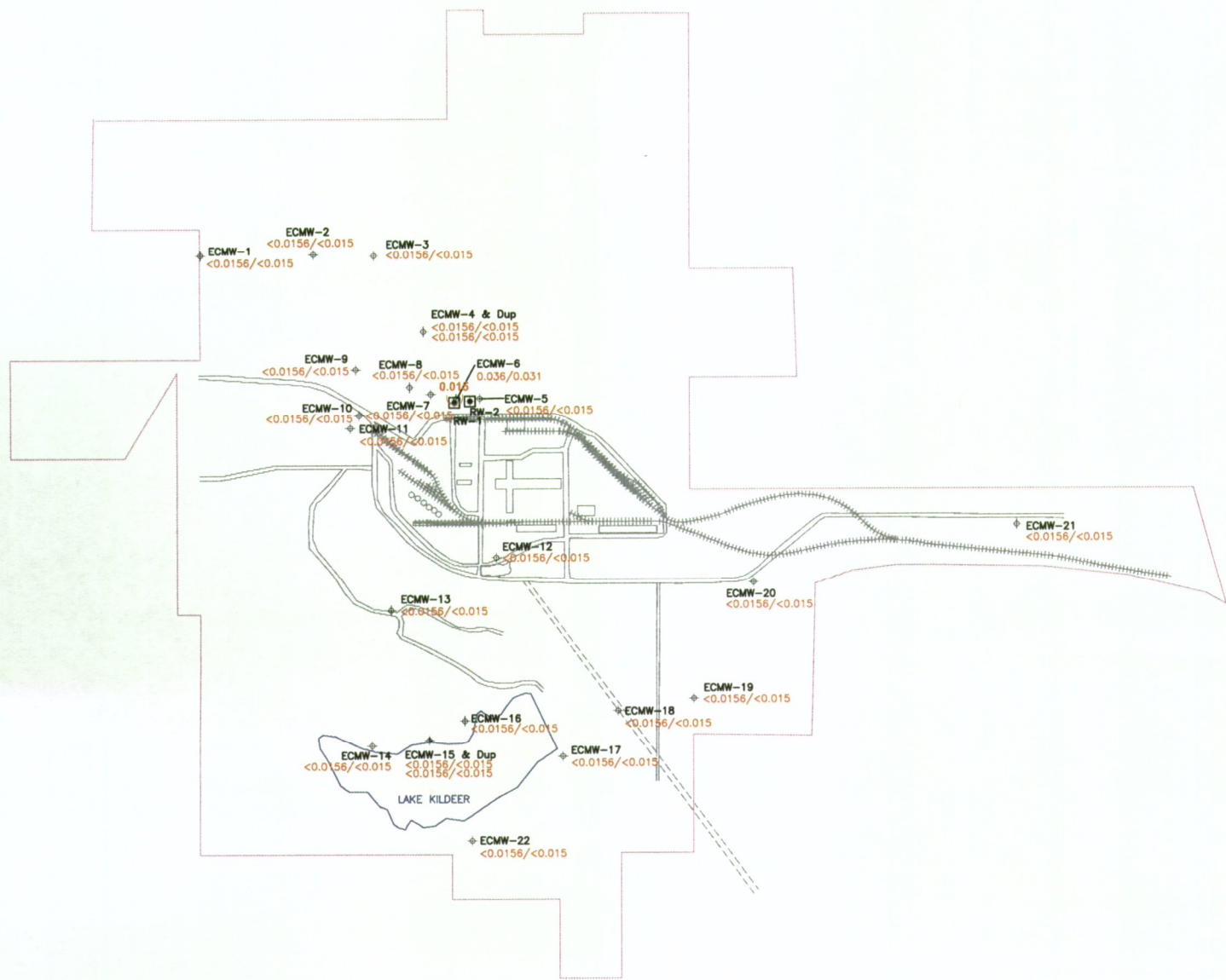
- PROPERTY BOUNDARY
- ⊕ ECMW-5 MONITOR WELL WITH LEAD CONCENTRATION TOTAL/DISSOLVED (mg/L)
- ⊕ RECOVERY WELLS
- JUNE 2014 LEAD ISOCONCENTRATION CONTOURS (mg/L)



**EL DORADO**

JUNE 2014 LEAD ISOCONCENTRATION MAP  
2014 ANNUAL GROUND WATER REPORT  
EL DORADO CHEMICAL COMPANY  
EL DORADO, ARKANSAS

DATE: 06/30/2014	APPROVED: _____	DRAWN BY: LMM
SCALE: see above	BY: _____	CAD NO. 02ECC100
ENVIRONMENTAL MANAGEMENT SERVICES, INC.		FIGURE 10



**LEGEND**

- PROPERTY BOUNDARY
- ⊕ ECMW-5 MONITOR WELL WITH LEAD CONCENTRATION TOTAL/DISSOLVED (mg/L)
- ⊠ RECOVERY WELLS
- NOVEMBER 2014 LEAD ISOCONCENTRATION CONTOURS (mg/L)



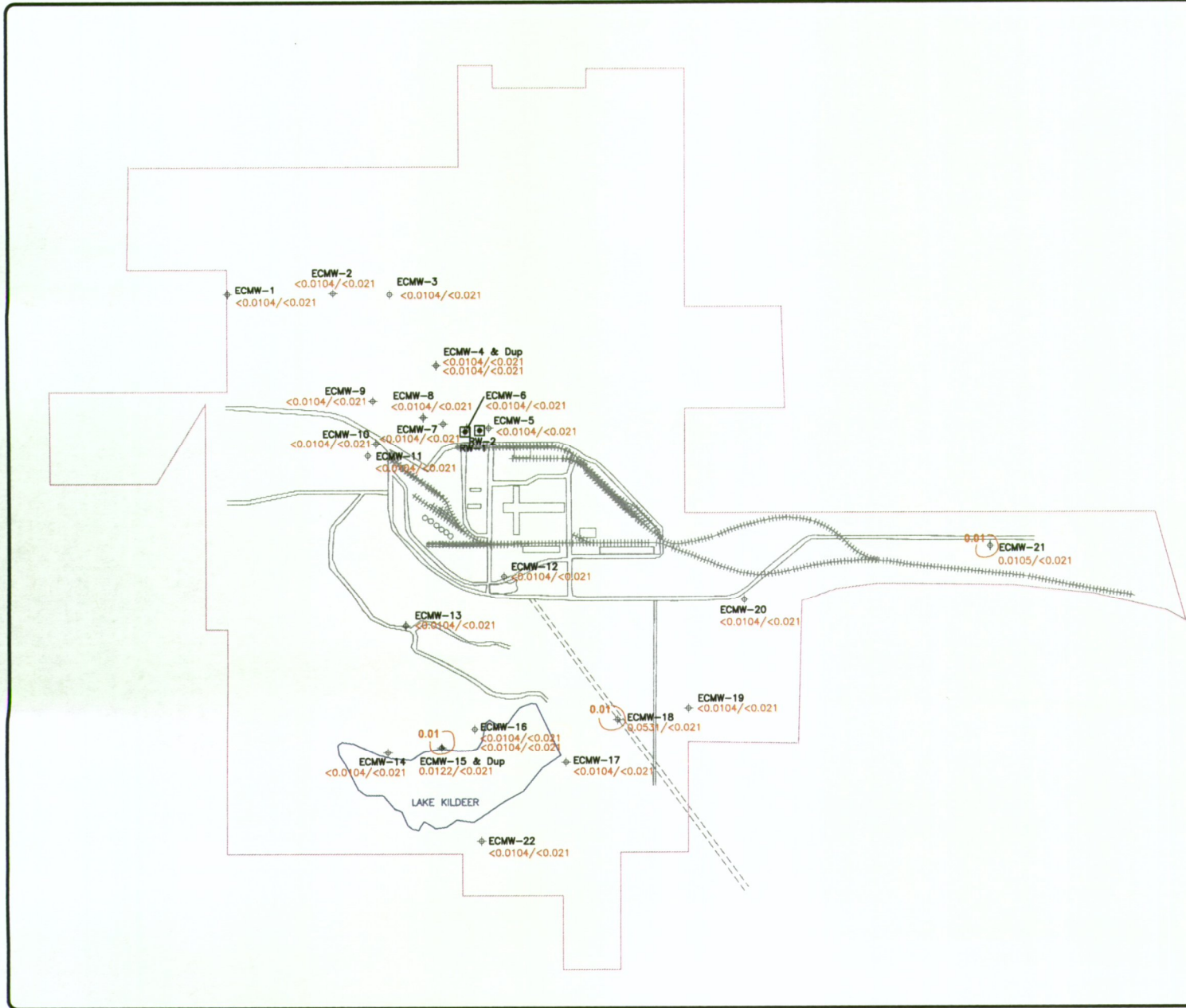
**EL DORADO**

NOVEMBER 2014 LEAD ISOCONCENTRATION MAP  
2014 ANNUAL GROUND WATER REPORT  
EL DORADO CHEMICAL COMPANY  
EL DORADO, ARKANSAS

DATE: 12/08/2014	APPROVED: _____	DRAWN BY: LMM
SCALE: see above	DATE: _____	CAD NO. 02EC0100

**ENVIRONMENTAL**  
MANAGEMENT SERVICES, INC.

FIGURE 11



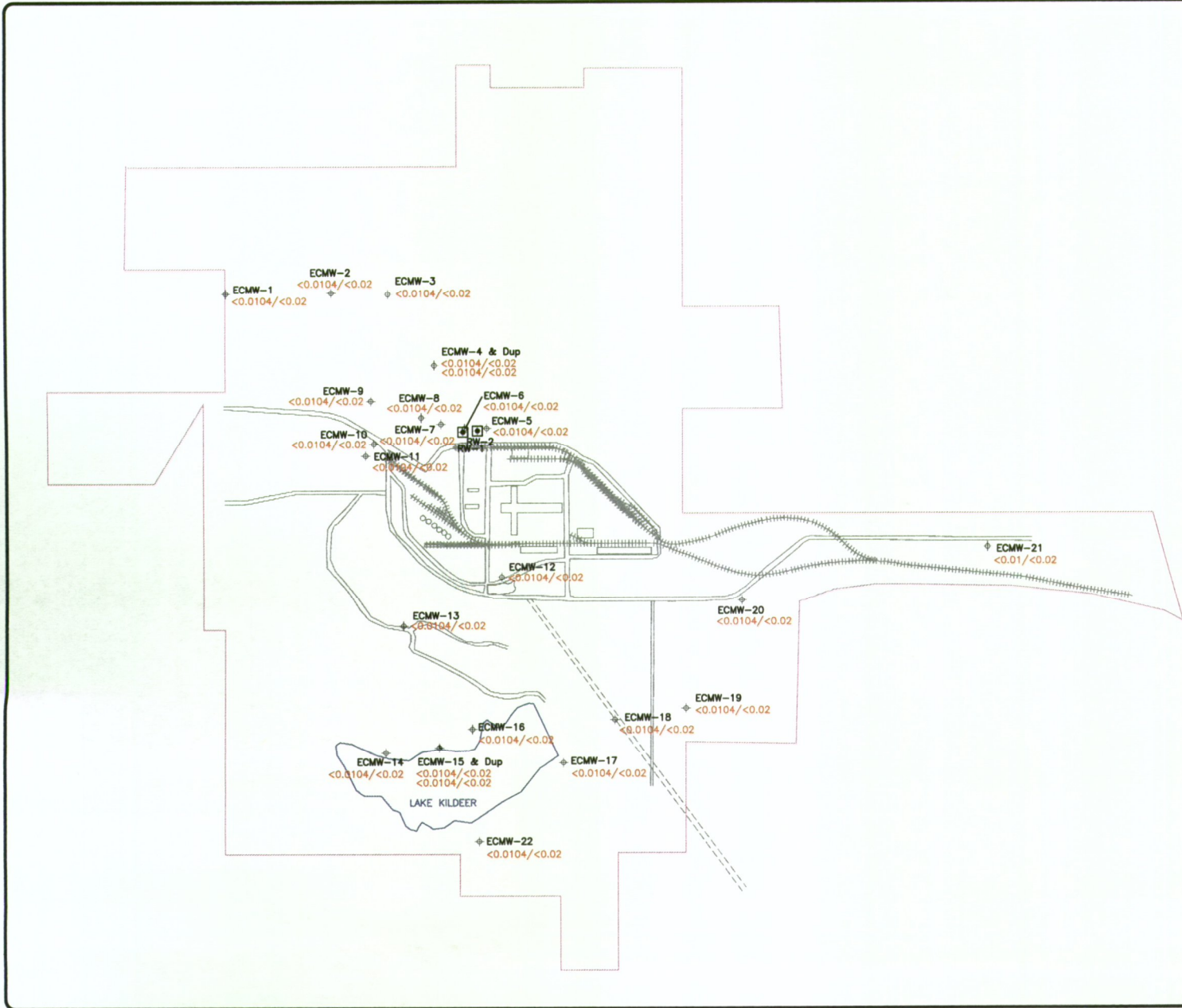
**LEGEND**

- PROPERTY BOUNDARY
- ◆ ECMW-5 MONITOR WELL WITH CHROMIUM CONCENTRATION TOTAL/DISSOLVED (mg/L)  
<0.0104/<0.021
- ☐ RECOVERY WELLS
- JUNE 2014 CHROMIUM ISOCONCENTRATION CONTOURS (mg/L)



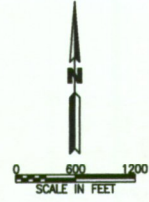
**EL DORADO**

JUNE 2014 CHROMIUM ISOCONCENTRATION MAP			
2014 ANNUAL GROUND WATER REPORT			
EL DORADO CHEMICAL COMPANY			
EL DORADO, ARKANSAS			
DATE: 06/30/2014	APPROVED:	DRAWN BY: LHM	
SCALE: see above	BY:	DATE:	CAD NO. 02E00100
ENVIRONMENTAL MANAGEMENT SERVICES, INC.			FIGURE 12



**LEGEND**

- PROPERTY BOUNDARY
- ◆ ECMW-5  
<0.0104/<0.02 MONITOR WELL WITH CHROMIUM CONCENTRATION TOTAL/DISSOLVED (mg/L)
- ◻ RECOVERY WELLS
- NOVEMBER 2014 CHROMIUM ISOCONCENTRATION CONTOURS (mg/L)



**EL DORADO**

NOVEMBER 2014 CHROMIUM ISOCONCENTRATION MAP  
2014 ANNUAL GROUND WATER REPORT  
EL DORADO CHEMICAL COMPANY  
EL DORADO, ARKANSAS

DATE: 12/08/2014	APPROVED: BY: _____ DATE: _____	DRAWN BY: LMM	
SCALE: see above		CAD NO. 02EC0100	FIGURE 13

**ENVIRONMENTAL**  
MANAGEMENT SERVICES, INC.

**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-12  
 Collector R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time	<u>6-2-14 1350</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>6.71</u> ft	Gallons per well volume	<u>8.4</u>
Top of casing to bottom	<u>19.9</u> ft	Total gallons evacuated	<u>25.2</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>6-3-14 1125</u>	Elevation of well water	<u>1</u>
Top of casing to water level	_____ ft	Method of Sampling	<u>PVC BAILER</u>

**SAMPLE D.**

<u>Temperature[°C]</u>	<u>pH</u>	<u>Conductivity[μS]</u>	<u>Diss. Oxygen[mg/l]</u>	<u>Turbidity [NT]</u>
<u>22.9</u>	<u>5.29</u>	<u>638 μS</u>	_____	_____
<u>21.0</u>	<u>5.50</u>	<u>596 μS</u>	_____	_____
<u>20.4</u>	<u>5.56</u>	<u>591 μS</u>	_____	_____

**GENERAL INFORMATION**

Weather conditions at time of sampling: P. CLOUDY / 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. ERMW-13  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 6-2-14 1410 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 19.8 ft Total gallons evacuated 27.6  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 6-4-14 0725 Elevation of well water 1  
 Top of casing to water level \_\_\_\_\_ ft Method of Sampling PVC BAILER

**SAMPLE D.**

Temperature[°C]	pH	Conductivity[μS]	Diss. Oxygen[ <sup>mg</sup> /l]	Turbidity [NT]
<u>20.8</u>	<u>5.32</u>	<u>1188 μs</u>		
<u>19.0</u>	<u>5.41</u>	<u>1176 μs</u>		
<u>18.2</u>	<u>5.33</u>	<u>1163 μs</u>		

**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-21  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 6-3-14 1510 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 18.19 ft Gallons per well volume .9  
 Top of casing to bottom 34.9 ft Total gallons evacuated 2.7  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 6-4-14 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[mg/l]	Turbidity [NT]
<u>22.5</u>	<u>5.19</u>	<u>57.0 µs</u>		
<u>20.8</u>	<u>5.54</u>	<u>48.5 µs</u>		
<u>20.5</u>	<u>5.22</u>	<u>42.0 µs</u>		

**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. EC MW 20  
 Collector R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 6-3-14 1440 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 30.13 ft Gallons per well volume 3.9  
 Top of casing to bottom 54.4 ft Total gallons evacuated 11.7  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 6-4-14 1015 Elevation of well water \_\_\_\_\_  
 Top of casing to water level \_\_\_\_\_ ft Method of Sampling PVC BAILER

**SAMPLE D.**

Temperature [°C]	pH	Conductivity [µS]	Dissolved Oxygen [mg/l]	Turbidity [NT]
<u>21.8</u>	<u>5.69</u>	<u>71.7 µS</u>		
<u>19.9</u>	<u>5.72</u>	<u>69.6</u>		
<u>20.2</u>	<u>5.63</u>	<u>72.2 µS</u>		

**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

FIGURE

**GROUNDWATER SAMPLING DATA FORM**  
**El Dorado Chemical Company**

**FIELD LOG**

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. ECADW-19  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 6-3-14 1430 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 1.22 ft Gallons per well volume 9.6  
 Top of casing to bottom 6.5 ft Total gallons evacuated 28.8  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 6-9-14 0955 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]
<u>22.1</u>	<u>6.02</u>	<u>78.7</u>		
<u>19.5</u>	<u>5.95</u>	<u>74.4</u>		
<u>19.7</u>	<u>5.92</u>	<u>74.5</u>		

**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. ECM4-18  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 6-3-14 1355 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 5.51 ft Gallons per well volume 7.6  
 Top of casing to bottom 17.2 ft Total gallons evacuated 22.8  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 6-4-14 0925 Elevation of well water \_\_\_\_\_  
 Top of casing to water level \_\_\_\_\_ ft Method of Sampling PVC BAILER

**SAMPLE D.**

Temperature [°C]	pH	Conductivity [µS]	Dissc	D Oxygen [mg/l]	Turbidity [NT]
<u>21.4</u>	<u>5.99</u>	<u>83.2 µS</u>			
<u>19.3</u>	<u>5.90</u>	<u>77.3 µS</u>			
<u>19.0</u>	<u>5.82</u>	<u>78.0 µS</u>			

**GENERAL INFORMATION**

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

FIGURE

**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 6-3-14 1340 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 29.62 ft Gallons per well volume 3.3  
 Top of casing to bottom 34.7 ft Total gallons evacuated 9.9  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 6-4-14 0905 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]
<u>24.2</u>	<u>5.24</u>	<u>228.5 µS</u>	_____	_____
<u>22.3</u>	<u>4.82</u>	<u>219.4</u>	_____	_____
<u>20.5</u>	<u>4.62</u>	<u>217.3 µS</u>	_____	_____

**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. EC MW-22  
 Collector R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 6-3-14 1310 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 6.78 ft Gallons per well volume 11.7  
 Top of casing to bottom 79.8 ft Total gallons evacuated 35.1  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 6-4-14 0845 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[ <sup>cc</sup> /l]	Turbidity [NT]
<u>22.1</u>	<u>5.82</u>	<u>146.3 μS</u>	_____	_____
<u>20.9</u>	<u>5.78</u>	<u>145.6 μS</u>	_____	_____
<u>20.5</u>	<u>5.79</u>	<u>138.0 μS</u>	_____	_____

**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. EC MW-16 + 201  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time	<u>6-3-14</u> <u>1255</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>4.83</u> ft	Gallons per well volume	<u>9.4</u>
Top of casing to bottom	<u>19.3</u> ft	Total gallons evacuated	<u>28.2</u>
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	<u>6-4-14</u> <u>0830</u>	Elevation of well water	<u>1</u>
Top of casing to water level	ft	Method of Sampling	<u>PVC BAILER</u>

**SAMPLE D.**

Temperature[°C]	pH	Conductivity[μS]	Diss. Oxygen[mg/l]	Turbidity [NT]
<u>22.0</u>	<u>5.48</u>	<u>151.3 μS</u>		
<u>20.7</u>	<u>5.23</u>	<u>140.7 μS</u>		
<u>20.5</u>	<u>5.09</u>	<u>145.7</u>		

**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. ECM 10-15  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time	<u>6-3-14 1240</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>4.43</u> ft	Gallons per well volume	<u>8.2</u>
Top of casing to bottom	<u>17.0</u> ft	Total gallons evacuated	<u>24.6</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>6-4-14 0810</u>	Elevation of well water	<u>1</u>
Top of casing to water level	_____ ft	Method of Sampling	<u>PVC BAILER</u>

**SAMPLE D.**

<u>Temperature[°C]</u>	<u>pH</u>	<u>Conductivity[μS]</u>	<u>Diss. Oxygen[mg/l]</u>	<u>Turbidity [NT]</u>
<u>24.0</u>	<u>5.87</u>	<u>95.7 uS</u>	_____	_____
<u>22.1</u>	<u>5.60</u>	<u>67.6</u>	_____	_____
<u>22.2</u>	<u>5.36</u>	<u>67.1 uS</u>	_____	_____

**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. EC MW-2  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 6-2-14 1015 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 0.00 ft Gallons per well volume 13.0  
 Top of casing to bottom 20.2 ft Total gallons evacuated 39.0  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 6-3-14 080 Elevation of well water \_\_\_\_\_  
 Top of casing to water level \_\_\_\_\_ ft Method of Sampling PVC BAILER

**SAMPLE D.**

Temperature[°C]	pH	Conductivity[μS]	Diss. i. Oxygen[ <sup>mg</sup> /l]	Turbidity [NT]
<u>19.7</u>	<u>5.45</u>	<u>269.0 μS</u>		
<u>18.2</u>	<u>5.27</u>	<u>259.5 μS</u>		
<u>18.3</u>	<u>5.10</u>	<u>251.5 μS</u>		

**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-3  
 Collected by R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 6-2-14 0945 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 10.02 ft Gallons per well volume 11.1  
 Top of casing to bottom 27.1 ft Total gallons evacuated 33.3  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 6-3-14 0745 Elevation of well water \_\_\_\_\_  
 Top of casing to water level \_\_\_\_\_ ft Method of Sampling PVC BAILER

**SAMPLE D.**

Temperature [°C]	pH	Conductivity [µS]	Dissolved Oxygen [mg/l]	Turbidity [NT]
<u>23.2</u>	<u>5.25</u>	<u>412.3 µS</u>		
<u>19.7</u>	<u>5.88</u>	<u>194.9 µS</u>		
<u>18.8</u>	<u>5.86</u>	<u>187.8 µS</u>		

**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. EC-MW-4  
 Colle. R. DURHAM + DUP

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 6-2-14 0920 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 8.96 ft Gallons per well volume 8.5  
 Top of casing to bottom 22.1 ft Total gallons evacuated 25.5  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 6-3-14 0840 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]
<u>21.20°C</u>	<u>5.66</u>	<u>6.55 µs</u>		
<u>20.7°C</u>	<u>4.92</u>	<u>6.57 µs</u>		
<u>20.6°C</u>	<u>4.50</u>	<u>6.54 µs</u>		

**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. EC-MW-5  
 Collector R. DURHAM

### MONITORING WELL INFORMATION

Evacuation: Date/Time 6-2-14 0845 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 3.94 ft Gallons per well volume 16.9  
 Top of casing to bottom 2.29 ft Total gallons evacuated 50.7  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 6-3-14 0730 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]
<u>23.6</u>	<u>7.96</u>	<u>543</u>	_____	_____
<u>20.4</u>	<u>7.53</u>	<u>496</u>	_____	_____
<u>19.4</u>	<u>7.26</u>	<u>488</u>	_____	_____

### GENERAL INFORMATION

Weather conditions at time of sampling: CLOUDY / WARM  
 Sample characteristics: COLEMAN  
 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. ECM W-6  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 6-2-14 1055 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 5.86 ft Gallons per well volume 10.4  
 Top of casing to bottom 22.0 ft Total gallons evacuated 31.2  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 6-3-14 0905 Elevation of well water \_\_\_\_\_  
 Top of casing to water level \_\_\_\_\_ ft Method of Sampling PVC BAILER

**SAMPLE D.**

Temperature [°C]	pH	Conductivity [µS]	Dissolved Oxygen [mg/l]	Turbidity [NT]
<u>21.0</u>	<u>7.85</u>	<u>35.17 µS</u>		
<u>19.9</u>	<u>4.00</u>	<u>31.53 µS</u>		
<u>19.5</u>	<u>3.99</u>	<u>28.03 µS</u>		

**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. EC MW-7  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 6-2-14 1120 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 7.65 ft Gallons per well volume 10.6  
 Top of casing to bottom 23.9 ft Total gallons evacuated 31.8  
 Water level after evacuation ~~6-3-14 0925~~ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 6-3-14 0925 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[ <sup>mg</sup> /l]	Turbidity [NT]
<u>22.4</u>	<u>4.18</u>	<u>86.1 µS</u>		
<u>20.7</u>	<u>5.37</u>	<u>23.56 µS</u>		
<u>19.9</u>	<u>5.24</u>	<u>20.57 µS</u>		

**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. EC MW-8  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 6-27-14 1145 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 252 ft Gallons per well volume 14.5  
 Top of casing to bottom 29.9 ft Total gallons evacuated 43.5  
 Water level after evacuation 1010ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 6-3-14 1010 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]
<u>22.2</u>	<u>5.19</u>	<u>21.85 μS</u>		
<u>20.7</u>	<u>4.63</u>	<u>21.08 μS</u>		
<u>19.9</u>	<u>4.33</u>	<u>20.79 μS</u>		

**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-9  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 6-2-14 1220 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 9.61 ft Gallons per well volume 13.3  
 Top of casing to bottom 30.0 ft Total gallons evacuated 39.9  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 6-3-14 0945 Elevation of well water \_\_\_\_\_  
 Top of casing to water level \_\_\_\_\_ ft Method of Sampling PVC BAILEY

**SAMPLE D.**

Temperature[°C]	pH	Conductivity[µS]	Diss. Oxygen[m%]	Turbidity [NT]
<u>23.0</u>	<u>5.37</u>	<u>2455 µS</u>		
<u>20.6</u>	<u>5.47</u>	<u>2117 µS</u>		
<u>20.6</u>	<u>5.47</u>	<u>2066 µS</u>		

**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. EC MW-10  
 Collector R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time	<u>6-2-14 1250</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>11.99</u> ft	Gallons per well volume	<u>6.9</u>
Top of casing to bottom	<u>22.1</u> ft	Total gallons evacuated	<u>20.7</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>6-3-14 1025</u>	Elevation of well water	<u>1</u>
Top of casing to water level	_____ ft	Method of Sampling	<u>PVC BAILER</u>

**SAMPLE D.**

Temperature [°C]	pH	Conductivity [µS]	Diss. Oxygen [mg/l]	Turbidity [NT]
<u>22.5</u>	<u>5.66</u>	<u>789 µS</u>		
<u>20.7</u>	<u>5.34</u>	<u>739 µS</u>		
<u>20.1</u>	<u>4.93</u>	<u>733 µS</u>		

**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-11  
 Collector R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 6-24-13 1315 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 10.30 ft Gallons per well volume 6.2  
 Top of casing to bottom 19.8 ft Total gallons evacuated 18.6  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 6-3-74 1105 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]
<u>20.6</u>	<u>4.69</u>	<u>618 µm</u>	_____	_____
<u>19.3</u>	<u>4.39</u>	<u>593 µm</u>	_____	_____
<u>19.1</u>	<u>4.18</u>	<u>587 µm</u>	_____	_____

**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-1  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 6-2-14 1035 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 10.63 ft Gallons per well volume 7.5  
 Top of casing to bottom 22.1 ft Total gallons evacuated 22.5  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 6-3-14 0825 Elevation of well water 1  
 Top of casing to water level \_\_\_\_\_ ft Method of Sampling PVC BAILER

**SAMPLE D.**

Temperature[°C]	pH	Conductivity[μS]	Dissc	D. Oxygen[m%]	Turbidity [NT]
<u>20.8</u>	<u>5.29</u>	<u>65.5 uM</u>			
<u>18.1</u>	<u>4.97</u>	<u>38.2 uM</u>			
<u>17.5</u>	<u>4.74</u>	<u>37.2 uM</u>			

**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. EC MW-14  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 6-2-14 1435 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 254 ft Gallons per well volume 6.9  
 Top of casing to bottom 18.2 ft Total gallons evacuated 2067  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 6-4-14 0750 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[ <sup>mg</sup> /l]	Turbidity [NT]
<u>21.4</u>	<u>5.69</u>	<u>343.1 μS</u>		
<u>20.4</u>	<u>5.81</u>	<u>290.9 μS</u>		
<u>20.1</u>	<u>5.73</u>	<u>283.9 μS</u>		

**GENERAL INFORMATION**

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

Containers and preservatives: \_\_\_\_\_

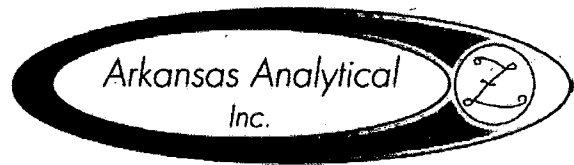
Comments and observations: \_\_\_\_\_

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



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

12 June 2014

David Sartain  
El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731

RE: Groundwater Sample(s)

SDG Number: 1406035

Enclosed are the results of analyses for samples received by the laboratory on 03-Jun-14 15:05. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

<u>Custody Seals</u>	✓
<u>Containers Correct</u>	✓
<u>COC/Labels Agree</u>	✓
<u>Received On Ice</u>	✓
<u>Temperature on Receipt</u>	18.0°C

Sincerely,

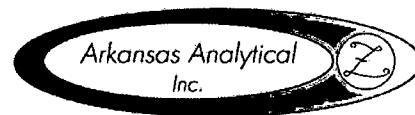
A handwritten signature in cursive script that reads "Norma James / Teresa Coins".

---

Norma James and/or Teresa Coins  
Technical Director and/or QA Officer

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12 June 2014



David Sartain  
El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731  
Project: Groundwater Sample(s)

Date Received: 03-Jun-14 15:05

**ANALYTICAL RESULTS**

Lab Number: 1406035-01  
Sample Name: ECMW #1  
Date/Time Collected: 6/3/14 8:25  
Sample Matrix: Water

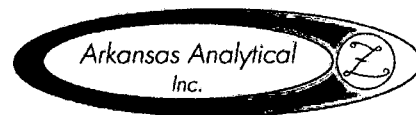
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	3.98		6/4/14 12:06	A406036	300.0, 2.1-1993
Nitrate as N	mg/L	0.986		6/4/14 12:06	A406036	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 9:02	A406094	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 9:02	A406094	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		6/11/14 18:54	A406096	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 18:54	A406096	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		6/5/14 7:46	A406045	4500-NH3 B,D,C-1997

**ANALYTICAL RESULTS**

Lab Number: 1406035-02  
Sample Name: ECMW #2  
Date/Time Collected: 6/3/14 8:10  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	30.7		6/5/14 8:47	A406036	300.0, 2.1-1993
Nitrate as N	mg/L	3.95		6/4/14 12:30	A406036	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 9:12	A406094	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 9:12	A406094	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		6/11/14 19:16	A406096	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 19:16	A406096	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		6/5/14 7:46	A406045	4500-NH3 B,D,C-1997

12 June 2014



David Sartain  
El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731  
Project: Groundwater Sample(s)

Date Received: 03-Jun-14 15:05

**ANALYTICAL RESULTS**

Lab Number: 1406035-03  
Sample Name: ECMW #3  
Date/Time Collected: 6/3/14 7:45  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	9.14		6/5/14 9:10	A406036	300.0, 2.1-1993
Nitrate as N	mg/L	< 0.250		6/4/14 12:53	A406036	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 9:15	A406094	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 9:15	A406094	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		6/11/14 19:20	A406096	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 19:20	A406096	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		6/5/14 7:46	A406045	4500-NH3 B,D,C-1997

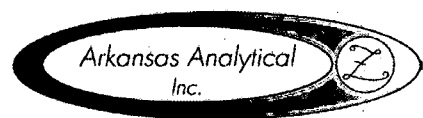
**ANALYTICAL RESULTS**

Lab Number: 1406035-04  
Sample Name: ECMW #4  
Date/Time Collected: 6/3/14 8:40  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	737		6/5/14 9:34	A406036	300.0, 2.1-1993
Nitrate as N	mg/L	0.431		6/4/14 13:17	A406036	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 9:19	A406094	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 9:19	A406094	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		6/11/14 19:23	A406096	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 19:23	A406096	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		6/5/14 7:46	A406045	4500-NH3 B,D,C-1997



12 June 2014



David Sartain  
El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731  
Project: Groundwater Sample(s)

Date Received: 03-Jun-14 15:05

**ANALYTICAL RESULTS**

Lab Number: 1406035-05  
Sample Name: ECMW #5  
Date/Time Collected: 6/3/14 7:30  
Sample Matrix: Water

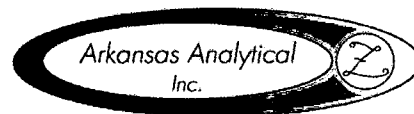
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	65.0		6/4/14 14:04	A406036	300.0, 2.1-1993
Nitrate as N	mg/L	38.0		6/4/14 14:04	A406036	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 9:22	A406094	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 9:22	A406094	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		6/11/14 19:26	A406096	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 19:26	A406096	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		6/5/14 7:46	A406045	4500-NH3 B,D,C-1997

**ANALYTICAL RESULTS**

Lab Number: 1406035-06  
Sample Name: ECMW #6  
Date/Time Collected: 6/3/14 9:05  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	28.9		6/5/14 8:23	A406036	300.0, 2.1-1993
Nitrate as N	mg/L	3560		6/4/14 14:27	A406036	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 9:25	A406094	200.7, Rev. 4.4 (1994)
Lead	mg/L	0.034		6/12/14 9:25	A406094	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		6/11/14 19:29	A406096	200.7, Rev 4.4 (1994)
Lead	mg/L	0.0339		6/11/14 19:29	A406096	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	1110		6/5/14 7:46	A406045	4500-NH3 B,D,C-1997

12 June 2014



David Sartain  
El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731  
Project: Groundwater Sample(s)

Date Received: 03-Jun-14 15:05

**ANALYTICAL RESULTS**

Lab Number: 1406035-07  
Sample Name: ECMW #7  
Date/Time Collected: 6/3/14 9:25  
Sample Matrix: Water

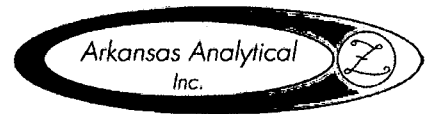
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	858		6/4/14 14:51	A406036	300.0, 2.1-1993
Nitrate as N	mg/L	169		6/4/14 14:51	A406036	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 9:42	A406094	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 9:42	A406094	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		6/11/14 19:33	A406096	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 19:33	A406096	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	100		6/5/14 7:46	A406045	4500-NH3 B.D.C-1997

**ANALYTICAL RESULTS**

Lab Number: 1406035-08  
Sample Name: ECMW #8  
Date/Time Collected: 6/3/14 10:10  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	516		6/4/14 15:15	A406036	300.0, 2.1-1993
Nitrate as N	mg/L	712		6/4/14 15:15	A406036	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 9:45	A406094	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 9:45	A406094	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		6/11/14 19:36	A406096	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 19:36	A406096	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	157		6/5/14 7:46	A406045	4500-NH3 B.D.C-1997

12 June 2014



David Sartain  
El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731  
Project: Groundwater Sample(s)

Date Received: 03-Jun-14 15:05

**ANALYTICAL RESULTS**

Lab Number: 1406035-09  
Sample Name: ECMW #9  
Date/Time Collected: 6/3/14 9:45  
Sample Matrix: Water

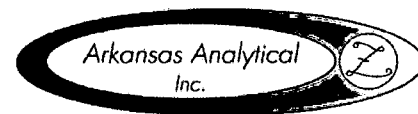
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	525		6/4/14 15:38	A406036	300.0, 2.1-1993
Nitrate as N	mg/L	35.6		6/4/14 15:38	A406036	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 9:48	A406094	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 9:48	A406094	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		6/11/14 19:39	A406096	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 19:39	A406096	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	3.23		6/5/14 7:46	A406045	4500-NH3 B,D,C-1997

**ANALYTICAL RESULTS**

Lab Number: 1406035-10  
Sample Name: ECMW #10  
Date/Time Collected: 6/3/14 10:25  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	136		6/4/14 16:52	A406036	300.0, 2.1-1993
Nitrate as N	mg/L	50.6		6/4/14 16:52	A406036	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 9:51	A406094	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 9:51	A406094	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		6/11/14 19:55	A406096	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 19:55	A406096	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	2.20		6/5/14 7:46	A406045	4500-NH3 B,D,C-1997

12 June 2014



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El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731  
Project: Groundwater Sample(s)

Date Received: 03-Jun-14 15:05

**ANALYTICAL RESULTS**

Lab Number: 1406035-11  
Sample Name: ECMW #11  
Date/Time Collected: 6/3/14 11:05  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	105		6/4/14 17:15	A406036	300.0, 2.1-1993
Nitrate as N	mg/L	30.7		6/4/14 17:15	A406036	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 9:55	A406094	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 9:55	A406094	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		6/11/14 19:59	A406096	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 19:59	A406096	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	26.0		6/5/14 7:46	A406045	4500-NH3 B,D,C-1997

**ANALYTICAL RESULTS**

Lab Number: 1406035-12  
Sample Name: ECMW #12  
Date/Time Collected: 6/3/14 11:25  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	5.04		6/4/14 17:39	A406036	300.0, 2.1-1993
Nitrate as N	mg/L	0.334		6/4/14 17:39	A406036	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 9:58	A406094	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 9:58	A406094	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		6/11/14 20:02	A406096	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 20:02	A406096	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	3.11		6/5/14 7:46	A406045	4500-NH3 B,D,C-1997

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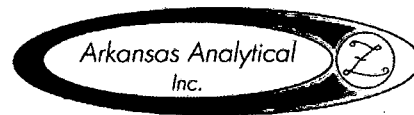
Date Received: 03-Jun-14 15:05

**ANALYTICAL RESULTS**

Lab Number: 1406035-13  
Sample Name: DUP  
Date/Time Collected: 6/3/14 0:00  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	707		6/5/14 16:35	A406036	300.0, 2.1-1993
Nitrate as N	mg/L	0.383		6/4/14 13:40	A406036	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 10:01	A406094	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 10:01	A406094	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		6/11/14 20:05	A406096	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 20:05	A406096	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	0.69		6/5/14 7:46	A406045	4500-NH3 B.D.C-1997

12 June 2014



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El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731  
Project: Groundwater Sample(s)

Date Received: 03-Jun-14 15:05

**QUALITY CONTROL RESULTS**

**Anions -- Batch: A406036 (Water)**

Prepared: 04-Jun-14 11:32 By: MB -- Analyzed: 04-Jun-14 20:24 By: Mei

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Nitrate as N	<0.250 mg/L	99.1% / NA	99.3% / 103%		2.63%	
Sulfate as SO4	<0.500 mg/L	97.5% / NA	101% / 103%		0.801%	

**Wet Chemistry -- Batch: A406045 (Water)**

Prepared: 05-Jun-14 07:46 By: KP -- Analyzed: 05-Jun-14 07:46 By: RJH

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Ammonia as N	<0.50 mg/L	122% / NA	116% / 122%		4.62%	

**Dissolved Metals -- Batch: A406094 (Water)**

Prepared: 09-Jun-14 12:04 By: ST -- Analyzed: 12-Jun-14 09:09 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Chromium	<0.021 mg/L	94.8% / NA	97.9% / 98.5%		0.539%	
Lead	<0.016 mg/L	95.4% / NA	98.7% / 99.1%		0.470%	

**Total Metals -- Batch: A406096 (Water)**

Prepared: 05-Jun-14 16:10 By: ST -- Analyzed: 11-Jun-14 19:13 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Chromium	<0.0104 mg/L	100% / NA	99.1% / 101%		2.07%	
Lead	<0.0156 mg/L	99.6% / NA	98.2% / 101%		2.44%	

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.  
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by: Norma James / Teresa Coins  
Norma James and/or Teresa Coins  
Technical Director and/or QA Officer





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		Turnaround Time		Preservation Codes:											
El Dorado Chemical Inc.		El Dorado Chemical Inc.		Groundwater Samples		1 Day (100%)		1. Cool, 4 Degrees Centigrade				4. Thiosulfate for Dechlorination							
4500 Northwest Ave.		P.O. Box 231				2 Day (50%)		2. Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> ), pH < 2				5. Hydrochloric Acid(HCl)							
El Dorado, AR 71731		El Dorado, AR 71731		Reporting Information		3 Day (25%)		3. Nitric Acid (HNO <sub>3</sub> ), pH < 2				6. Sodium Hydroxide (NaOH), pH > 12							
Attn: David Sartain				Telephone: 870-863-1484		5 Day (Routine)		<b>TEST PARAMETERS</b>								Bottle Type Code			
				Fax: 870-863-1499		Preservative Code:		1	1,2	1	1,3						G = Glass; P = Plastic		
				Email: dsartain@cdc-ark.com; browe@cdc-ark.com; lmarcella@env-mgt.com		Bottle Type:		P	P	P	P						V = Septum; A = Amber		
<i>R. Durham</i> Sampler(s) Signature				R. DURHAM Sampler(s) Printed															
Field Number	SAMPLE COLLECTION		Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION				Nitrate, Sulfate	Ammonia	d Cr, d Pb	Cr, Pb	Arkansas Analytical Work Order Number:				
11	6-3-4	1105	X		4	Water	ECMW- 11				X	X	X	X	1406035				
12	6-3-4	1125	X		4	Water	ECMW- 12				X	X	X	X	12				
13	"		X		4	Water	ECMW- DUP				X	X	X	X	13				
			X		4	Water	ECMW-				X	X	X	X					
			X		4	Water	ECMW-				X	X	X	X					
1. Relinquished by: (Signature)		Date/Time		2. Received by: (Signature)		SAMPLE CONDITION UPON RECEIPT IN LAB						REMARKS / SAMPLE COMMENTS							
<i>R. Durham</i>		6-3-4 1125		<i>Allen Parker</i>		1. CUSTODY SEALS: <input checked="" type="checkbox"/> Yes ___ No 2. CONTAINERS CORRECT: <input checked="" type="checkbox"/> Yes ___ No 3. COC/LABELS AGREE: <input checked="" type="checkbox"/> Yes ___ No 4. RECEIVED ON ICE: ___ Yes ___ No 5. TEMPERATURE ON RECEIPT: 18°C 6. TEMPERATURE GUN ID: HHT#2													
3. Relinquished by: (Signature)		Date/Time		4. Received by lab: (Signature)		FOR COMPLETION BY LAB ONLY													
<i>Allen Parker</i>		6-3-14 1509		<i>Amanda Forbush</i>															





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

12 June 2014

David Sartain  
El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731

RE: Groundwater Sample(s)  
SDG Number: 1406042

Enclosed are the results of analyses for samples received by the laboratory on 04-Jun-14 15:35. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

<u>Custody Seals</u>	✓
<u>Containers Correct</u>	✓
<u>COC/Labels Agree</u>	✓
<u>Received On Ice</u>	✓
Temperature on Receipt	13.0°C

Sincerely,

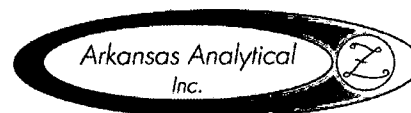
A handwritten signature in cursive script that reads "Norma James / Teresa Coins".

---

Norma James and/or Teresa Coins  
Technical Director and/or QA Officer

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12 June 2014



David Sartain  
El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731  
Project: Groundwater Sample(s)

Date Received: 04-Jun-14 15:35

**ANALYTICAL RESULTS**

Lab Number: 1406042-01  
Sample Name: ECMW #13  
Date/Time Collected: 6/4/14 7:25  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	374		6/6/14 8:40	A406065	300.0, 2.1-1993
Nitrate as N	mg/L	0.255		6/5/14 11:03	A406065	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 10:11	A406095	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 10:11	A406095	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		6/11/14 20:22	A406103	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 20:22	A406103	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		6/5/14 7:47	A406046	4500-NH3 B.D.C-1997

**ANALYTICAL RESULTS**

Lab Number: 1406042-02  
Sample Name: ECMW #21  
Date/Time Collected: 6/4/14 10:35  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	4.57		6/5/14 11:27	A406065	300.0, 2.1-1993
Nitrate as N	mg/L	1.63		6/5/14 11:27	A406065	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 10:34	A406095	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 10:34	A406095	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	0.0105		6/11/14 20:44	A406103	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 20:44	A406103	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		6/5/14 7:47	A406046	4500-NH3 B.D.C-1997

12 June 2014



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El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731  
Project: Groundwater Sample(s)

Date Received: 04-Jun-14 15:35

**ANALYTICAL RESULTS**

Lab Number: 1406042-03  
Sample Name: ECMW #20  
Date/Time Collected: 6/4/14 10:15  
Sample Matrix: Water

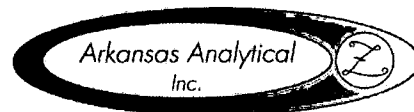
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	8.17		6/6/14 9:04	A406065	300.0, 2.1-1993
Nitrate as N	mg/L	< 0.250		6/5/14 11:50	A406065	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 10:37	A406095	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 10:37	A406095	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		6/11/14 20:48	A406103	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 20:48	A406103	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		6/5/14 7:47	A406046	4500-NH3 B,D,C-1997

**ANALYTICAL RESULTS**

Lab Number: 1406042-04  
Sample Name: ECMW #19  
Date/Time Collected: 6/4/14 9:55  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	2.78		6/5/14 12:14	A406065	300.0, 2.1-1993
Nitrate as N	mg/L	< 0.250		6/5/14 12:14	A406065	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 10:40	A406095	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 10:40	A406095	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		6/11/14 20:51	A406103	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 20:51	A406103	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		6/5/14 7:47	A406046	4500-NH3 B,D,C-1997

12 June 2014



David Sartain  
El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731  
Project: Groundwater Sample(s)

Date Received: 04-Jun-14 15:35

**ANALYTICAL RESULTS**

Lab Number: 1406042-05  
Sample Name: ECMW #18  
Date/Time Collected: 6/4/14 9:25  
Sample Matrix: Water

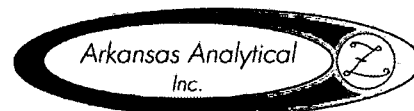
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	7.15		6/5/14 12:37	A406065	300.0, 2.1-1993
Nitrate as N	mg/L	0.299		6/5/14 12:37	A406065	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 10:44	A406095	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 10:44	A406095	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	0.0531		6/11/14 20:54	A406103	200.7, Rev 4.4 (1994)
Lead	mg/L	0.0274		6/11/14 20:54	A406103	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		6/5/14 7:47	A406046	4500-NH3 B,D,C-1997

**ANALYTICAL RESULTS**

Lab Number: 1406042-06  
Sample Name: ECMW #17  
Date/Time Collected: 6/4/14 9:05  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	29.3		6/6/14 9:28	A406065	300.0, 2.1-1993
Nitrate as N	mg/L	7.19		6/5/14 13:01	A406065	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 10:47	A406095	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 10:47	A406095	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		6/11/14 20:57	A406103	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 20:57	A406103	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	2.46		6/5/14 7:47	A406046	4500-NH3 B,D,C-1997

12 June 2014



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Project: Groundwater Sample(s)

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**ANALYTICAL RESULTS**

Lab Number: 1406042-07  
Sample Name: ECMW #22  
Date/Time Collected: 6/4/14 8:45  
Sample Matrix: Water

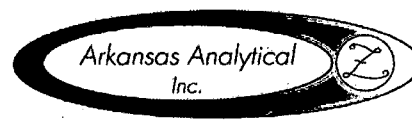
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	5.05		6/5/14 13:24	A406065	300.0, 2.1-1993
Nitrate as N	mg/L	1.75		6/5/14 13:24	A406065	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 10:50	A406095	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 10:50	A406095	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		6/11/14 21:01	A406103	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 21:01	A406103	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		6/5/14 7:47	A406046	4500-NH3 B,D,C-1997

**ANALYTICAL RESULTS**

Lab Number: 1406042-08  
Sample Name: ECMW #16  
Date/Time Collected: 6/4/14 8:30  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	10.7		6/5/14 14:12	A406065	300.0, 2.1-1993
Nitrate as N	mg/L	10.9		6/5/14 14:12	A406065	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 10:53	A406095	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 10:53	A406095	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		6/11/14 21:04	A406103	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 21:04	A406103	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	1.80		6/5/14 7:47	A406046	4500-NH3 B,D,C-1997

12 June 2014



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**ANALYTICAL RESULTS**

Lab Number: 1406042-09  
Sample Name: ECMW #15  
Date/Time Collected: 6/4/14 8:10  
Sample Matrix: Water

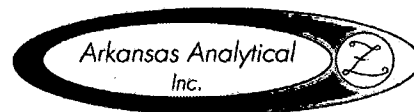
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	12.4		6/5/14 14:35	A406065	300.0, 2.1-1993
Nitrate as N	mg/L	1.74		6/5/14 14:35	A406065	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 10:57	A406095	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 10:57	A406095	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	0.0122		6/11/14 21:07	A406103	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 21:07	A406103	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		6/5/14 7:47	A406046	4500-NH3 B,D,C-1997

**ANALYTICAL RESULTS**

Lab Number: 1406042-10  
Sample Name: ECMW #14  
Date/Time Collected: 6/4/14 7:50  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	54.2		6/5/14 15:46	A406065	300.0, 2.1-1993
Nitrate as N	mg/L	4.31		6/5/14 15:46	A406065	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 11:13	A406095	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 11:13	A406095	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		6/11/14 21:10	A406103	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 21:10	A406103	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		6/5/14 7:47	A406046	4500-NH3 B,D,C-1997

12 June 2014



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Project: Groundwater Sample(s)

Date Received: 04-Jun-14 15:35

**ANALYTICAL RESULTS**

Lab Number: 1406042-11  
Sample Name: DUP  
Date/Time Collected: 6/4/14 0:00  
Sample Matrix: Water

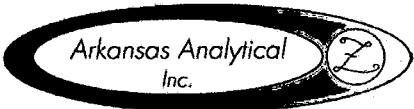
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	11.4		6/5/14 16:58	A406065	300.0, 2.1-1993
Nitrate as N	mg/L	10.4		6/5/14 16:58	A406065	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 11:16	A406095	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 11:16	A406095	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		6/11/14 21:27	A406103	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 21:27	A406103	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	1.18		6/5/14 7:47	A406046	4500-NH3 B,D,C-1997

**ANALYTICAL RESULTS**

Lab Number: 1406042-12  
Sample Name: Field Blank  
Date/Time Collected: 6/4/14 0:00  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	< 0.500		6/5/14 16:09	A406065	300.0, 2.1-1993
Nitrate as N	mg/L	< 0.250		6/5/14 16:09	A406065	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		6/12/14 11:20	A406095	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		6/12/14 11:20	A406095	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		6/11/14 21:30	A406103	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		6/11/14 21:30	A406103	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		6/5/14 7:47	A406046	4500-NH3 B,D,C-1997

12 June 2014



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El Dorado, AR 71731  
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**QUALITY CONTROL RESULTS**

**Wet Chemistry -- Batch: A406046 (Water)**

Prepared: 05-Jun-14 07:47 By: KP -- Analyzed: 05-Jun-14 07:47 By: RJH

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Ammonia as N	<0.50 mg/L	107% / NA	118% / 126%		5.40%	

**Anions -- Batch: A406065 (Water)**

Prepared: 05-Jun-14 10:21 By: MB -- Analyzed: 05-Jun-14 18:33 By: Mel

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Nitrate as N	<0.250 mg/L	98.7% / NA	107% / 107%		0.409%	
Sulfate as SO4	<0.500 mg/L	104% / NA	110% / 110%		0.0724%	

**Dissolved Metals -- Batch: A406095 (Water)**

Prepared: 09-Jun-14 12:07 By: ST -- Analyzed: 12-Jun-14 10:31 By: ST

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Chromium	<0.021 mg/L	99.4% / NA	102% / 101%		0.919%	
Lead	<0.016 mg/L	100% / NA	102% / 101%		0.778%	

**Total Metals -- Batch: A406103 (Water)**

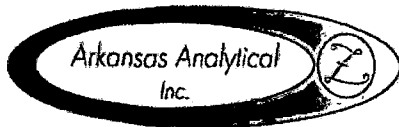
Prepared: 06-Jun-14 10:25 By: ST -- Analyzed: 11-Jun-14 20:41 By: ST

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Chromium	<0.0104 mg/L	97.5% / NA	99.4% / 97.7%		1.68%	
Lead	<0.0156 mg/L	96.8% / NA	98.1% / 96.1%		2.01%	

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.  
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by: Norma James / Teresa Coins  
Norma James and/or Teresa Coins  
Technical Director and/or QA Officer

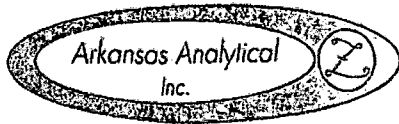




11701 Interstate 30, Bldg. 1, Ste. 115  
 Little Rock, AR 72209  
 PHONE: 501-455-3233  
 FAX: 501-455-6118

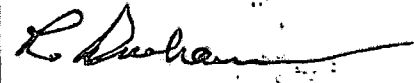
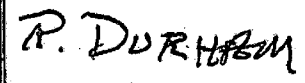
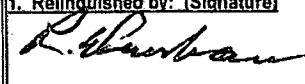
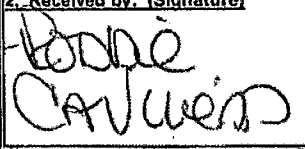
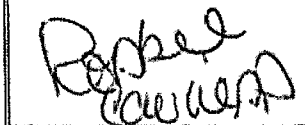
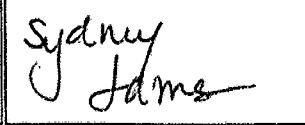
# CHAIN OF CUSTODY RECORD

CLIENT INFORMATION		BILLING INFORMATION		Project Description		Turnaround Time		Preservation Codes:											
El Dorado Chemical Inc.		El Dorado Chemical Inc.		Groundwater Samples		1 Day (100%)		1. Cool, 4 Degrees Centigrade				4. Thiosulfate for Dechlorination							
4500 Northwest Ave.		P.O. Box 231				2 Day (50%)		2. Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> ), pH < 2				5. Hydrochloric Acid(HCl)							
El Dorado, AR 71731		El Dorado, AR 71731		Reporting Information		3 Day (25%)		3. Nitric Acid (HNO <sub>3</sub> ), pH < 2				6. Sodium Hydroxide (NaOH), pH > 12							
				Telephone: 870-863-1484		5 Day (Routine)		<b>TEST PARAMETERS</b>								Bottle Type Code			
Attn: David Sartain				Fax: 870-863-1499		Preservative Code:		1	1,2	1	1,3						G = Glass; P = Plastic		
				Email: dsartain@edc-ark.com; browe@edc-ark.com; lmarcella@env-mgt.com		Bottle Type:		P	P	P	P						V = Septum; A = Amber		
<i>R. Durham</i> Sampler(s) Signature				R. DURHAM EMS INC Sampler(s) Printed														Arkansas Analytical Work Order Number: 1406042-	
Field Number	SAMPLE COLLECTION		Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION				Nitrate, Sulfate	Ammonia	d Cr, d Pb	Cr, Pb					
1	6-4-14	0725	X		4	Water	ECMW-23				X	X	X	X					01
2	"	1035	X		4	Water	ECMW-21				X	X	X	X					02
3	"	1015	X		4	Water	ECMW-20				X	X	X	X					03
4	"	0955	X		4	Water	ECMW-19				X	X	X	X					04
5	"	0925	X		4	Water	ECMW-18				X	X	X	X					05
6	"	0905	X		4	Water	ECMW-17				X	X	X	X					06
7	"	0845	X		4	Water	ECMW-22				X	X	X	X					07
8	"	0830	X		4	Water	ECMW-16				X	X	X	X					08
9	"	0810	X		4	Water	ECMW-15				X	X	X	X					09
10	"	0750	X		4	Water	ECMW-14				X	X	X	X					10
1. Relinquished by: (Signature)		Date/Time		2. Received by: (Signature)		SAMPLE CONDITION UPON RECEIPT IN LAB				REMARKS / SAMPLE COMMENTS									
<i>R. Durham</i>		6-4-14 1115		<i>Robbie Caenen</i>		1. CUSTODY SEALS: <input checked="" type="checkbox"/> Yes ___ No 2. CONTAINERS CORRECT: <input checked="" type="checkbox"/> Yes ___ No 3. COC/LABELS AGREE: <input checked="" type="checkbox"/> Yes ___ No 4. RECEIVED ON ICE: <input checked="" type="checkbox"/> Yes ___ No 5. TEMPERATURE ON RECEIPT: 13°C 6. TEMPERATURE GUN ID: HIT #2													
3. Relinquished by: (Signature)		Date/Time		4. Received by lab: (Signature)		FOR COMPLETION BY LAB ONLY													
<i>Robbie Caenen</i>		6/4/14, 1535		<i>Sydney James</i>															



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		Turnaround Time		Preservation Codes:											
EI Dorado Chemical Inc.		EI Dorado Chemical Inc.		Groundwater Samples		1 Day (100%)		1. Cool, 4 Degrees Centigrade				4. Thiosulfate for Dechlorination							
4500 Northwest Ave.		P.O. Box 231				2 Day (50%)		2. Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> ), pH < 2				5. Hydrochloric Acid(HCl)							
EI Dorado, AR 71731		EI Dorado, AR 71731		Reporting Information		3 Day (25%)		3. Nitric Acid (HNO <sub>3</sub> ), pH < 2				6. Sodium Hydroxide (NaOH), pH > 12							
				Telephone: 870-863-1484		5 Day (flexible)		TEST PARAMETERS								Bottle Type Code			
Attn: David Sartain				Fax: 870-863-1499		Preservative Code:		1	1,2	1	1,3							G = Glass; P = Plastic	
				Email: dsartain@edo-ark.com; browe@edo-ark.com; lmarcella@env-mgt.com		Bottle Type:		P	P	P	P							V = Septum; A = Amber	
 Sampler(s) Signature				 Sampler(s) Printed						Nitrate, Sulfate Ammonia d Cr, d Pb Cr, Pb								Arkansas Analytical Work Order Number: 1406042-	
Field Number	SAMPLE COLLECTION		Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION		Nitrate, Sulfate	Ammonia	d Cr, d Pb	Cr, Pb							
11	6-4-14		X		4	Water	ECMW- DUR		X	X	X	X						11	
12	6-4-14		X		4	Water	ECMW- FIELD BLANK		X	X	X	X						12	
			X		4	Water	ECMW-		X	X	X	X							
			X		4	Water	ECMW-		X	X	X	X							
			X		4	Water	ECMW-		X	X	X	X							
			X		4	Water	ECMW-		X	X	X	X							
			X		4	Water	ECMW-		X	X	X	X							
			X		4	Water	ECMW-		X	X	X	X							
			X		4	Water	ECMW-		X	X	X	X							
			X		4	Water	ECMW-		X	X	X	X							
1. Relinquished by: (Signature)		Date/Time		2. Received by: (Signature)		SAMPLE CONDITION UPON RECEIPT IN LAB				REMARKS / SAMPLE COMMENTS									
		6-7-14 1115				1. CUSTODY SEALS: <input checked="" type="checkbox"/> Yes ___ No													
						2. CONTAINERS CORRECT: <input type="checkbox"/> Yes ___ No													
						3. COC/LABELS AGREE: <input type="checkbox"/> Yes ___ No													
3. Relinquished by: (Signature)		Date/Time		4. Received by lab: (Signature)		4. RECEIVED ON ICE: <input type="checkbox"/> Yes ___ No													
		6/4/14 1535				5. TEMPERATURE ON RECEIPT: 13°C													
						6. TEMPERATURE GUN ID: HHT #2													
FOR COMPLETION BY LAB ONLY																			

**GROUNDWATER SAMPLING DATA FORM**  
**El Dorado Chemical Company**

**FIELD LOG**

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. EC MW-19  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 11-4-14 1325 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 4.21 ft Gallons per well volume 9.2  
 Top of casing to bottom 61.5 ft Total gallons evacuated 28.2  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 11-5-14 0925 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[ <sup>mg</sup> /l]	Turbidity [NT]
<u>19.3</u>	<u>5.19</u>	<u>86.6</u>		
<u>18.6</u>	<u>5.13</u>	<u>75.7</u>		
<u>18.8</u>	<u>5.05</u>	<u>82.6</u>		

**GENERAL INFORMATION**

Weather conditions at time of sampling: COOL / RAINY  
 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-18  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 11-9-74 1300 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 6.68 ft Gallons per well volume 6.8  
 Top of casing to bottom 17.20 ft Total gallons evacuated 20.4  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 11-5-14 0910 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[ <sup>mg/l</sup> ]	Turbidity [NT]
<u>20.3</u>	<u>4.31</u>	<u>73.8 μS</u>	_____	_____
<u>20.2</u>	<u>4.76</u>	<u>75.3 μS</u>	_____	_____
<u>20.3</u>	<u>4.77</u>	<u>74.1 μS</u>	_____	_____

**GENERAL INFORMATION**

Weather conditions at time of sampling: COOL / RAIN

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

FIGURE

**GROUNDWATER SAMPLING DATA FORM**  
**El Dorado Chemical Company**

**FIELD LOG**

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. ECMLW-20  
 Collected by R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time	<u>11-4-14 1230</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>29.83</u> ft	Gallons per well volume	<u>398</u>
Top of casing to bottom	<u>54.4</u> ft	Total gallons evacuated	<u>11.7</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>11-5-14 0950</u>	Elevation of well water	<u>1</u>
Top of casing to water level	_____ ft	Method of Sampling	<u>PVC BAILER</u>

**SAMPLE D.**

Temperature[°C]	pH	Conductivity[μS]	Dissolved Oxygen[ <sup>mg</sup> /l]	Turbidity [NT]
<u>18.7</u>	<u>4.07</u>	<u>42.8 μS</u>	_____	_____
<u>30.2</u>	<u>3.71</u>	<u>78.4 μS</u>	_____	_____
<u>19.3</u>	<u>3.61</u>	<u>63.6 μS</u>	_____	_____

**GENERAL INFORMATION**

Weather conditions at time of sampling: Cloud / RAIN  
 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

FIGURE

**GROUNDWATER SAMPLING DATA FORM**  
**El Dorado Chemical Company**

**FIELD LOG**

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. ECMW-24  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 11-4-14 1210 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 19.3 ft Gallons per well volume 2.5  
 Top of casing to bottom 34.9 ft Total gallons evacuated 7.5  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 11-5-14 1005 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[ <sup>mg</sup> /l]	Turbidity [NT]
<u>21.5</u>	<u>5.35</u>	<u>62.2</u>	<u>ND</u>	_____
<u>20.7</u>	<u>4.36</u>	<u>63.0</u>	<u>ND</u>	_____
<u>20.2</u>	<u>3.81</u>	<u>56.7</u>	<u>ND</u>	_____

**GENERAL INFORMATION**

Weather conditions at time of sampling: COOL / RAIN  
 Sample characteristics: \_\_\_\_\_  
 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. ECMU-14  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 11-3-14 1400 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 10.19 ft Gallons per well volume 5.2  
 Top of casing to bottom 18.2 ft Total gallons evacuated 15.6  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 11-5-14 0810 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]
<u>21.9</u>	<u>4.32</u>	<u>558 μS</u>	_____	_____
<u>22.2</u>	<u>4.16</u>	<u>429.4 μS</u>	_____	_____
<u>22.1</u>	<u>4.09</u>	<u>401.6 μS</u>	_____	_____

**GENERAL INFORMATION**

Weather conditions at time of sampling: Cool / RAIN  
 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. GRW-15  
 Collector R. DURHAM FDUP

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 11-5-14 1415 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 7.02 ft Gallons per well volume 6.5  
 Top of casing to bottom 17.00 ft Total gallons evacuated 25.5  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 11-5-14 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. i Oxygen[mg/l]	Turbidity [NT]
<u>21.3</u>	<u>2.82</u>	<u>77.8 us</u>	_____	_____
<u>21.8</u>	<u>2.72</u>	<u>75.6 us</u>	_____	_____
<u>21.7</u>	<u>2.75</u>	<u>70.5 us</u>	_____	_____

**GENERAL INFORMATION**

Weather conditions at time of sampling: RAIN/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

FIGURE



**GROUNDWATER SAMPLING DATA FORM**  
**El Dorado Chemical Company**

**FIELD LOG**

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

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 11-3-14 1425 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 6.81 ft Gallons per well volume 8.1  
 Top of casing to bottom 19.3 ft Total gallons evacuated 24.3  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 11-5-14 0845 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[ <sup>mg/l</sup> ]	Turbidity [NT]
<u>21.5</u>	<u>7.78</u>	<u>136.9 μS</u>	_____	_____
<u>22.0</u>	<u>2.65</u>	<u>135.6 μS</u>	_____	_____
<u>22.3</u>	<u>2.64</u>	<u>135.5 μS</u>	_____	_____

**GENERAL INFORMATION**

Weather conditions at time of sampling: COOL / RAIN  
 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. EGMW-22  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 11-5-14 1435 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 9.06 ft Gallons per well volume 11.3  
 Top of casing to bottom 79.8 ft Total gallons evacuated 33.9  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 11-5-14 1020 Elevation of well water \_\_\_\_\_  
 Top of casing to water level \_\_\_\_\_ ft Method of Sampling PVC BAILEY

**SAMPLE D.**

Temperature[°C]	pH	Conductivity[µS]	Diss. Oxygen[ <sup>mg/l</sup> ]	Turbidity [NT]
<u>19.2</u>	<u>4.34</u>	<u>134.7</u>	_____	_____
<u>18.9</u>	<u>4.37</u>	<u>129.6</u>	_____	_____
<u>19.0</u>	<u>4.42</u>	<u>132.5</u>	_____	_____

**GENERAL INFORMATION**

Weather conditions at time of sampling: COOL/RAIN  
 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-17  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 11-3-14 1450 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 30.01 ft Gallons per well volume 3.0  
 Top of casing to bottom 34.7 ft Total gallons evacuated 9.0  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 11-5-14 0855 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[ <sup>mg</sup> /l]	Turbidity [NT]
<u>18.8</u>	<u>3.01</u>	<u>228.2 μS</u>		
<u>18.6</u>	<u>2.74</u>	<u>241.8 μS</u>		
<u>18.5</u>	<u>2.73</u>	<u>228.6 μS</u>		

**GENERAL INFORMATION**

Weather conditions at time of sampling: COOL / RAIN  
 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. EC MW-13  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 11-3-14 1500 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 7.42 ft Gallons per well volume 8.0  
 Top of casing to bottom 19.8 ft Total gallons evacuated 24.0  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time \_\_\_\_\_ Elevation of well water \_\_\_\_\_  
 Top of casing to water level 11-5-14 0745 Method of Sampling PVC BAILER

**SAMPLE D.**

Temperature[°C]	pH	Conductivity[μS]	Diss. Oxygen[mg/l]	Turbidity [NT]
<u>19.5</u>	<u>3.89</u>	<u>1215 μS</u>	_____	_____
<u>20.0</u>	<u>3.96</u>	<u>1248 μS</u>	_____	_____
<u>20.7</u>	<u>4.03</u>	<u>1211 μS</u>	_____	_____

**GENERAL INFORMATION**

Weather conditions at time of sampling: Clear / RAIN  
 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. ECMS-12  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 11-3-14 1545 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 6.70 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 11-3-14 1025 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]
<u>21.4</u>	<u>4.61</u>	<u>641 µS</u>	_____	_____
<u>21.6</u>	<u>4.53</u>	<u>630 µS</u>	_____	_____
<u>22.2</u>	<u>4.53</u>	<u>625 µS</u>	_____	_____

**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

FIGURE

**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 11-3-14 1535 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 15.32 ft Gallons per well volume 4.7  
 Top of casing to bottom 22.6 ft Total gallons evacuated 14.1  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 11-4-14 1005 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[ <sup>mg/l</sup> ]	Turbidity [NT]
<u>20.5</u>	<u>3.46</u>	<u>752 μs</u>	_____	_____
<u>20.7</u>	<u>3.17</u>	<u>682 μs</u>	_____	_____
<u>20.9</u>	<u>3.07</u>	<u>675 μs</u>	_____	_____

**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

FIGURE

**GROUNDWATER SAMPLING DATA FORM**  
**El Dorado Chemical Company**

**FIELD LOG**

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. ELMWS-11  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 11-5-14 1515 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 12.21 ft Gallons per well volume 4.9  
 Top of casing to bottom 19.8 ft Total gallons evacuated 14.7  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 11-4-14 1015 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[ <sup>mg</sup> /l]	Turbidity [NT]
<u>20.9</u>	<u>3.69</u>	<u>742 µS</u>		
<u>21.6</u>	<u>3.21</u>	<u>720 µS</u>		
<u>21.5</u>	<u>3.08</u>	<u>655 µS</u>		

**GENERAL INFORMATION**

Weather conditions at time of sampling: COOL / RAIN  
 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. ECOMW-9  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 11-3-84 11:35 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 12.10 ft Gallons per well volume 11.6  
 Top of casing to bottom 30.0 ft Total gallons evacuated 34.8  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 11-4-84 0955 Elevation of well water 1  
 Top of casing to water level \_\_\_\_\_ ft Method of Sampling PVC BAILER

**SAMPLE D.**

Temperature[°C]	pH	Conductivity[μS]	Diss. Oxygen[ <sup>mg</sup> /l]	Turbidity [NT]
<u>20.0</u>	<u>4.75</u>	<u>2557 μs</u>	_____	_____
<u>19.3</u>	<u>4.82</u>	<u>2128 μs</u>	_____	_____
<u>18.9</u>	<u>4.81</u>	<u>2114 μs</u>	_____	_____

**GENERAL INFORMATION**

Weather conditions at time of sampling: COOL/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

FIGURE



**GROUNDWATER SAMPLING DATA FORM**  
**El Dorado Chemical Company**

**FIELD LOG**

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. ECMWS-8  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time	<u>11-3-14 1120</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>3.59</u> ft	Gallons per well volume	<u>13.8</u>
Top of casing to bottom	<u>29.9</u> ft	Total gallons evacuated	<u>41.4</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>11-4-14 0940</u>	Elevation of well water	_____
Top of casing to water level	_____ ft	Method of Sampling	<u>PVC BAILER</u>

**SAMPLE D.**

<u>Temperature[°C]</u>	<u>pH</u>	<u>Conductivity[μS]</u>	<u>Diss. Oxygen[mS/l]</u>	<u>Turbidity [NT]</u>
<u>19.5</u>	<u>3.45</u>	<u>20.70 <del>MS</del></u>	_____	_____
<u>19.7</u>	<u>3.16</u>	<u>20.04 <del>MS</del></u>	_____	_____
<u>19.2</u>	<u>3.09</u>	<u>20.03 <del>MS</del></u>	_____	_____

**GENERAL INFORMATION**

Weather conditions at time of sampling: CLEAR/COOL

Sample characteristics: CLEAR

Containers and preservatives: \_\_\_\_\_

Comments and observations: \_\_\_\_\_

Recommendations: \_\_\_\_\_

Certification: R. Durham

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

**GROUNDWATER SAMPLING DATA FORM**  
**El Dorado Chemical Company**

**FIELD LOG**

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. EC MW-7  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 11-3-14 11:10 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 9.53 ft Gallons per well volume 9.7  
 Top of casing to bottom 23.9 ft Total gallons evacuated 23.1  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 11-3-14 025 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]
<u>19.7</u>	<u>5.50</u>	<u>29.3 MS</u>		
<u>20.3</u>	<u>4.76</u>	<u>21.62 MS</u>		
<u>20.6</u>	<u>4.56</u>	<u>19.28 MS</u>		

**GENERAL INFORMATION**

Weather conditions at time of sampling: CLEAR/COOL  
 Sample characteristics: \_\_\_\_\_  
 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. ECTMUS-1  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 11-3-14 1055 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 14.84 ft Gallons per well volume 2.8  
 Top of casing to bottom 22.1 ft Total gallons evacuated 23.4  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 11-4-14 0915 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[ <sup>mg/l</sup> ]	Turbidity [NT]
<u>12.9</u>	<u>5.11</u>	<u>77.2 μS</u>		
<u>18.2</u>	<u>4.22</u>	<u>52.5 μS</u>		
<u>18.7</u>	<u>3.97</u>	<u>47.5 μS</u>		

**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

FIGURE

**GROUNDWATER SAMPLING DATA FORM**  
**El Dorado Chemical Company**

**FIELD LOG**

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

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 11-3-14 1040 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 1.44 ft Gallons per well volume 122  
 Top of casing to bottom 20.2 ft Total gallons evacuated 32.6  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 11-4-14 0900 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[ <sup>mg/l</sup> ]	Turbidity [NT]
<u>18.2</u>	<u>4.82</u>	<u>415.0 μS</u>		
<u>18.2</u>	<u>4.76</u>	<u>333.1 μS</u>		
<u>18.2</u>	<u>4.45</u>	<u>325.5 μS</u>		

**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

FIGURE

**GROUNDWATER SAMPLING DATA FORM**  
**El Dorado Chemical Company**

**FIELD LOG**

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

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 11-3-14 10:20 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 12.15 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 11-4-14 0830 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[ <sup>mg</sup> /l]	Turbidity [NT]
<u>18.5</u>	<u>5.16</u>	<u>494.3 μS</u>		
<u>18.3</u>	<u>5.12</u>	<u>259.4 μS</u>		
<u>18.6</u>	<u>4.97</u>	<u>249.3 μS</u>		

**GENERAL INFORMATION**

Weather conditions at time of sampling: \_\_\_\_\_  
 Sample characteristics: \_\_\_\_\_  
 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-4  
 Colle. R. DURHAM + DUP

### MONITORING WELL INFORMATION

Evacuation: Date/Time 11.3.14 1005 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 9.28 ft Gallons per well volume 7.9  
 Top of casing to bottom 22.1 ft Total gallons evacuated 23.7  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 11.4.14 0825 Elevation of well water 1  
 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]
<u>19.8</u>	<u>3.29</u>	<u>7.25 MS</u>		
<u>20.2</u>	<u>3.16</u>	<u>6.86 MS</u>		
<u>20.9</u>	<u>3.01</u>	<u>6.81 MS</u>		

### 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

FIGURE

**GROUNDWATER SAMPLING DATA FORM**  
**El Dorado Chemical Company**

**FIELD LOG**

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. ECMW-6  
 Colle. R. DURHAM

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 11-3-14 0950 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 6.88 ft Gallons per well volume 9.8  
 Top of casing to bottom 22.00 ft Total gallons evacuated 29.4  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 11-4-14 0845 Elevation of well water 1  
 Top of casing to water level \_\_\_\_\_ ft Method of Sampling PVC BAILER

**SAMPLE D.**

Temperature[°C]	pH	Conductivity[μS]	Diss. ! Oxygen[ <sup>mg</sup> /l]	Turbidity [NT]
<u>20.2</u>	<u>5.37</u>	<u>28.46 MS</u>		
<u>20.8</u>	<u>3.29</u>	<u>27.31 MS</u>		
<u>20.7</u>	<u>3.29</u>	<u>27.94 MA</u>		

**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

FIGURE

**GROUNDWATER SAMPLING DATA FORM**  
**El Dorado Chemical Company**

**FIELD LOG**

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

**MONITORING WELL INFORMATION**

Evacuation: Date/Time 11-3-14 0930 Method of Evacuation ELEC. PUMP  
 Top of casing to water level 4.61 ft Gallons per well volume \_\_\_\_\_  
 Top of casing to bottom 17.7 ft Total gallons evacuated \_\_\_\_\_  
 Water level after evacuation \_\_\_\_\_ ft Elevation, Top of casing \_\_\_\_\_  
 Sampling: Date/Time 11-4-14 0805 Elevation of well water \_\_\_\_\_  
 Top of casing to water level \_\_\_\_\_ ft Method of Sampling PVC BAILER

**SAMPLE D.**

Temperature [°C]	pH	Conductivity [µS]	Dissolved Oxygen [mg/l]	Turbidity [NT]
<u>4.45 20.1</u>	<u>20.7 4.45</u>	<u>505 µS</u>	_____	_____
<u>20.5</u>	<u>3.99</u>	<u>501 µS</u>	_____	_____
<u>20.7</u>	<u>4.13</u>	<u>510 µS</u>	_____	_____

**GENERAL INFORMATION**

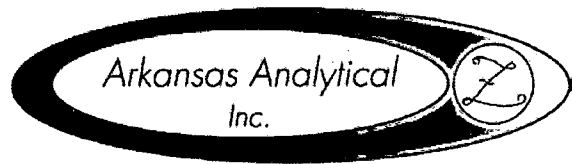
Weather conditions at time of sampling: CLEAR/COOL  
 Sample characteristics: CLEAR  
 Containers and preservatives: \_\_\_\_\_  
 Comments and observations: \_\_\_\_\_  
 Recommendations: \_\_\_\_\_

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

FIGURE





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

11 November 2014

David Sartain  
El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731

RE: Groundwater Sample(s)

SDG Number: 1411035

Enclosed are the results of analyses for samples received by the laboratory on 04-Nov-14 16:05. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

<u>Custody Seals</u>	✓
<u>Containers Correct</u>	✓
<u>COC/Labels Agree</u>	✓
<u>Received On Ice</u>	✓
<u>Temperature on Receipt</u>	11.0°C

Sincerely,

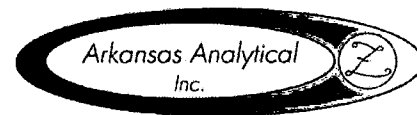
*Norma James / Teresa Coins*

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Norma James and/or Teresa Coins  
Technical Director and/or QA Officer

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11 November 2014



David Sartain  
El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731  
Project: Groundwater Sample(s)

Date Received: 04-Nov-14 16:05

**ANALYTICAL RESULTS**

Lab Number: 1411035-01  
Sample Name: ECMW #1  
Date/Time Collected: 11/4/14 9:15  
Sample Matrix: Water

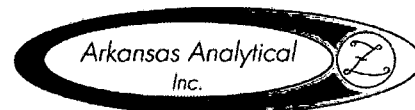
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	6.29		11/5/14 12:30	A411047	300.0, 2.1-1993
Nitrate as N	mg/L	0.674		11/5/14 12:30	A411047	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 11:37	A411065	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 11:37	A411065	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 12:59	A411066	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 12:59	A411066	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		11/7/14 15:39	A411078	4500-NH3 B,D,C-1997

**ANALYTICAL RESULTS**

Lab Number: 1411035-02  
Sample Name: ECMW #2  
Date/Time Collected: 11/4/14 9:00  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	21.9		11/5/14 12:54	A411047	300.0, 2.1-1993
Nitrate as N	mg/L	0.635		11/5/14 12:54	A411047	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 11:40	A411065	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 11:40	A411065	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 13:02	A411066	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 13:02	A411066	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		11/7/14 15:39	A411078	4500-NH3 B,D,C-1997

11 November 2014



David Sartain  
El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731  
Project: Groundwater Sample(s)

Date Received: 04-Nov-14 16:05

**ANALYTICAL RESULTS**

Lab Number: 1411035-03  
Sample Name: ECMW #3  
Date/Time Collected: 11/4/14 8:30  
Sample Matrix: Water

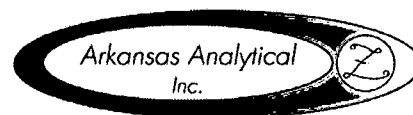
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	12.8		11/7/14 15:00	A411047	300.0, 2.1-1993
Nitrate as N	mg/L	0.239		11/5/14 13:17	A411047	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 11:44	A411065	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 11:44	A411065	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 13:05	A411066	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 13:05	A411066	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		11/7/14 15:39	A411078	4500-NH3 B,D,C-1997

**ANALYTICAL RESULTS**

Lab Number: 1411035-04  
Sample Name: ECMW #4  
Date/Time Collected: 11/4/14 8:25  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	772		11/7/14 15:23	A411047	300.0, 2.1-1993
Nitrate as N	mg/L	1.29		11/5/14 13:41	A411047	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 11:47	A411065	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 11:47	A411065	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 13:09	A411066	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 13:09	A411066	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	1.31		11/7/14 15:39	A411078	4500-NH3 B,D,C-1997

11 November 2014



David Sartain  
El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731  
Project: Groundwater Sample(s)

Date Received: 04-Nov-14 16:05

**ANALYTICAL RESULTS**

Lab Number: 1411035-05  
Sample Name: ECMW #5  
Date/Time Collected: 11/4/14 8:05  
Sample Matrix: Water

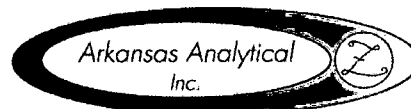
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	55.6		11/5/14 14:04	A411047	300.0, 2.1-1993
Nitrate as N	mg/L	43.4		11/5/14 14:04	A411047	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 11:50	A411065	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 11:50	A411065	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 13:12	A411066	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 13:12	A411066	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	1.00		11/7/14 15:39	A411078	4500-NH3 B,D,C-1997

**ANALYTICAL RESULTS**

Lab Number: 1411035-06  
Sample Name: ECMW #6  
Date/Time Collected: 11/4/14 8:15  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	33.7		11/7/14 15:47	A411047	300.0, 2.1-1993
Nitrate as N	mg/L	3550		11/5/14 14:28	A411047	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 11:53	A411065	200.7, Rev. 4.4 (1994)
Lead	mg/L	0.031		11/7/14 11:53	A411065	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 13:15	A411066	200.7, Rev 4.4 (1994)
Lead	mg/L	0.0360		11/7/14 13:15	A411066	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	1110		11/7/14 15:39	A411078	4500-NH3 B,D,C-1997

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Project: Groundwater Sample(s)

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**ANALYTICAL RESULTS**

Lab Number: 1411035-07  
Sample Name: ECMW #7  
Date/Time Collected: 11/4/14 9:25  
Sample Matrix: Water

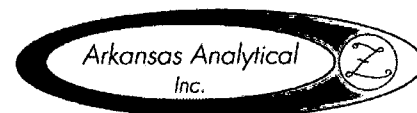
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	816		11/5/14 14:52	A411047	300.0, 2.1-1993
Nitrate as N	mg/L	99.6		11/5/14 14:52	A411047	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 12:10	A411065	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 12:10	A411065	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 13:18	A411066	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 13:18	A411066	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	77.0		11/7/14 15:39	A411078	4500-NH3 B,D,C-1997

**ANALYTICAL RESULTS**

Lab Number: 1411035-08  
Sample Name: ECMW #8  
Date/Time Collected: 11/4/14 9:40  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	466		11/5/14 15:15	A411047	300.0, 2.1-1993
Nitrate as N	mg/L	697		11/5/14 15:15	A411047	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 12:13	A411065	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 12:13	A411065	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 13:22	A411066	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 13:22	A411066	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	198		11/7/14 15:39	A411078	4500-NH3 B,D,C-1997

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**ANALYTICAL RESULTS**

Lab Number: 1411035-09  
Sample Name: ECMW #9  
Date/Time Collected: 11/4/14 9:55  
Sample Matrix: Water

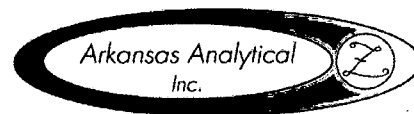
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	484		11/5/14 15:39	A411047	300.0, 2.1-1993
Nitrate as N	mg/L	37.6		11/5/14 15:39	A411047	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 12:16	A411065	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 12:16	A411065	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 13:25	A411066	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 13:25	A411066	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	4.61		11/7/14 15:39	A411078	4500-NH3 B,D,C-1997

**ANALYTICAL RESULTS**

Lab Number: 1411035-10  
Sample Name: ECMW #10  
Date/Time Collected: 11/4/14 10:05  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	172		11/5/14 16:02	A411047	300.0, 2.1-1993
Nitrate as N	mg/L	39.8		11/5/14 16:02	A411047	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 12:20	A411065	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 12:20	A411065	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 13:41	A411066	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 13:41	A411066	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		11/7/14 15:39	A411078	4500-NH3 B,D,C-1997

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**ANALYTICAL RESULTS**

Lab Number: 1411035-11  
Sample Name: ECMW #11  
Date/Time Collected: 11/4/14 10:15  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	117		11/5/14 17:28	A411047	300.0, 2.1-1993
Nitrate as N	mg/L	30.5		11/5/14 17:28	A411047	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 12:23	A411065	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 12:23	A411065	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 13:44	A411066	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 13:44	A411066	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	13.9		11/7/14 15:39	A411078	4500-NH3 B,D,C-1997

**ANALYTICAL RESULTS**

Lab Number: 1411035-12  
Sample Name: ECMW #12  
Date/Time Collected: 11/4/14 10:25  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	20.6		11/7/14 14:10	A411047	300.0, 2.1-1993
Nitrate as N	mg/L	< 0.250		11/5/14 17:52	A411047	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 12:26	A411065	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 12:26	A411065	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 13:48	A411066	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 13:48	A411066	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	2.15		11/7/14 15:39	A411078	4500-NH3 B,D,C-1997

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**ANALYTICAL RESULTS**

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Lab Number: 1411035-13  
Sample Name: DUP  
Date/Time Collected: 11/4/14 12:00  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	762		11/7/14 14:34	A411047	300.0, 2.1-1993
Nitrate as N	mg/L	4.24		11/5/14 18:15	A411047	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 12:29	A411065	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 12:29	A411065	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 13:51	A411066	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 13:51	A411066	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	1.31		11/7/14 15:39	A411078	4500-NH3 B,D,C-1997



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**QUALITY CONTROL RESULTS**

**Anions -- Batch: A411047 (Water)**

Prepared: 05-Nov-14 11:55 By: MB -- Analyzed: 05-Nov-14 23:21 By: Mel

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Nitrate as N	<0.250 mg/L	101% / NA	94.4% / 92.6%		1.85%	
Sulfate as SO4	<0.500 mg/L	100% / NA	106% / 104%		1.12%	

**Dissolved Metals -- Batch: A411065 (Water)**

Prepared: 06-Nov-14 11:45 By: ST -- Analyzed: 07-Nov-14 11:34 By: ST

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Chromium	<0.020 mg/L	96.1% / NA	94.8% / 94.1%		0.755%	
Lead	<0.015 mg/L	100% / NA	97.5% / 96.7%		0.879%	

**Total Metals -- Batch: A411066 (Water)**

Prepared: 06-Nov-14 11:47 By: ST -- Analyzed: 07-Nov-14 12:55 By: ST

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Chromium	<0.0104 mg/L	101% / NA	98.8% / 95.5%		3.43%	
Lead	<0.0156 mg/L	106% / NA	102% / 98.9%		2.79%	

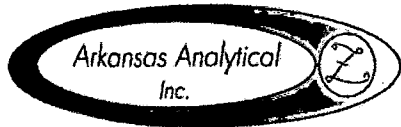
**Wet Chemistry -- Batch: A411078 (Water)**

Prepared: 07-Nov-14 09:20 By: KP -- Analyzed: 07-Nov-14 15:39 By: KP

<u>Analyte</u>	<u>BLK</u>	<u>LCS / LCSD</u>	<u>MS / MSD</u>	<u>Dup</u>	<u>RPD</u>	<u>Qualifiers</u>
Ammonia as N	<0.50 mg/L	102% / NA	103% / 101%		2.39%	

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.  
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

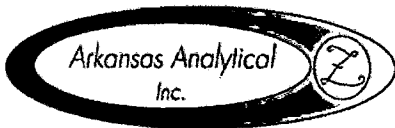
Reviewed by: Norma James / Teresa Coins  
Norma James and/or Teresa Coins  
Technical Director and/or QA Officer



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		Turnaround Time		Preservation Codes:											
El Dorado Chemical Inc.		El Dorado Chemical Inc.		Groundwater Samples		1 Day (100%)		1. Cool, 4 Degrees Centigrade				4. Thiou sulfate for Dechlorination							
4500 Northwest Ave.		P.O. Box 231				2 Day (50%)		2. Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> ), pH < 2				5. Hydrochloric Acid (HCl)							
El Dorado, AR 71731		El Dorado, AR 71731		Reporting Information		3 Day (25%)		3. Nitric Acid (HNO <sub>3</sub> ), pH < 2				6. Sodium Hydroxide (NaOH), pH > 12							
				Telephone: 870-863-1484		5 Day (Routine)		TEST PARAMETERS								Bottle Type Code			
Attn: David Sartain				Fax: 870-863-1499		Preservative Code:		1	1,2	1	1,3								G = Glass; P = Plastic
				Email: dsartain@edc-ar.com; tmarcella@env-mgt.com		Bottle Type:		P	P	P	P								V = Septum; A = Amber
Sampler(s) Signature: <i>K. Durham</i> EMS-Idk				Sampler(s) Printed: <i>R. DURHAM</i> EMS-Idk				Arkansas Analytical Work Order Number: 1411035											
Field Number	SAMPLE COLLECTION		Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION		Nitrate, Sulfate	Ammonia	d Cr, d Pb	Cr, Pb							
1	11-4-14	0915	X		4	Water	ECMW-1	X	X	X	X								01
2		0900	X		4	Water	ECMW-2	X	X	X	X								02
3		0930	X		4	Water	ECMW-3	X	X	X	X								03
4		0825	X		4	Water	ECMW-4	X	X	X	X								04
5		0805	X		4	Water	ECMW-5	X	X	X	X								05
6		0815	X		4	Water	ECMW-6	X	X	X	X								06
7		0925	X		4	Water	ECMW-7	X	X	X	X								07
8		0940	X		4	Water	ECMW-8	X	X	X	X								08
9		0955	X		4	Water	ECMW-9	X	X	X	X								09
10		1005	X		4	Water	ECMW-10	X	X	X	X								10
1. Relinquished by: (Signature)		Date/Time		2. Received by: (Signature)		SAMPLE CONDITION UPON RECEIPT IN LAB						REMARKS / SAMPLE COMMENTS							
<i>K. Durham</i>		11-4-14		<i>Pamish</i>		1. CUSTODY SEALS: <input checked="" type="checkbox"/> Yes ___ No 2. CONTAINERS CORRECT: <input checked="" type="checkbox"/> Yes ___ No 3. COC/LABELS AGREE: <input checked="" type="checkbox"/> Yes ___ No 4. RECEIVED ON ICE: <input checked="" type="checkbox"/> Yes ___ No 5. TEMPERATURE ON RECEIPT: 11.0°C 6. TEMPERATURE GUN ID: HHTH2													
3. Relinquished by: (Signature)		Date/Time		4. Received by lab: (Signature)		FOR COMPLETION BY LAB ONLY													
<i>Pamish</i>		11-4-14 11005		<i>Amanda Pamish</i>															



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		Turnaround Time		Preservation Codes:											
El Dorado Chemical Inc.		El Dorado Chemical Inc.		Groundwater Samples		1 Day (100%)		1. Cool, 4 Degrees Centigrade				4. Thiosulfate for Dechlorination							
4500 Northwest Ave.		P.O. Box 231				2 Day (50%)		2. Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> ), pH < 2				5. Hydrochloric Acid(HCl)							
El Dorado, AR 71731		El Dorado, AR 71731		Reporting Information		3 Day (25%)		3. Nitric Acid (HNO <sub>3</sub> ), pH < 2				6. Sodium Hydroxide (NaOH), pH > 12							
Attn: David Sartain				Telephone: 870-863-1484		5 Day (Routine)		<b>TEST PARAMETERS</b>								Bottle Type Code			
				Fax: 870-863-1499		Preservative Code:		1	1,2	1	1,3							O = Glass; P = Plastic	
				Email: dsartain@edc-ark.com; tmarcelta@env-mgt.com		Bottle Type:		P	P	P	P							V = Septum; A = Amber	
Sampler(s) Signature				Sampler(s) Printed															
Field Number	SAMPLE COLLECTION		Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION				Nitrate, Sulfate	Ammonia	d Cr, d Pb	Cr, Pb	Arkansas Analytical Work Order Number:				
11	11-4-14	10:15	X		4	Water	ECMW- 11				X	X	X	X	1411035				
12	"	12:00	X		4	Water	ECMW- DUP 12				X	X	X	X	12				
13		12:00	X		4	Water	ECMW- DUP				X	X	X	X	13				
			X		4	Water	ECMW-				X	X	X	X					
			X		4	Water	ECMW-				X	X	X	X					
			X		4	Water	ECMW-				X	X	X	X					
			X		4	Water	ECMW-				X	X	X	X					
			X		4	Water	ECMW-				X	X	X	X					
			X		4	Water	ECMW-				X	X	X	X					
			X		4	Water	ECMW-				X	X	X	X					
1. Relinquished by: (Signature)		Date/Time		2. Received by: (Signature)		SAMPLE CONDITION UPON RECEIPT IN LAB						REMARKS / SAMPLE COMMENTS							
				Parnish		1. CUSTODY SEALS: <input checked="" type="checkbox"/> Yes ___ No													
						2. CONTAINERS CORRECT: <input type="checkbox"/> Yes ___ No													
						3. COC/LABELS AGREE: <input type="checkbox"/> Yes ___ No													
3. Relinquished by: (Signature)		Date/Time		4. Received by lab: (Signature)		4. RECEIVED ON ICE: <input checked="" type="checkbox"/> Yes ___ No													
Parnish		11-4-14 1605		Amanda Fobush		5. TEMPERATURE ON RECEIPT: 11°C													
						6. TEMPERATURE GUN ID: HHT#2													
FOR COMPLETION BY LAB ONLY																			



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

11 November 2014

David Sartain  
El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731

RE: Groundwater Sample(s)  
SDG Number: 1411046

Enclosed are the results of analyses for samples received by the laboratory on 05-Nov-14 14:15. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

<u>Custody Seals</u>	✓
<u>Containers Correct</u>	✓
<u>COC/Labels Agree</u>	✓
<u>Received On Ice</u>	✓
Temperature on Receipt	9.0°C

Sincerely,

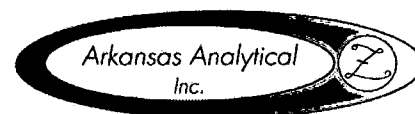
A handwritten signature in cursive script that reads "Norma James / Teresa Coins".

---

Norma James and/or Teresa Coins  
Technical Director and/or QA Officer

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11 November 2014



David Sartain  
El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731  
Project: Groundwater Sample(s)

Date Received: 05-Nov-14 14:15

**ANALYTICAL RESULTS**

Lab Number: 1411046-01  
Sample Name: ECMW #13  
Date/Time Collected: 11/5/14 7:45  
Sample Matrix: Water

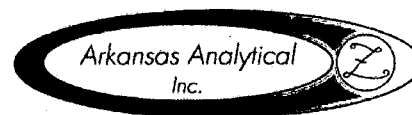
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	425		11/7/14 16:58	A411048	300.0, 2.1-1993
Nitrate as N	mg/L	< 0.250		11/6/14 8:59	A411048	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 14:27	A411082	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 14:27	A411082	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 15:33	A411080	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 15:33	A411080	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		11/10/14 8:45	A411122	4500-NH3 B,D,C-1997

**ANALYTICAL RESULTS**

Lab Number: 1411046-02  
Sample Name: ECMW #14  
Date/Time Collected: 11/5/14 8:00  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	98.3		11/6/14 9:23	A411048	300.0, 2.1-1993
Nitrate as N	mg/L	5.12		11/6/14 9:23	A411048	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 14:30	A411082	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 14:30	A411082	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 15:36	A411080	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 15:36	A411080	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		11/10/14 8:45	A411122	4500-NH3 B,D,C-1997

11 November 2014



David Sartain  
El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731  
Project: Groundwater Sample(s)

Date Received: 05-Nov-14 14:15

**ANALYTICAL RESULTS**

Lab Number: 1411046-03  
Sample Name: ECMW #15  
Date/Time Collected: 11/5/14 8:20  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	9.58		11/6/14 9:46	A411048	300.0, 2.1-1993
Nitrate as N	mg/L	3.07		11/6/14 9:46	A411048	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 14:33	A411082	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 14:33	A411082	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 15:39	A411080	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 15:39	A411080	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		11/10/14 8:45	A411122	4500-NH3 B,D,C-1997

**ANALYTICAL RESULTS**

Lab Number: 1411046-04  
Sample Name: ECMW #16  
Date/Time Collected: 11/5/14 8:45  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	11.2		11/6/14 10:10	A411048	300.0, 2.1-1993
Nitrate as N	mg/L	9.20		11/6/14 10:10	A411048	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 14:37	A411082	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 14:37	A411082	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 15:42	A411080	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 15:42	A411080	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	1.27		11/10/14 8:45	A411122	4500-NH3 B,D,C-1997

11 November 2014



David Sartain  
El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731  
Project: Groundwater Sample(s)

Date Received: 05-Nov-14 14:15

**ANALYTICAL RESULTS**

Lab Number: 1411046-05  
Sample Name: ECMW #17  
Date/Time Collected: 11/5/14 8:55  
Sample Matrix: Water

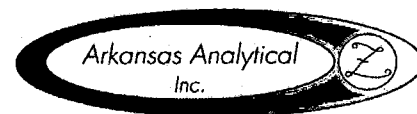
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	34.3		11/6/14 10:33	A411048	300.0, 2.1-1993
Nitrate as N	mg/L	7.50		11/6/14 10:33	A411048	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 14:41	A411082	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 14:41	A411082	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 15:59	A411080	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 15:59	A411080	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	3.46		11/10/14 8:45	A411122	4500-NH3 B,D,C-1997

**ANALYTICAL RESULTS**

Lab Number: 1411046-06  
Sample Name: ECMW #18  
Date/Time Collected: 11/5/14 9:10  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	2.64		11/6/14 10:57	A411048	300.0, 2.1-1993
Nitrate as N	mg/L	0.254		11/6/14 10:57	A411048	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 14:44	A411082	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 14:44	A411082	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 16:02	A411080	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 16:02	A411080	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		11/10/14 8:45	A411122	4500-NH3 B,D,C-1997

11 November 2014



David Sartain  
El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731  
Project: Groundwater Sample(s)

Date Received: 05-Nov-14 14:15

**ANALYTICAL RESULTS**

Lab Number: 1411046-07  
Sample Name: ECMW #19  
Date/Time Collected: 11/5/14 9:25  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	2.97		11/6/14 11:20	A411048	300.0, 2.1-1993
Nitrate as N	mg/L	< 0.250		11/6/14 11:20	A411048	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 14:47	A411082	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 14:47	A411082	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 16:05	A411080	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 16:05	A411080	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		11/10/14 8:45	A411122	4500-NH3 B,D,C-1997

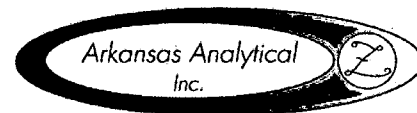
**ANALYTICAL RESULTS**

Lab Number: 1411046-08  
Sample Name: ECMW #20  
Date/Time Collected: 11/5/14 9:50  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	9.87		11/6/14 12:31	A411048	300.0, 2.1-1993
Nitrate as N	mg/L	0.262		11/6/14 12:31	A411048	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 14:50	A411082	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 14:50	A411082	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 16:08	A411080	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 16:08	A411080	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		11/10/14 8:45	A411122	4500-NH3 B,D,C-1997



11 November 2014



David Sartain  
El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731  
Project: Groundwater Sample(s)

Date Received: 05-Nov-14 14:15

**ANALYTICAL RESULTS**

Lab Number: 1411046-09  
Sample Name: ECMW #21  
Date/Time Collected: 11/5/14 10:05  
Sample Matrix: Water

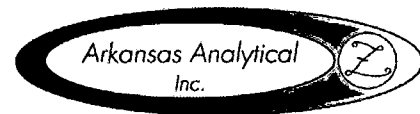
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	5.25		11/6/14 12:55	A411048	300.0, 2.1-1993
Nitrate as N	mg/L	1.62		11/6/14 12:55	A411048	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 14:54	A411082	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 14:54	A411082	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 16:12	A411080	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 16:12	A411080	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		11/10/14 8:45	A411122	4500-NH3 B,D,C-1997

**ANALYTICAL RESULTS**

Lab Number: 1411046-10  
Sample Name: ECMW #22  
Date/Time Collected: 11/5/14 10:20  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	5.66		11/6/14 14:05	A411048	300.0, 2.1-1993
Nitrate as N	mg/L	2.58		11/6/14 14:05	A411048	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 14:57	A411082	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 14:57	A411082	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 16:15	A411080	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 16:15	A411080	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	0.61		11/10/14 8:45	A411122	4500-NH3 B,D,C-1997

11 November 2014



David Sartain  
El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731  
Project: Groundwater Sample(s)

Date Received: 05-Nov-14 14:15

**ANALYTICAL RESULTS**

Lab Number: 1411046-11  
Sample Name: DUP  
Date/Time Collected: 11/5/14 12:00  
Sample Matrix: Water

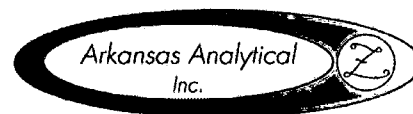
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	9.66		11/6/14 14:29	A411048	300.0, 2.1-1993
Nitrate as N	mg/L	2.92		11/6/14 14:29	A411048	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 15:13	A411082	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 15:13	A411082	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 16:18	A411080	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 16:18	A411080	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		11/10/14 8:45	A411122	4500-NH3 B,D,C-1997

**ANALYTICAL RESULTS**

Lab Number: 1411046-12  
Sample Name: Field Blank  
Date/Time Collected: 11/5/14 10:50  
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	< 0.500		11/6/14 14:53	A411048	300.0, 2.1-1993
Nitrate as N	mg/L	< 0.250		11/6/14 14:53	A411048	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.020		11/7/14 15:16	A411082	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.015		11/7/14 15:16	A411082	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/7/14 16:21	A411080	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/7/14 16:21	A411080	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.50		11/10/14 8:45	A411122	4500-NH3 B,D,C-1997

11 November 2014



David Sartain  
El Dorado Chemical Inc.  
4500 North West Ave.  
El Dorado, AR 71731  
Project: Groundwater Sample(s)

Date Received: 05-Nov-14 14:15

**QUALITY CONTROL RESULTS**

**Anions -- Batch: A411048 (Water)**

Prepared: 05-Nov-14 16:50 By: MB -- Analyzed: 06-Nov-14 16:03 By: Mel

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Nitrate as N	<0.250 mg/L	98.5% / NA	107% / 107%		0.353%	
Sulfate as SO4	<0.500 mg/L	99.3% / NA	101% / 101%		0.0998%	

**Total Metals -- Batch: A411080 (Water)**

Prepared: 07-Nov-14 10:10 By: ST -- Analyzed: 07-Nov-14 15:29 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Chromium	<0.0104 mg/L	98.0% / NA	95.6% / 94.4%		1.32%	
Lead	<0.0156 mg/L	103% / NA	96.5% / 95.3%		1.30%	

**Dissolved Metals -- Batch: A411082 (Water)**

Prepared: 07-Nov-14 10:15 By: ST -- Analyzed: 07-Nov-14 14:11 By: ST

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Chromium	<0.020 mg/L	95.8% / NA	97.1% / 95.7%		1.38%	
Lead	<0.015 mg/L	101% / NA	101% / 99.7%		1.29%	

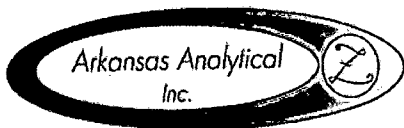
**Wet Chemistry -- Batch: A411122 (Water)**

Prepared: 10-Nov-14 08:45 By: RJH -- Analyzed: 10-Nov-14 08:45 By: RJH

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Ammonia as N	<0.50 mg/L	91.1% / NA	94.4% / 96.3%		2.01%	

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.  
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

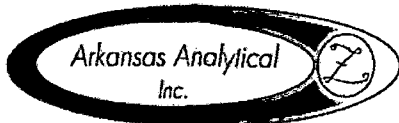
Reviewed by: Norma James / Teresa Coins  
Norma James and/or Teresa Coins  
Technical Director and/or QA Officer



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

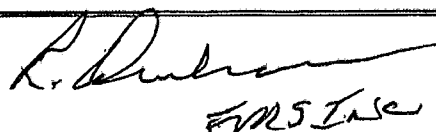
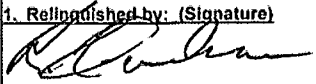
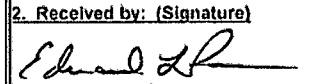
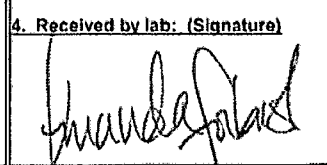
# CHAIN OF CUSTODY RECORD

CLIENT INFORMATION		BILLING INFORMATION		Project Description		Turnaround Time		Preservation Codes:											
El Dorado Chemical Inc.		El Dorado Chemical Inc.		Groundwater Samples		1 Day (100%)		1. Cool, 4 Degrees Centigrade				4. Thiosulfate for Dechlorination							
4500 Northwest Ave.		P.O. Box 231				2 Day (50%)		2. Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> ), pH < 2				5. Hydrochloric Acid(HCl)							
El Dorado, AR 71731		El Dorado, AR 71731		Reporting Information		3 Day (25%)		3. Nitric Acid (HNO <sub>3</sub> ), pH < 2				6. Sodium Hydroxide (NaOH), pH > 12							
				Telephone: 870-863-1484		5 Day (Routine)		TEST PARAMETERS								1			
Attn: David Sartain				Fax: 870-863-1499		Preservative Code:		1	1,2	1	1,3								1
				Email: dsartain@cdc-ark.com; lmarella@env-mgt.com		Bottle Type:		P	P	P	P								Bottle Type Code
																			G = Glass; P = Plastic
																			V = Septum; A = Amber
Sampler(s) Signature		Sampler(s) Printed																	Arkansas Analytical Work Order Number:
																			1411046
Field Number	SAMPLE COLLECTION		Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION		Nitrate, Sulfate	Ammonia	d Cr, d Pb	Cr, Pb							
1	11-5-12	0745	X		4	Water	ECMW- 13	X	X	X	X								01
2		0810	X		4	Water	ECMW- 14	X	X	X	X								02
3		0820	X		4	Water	ECMW- 15	X	X	X	X								03
4		0845	X		4	Water	ECMW- 16	X	X	X	X								04
5		0855	X		4	Water	ECMW- 17	X	X	X	X								05
6		0910	X		4	Water	ECMW- 18	X	X	X	X								06
7		0925	X		4	Water	ECMW- 19	X	X	X	X								07
8		0950	X		4	Water	ECMW- 20	X	X	X	X								08
9		1005	X		4	Water	ECMW- 21	X	X	X	X								09
10		1020	X		4	Water	ECMW- 22	X	X	X	X								10
1. Relinquished by: (Signature)		Date/Time		2. Received by: (Signature)		SAMPLE CONDITION UPON RECEIPT IN LAB		REMARKS / SAMPLE COMMENTS											
				Eddie P		1. CUSTODY SEALS: <input checked="" type="checkbox"/> Yes ___ No													
						2. CONTAINERS CORRECT: <input checked="" type="checkbox"/> Yes ___ No													
						3. COC/LABELS AGREE: <input checked="" type="checkbox"/> Yes ___ No													
						4. RECEIVED ON ICE: <input checked="" type="checkbox"/> Yes ___ No													
						5. TEMPERATURE ON RECEIPT: 9°C													
						6. TEMPERATURE GUN ID: HHTH													
3. Relinquished by: (Signature)		Date/Time		4. Received by lab: (Signature)		FOR COMPLETION BY LAB ONLY													
Eddie P		11-5-14 1415		Amanda															



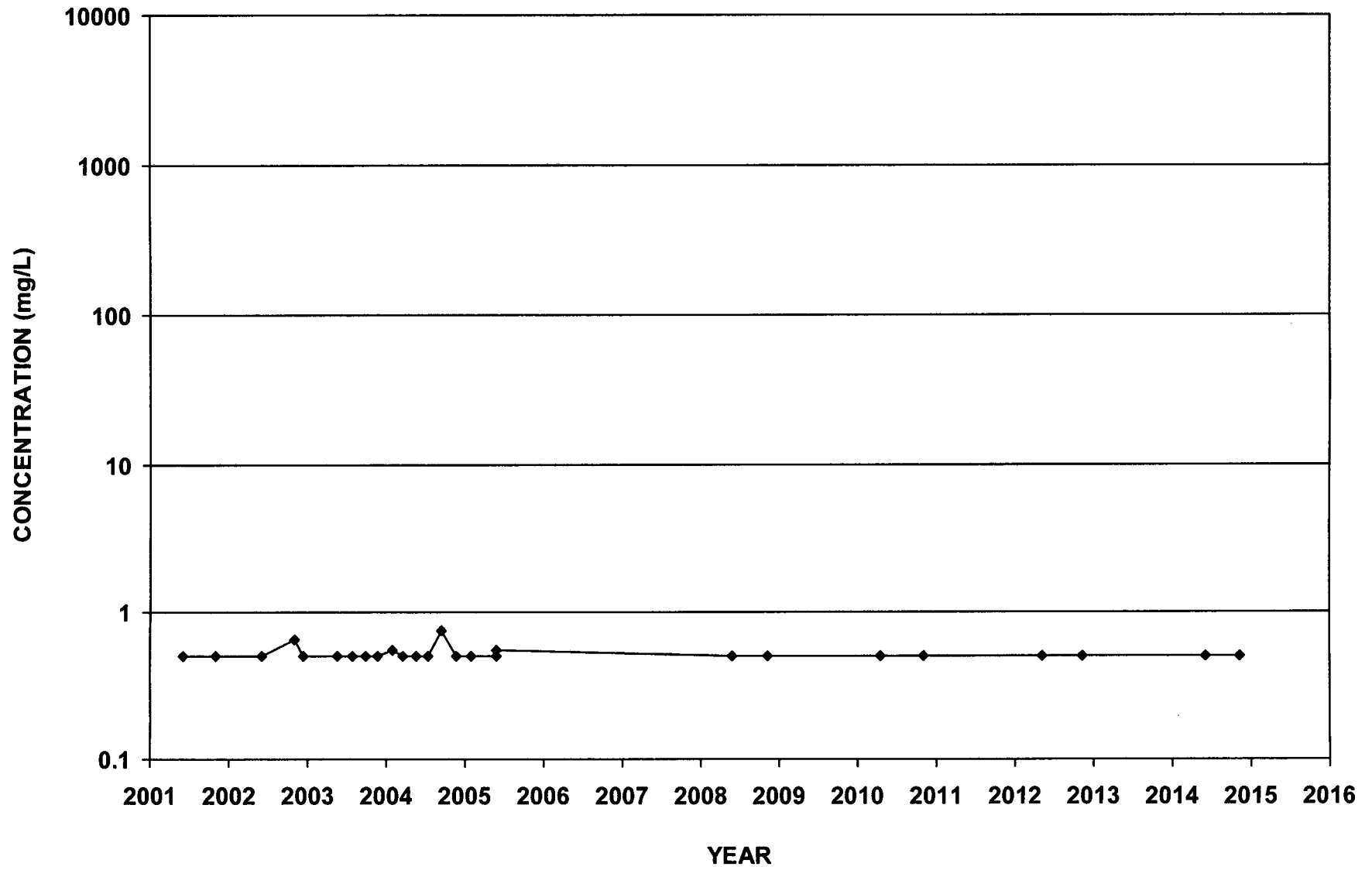
11701 Interstate 30, Bldg. 1, Ste. 115  
 Little Rock, AR 72209  
 PHONE: 501-455-3233  
 FAX: 501-455-6118

# CHAIN OF CUSTODY RECORD

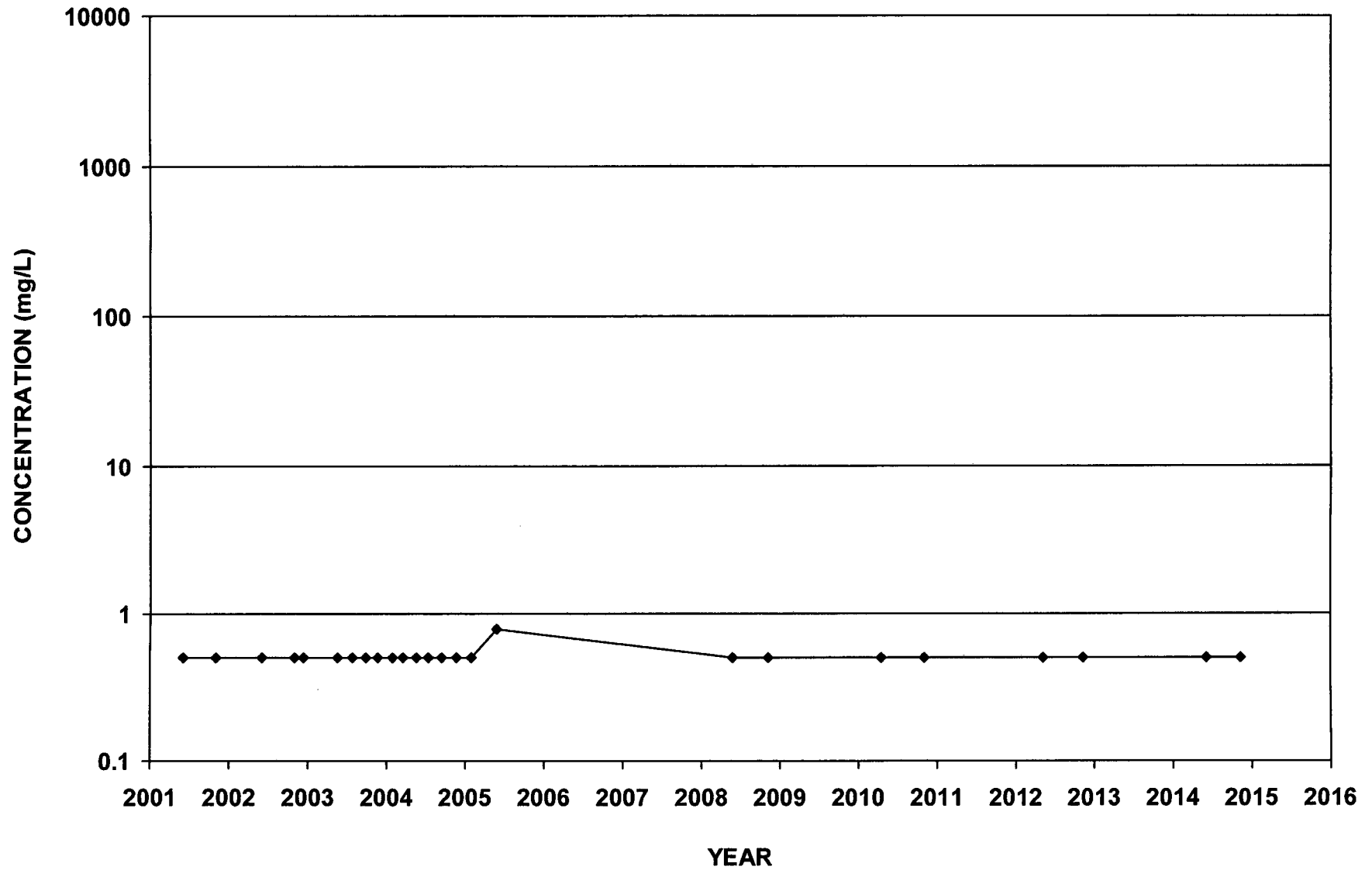
CLIENT INFORMATION		BILLING INFORMATION		Project Description		Turnaround Time		Preservation Codes:											
El Dorado Chemical Inc.		El Dorado Chemical Inc.		Groundwater Samples		1 Day (100%)		1. Cool, 4 Degrees Centigrade				4. Thiosulfate for Dechlorination							
4500 Northwest Ave.		P.O. Box 231				2 Day (50%)		2. Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> ), pH < 2				5. Hydrochloric Acid(HCl)							
El Dorado, AR 71731		El Dorado, AR 71731		Reporting Information		3 Day (25%)		3. Nitric Acid (HNO <sub>3</sub> ), pH < 2				6. Sodium Hydroxide (NaOH), pH > 12							
				Telephone: 870-863-1484		5 Day (Routine)		TEST PARAMETERS								Buttle Type Code			
Attn: David Sartain				Fax: 870-863-1499		Preservative Code:		1	1,2	1	1,3							G = Glass; P = Plastic	
				Email: dsartain@cdc-ark.com; hmarcella@env-mgt.com		Bottle Type:		P	P	P	P							V = Septum; A = Amber	
 Sampler(s) Signature				R. DURAN Sampler(s) Printed						Nitrate, Sulfate Ammonia d Cr, d Pb Cr, Pb								Arkansas Analytical Work Order Number: 1411046	
Field Number	SAMPLE COLLECTION		Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION		Nitrate, Sulfate	Ammonia	d Cr, d Pb	Cr, Pb							
11	12-5-14	1200	X		4	Water	ECMW- DVP	X	X	X	X							11	
12	1	1050	X		4	Water	ECMW- FIELD BLANK	X	X	X	X							12	
			X		4	Water	ECMW-	X	X	X	X								
			X		4	Water	ECMW-	X	X	X	X								
			X		4	Water	ECMW-	X	X	X	X								
			X		4	Water	ECMW-	X	X	X	X								
			X		4	Water	ECMW-	X	X	X	X								
			X		4	Water	ECMW-	X	X	X	X								
			X		4	Water	ECMW-	X	X	X	X								
1. Relinquished by: (Signature)		Date/Time		2. Received by: (Signature)		SAMPLE CONDITION UPON RECEIPT IN LAB						REMARKS / SAMPLE COMMENTS							
		11-5-14 1130				1. CUSTODY SEALS: <input checked="" type="checkbox"/> Yes ___ No 2. CONTAINERS CORRECT: <input checked="" type="checkbox"/> Yes ___ No 3. COC/LABELS AGREE: <input checked="" type="checkbox"/> Yes ___ No 4. RECEIVED ON ICE: ___ Yes ___ No 5. TEMPERATURE ON RECEIPT: 9" 6. TEMPERATURE GUN ID: HH#2													
3. Relinquished by: (Signature)		Date/Time		4. Received by lab: (Signature)		FOR COMPLETION BY LAB ONLY													
		1415 11-5-14																	

**APPENDIX B**  
**TREND GRAPHS**

ECMW-1  
Ammonia-N

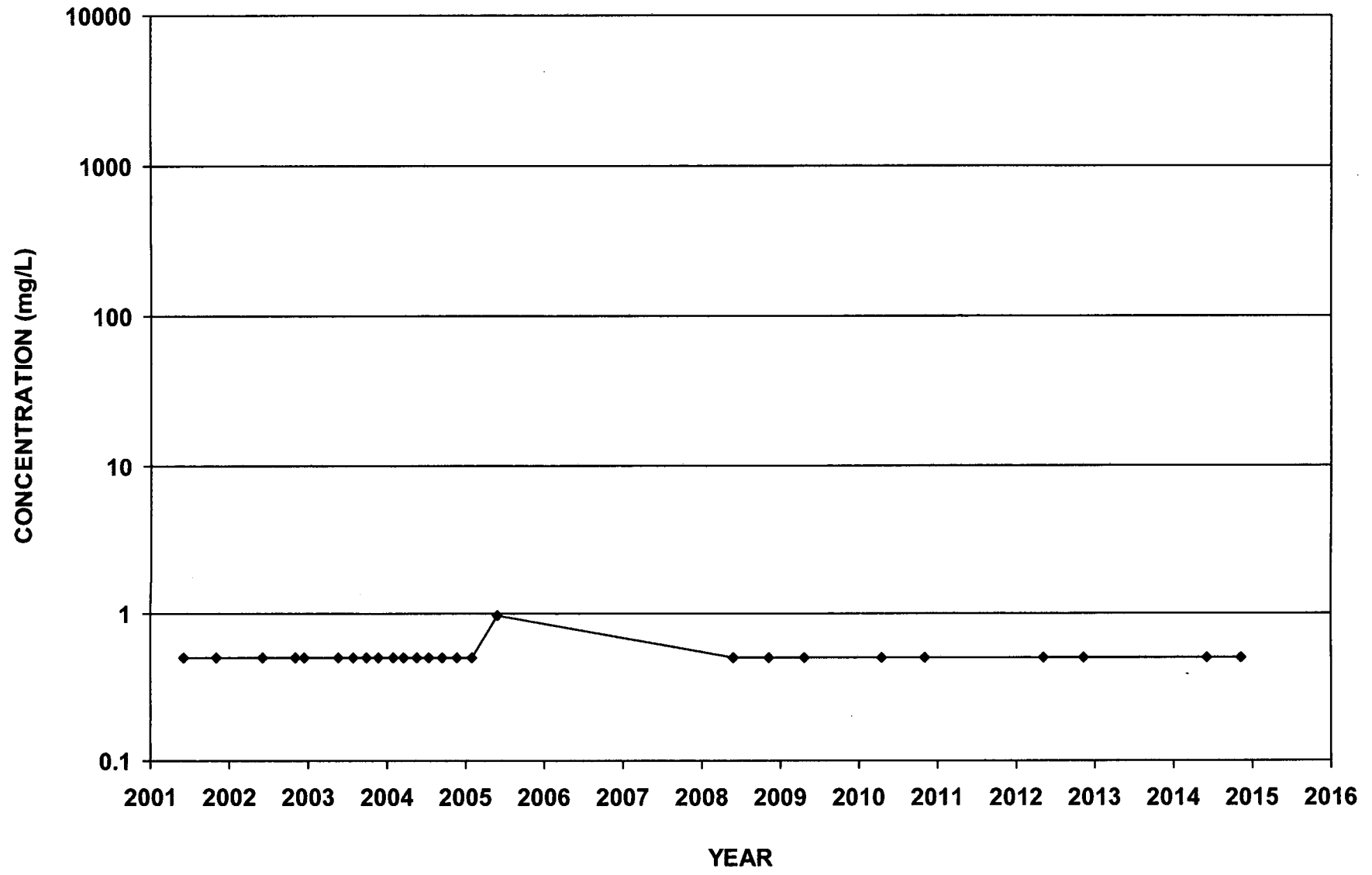


ECMW-2  
Ammonia-N

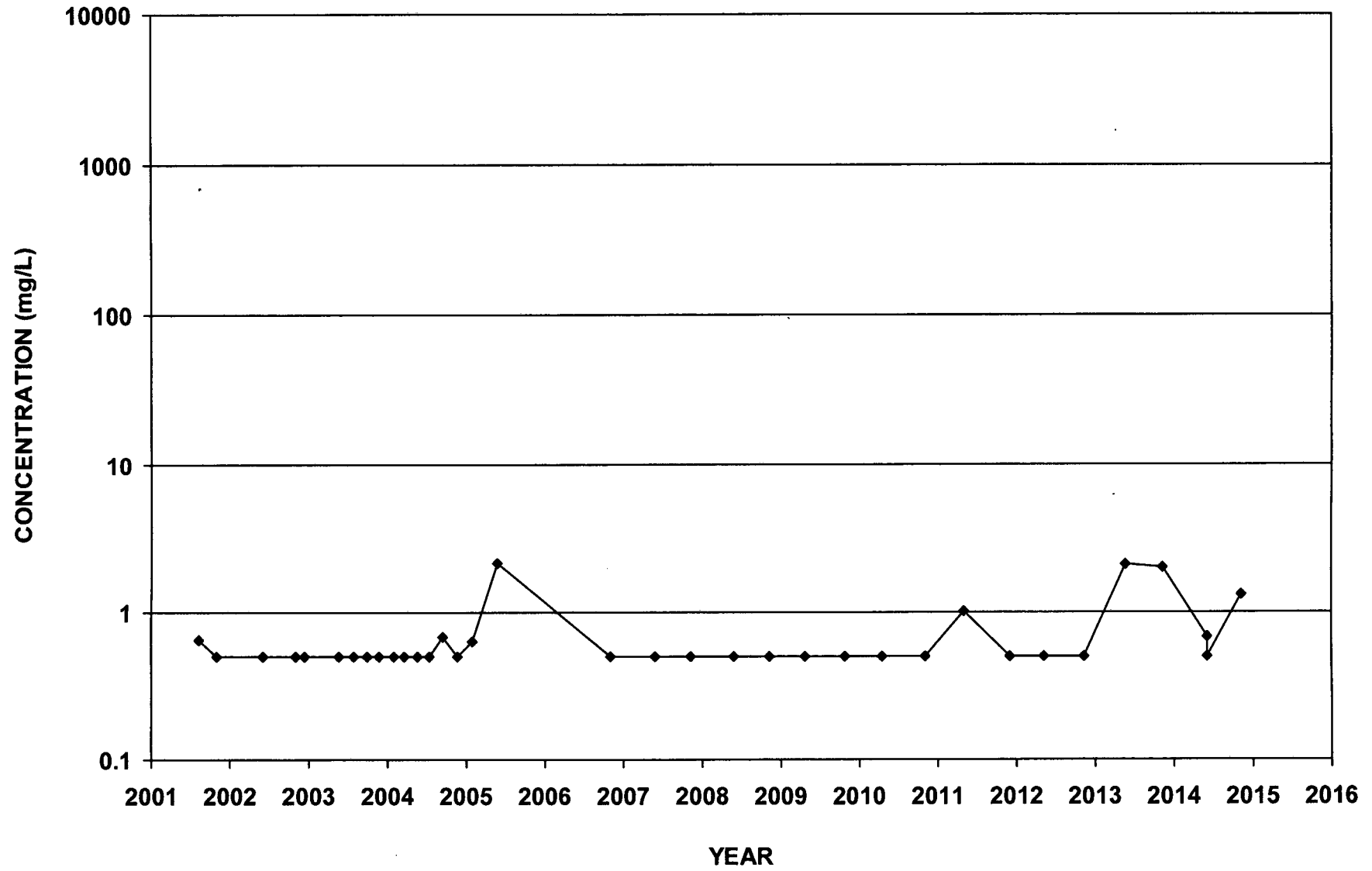




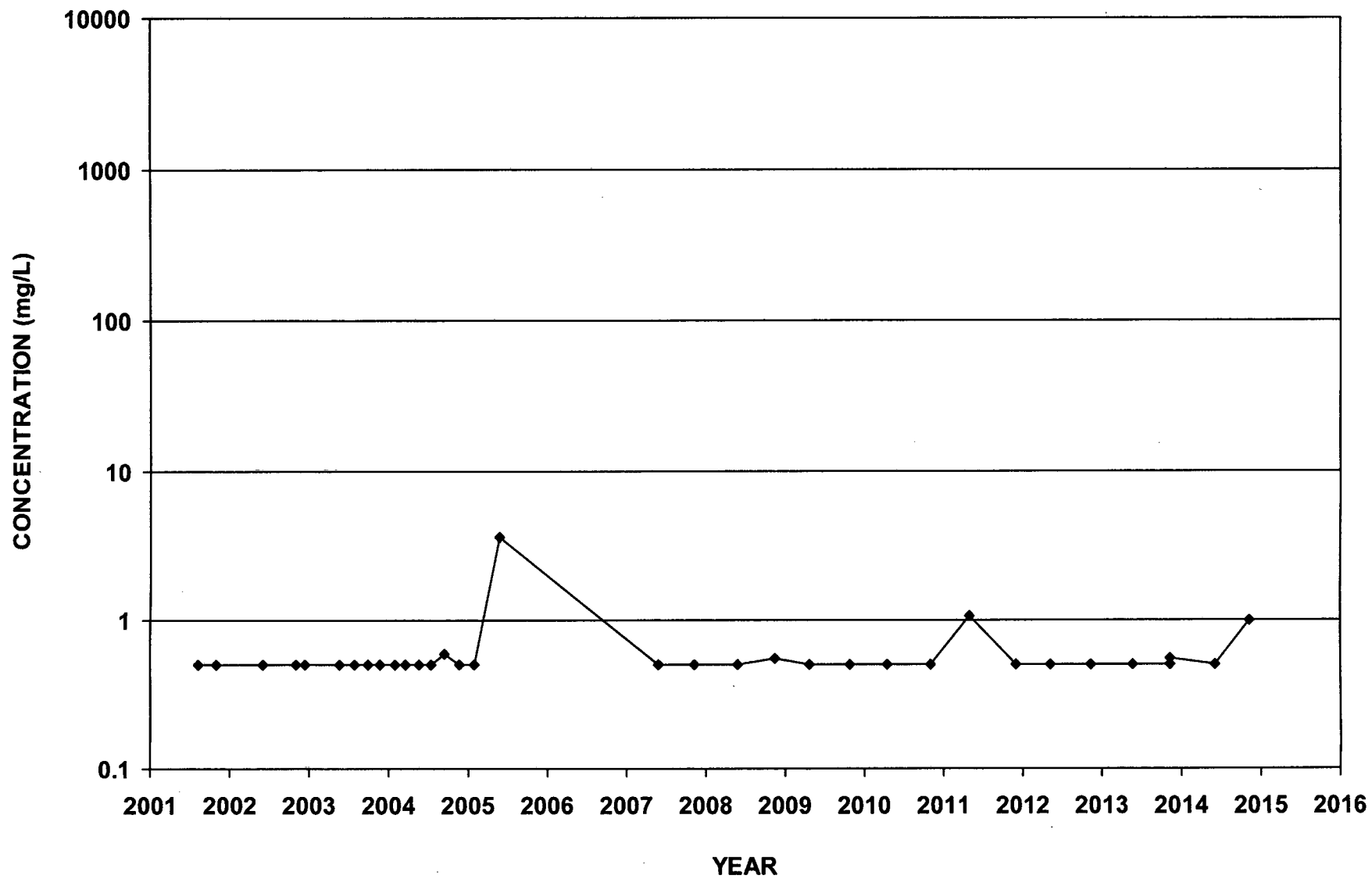
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Ammonia-N



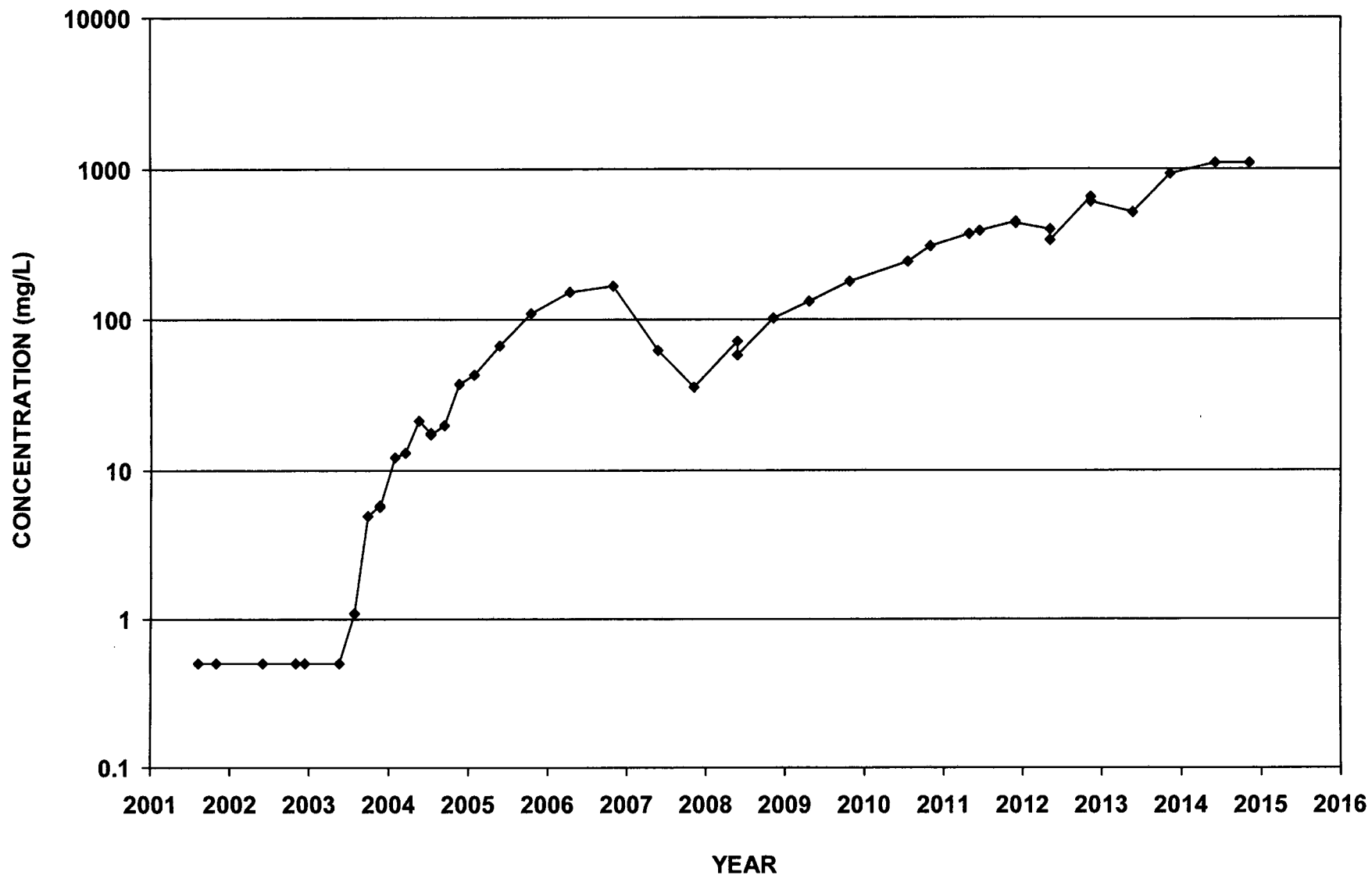
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Ammonia-N



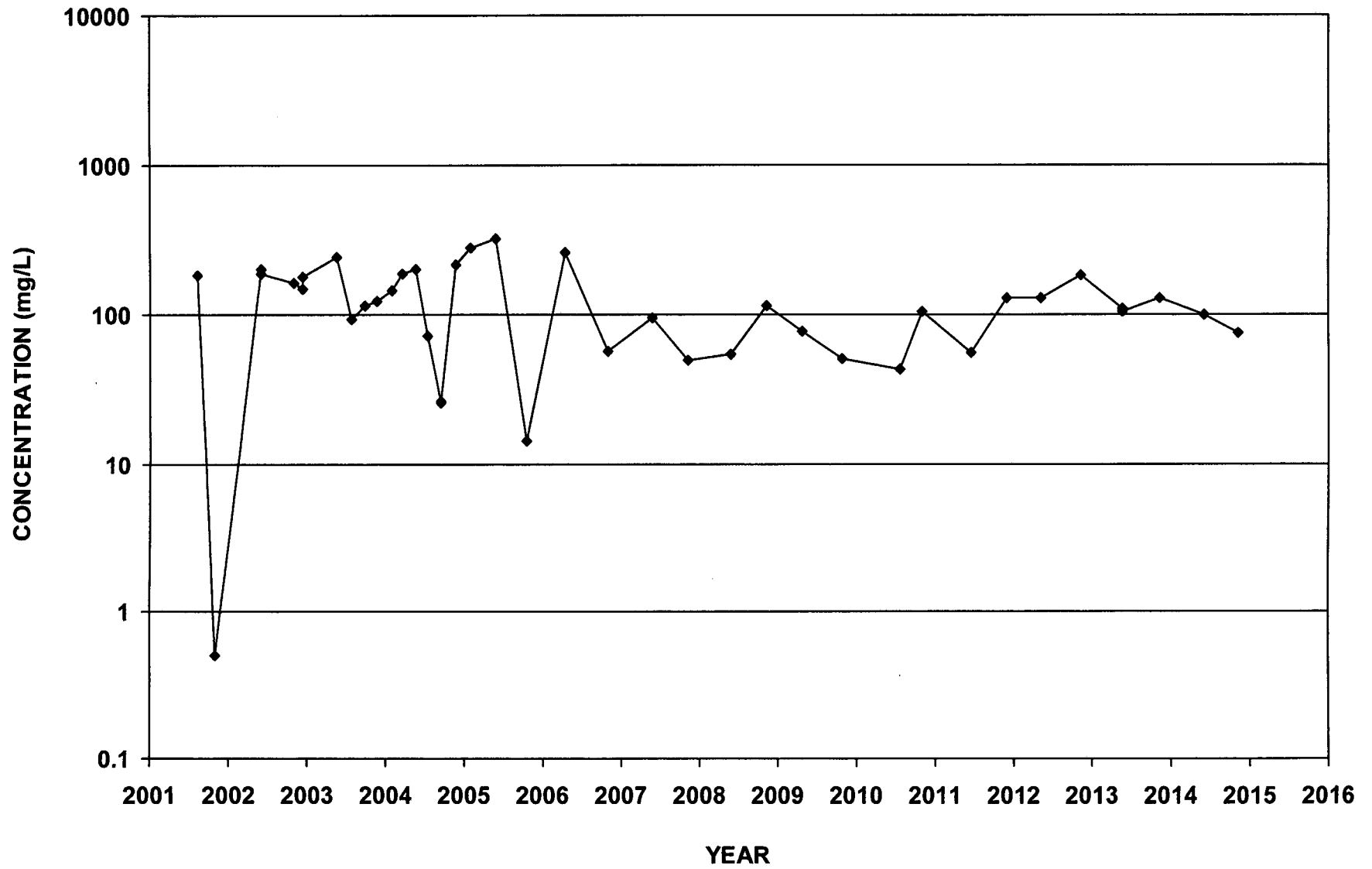
ECMW-5  
Ammonia-N



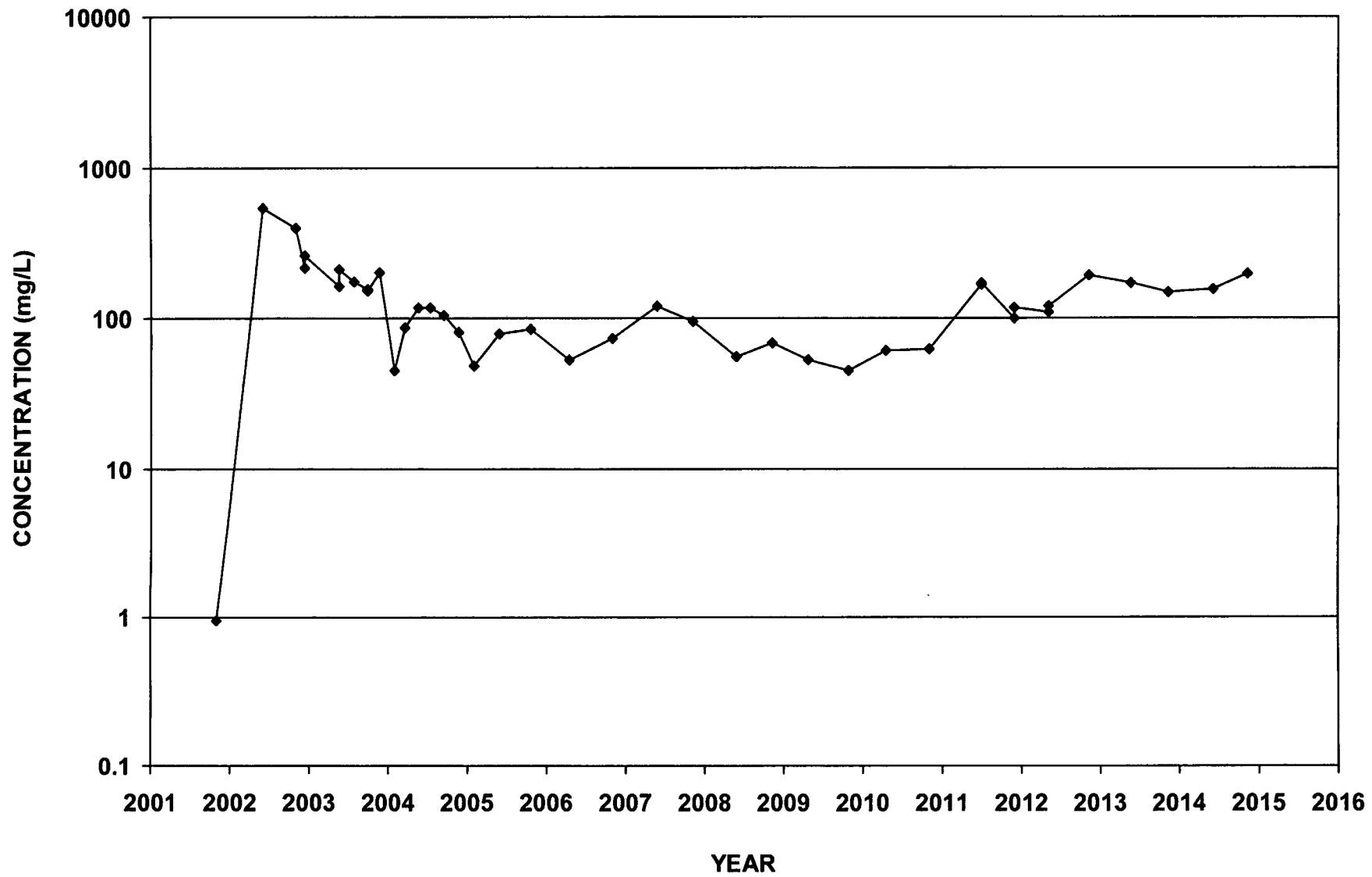
ECMW-6  
Ammonia-N



ECMW-7  
Ammonia-N

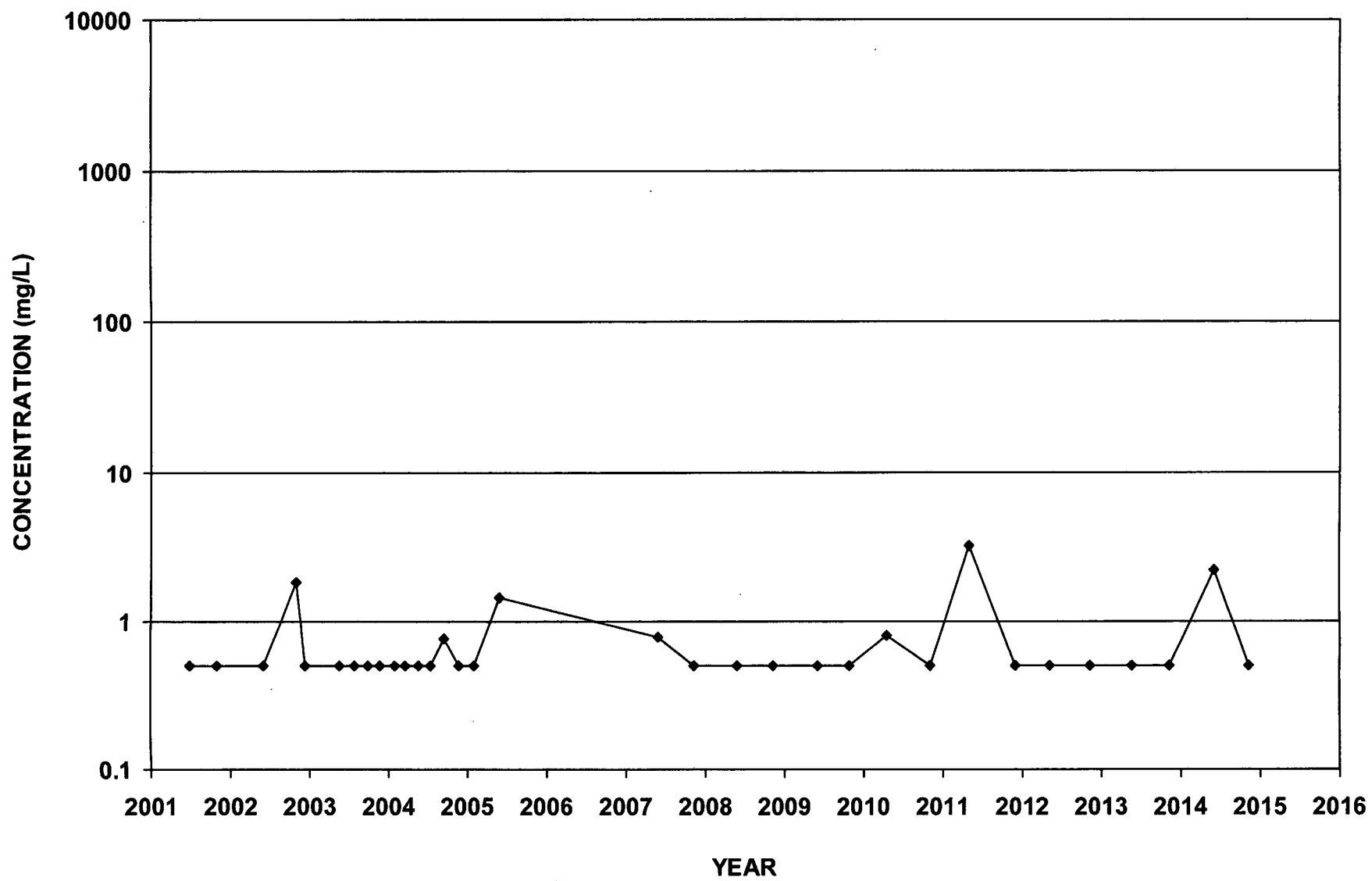


ECMW-8  
Ammonia-N



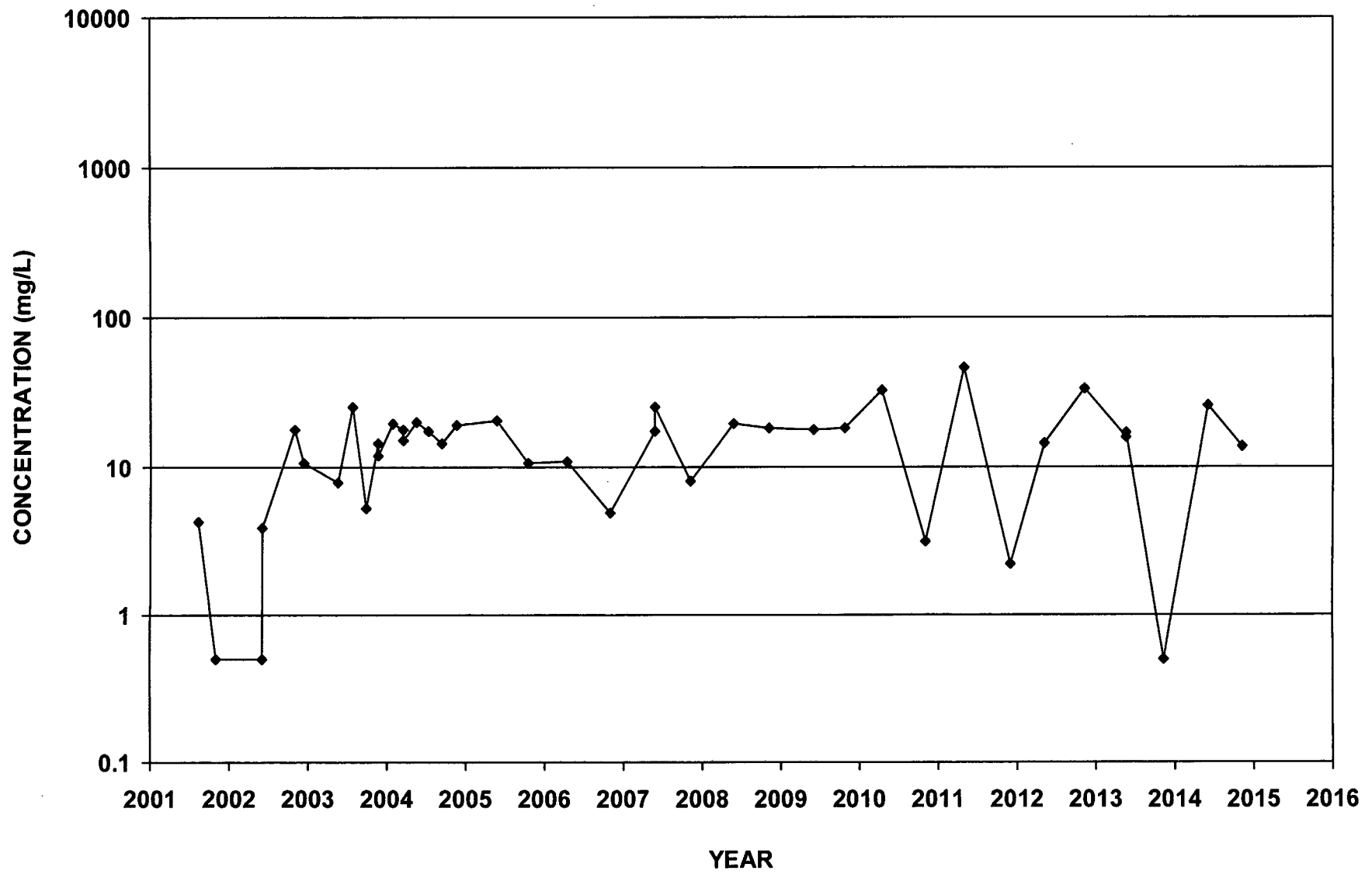


ECMW-10  
Ammonia-N

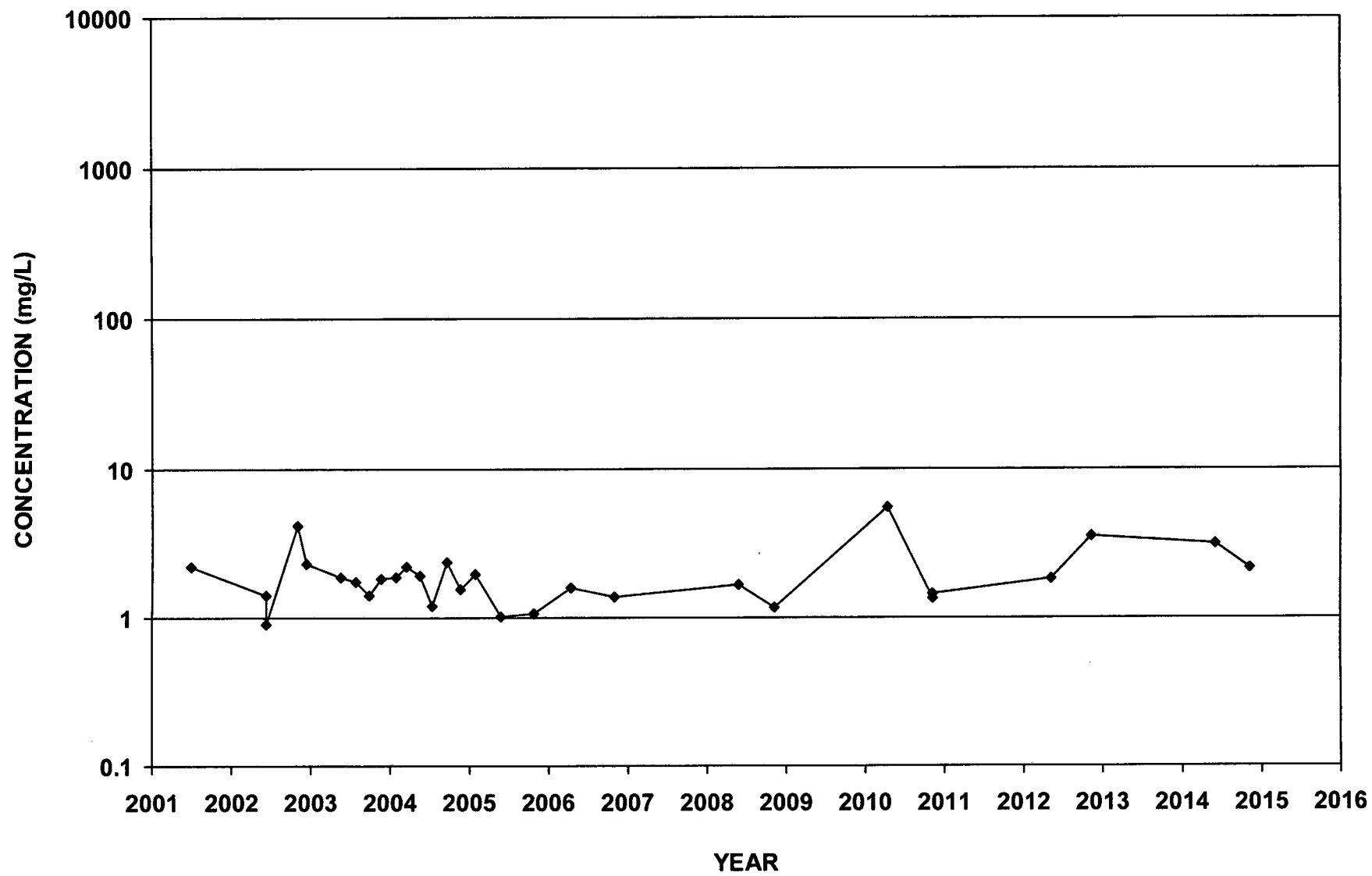




ECMW-11  
Ammonia-N

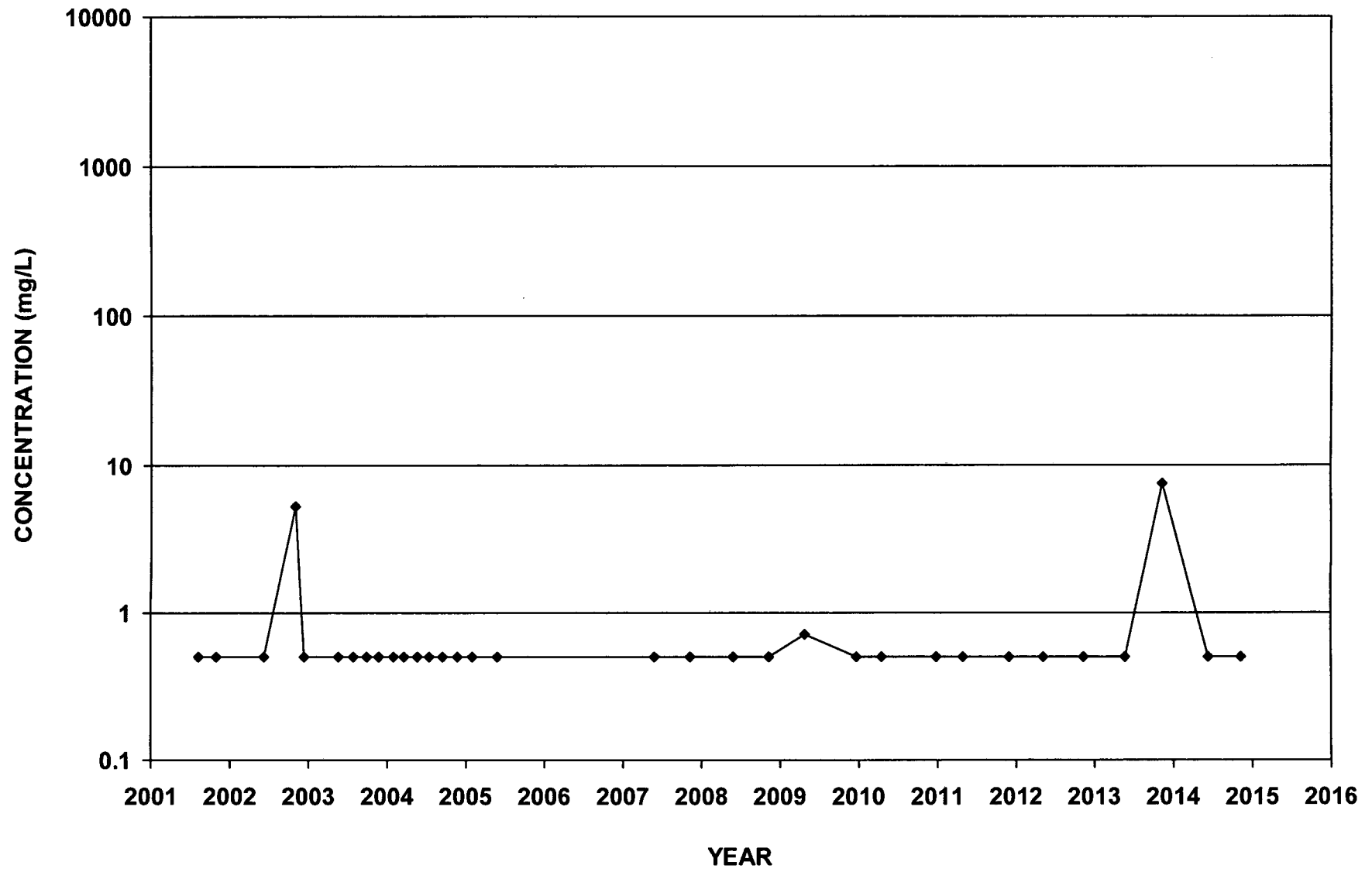


ECMW-12  
Ammonia-N

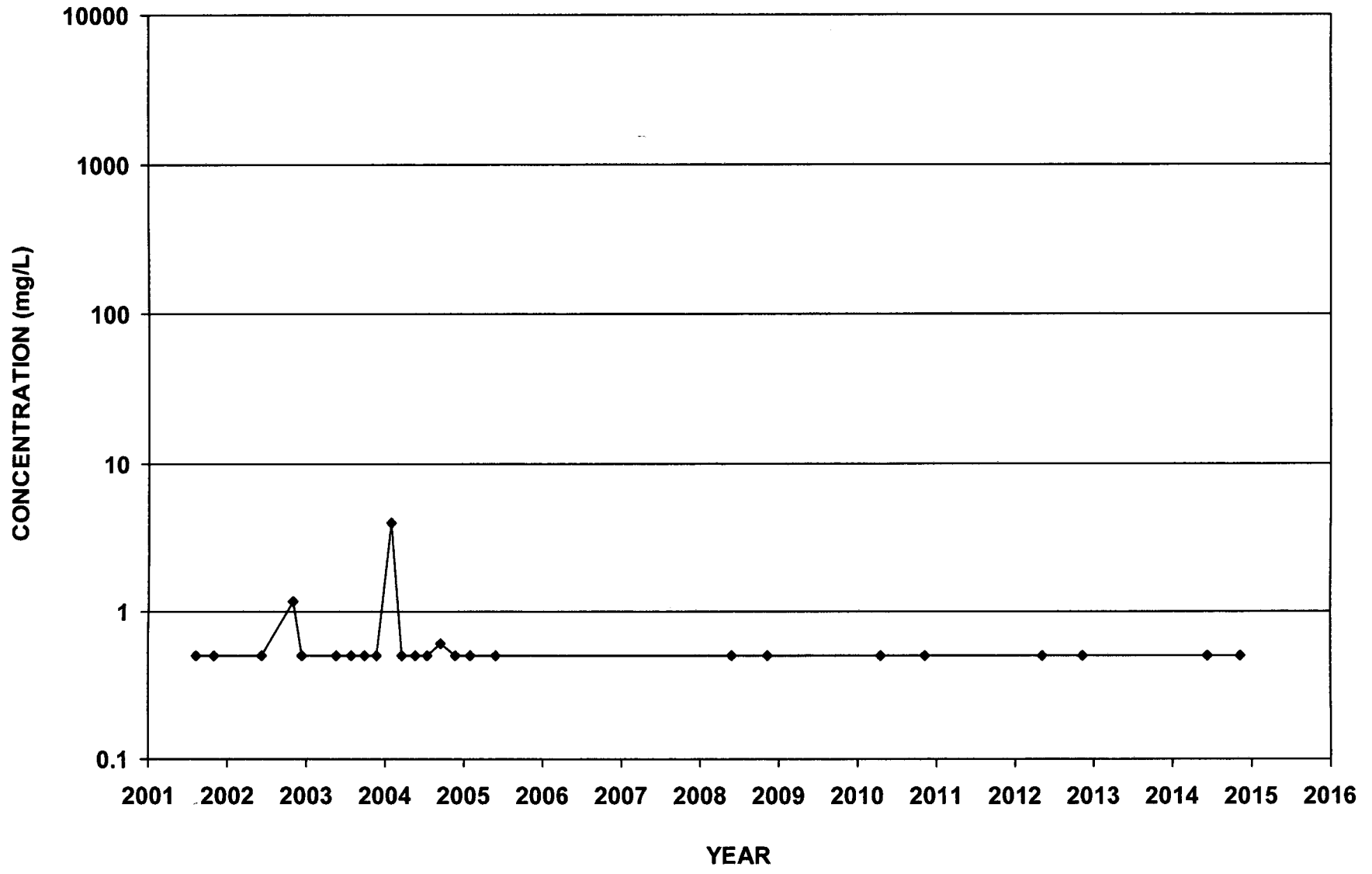




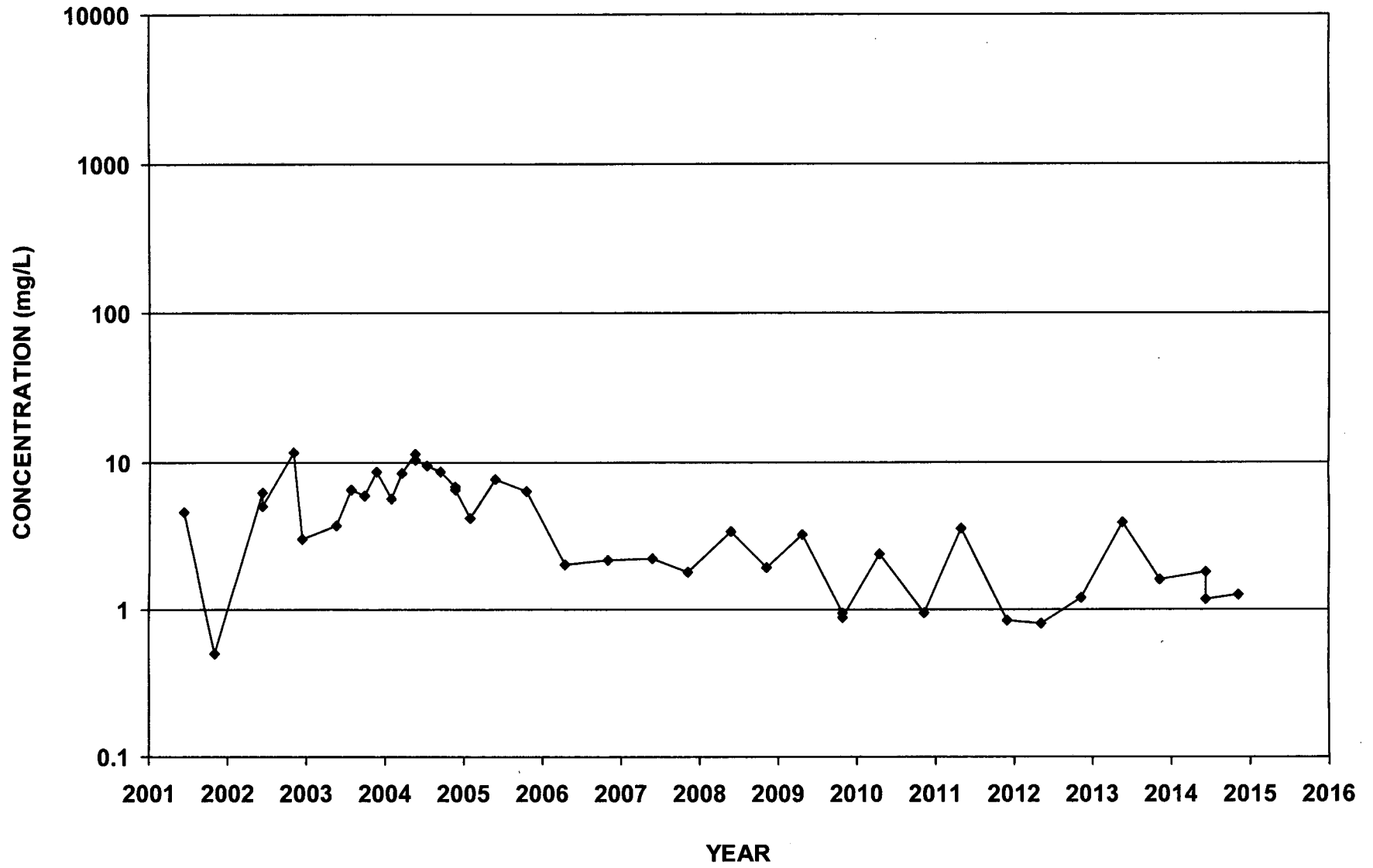
ECMW-14  
Ammonia-N



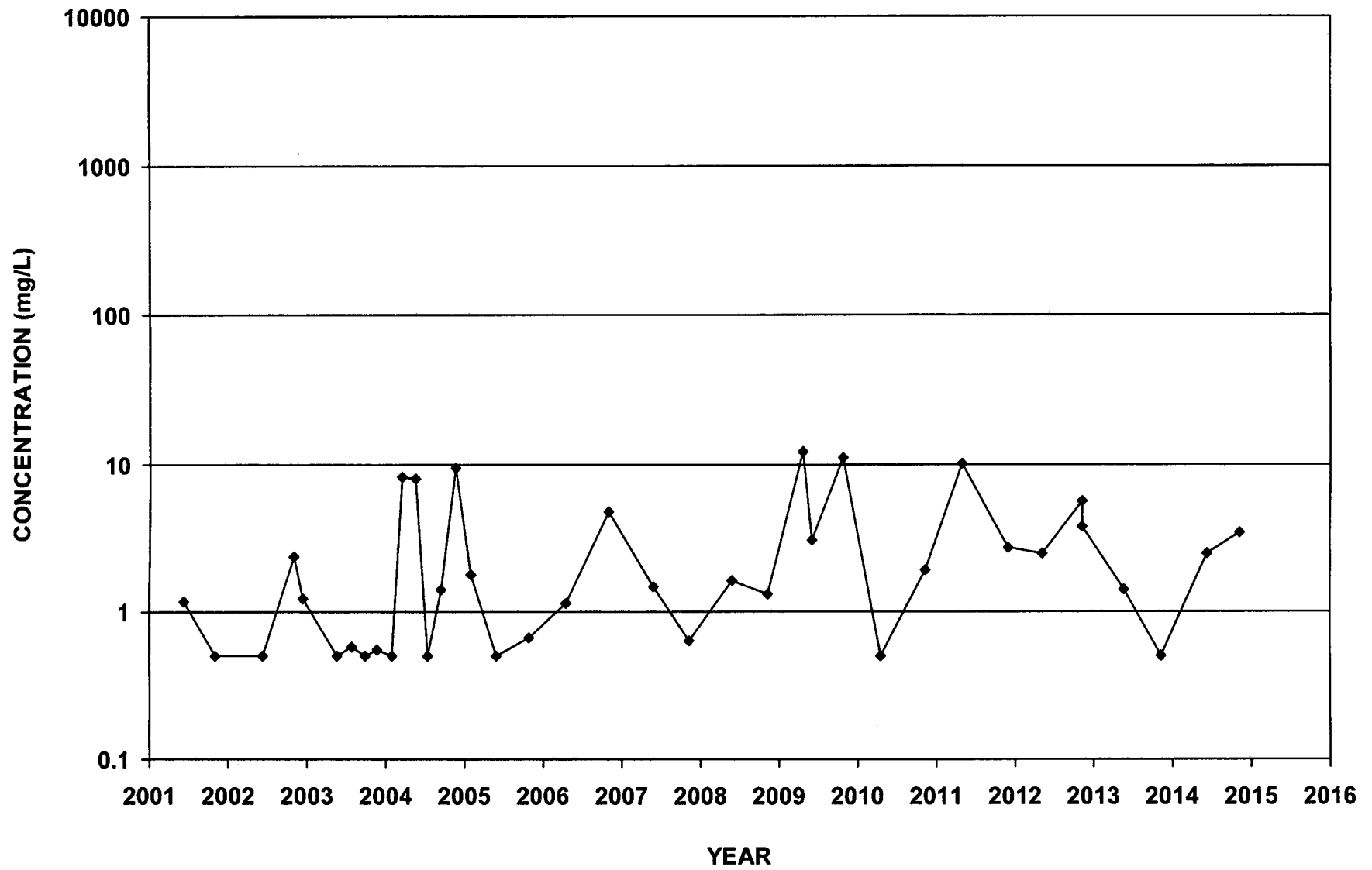
ECMW-15  
Ammonia-N



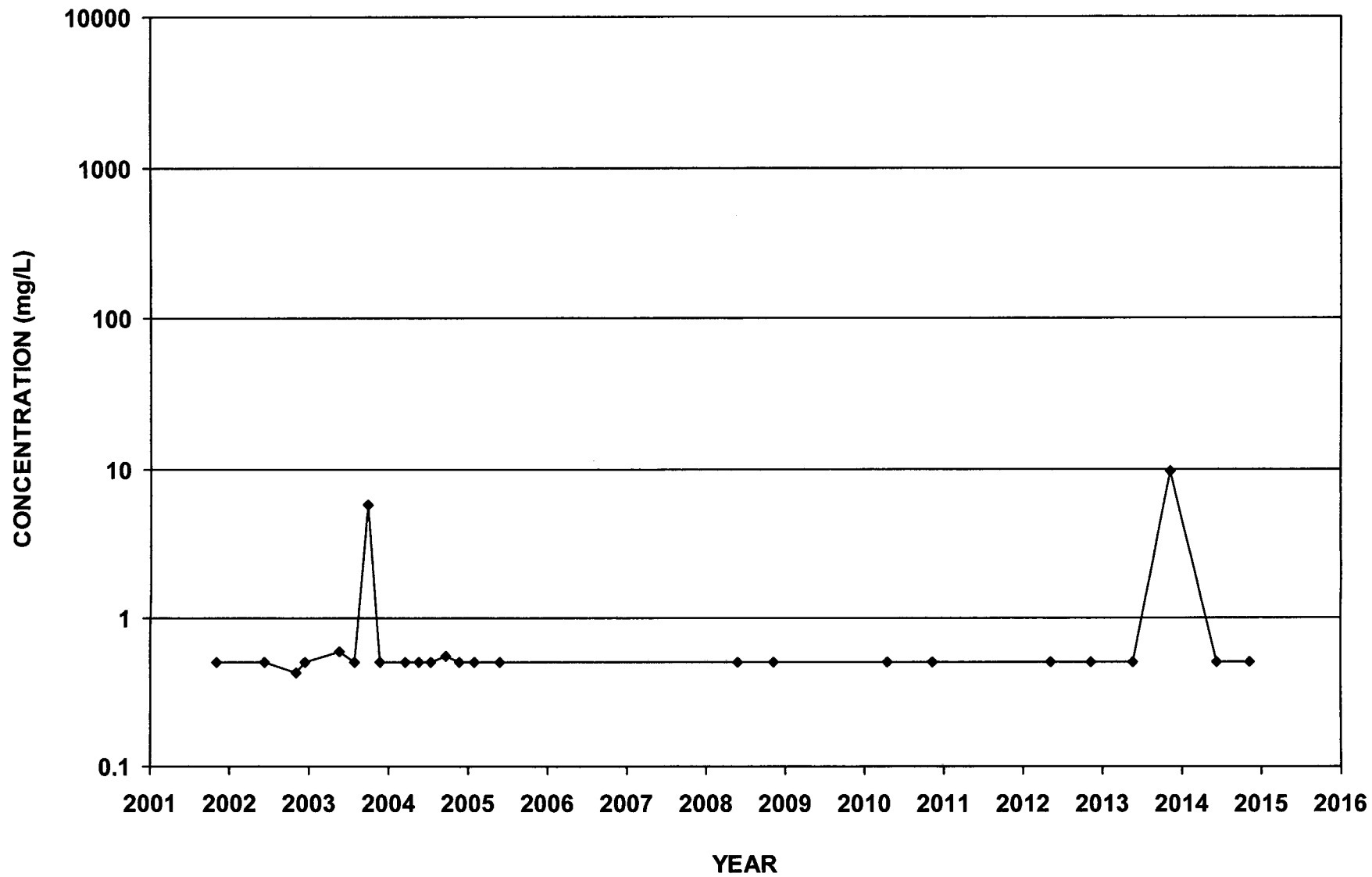
ECMW-16  
Ammonia-N



ECMW-17  
Ammonia-N

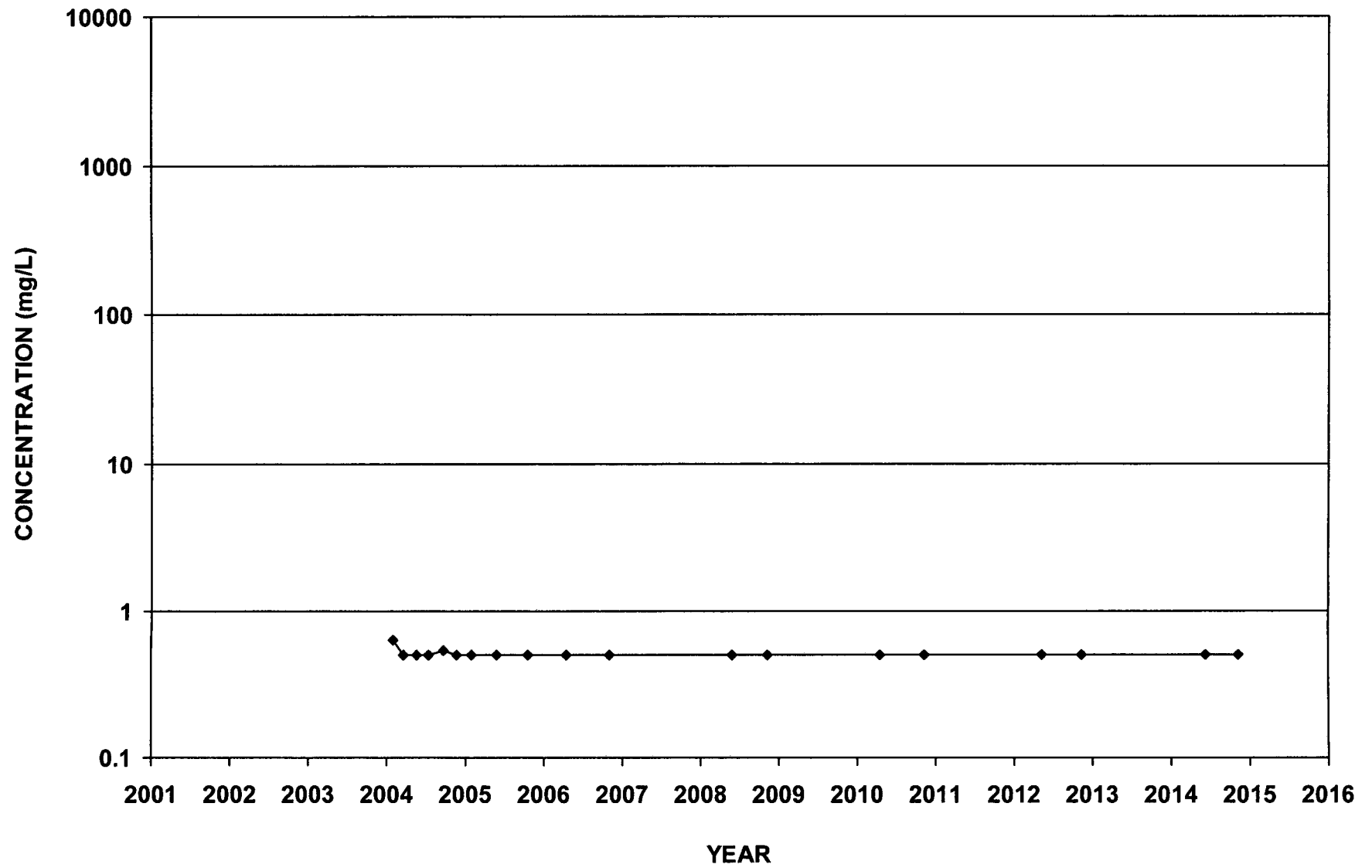


ECMW-18  
Ammonia-N

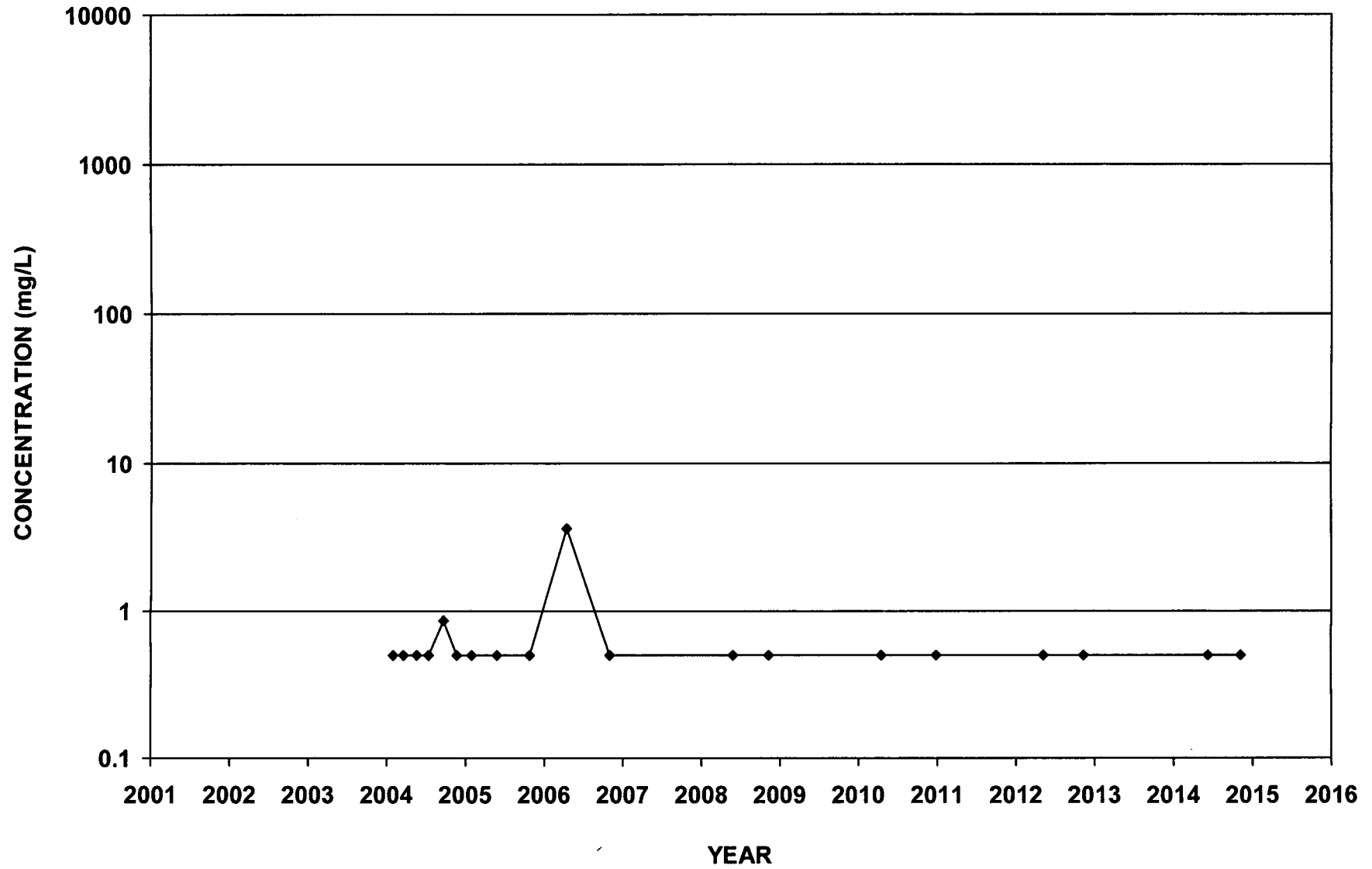




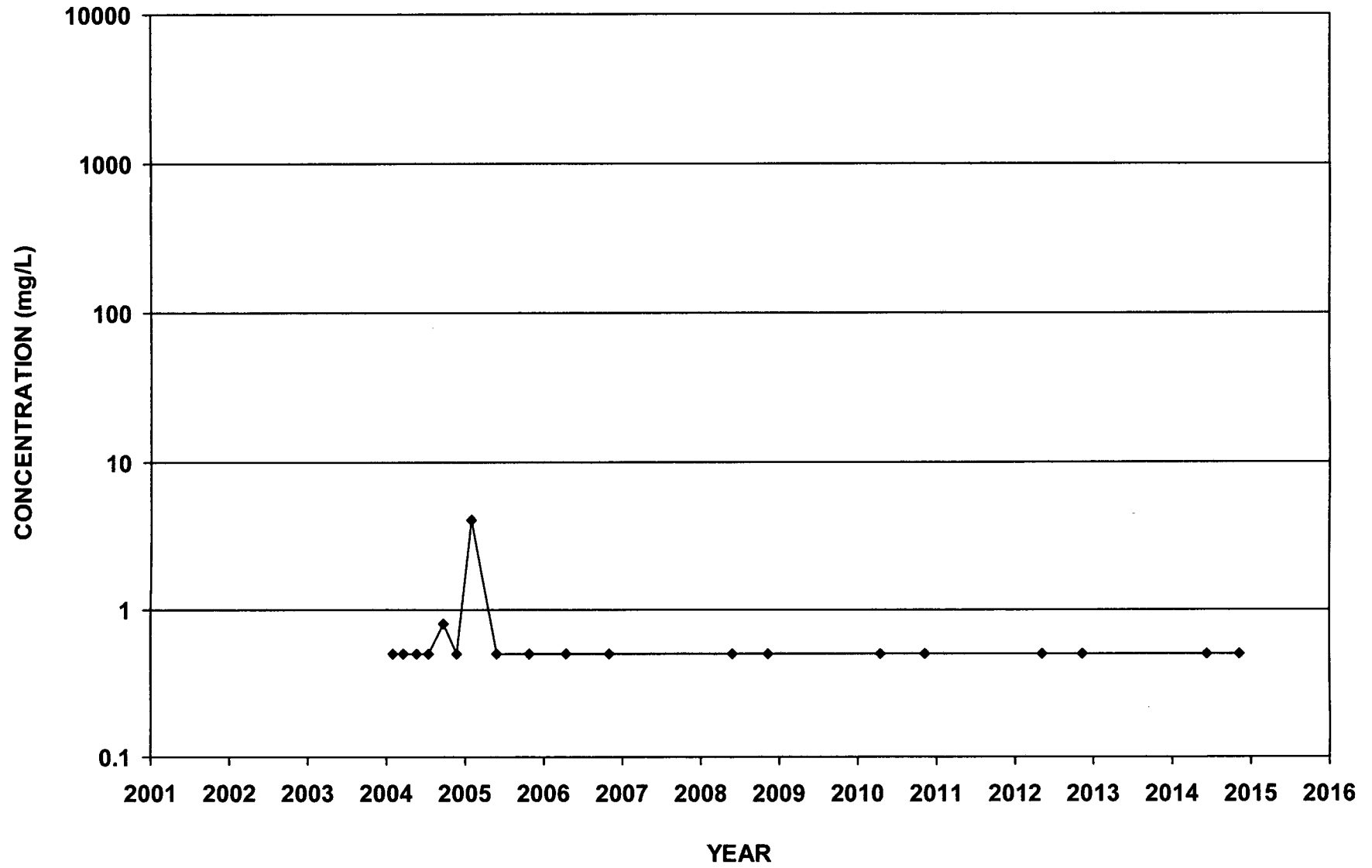
ECMW-19  
Ammonia-N



ECMW-20  
Ammonia-N

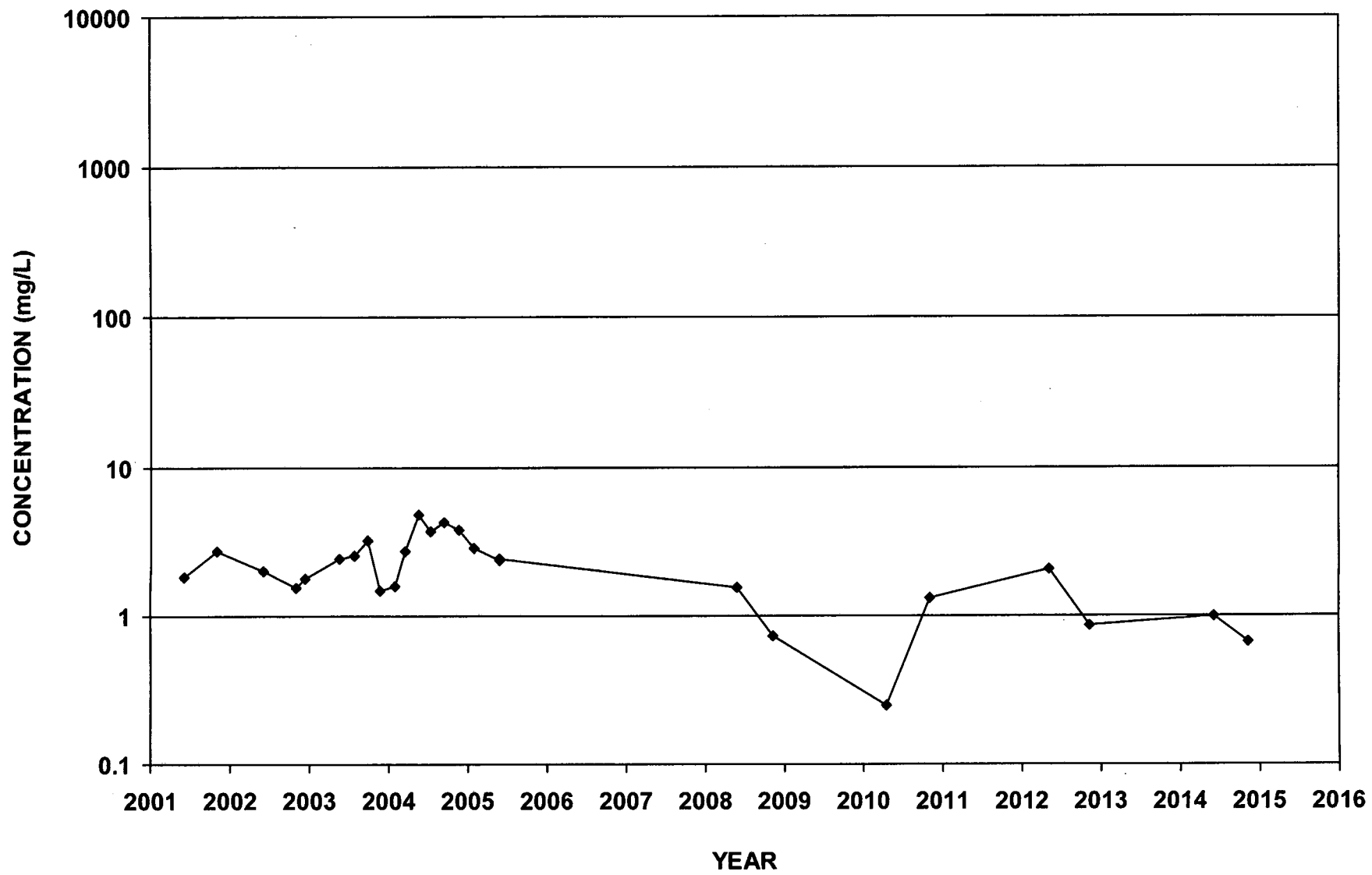


ECMW-21  
Ammonia-N

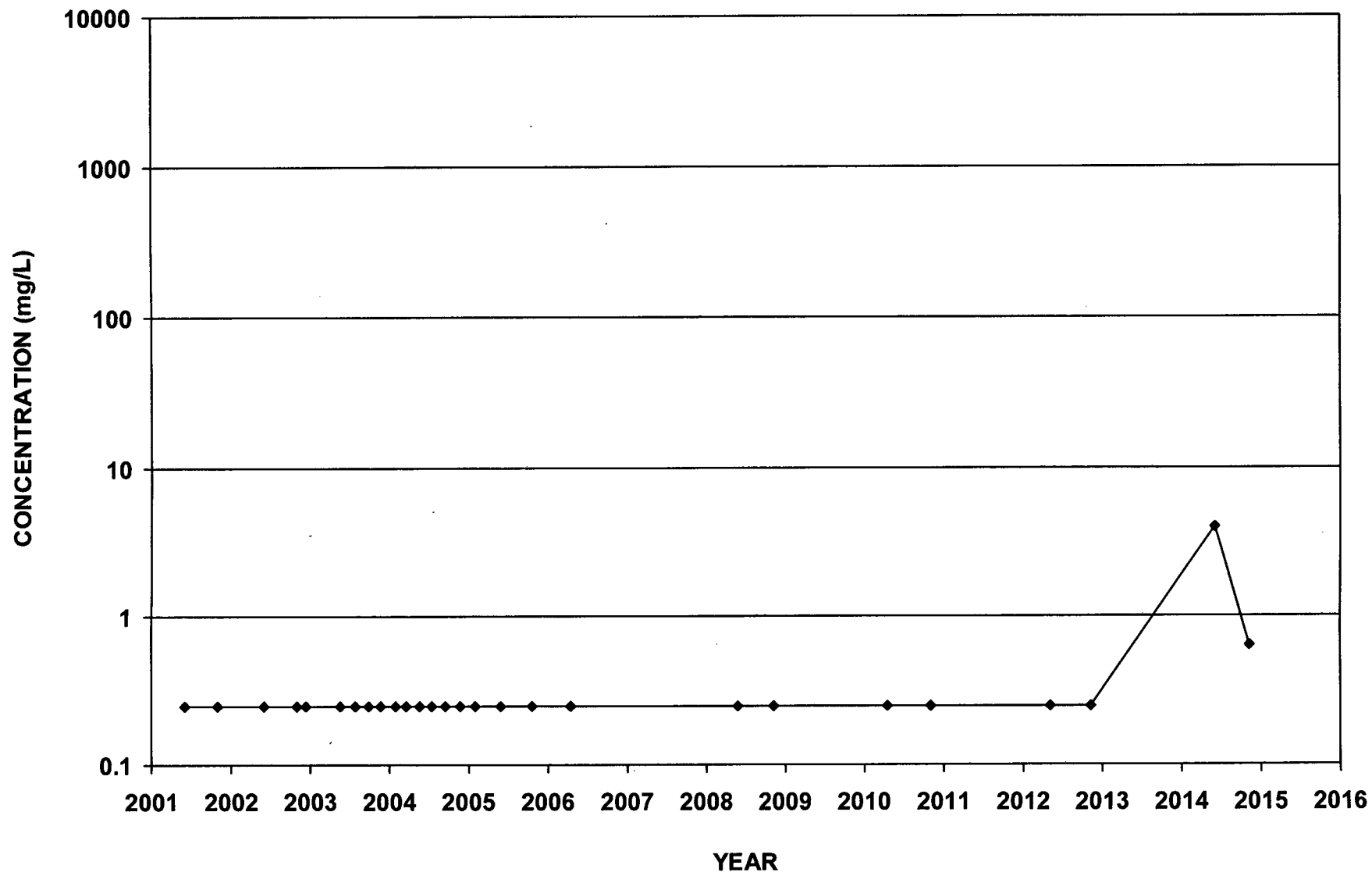




ECMW-1  
Nitrate-N

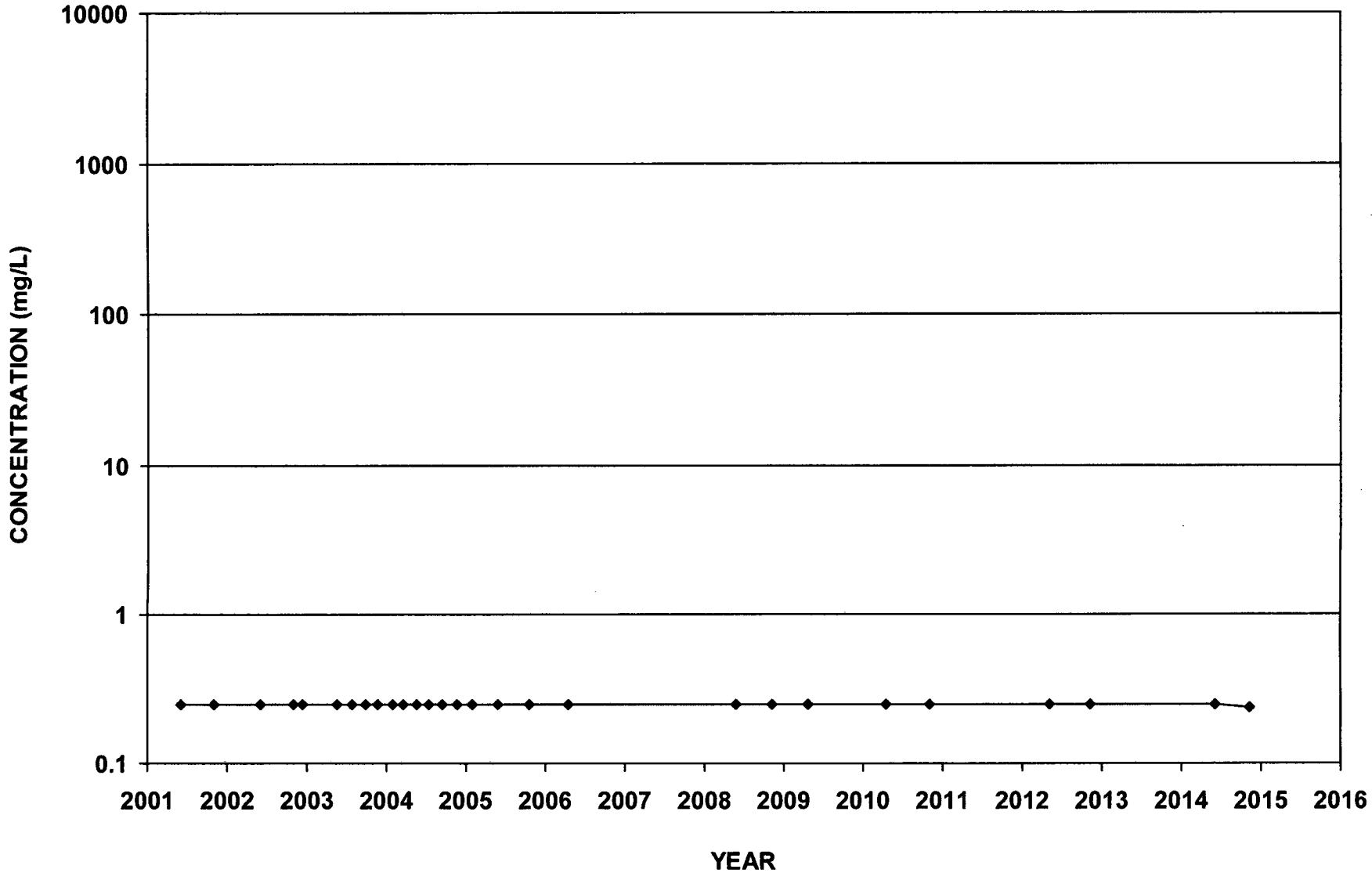


ECMW-2  
Nitrate-N

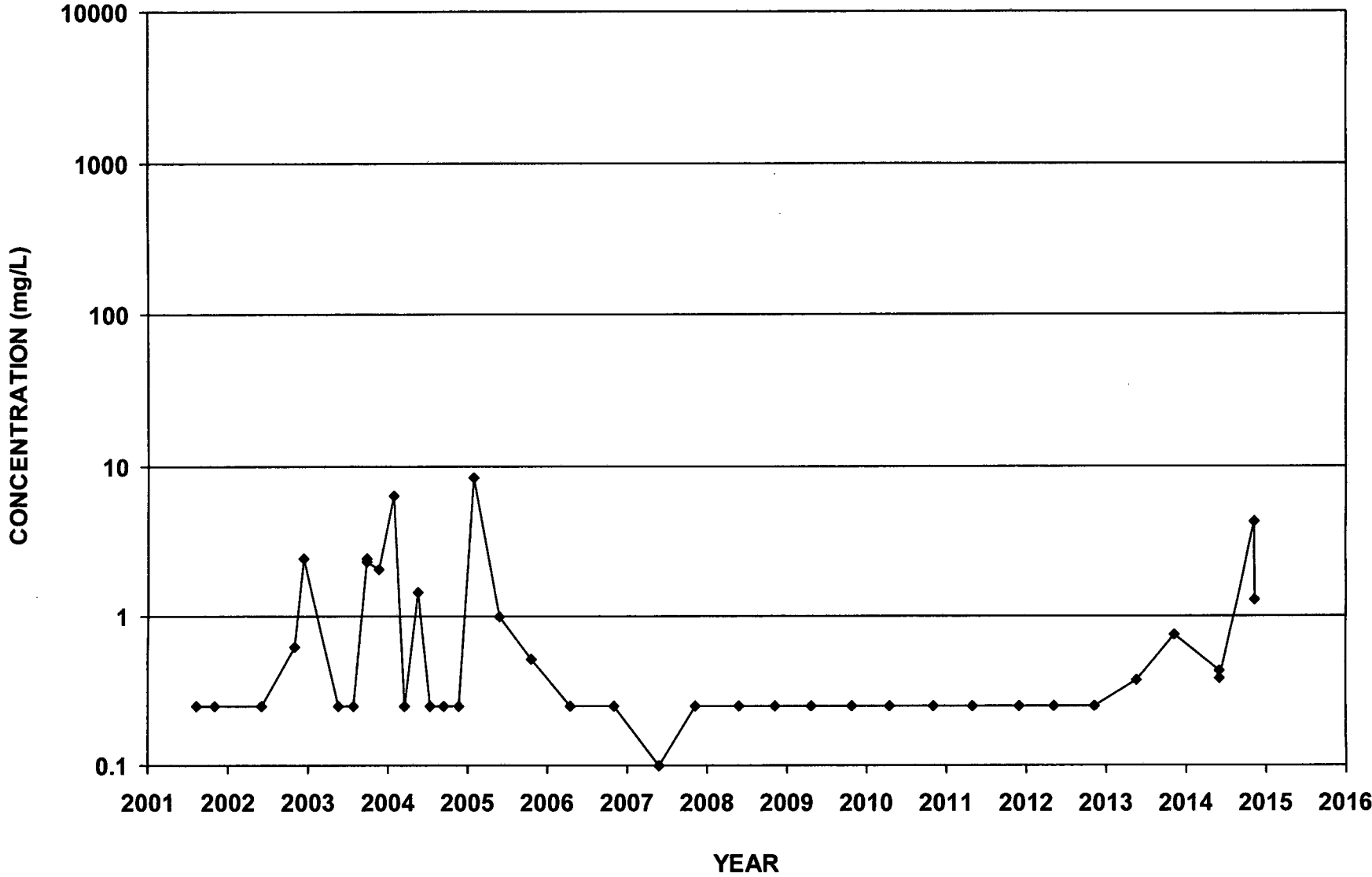


ECMW-3

Nitrate-N

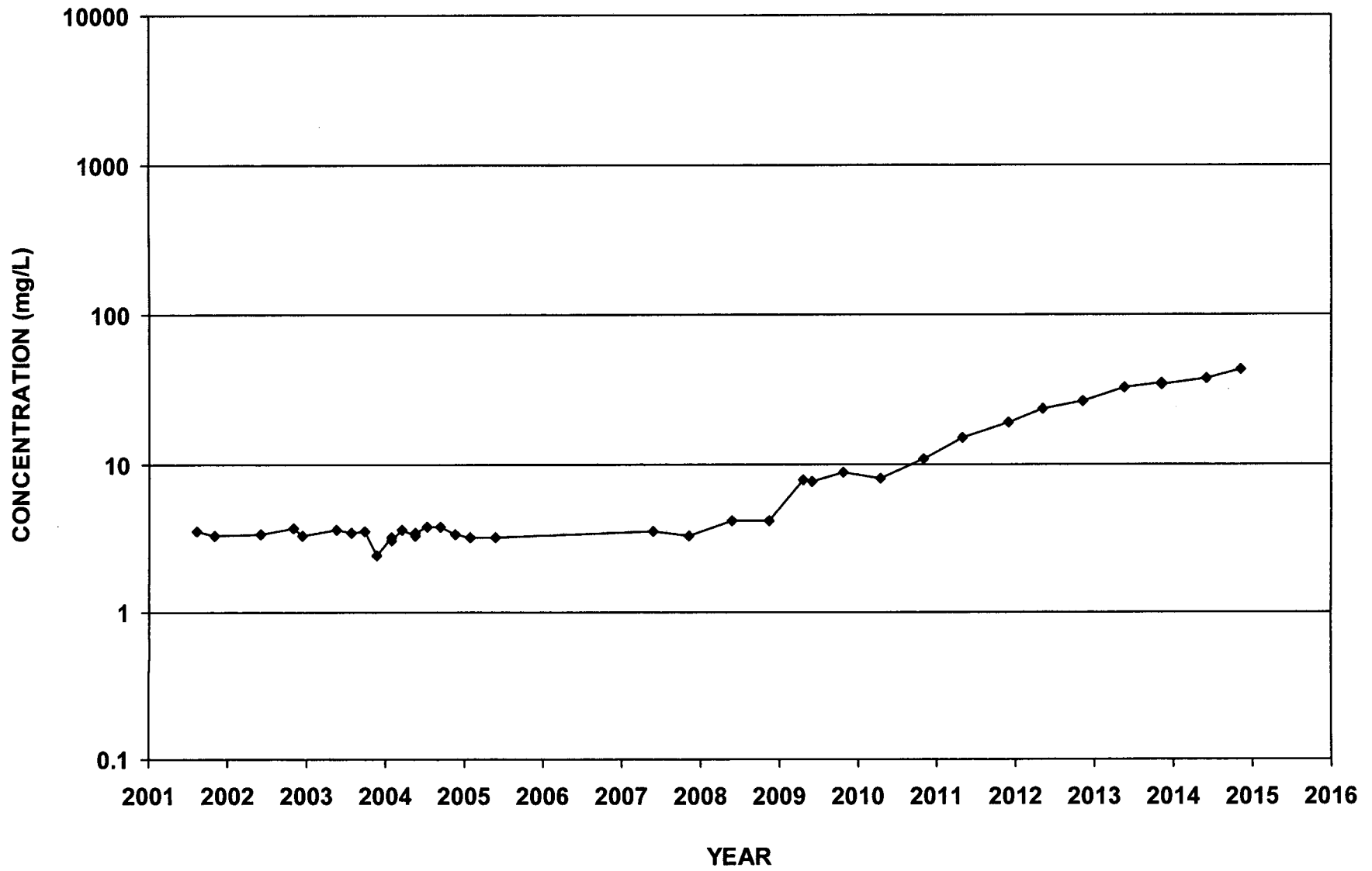


ECMW-4  
Nitrate-N

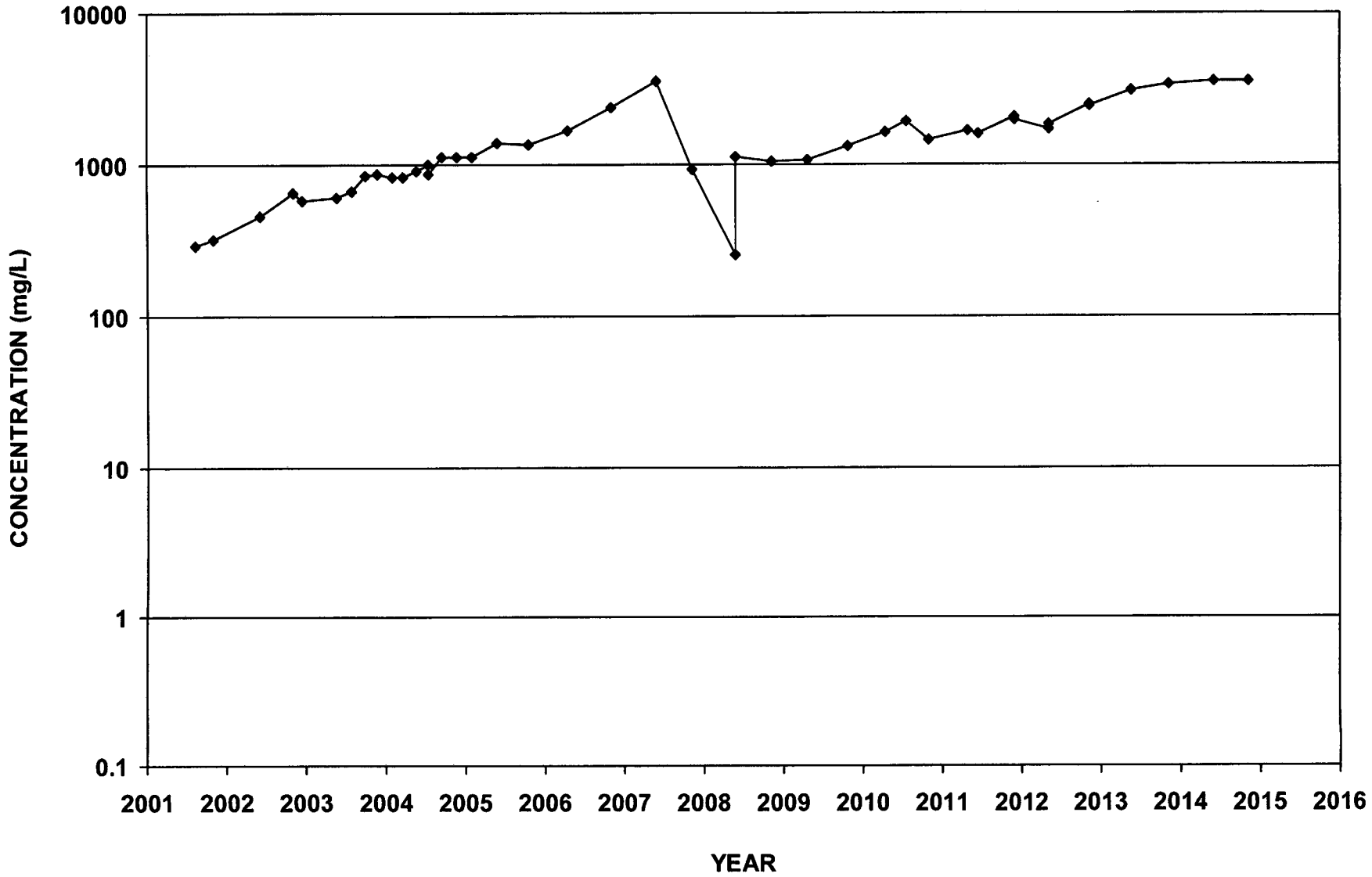




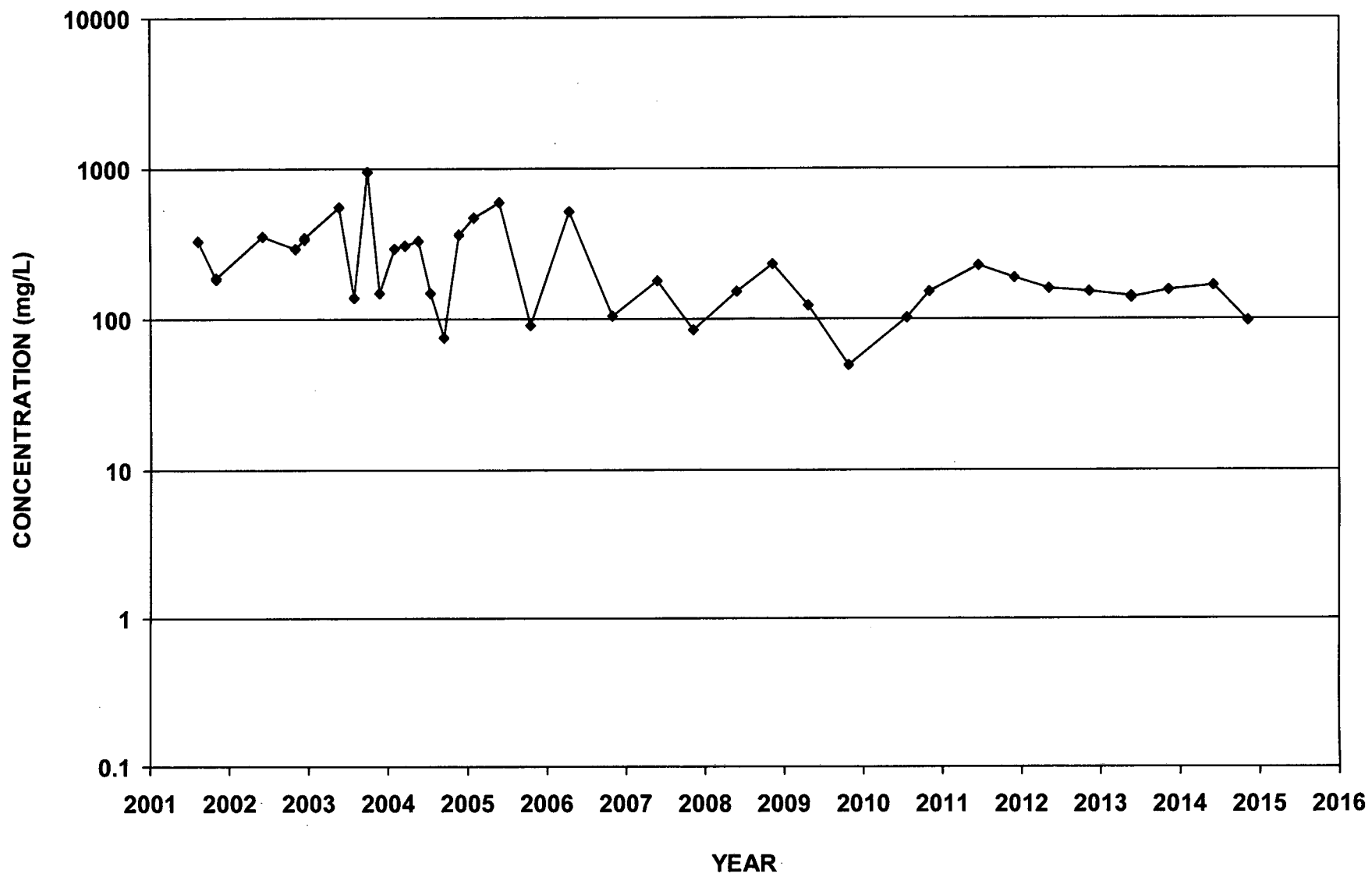
ECMW-5  
Nitrate-N



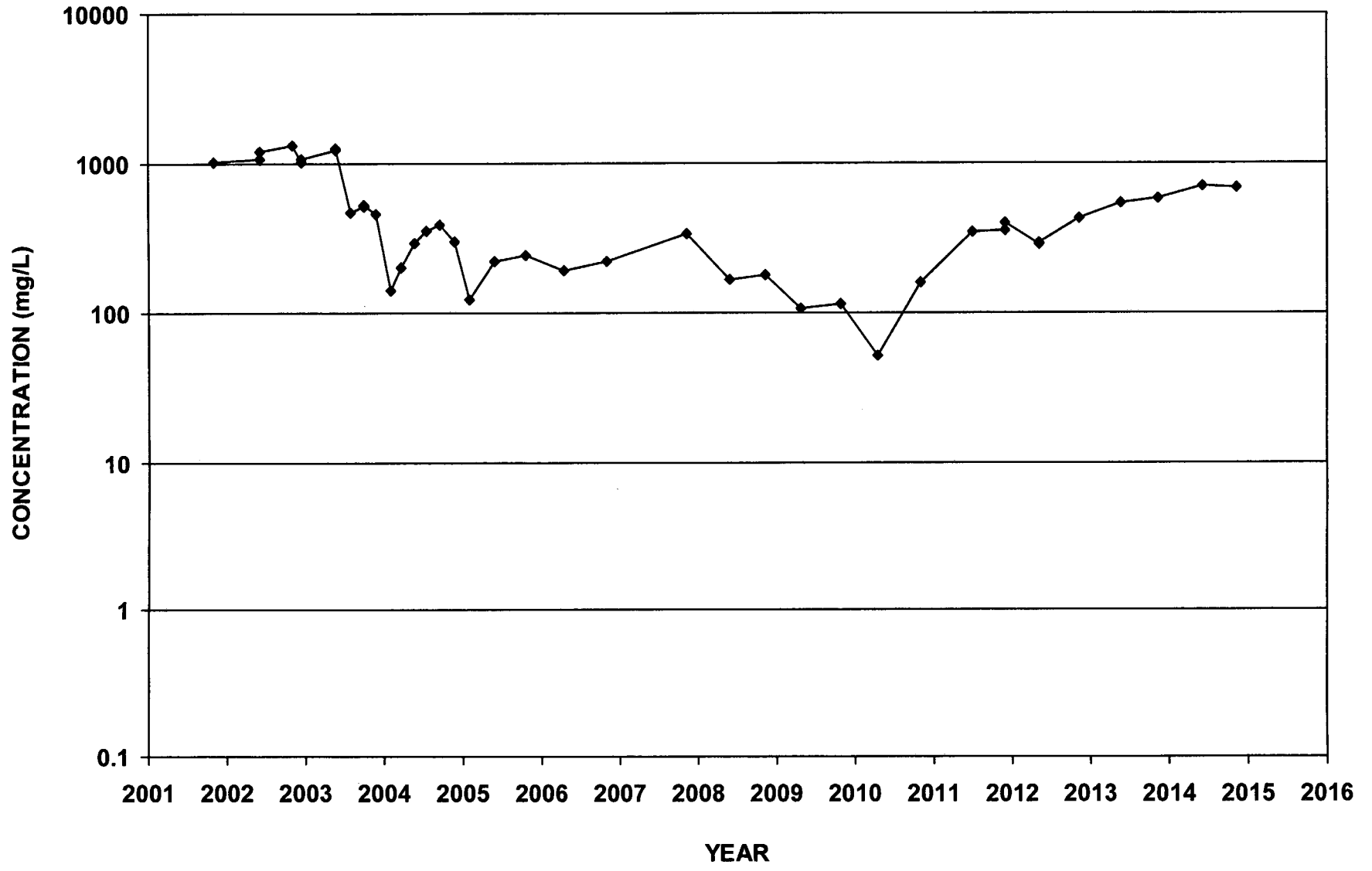
ECMW-6  
Nitrate-N



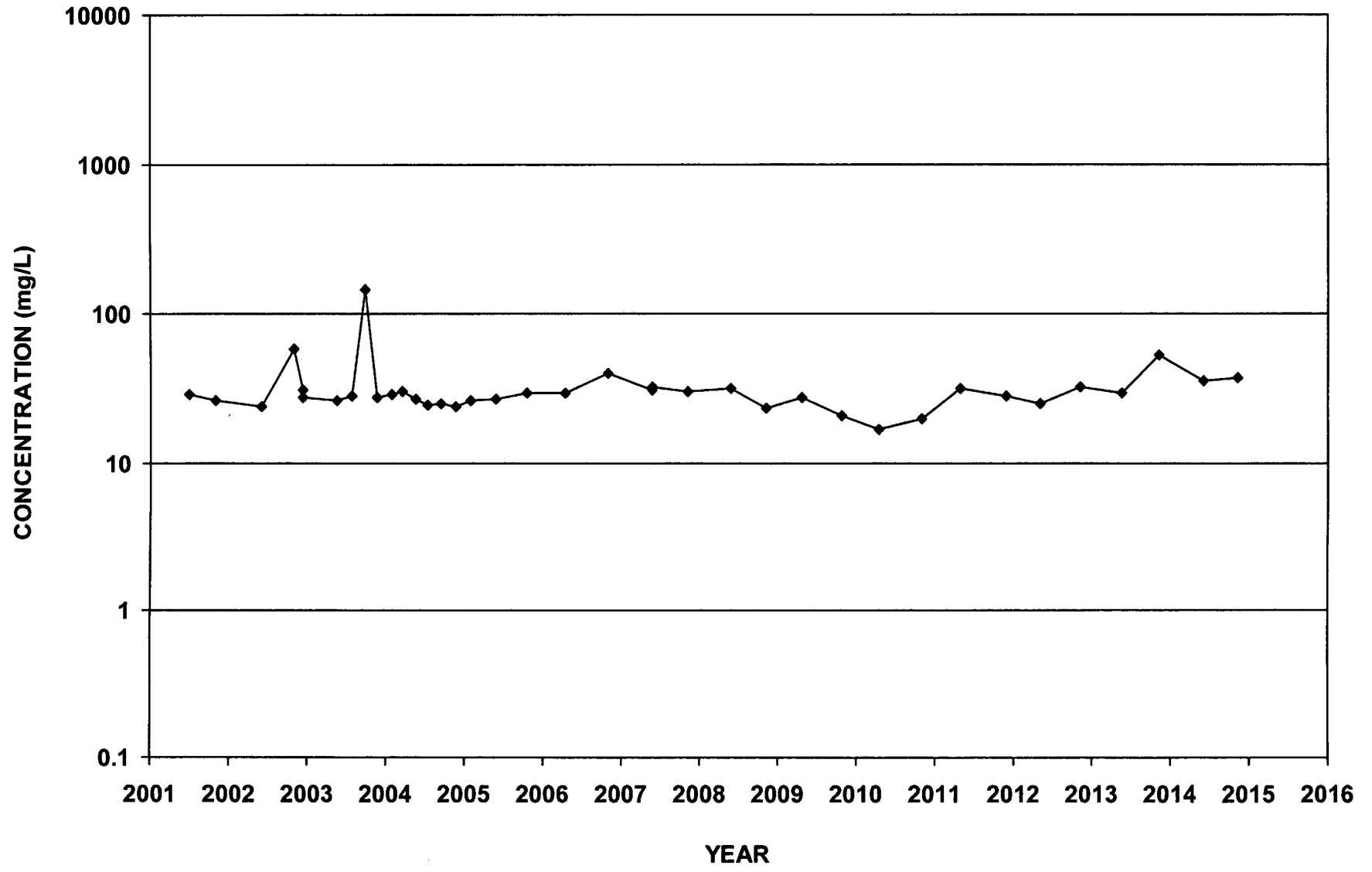
ECMW-7  
Nitrate-N



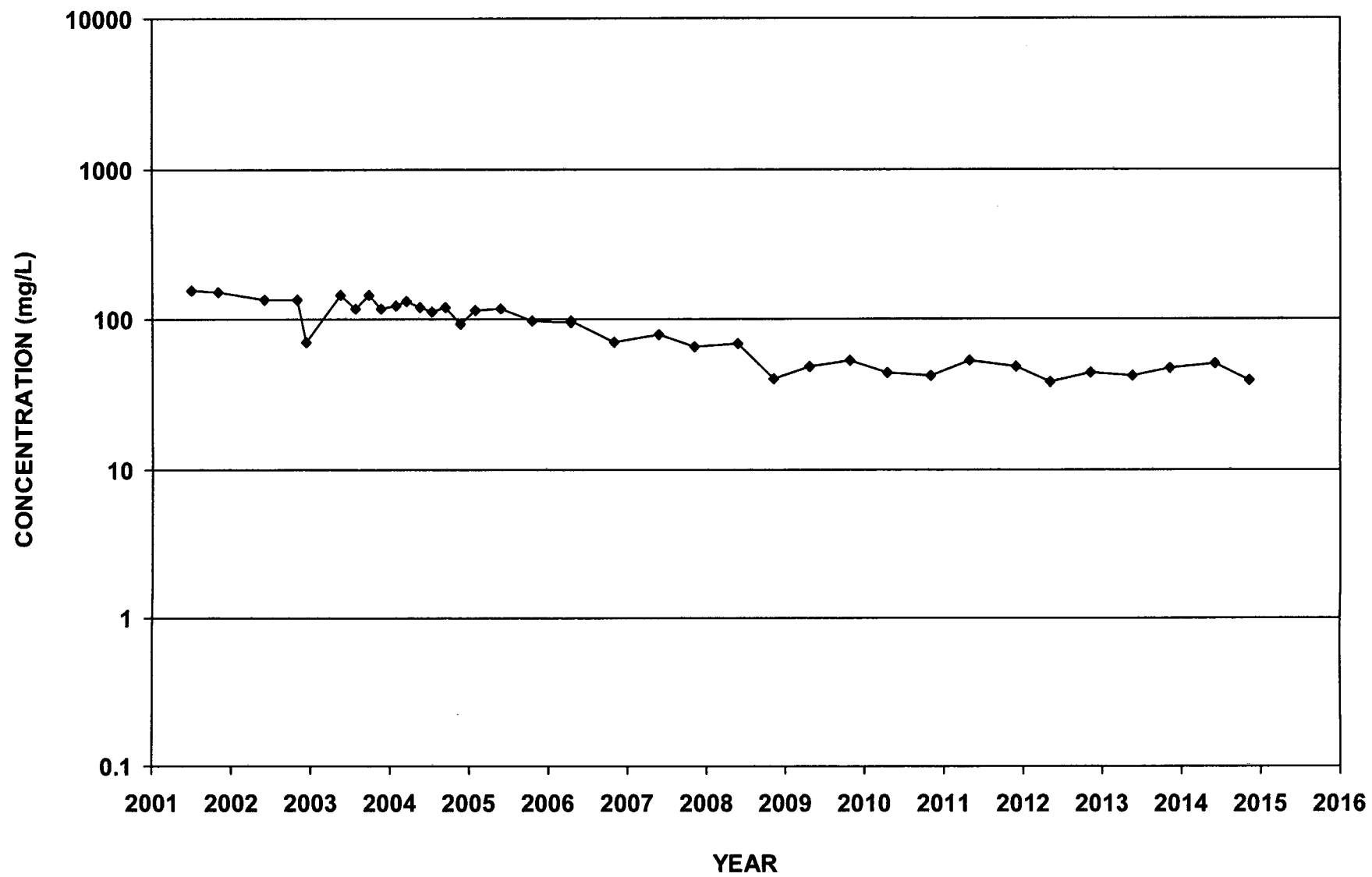
ECMW-8  
Nitrate-N



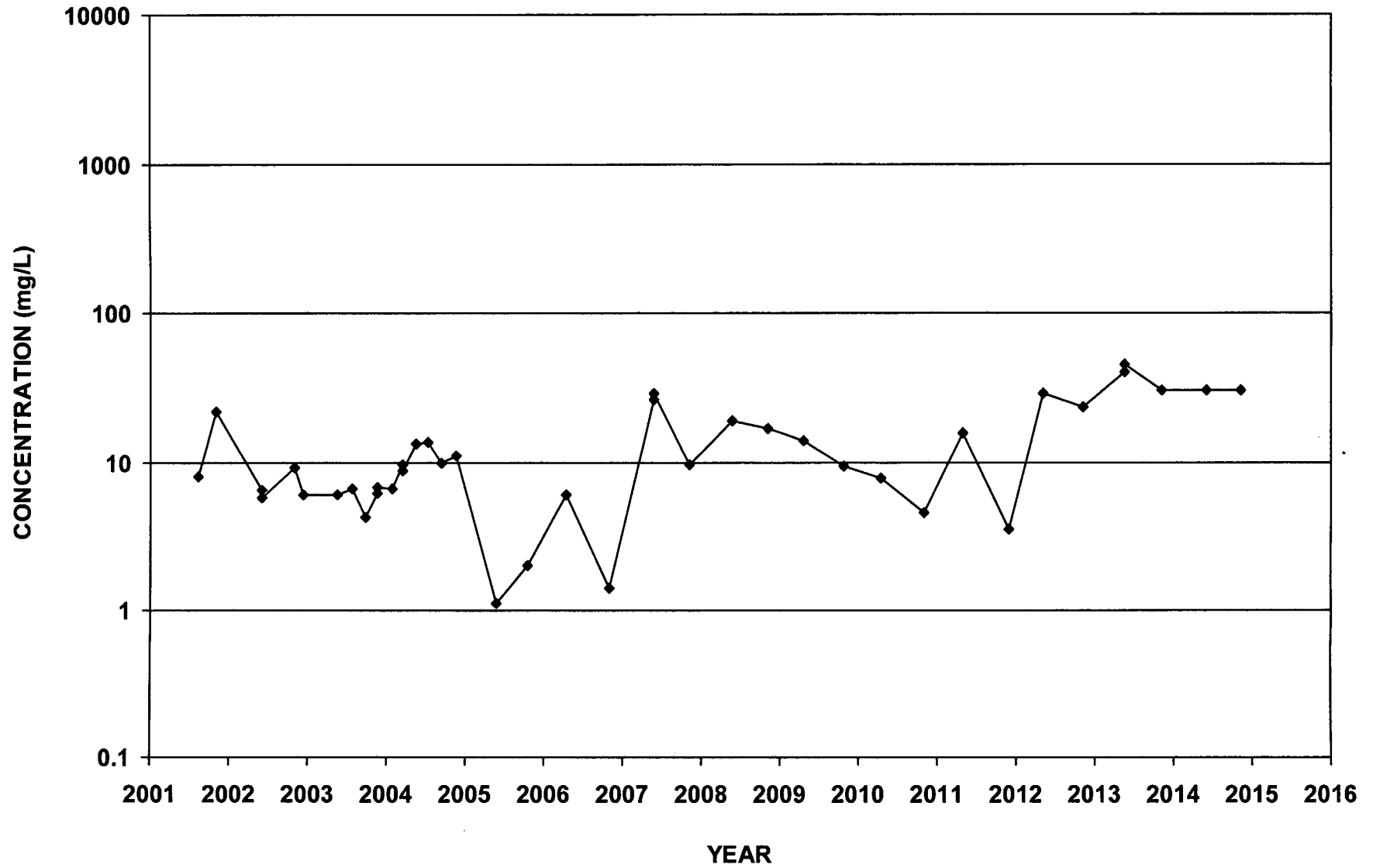
ECMW-9  
Nitrate-N



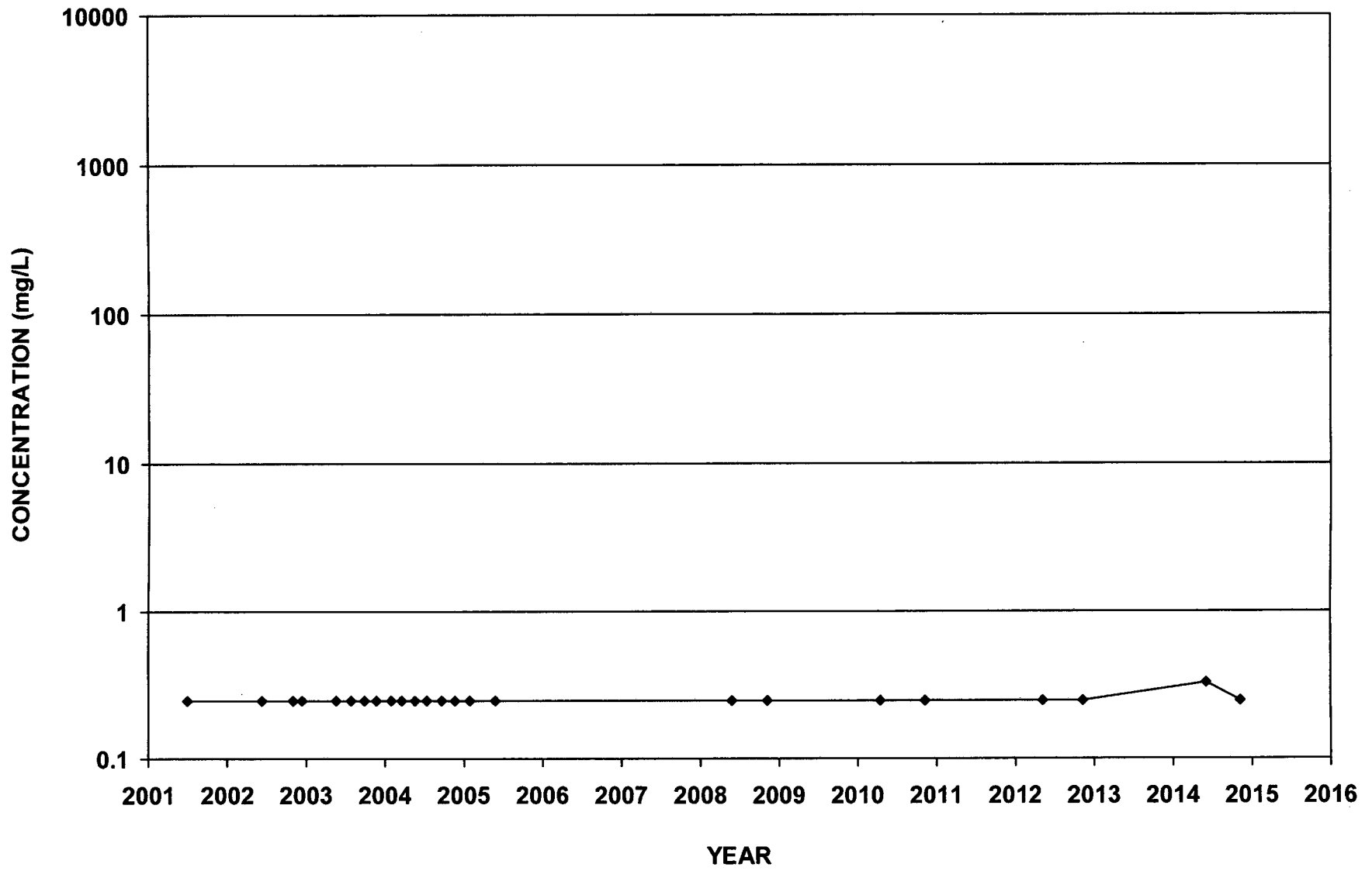
ECMW-10  
Nitrate-N



ECMW-11  
Nitrate-N

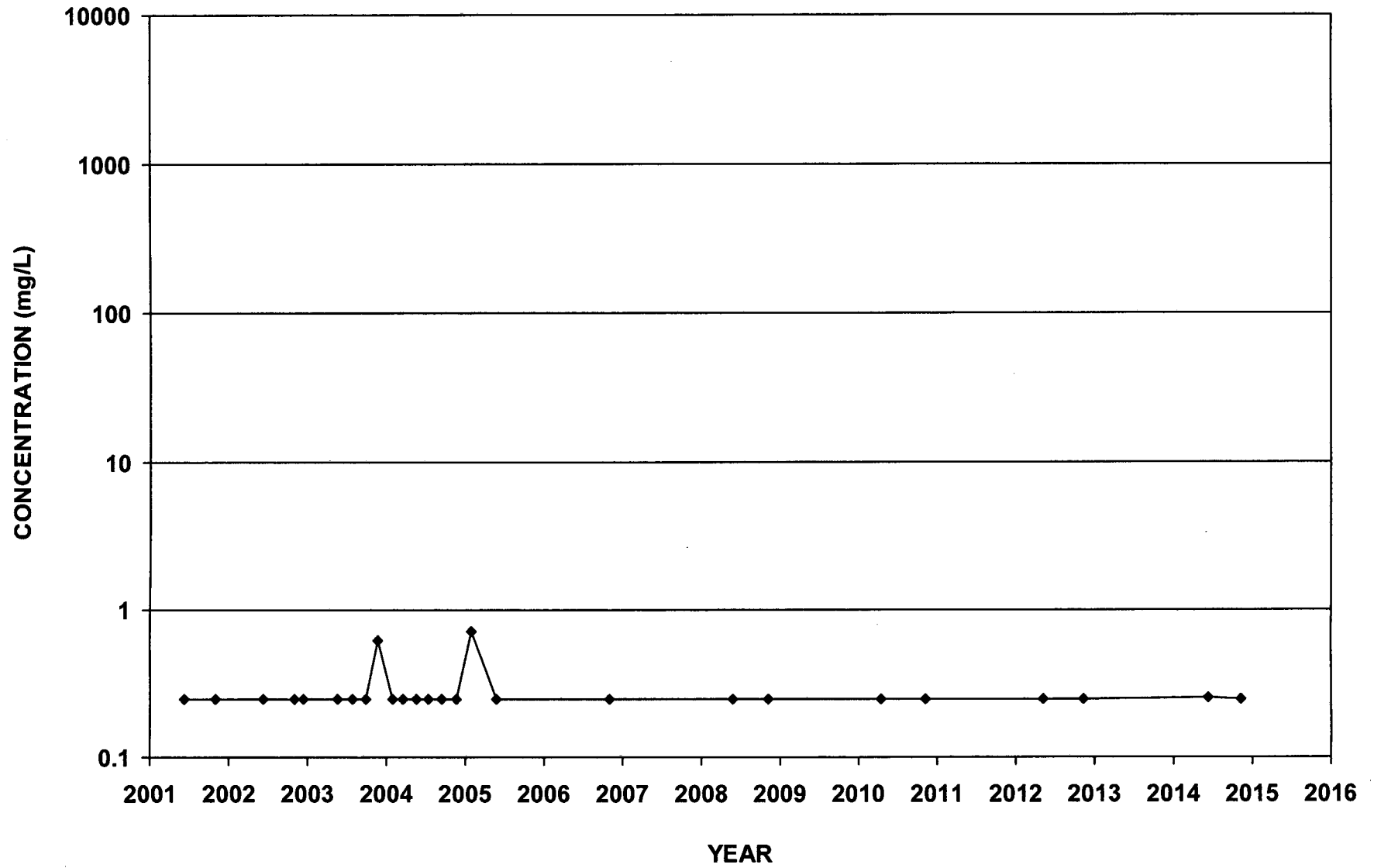


ECMW-12  
Nitrate-N

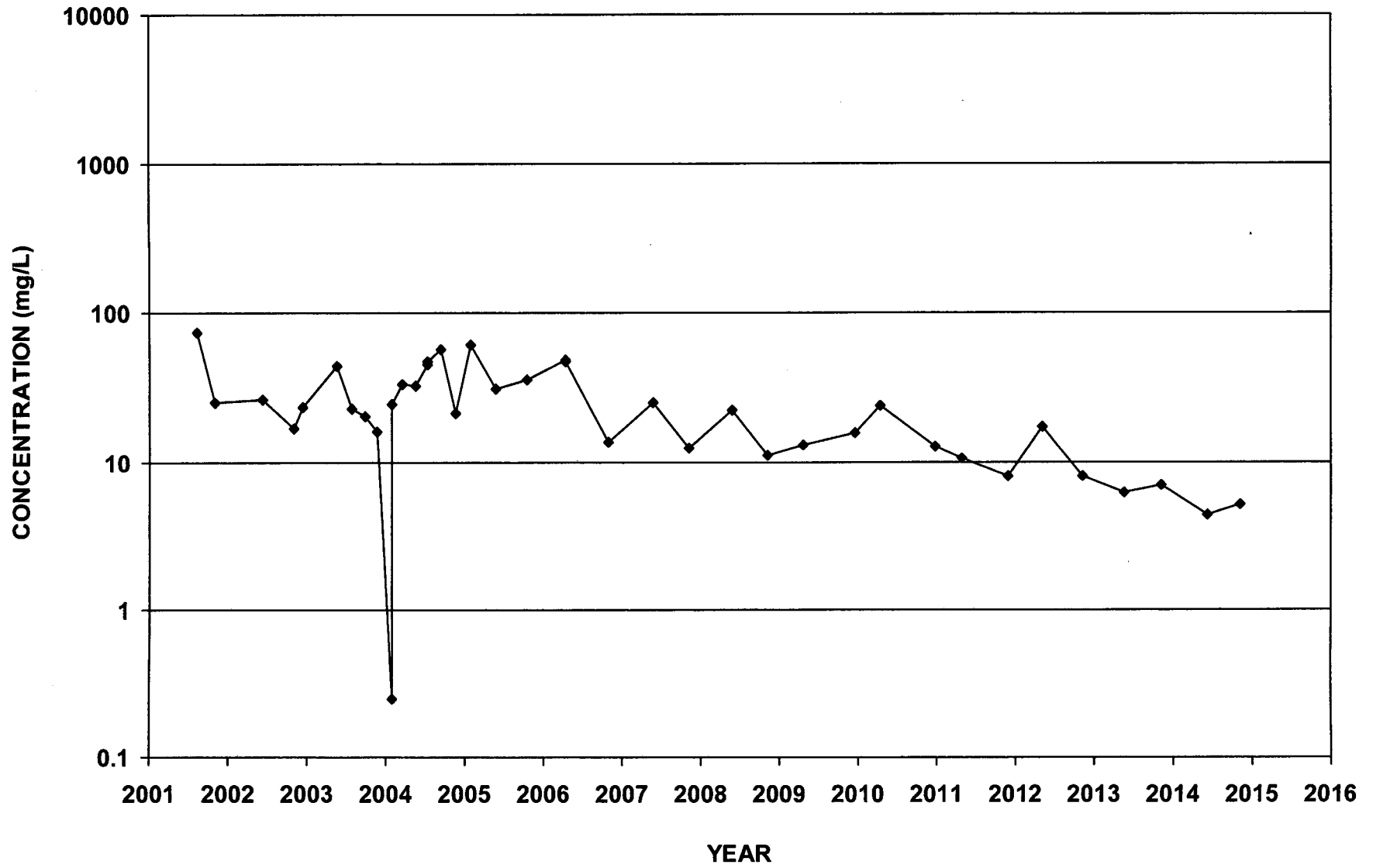




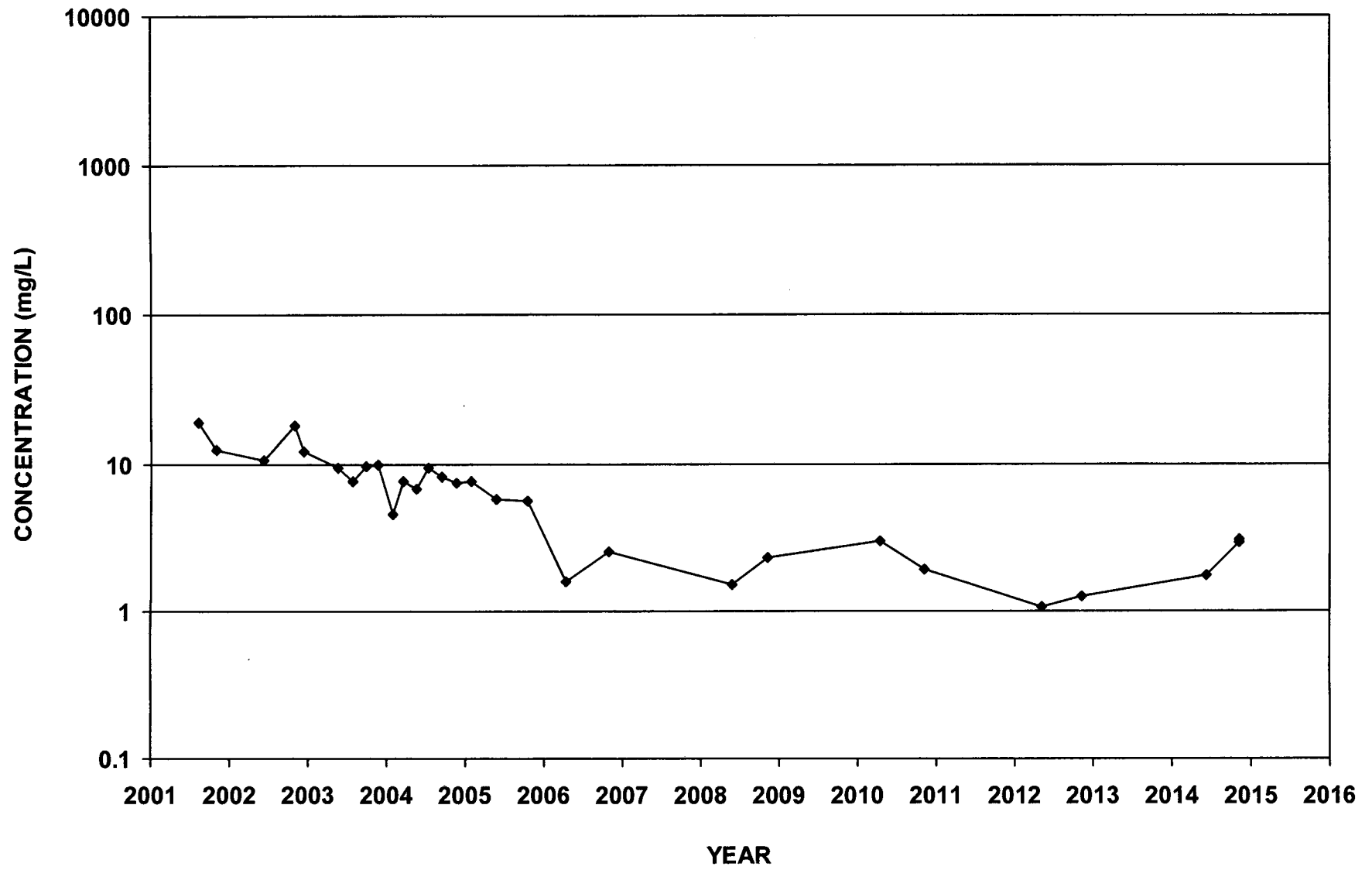
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Nitrate-N



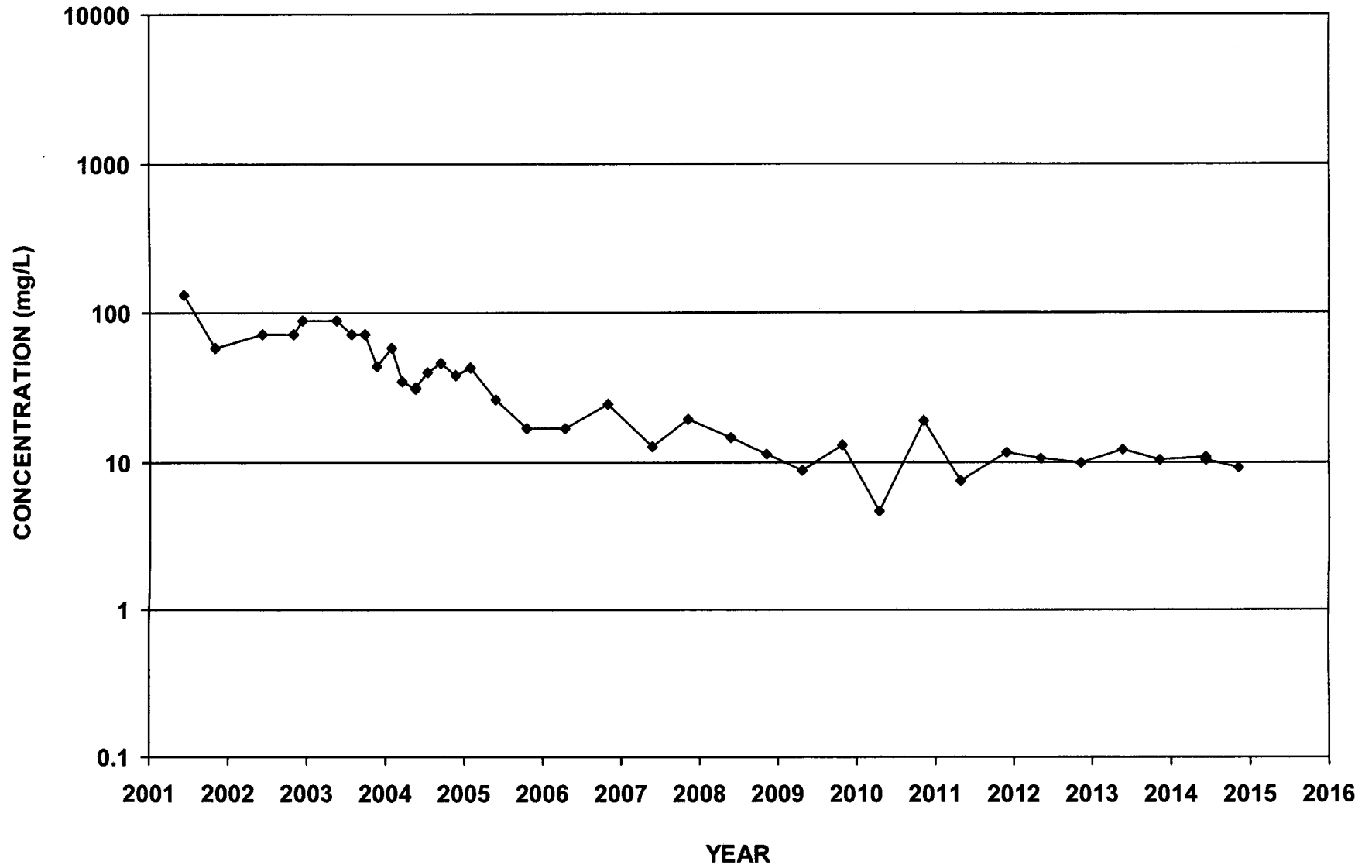
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Nitrate-N



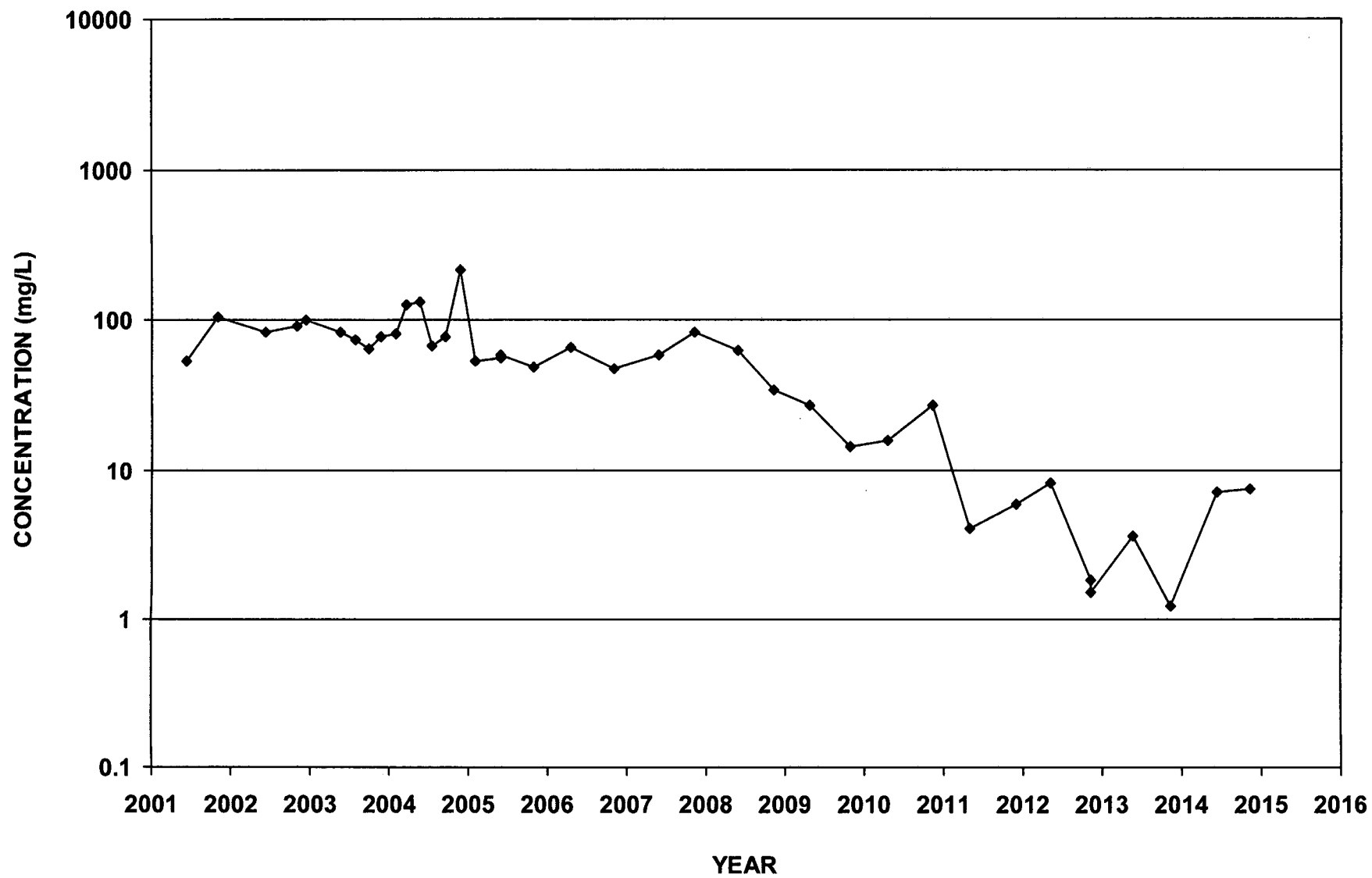
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Nitrate-N



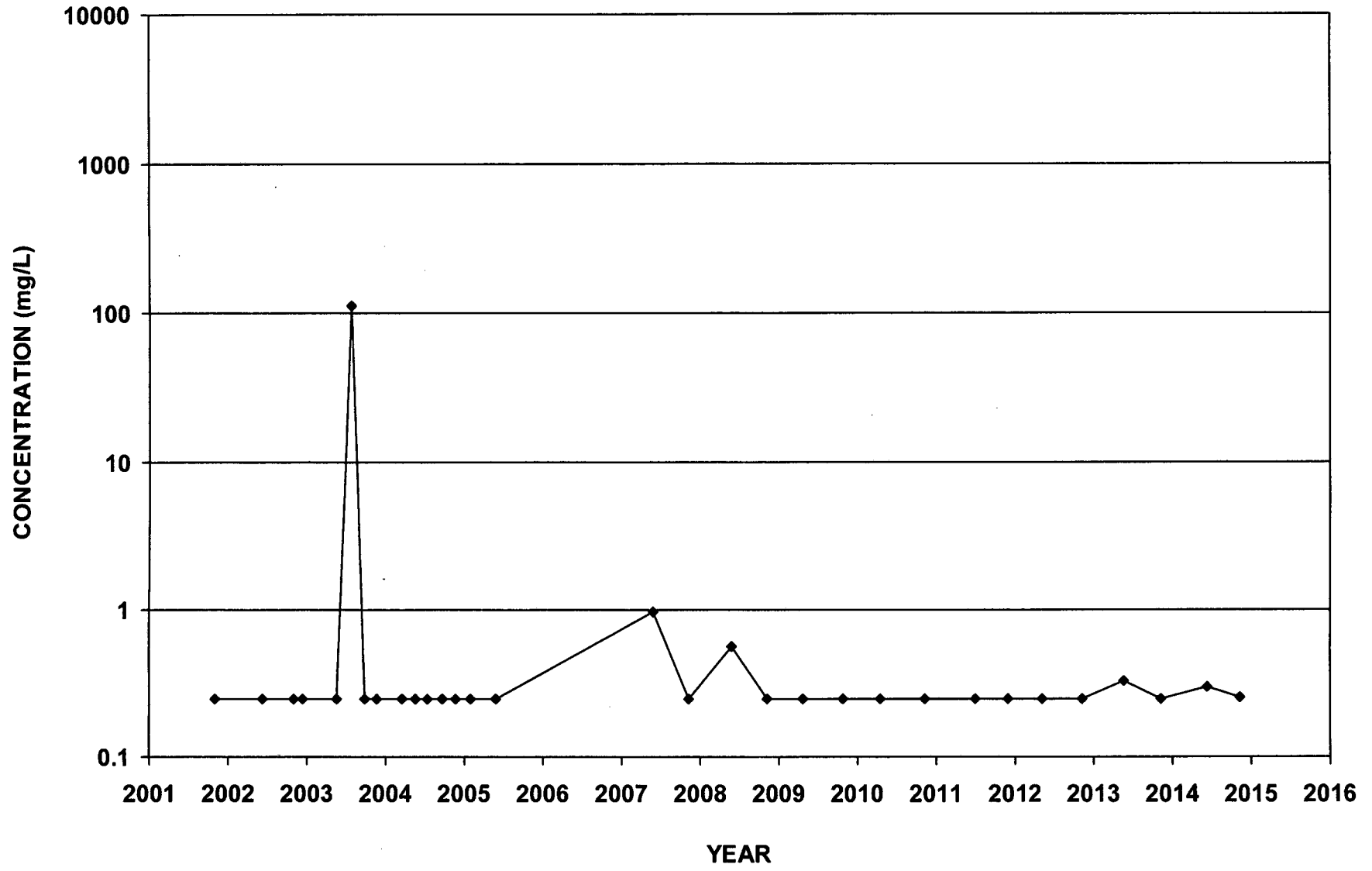
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Nitrate-N



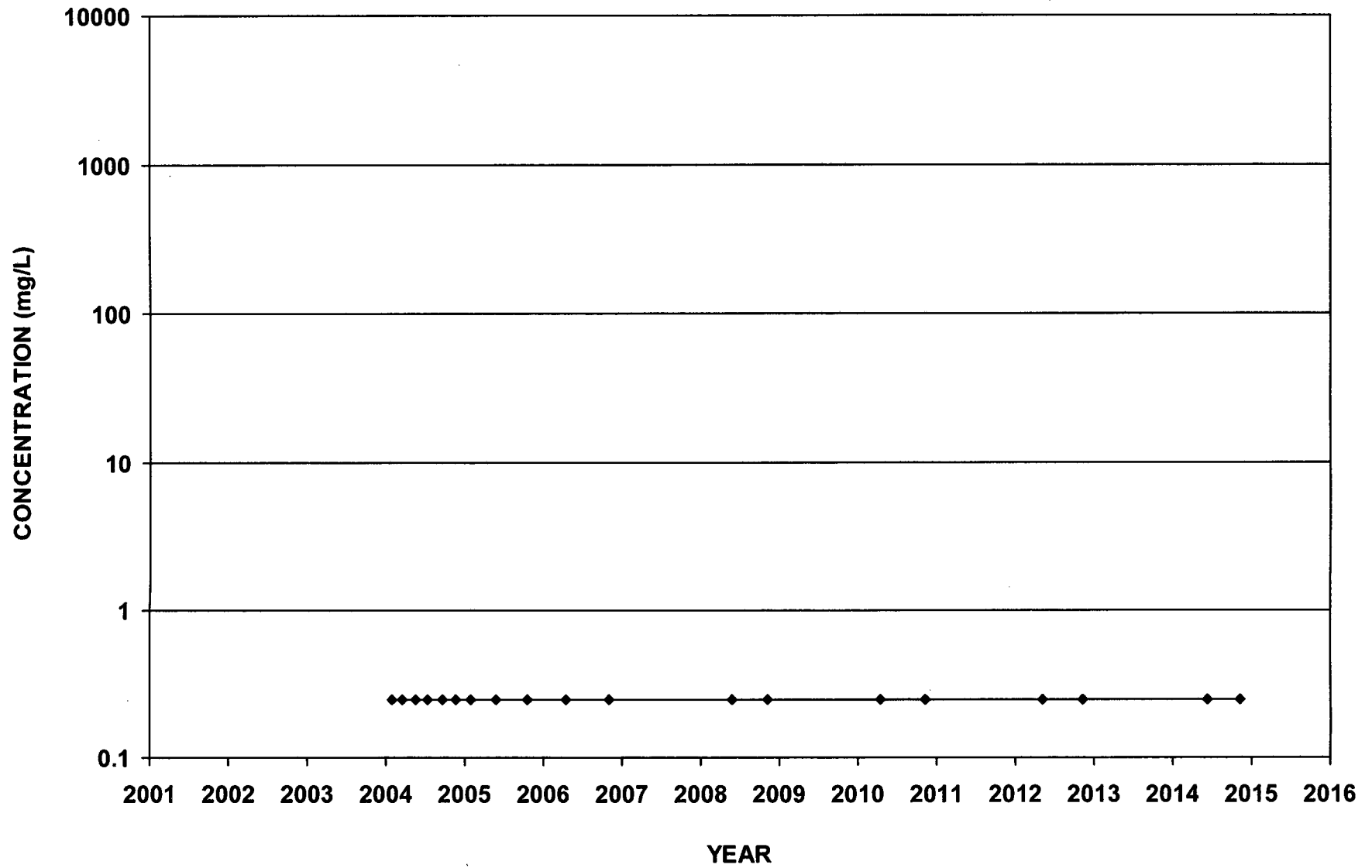
ECMW-17  
Nitrate-N



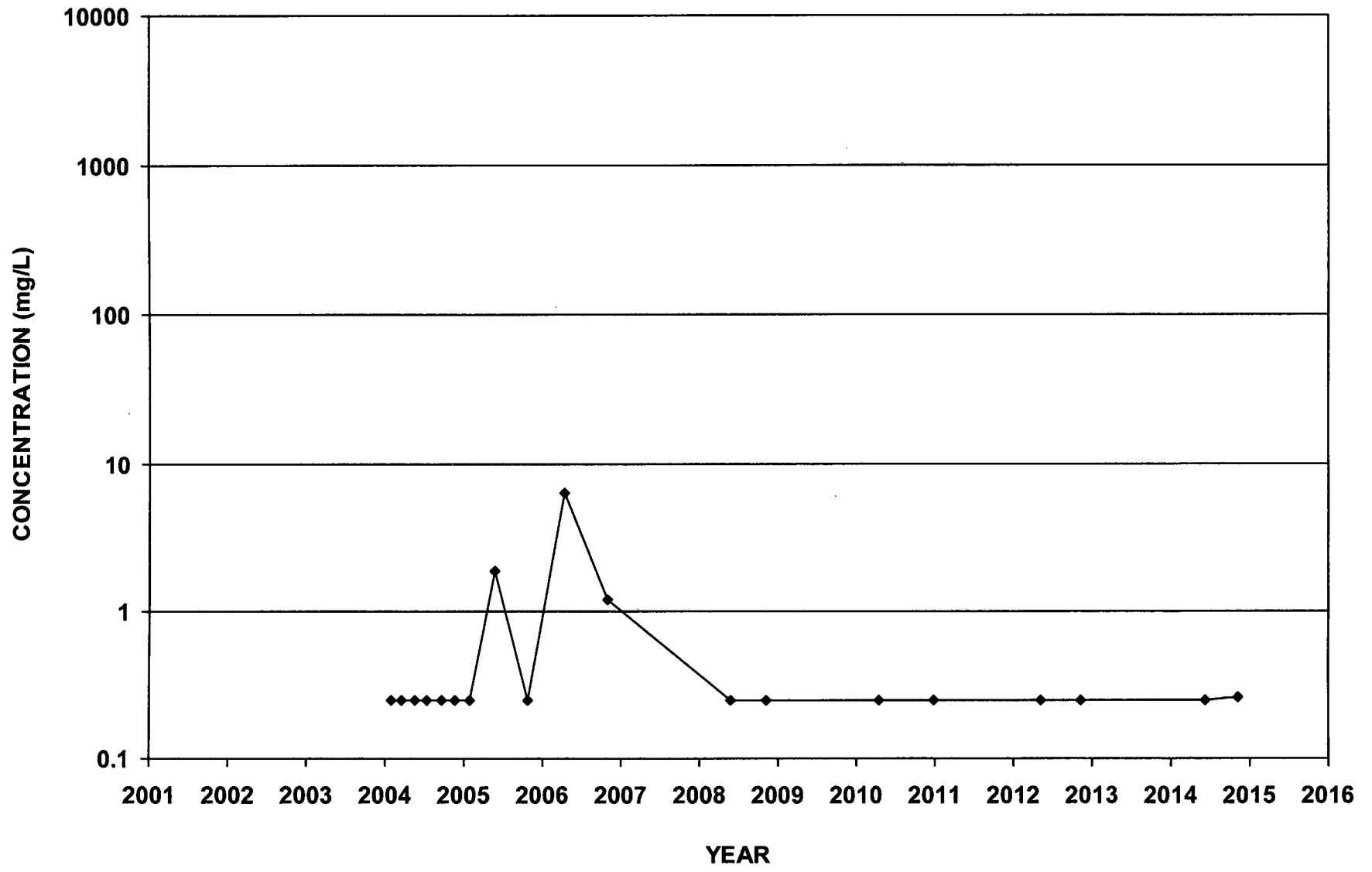
ECMW-18  
Nitrate-N



ECMW-19  
Nitrate-N

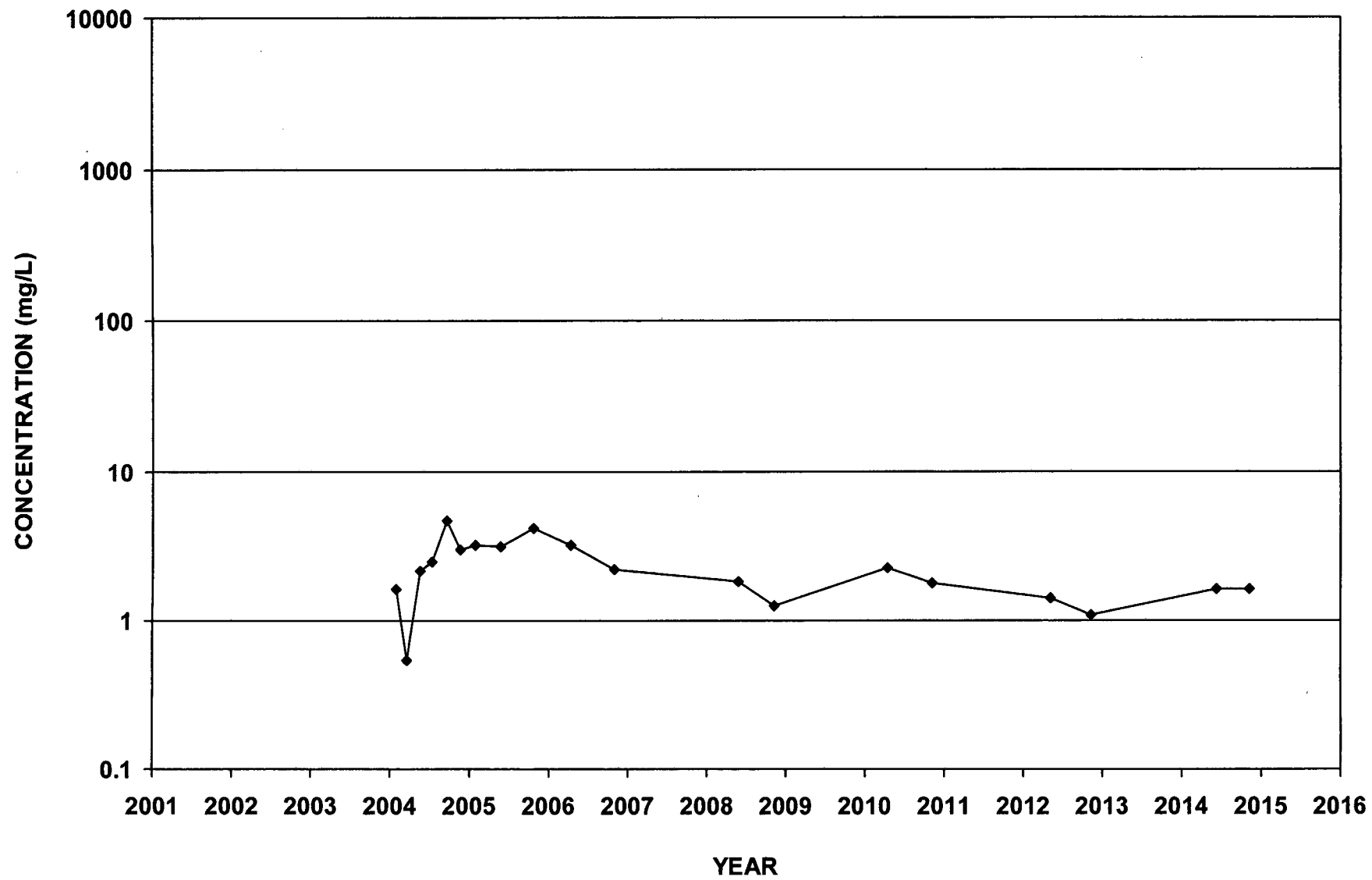


ECMW-20  
Nitrate-N

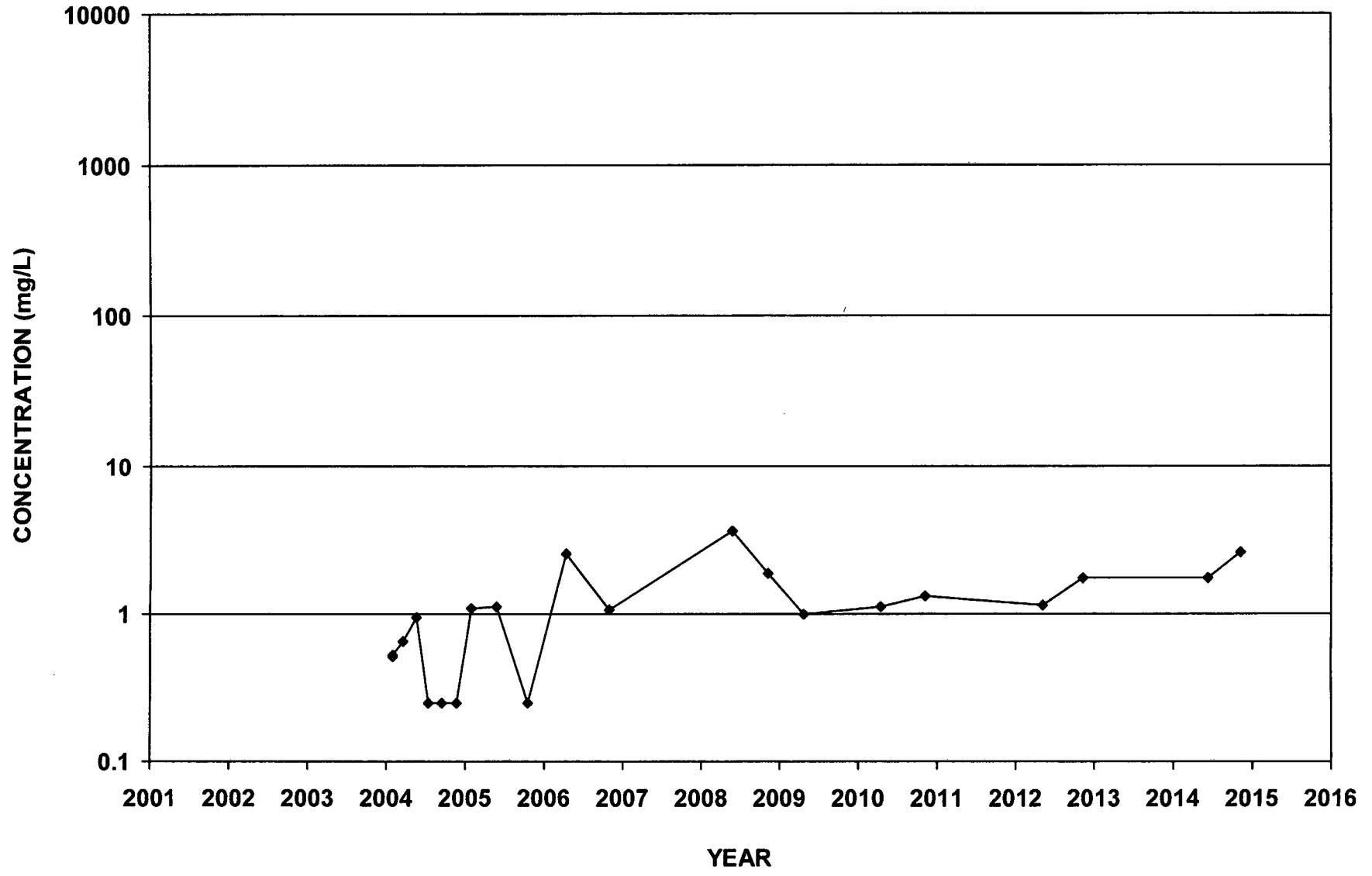




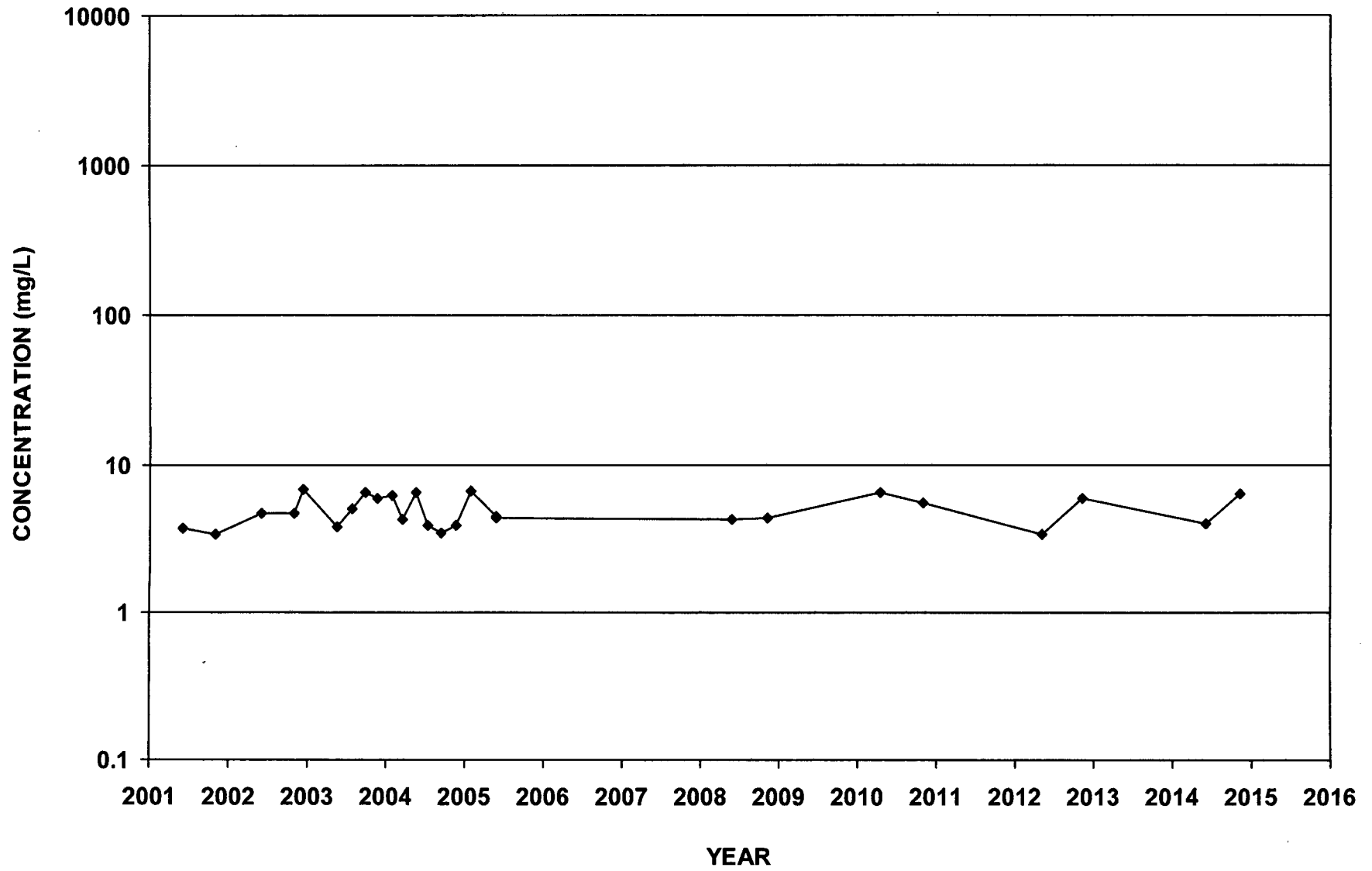
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Nitrate-N



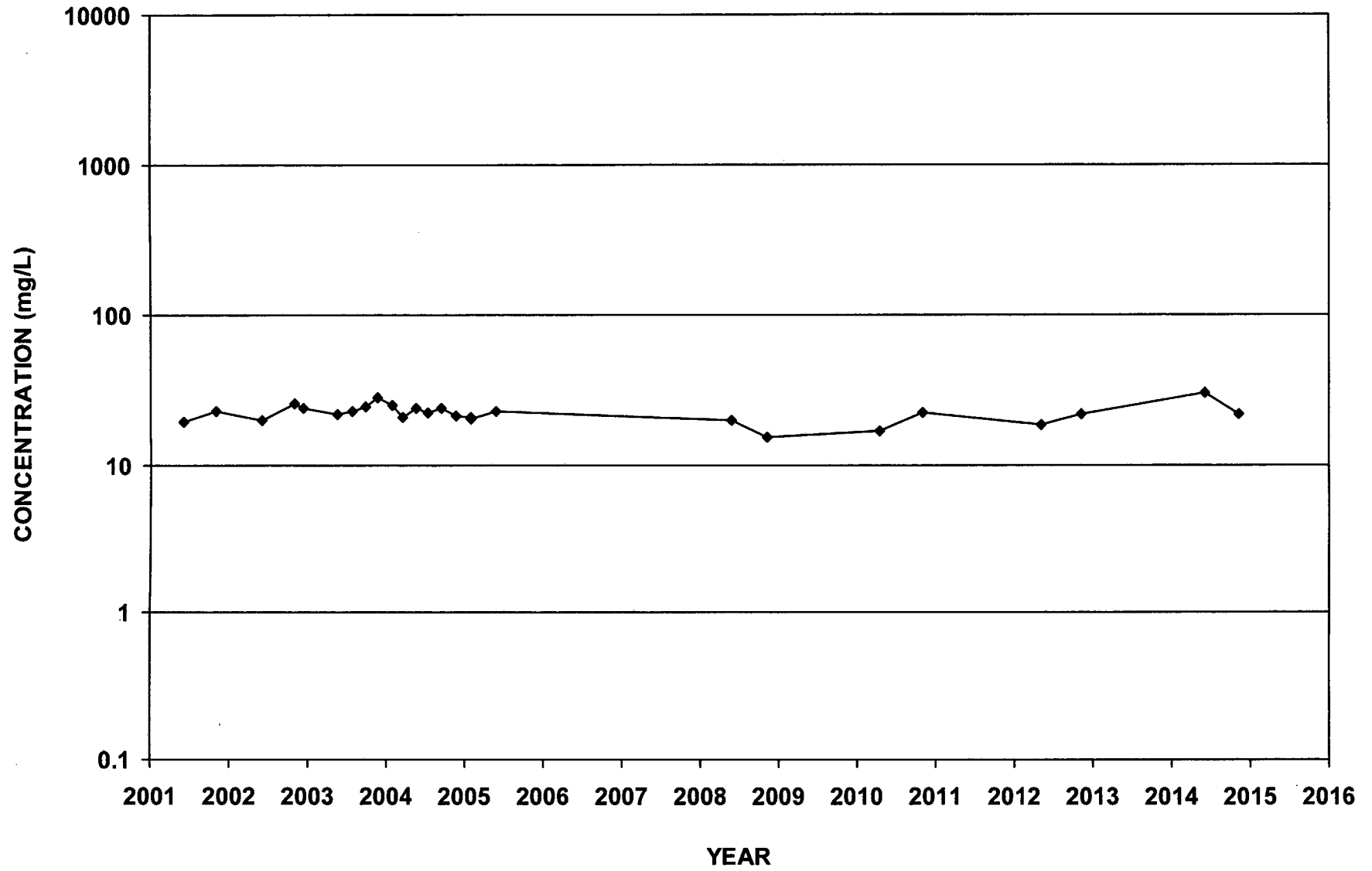
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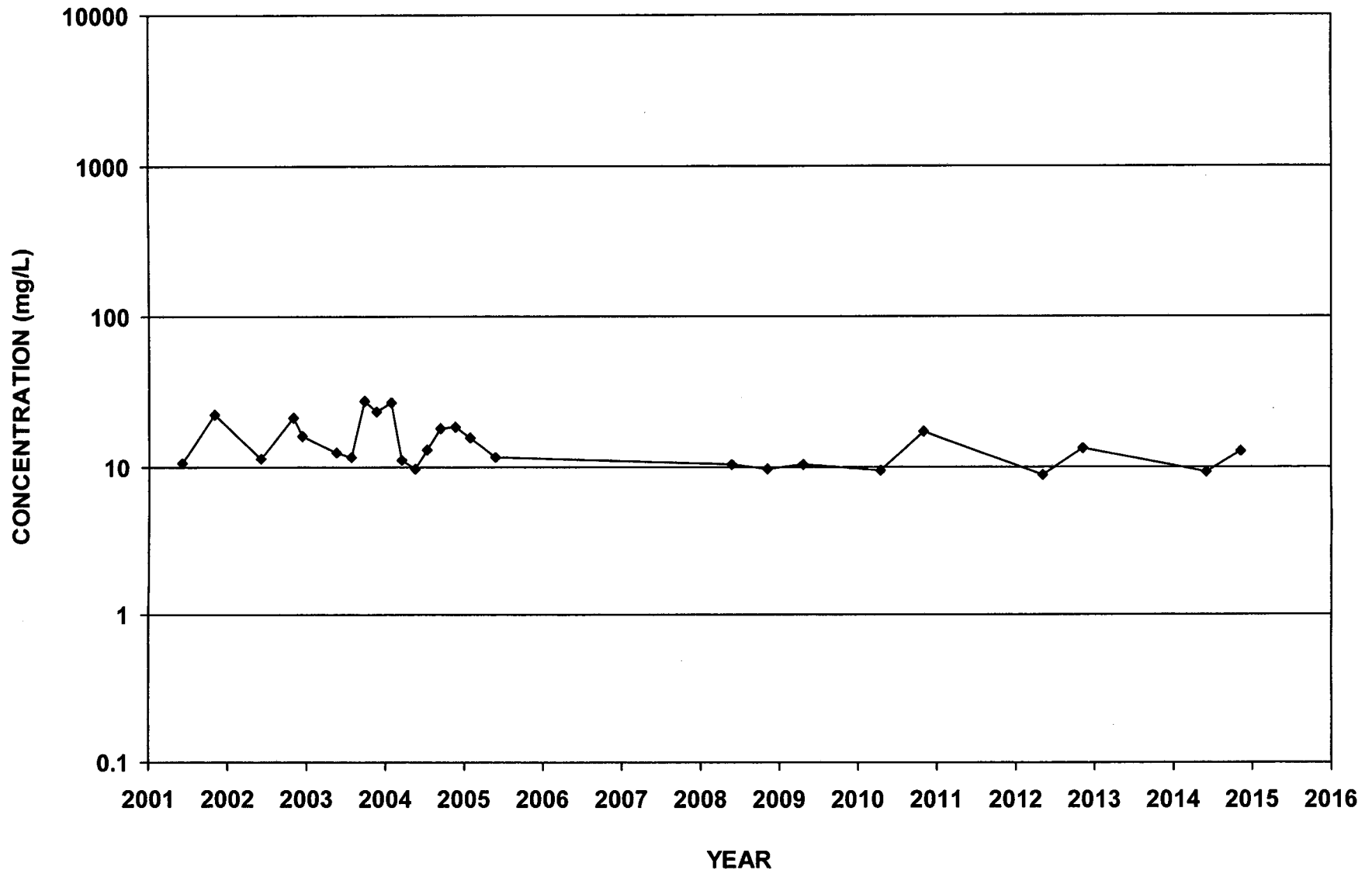
ECMW-1  
Sulfate as SO<sub>4</sub>



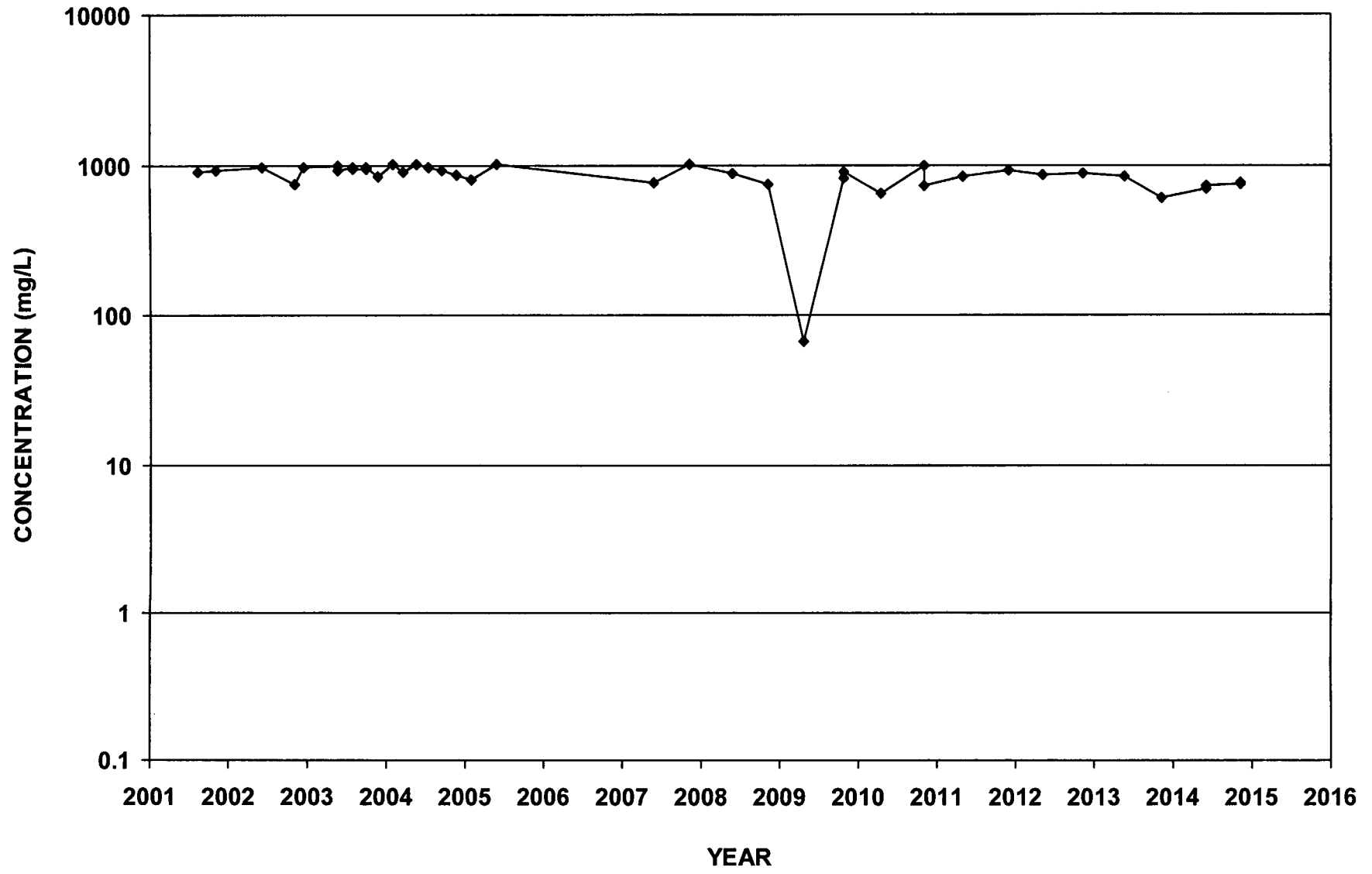
ECMW-2  
Sulfate as SO4



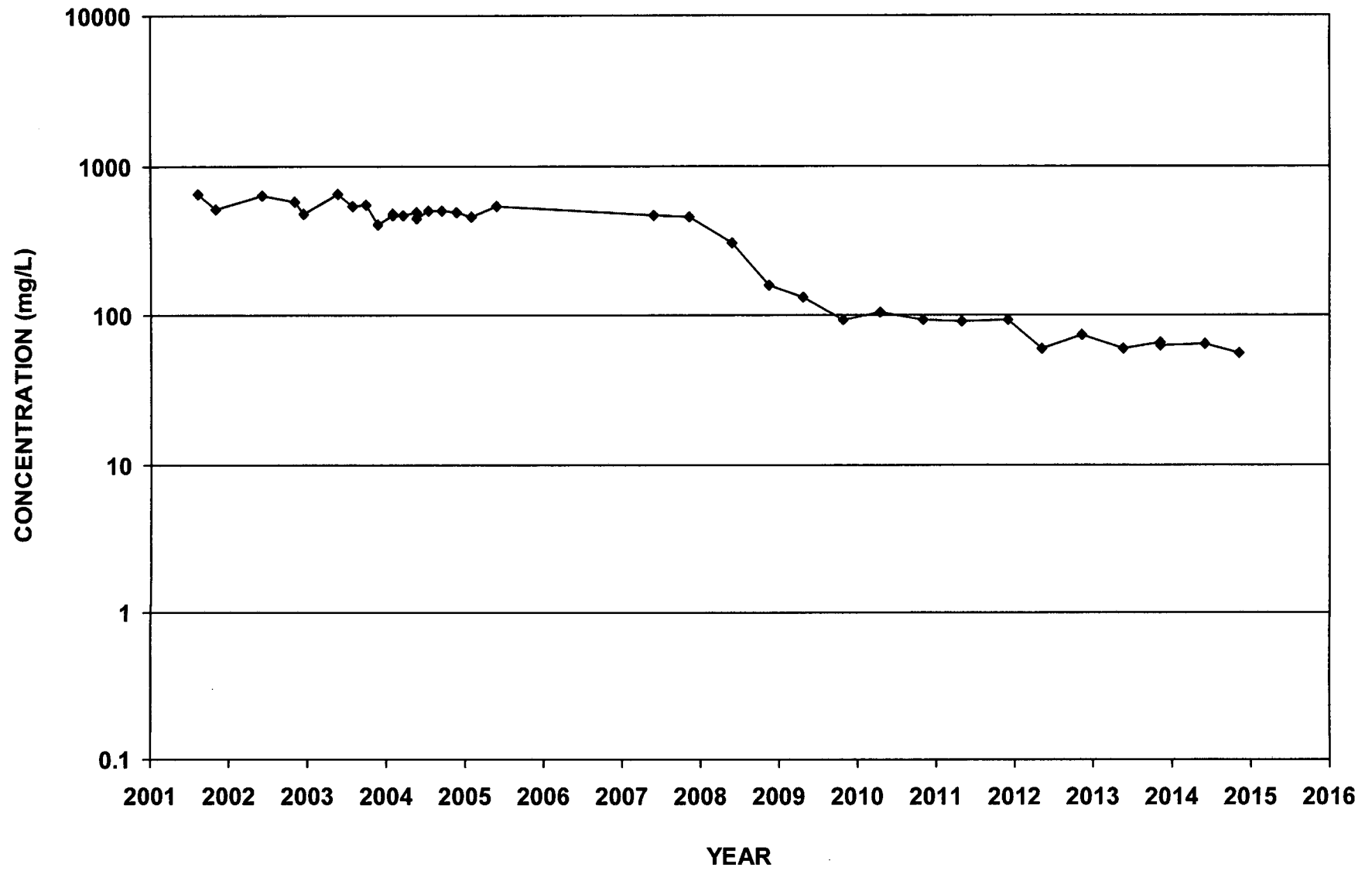
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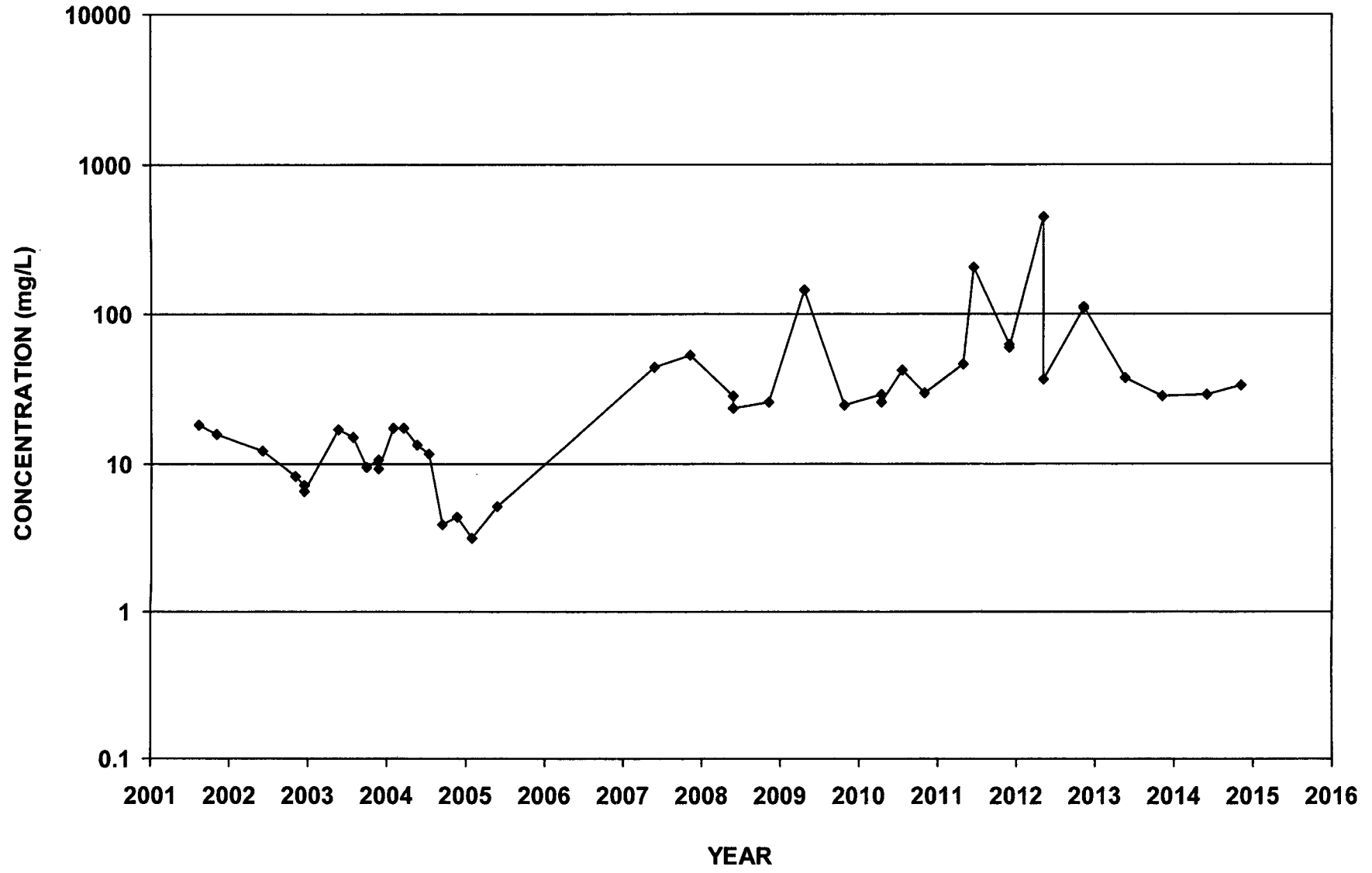
ECMW-4  
Sulfate as SO4



ECMW-5  
Sulfate as SO<sub>4</sub>

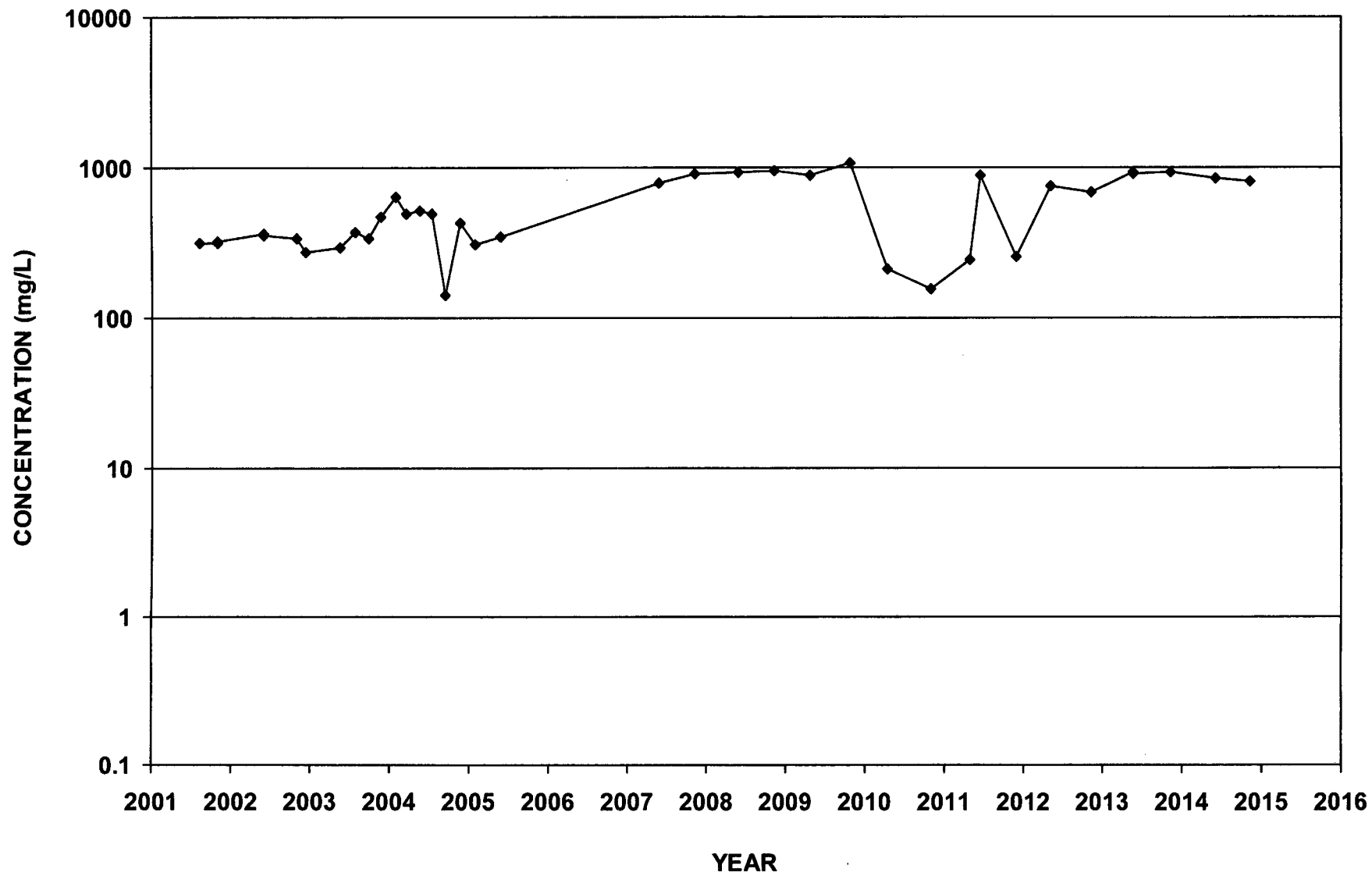


ECMW-6  
Sulfate as SO4

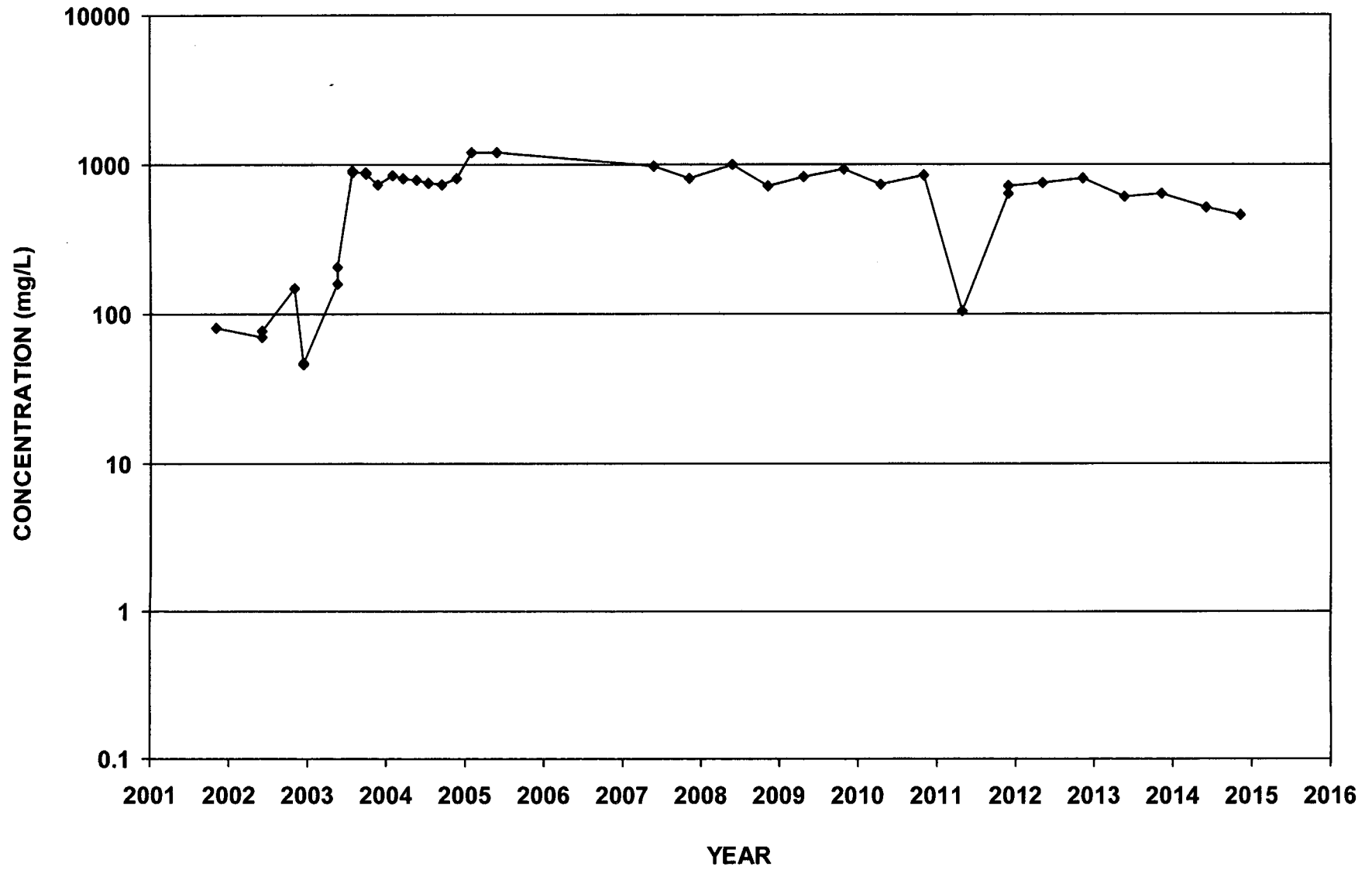




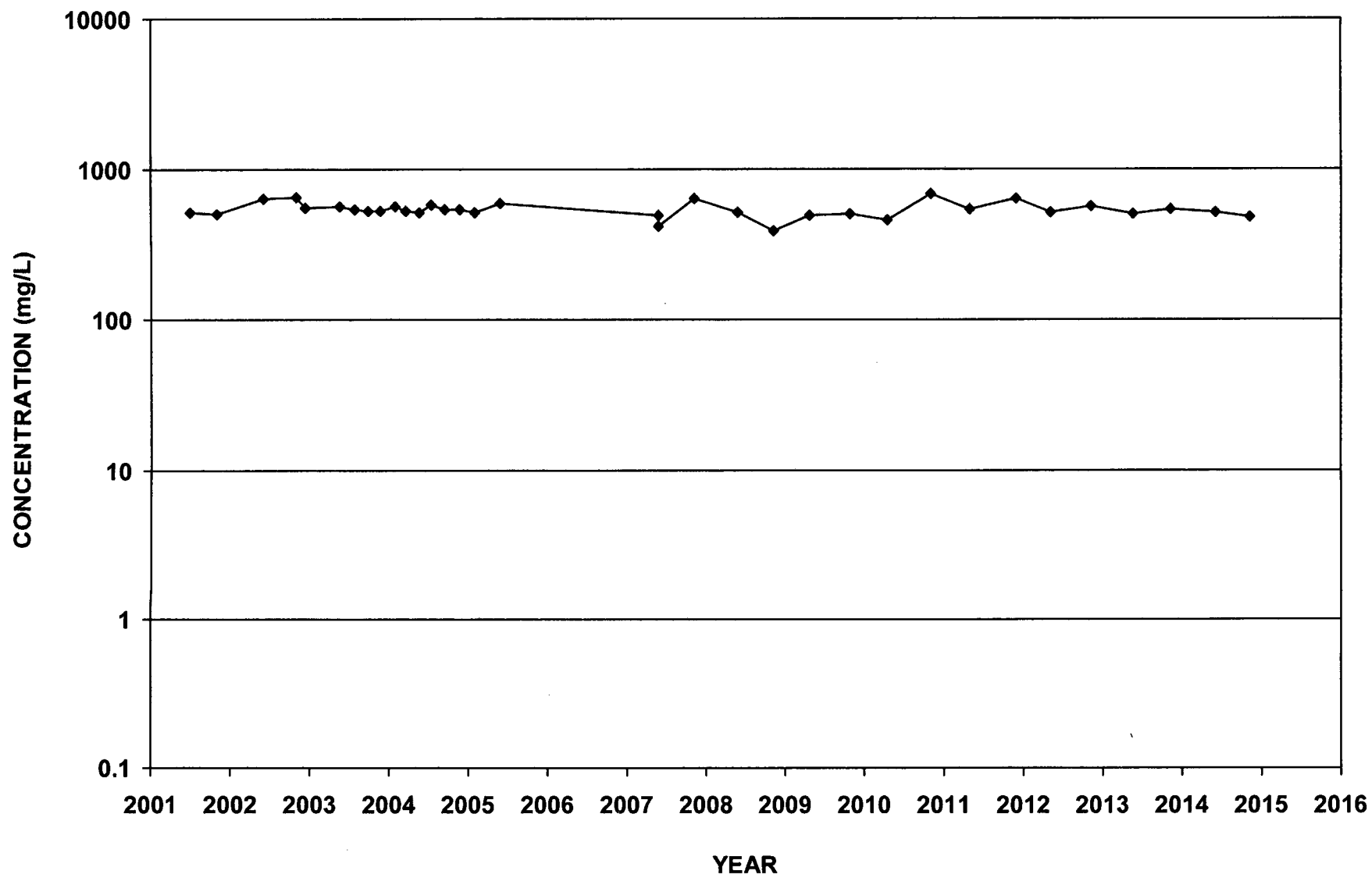
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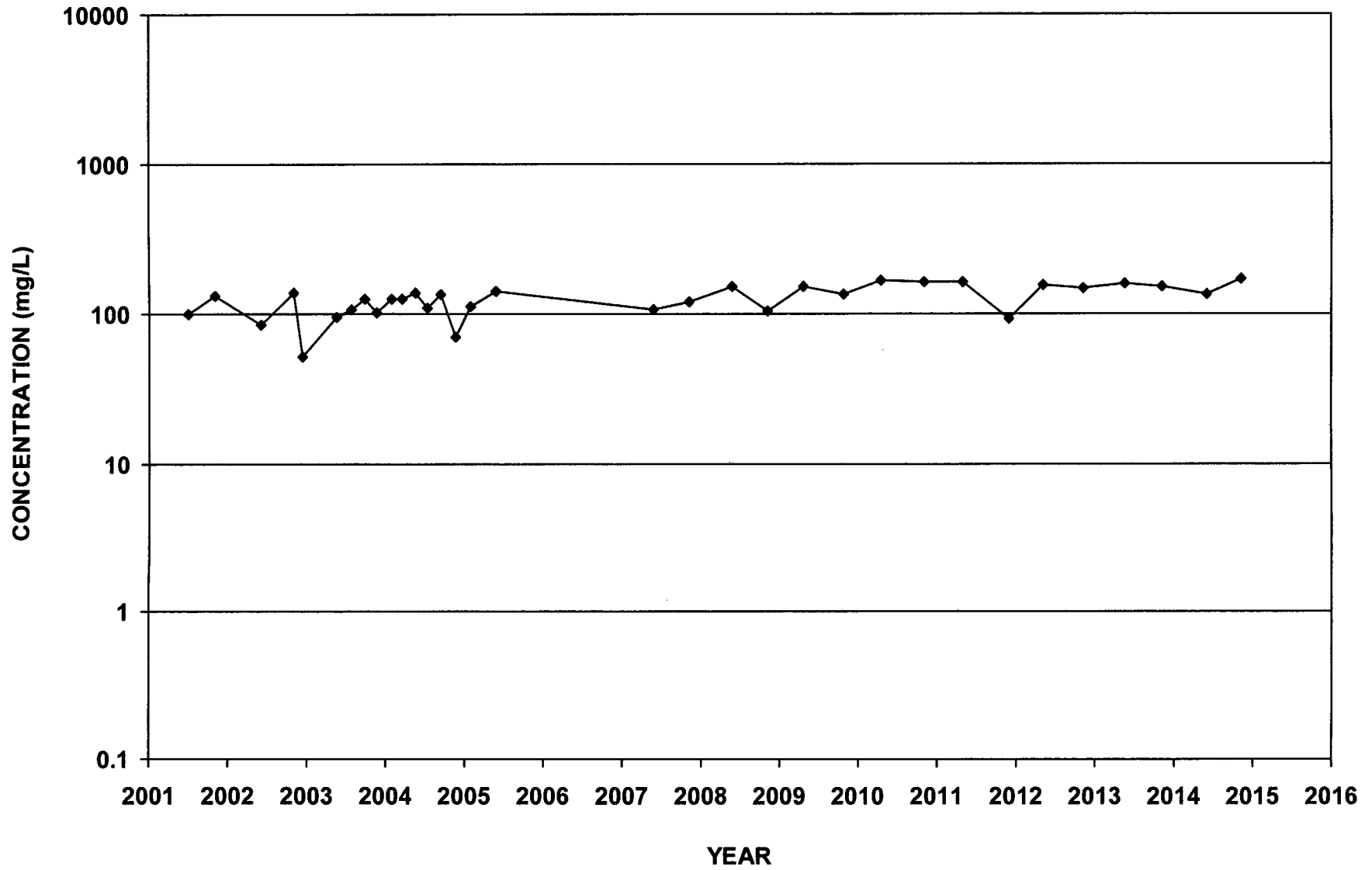
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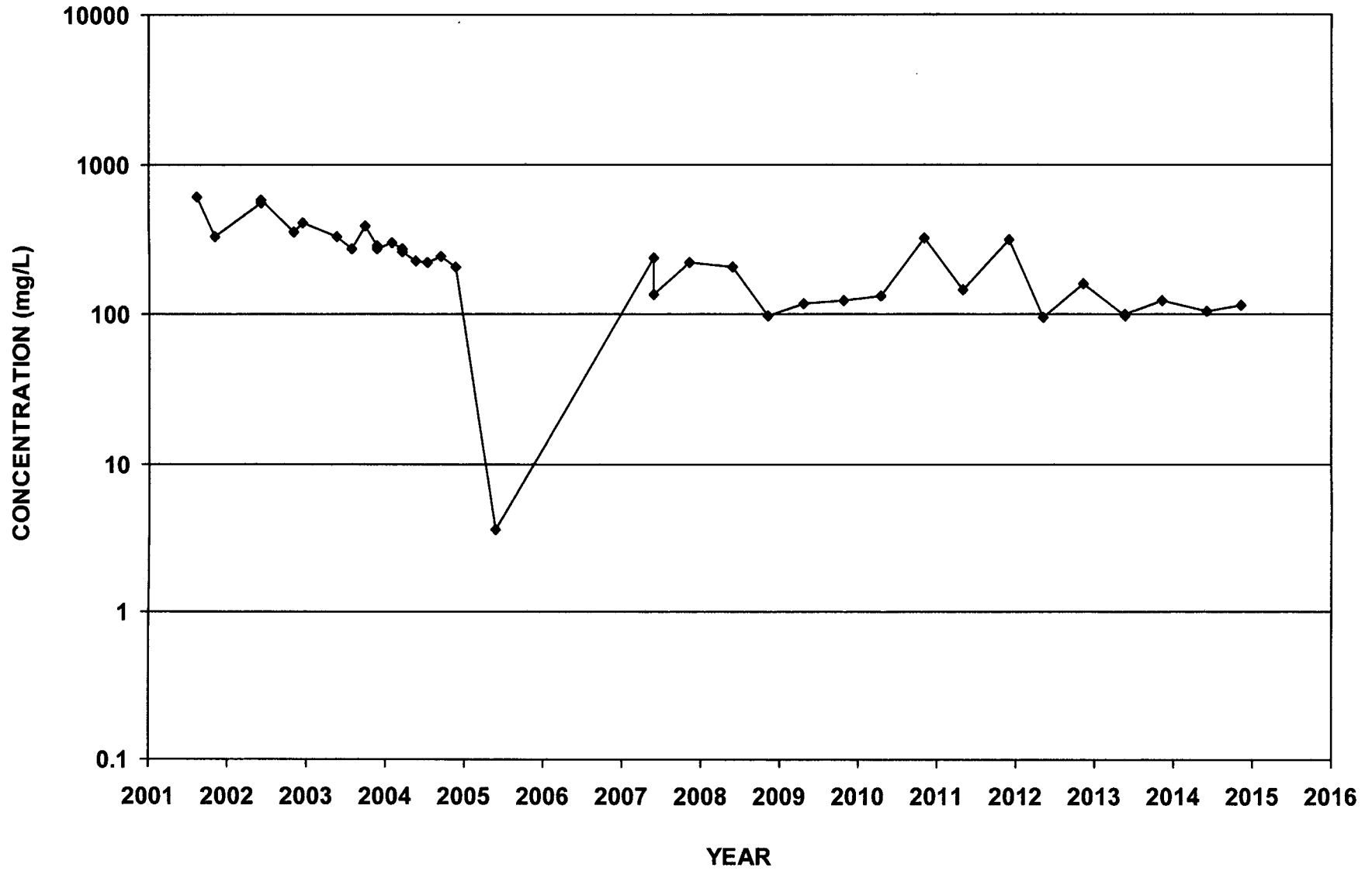
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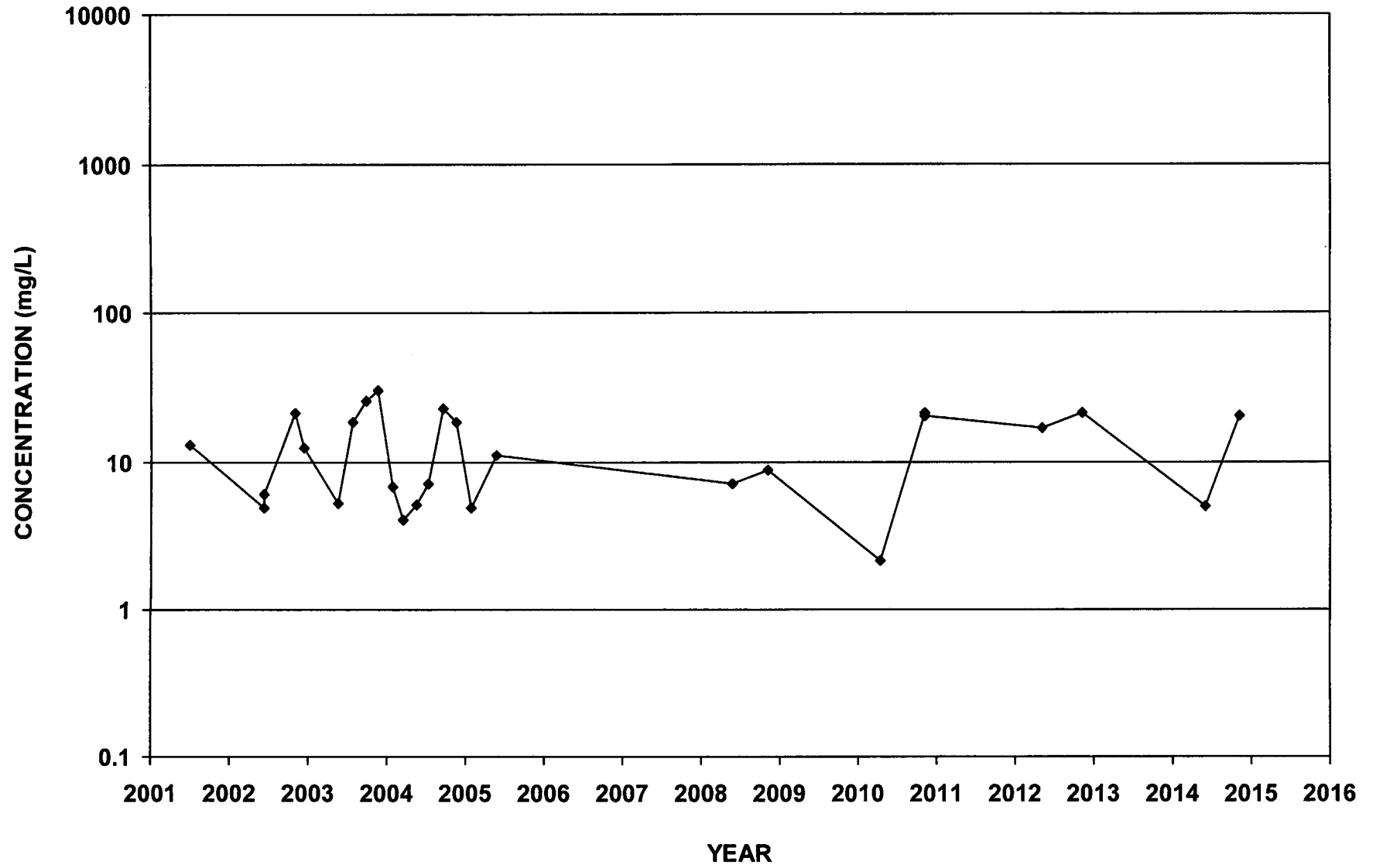
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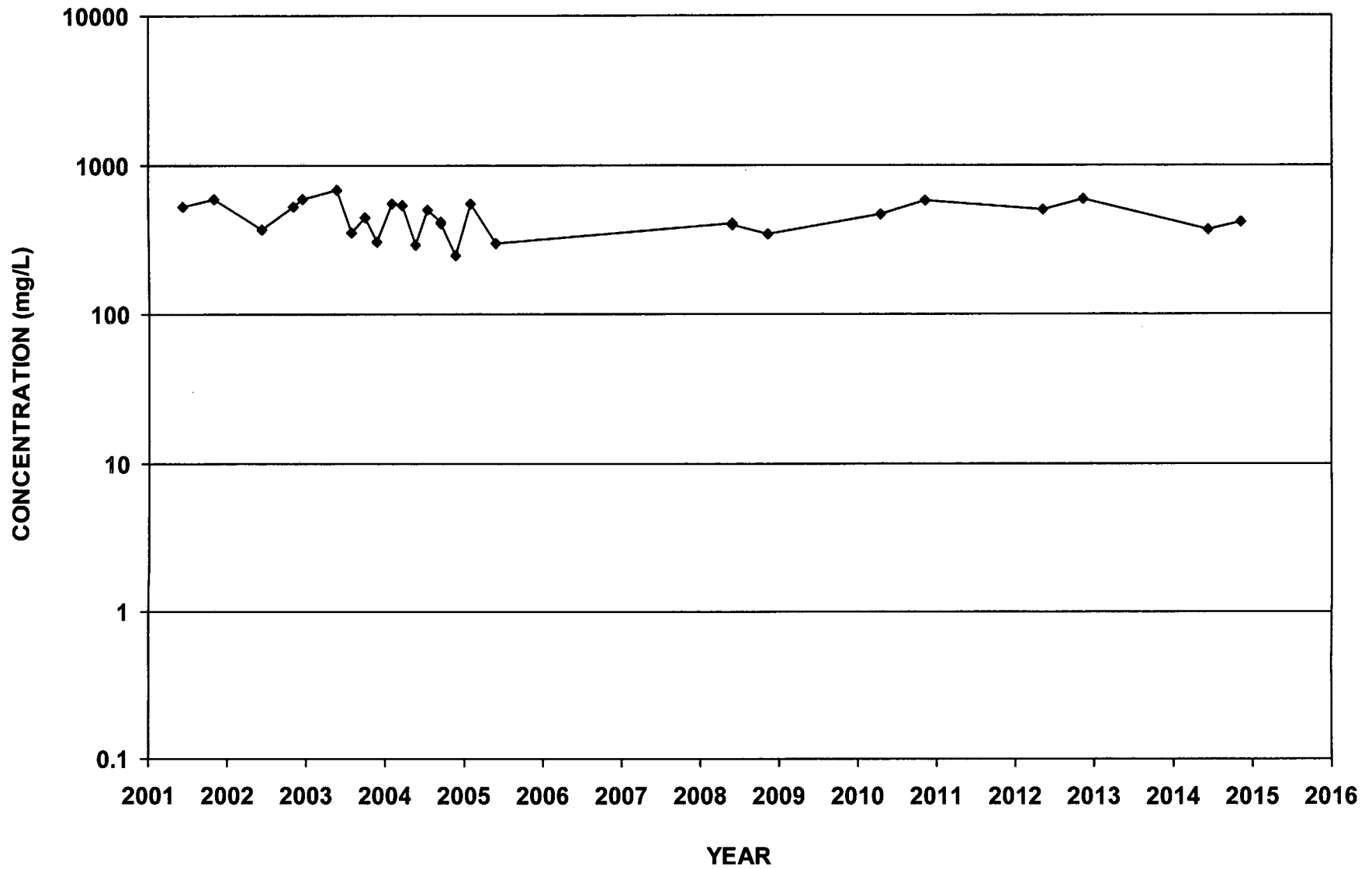
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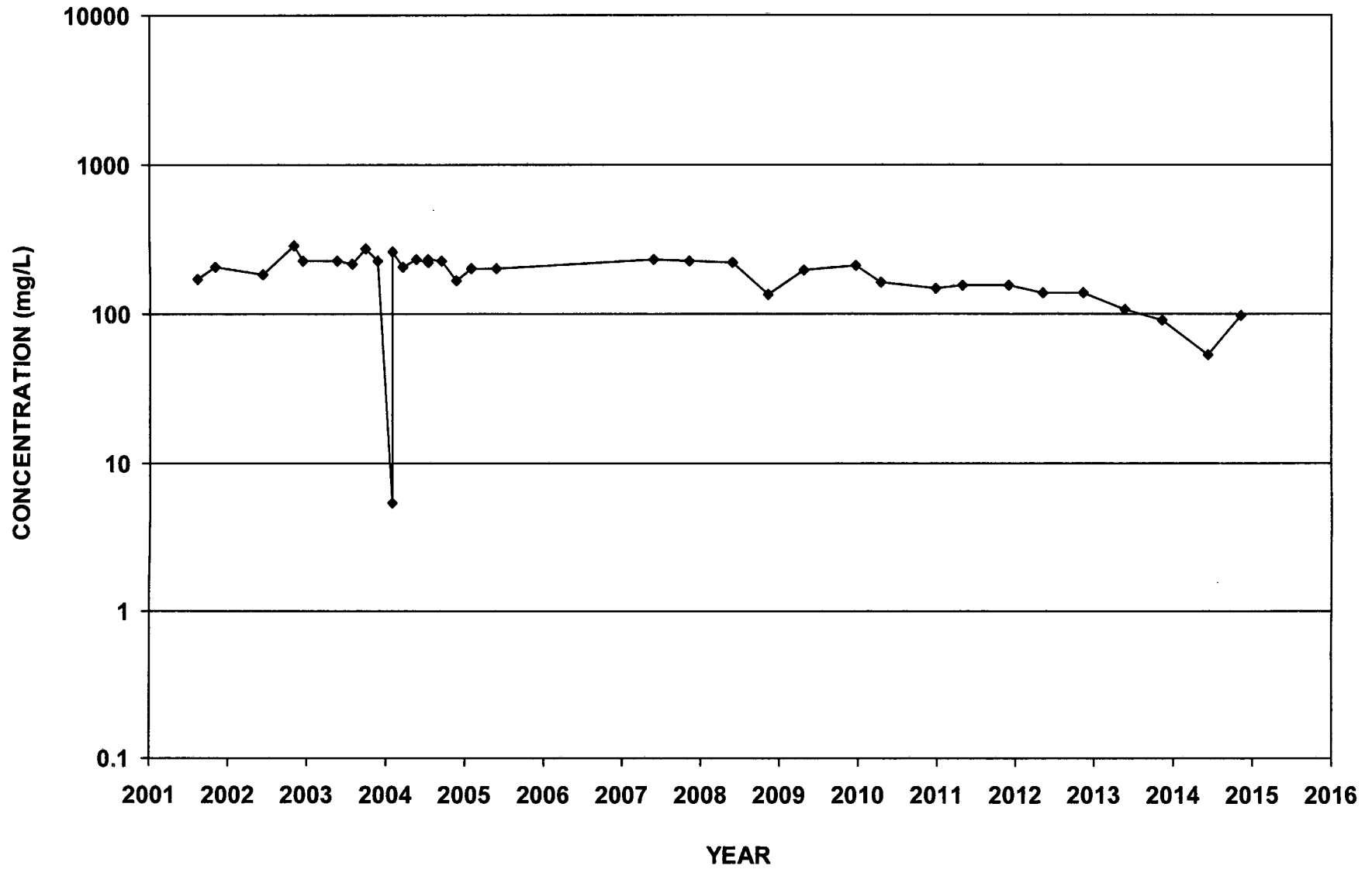
ECMW-12  
Sulfate as SO<sub>4</sub>



ECMW-13  
Sulfate as SO<sub>4</sub>

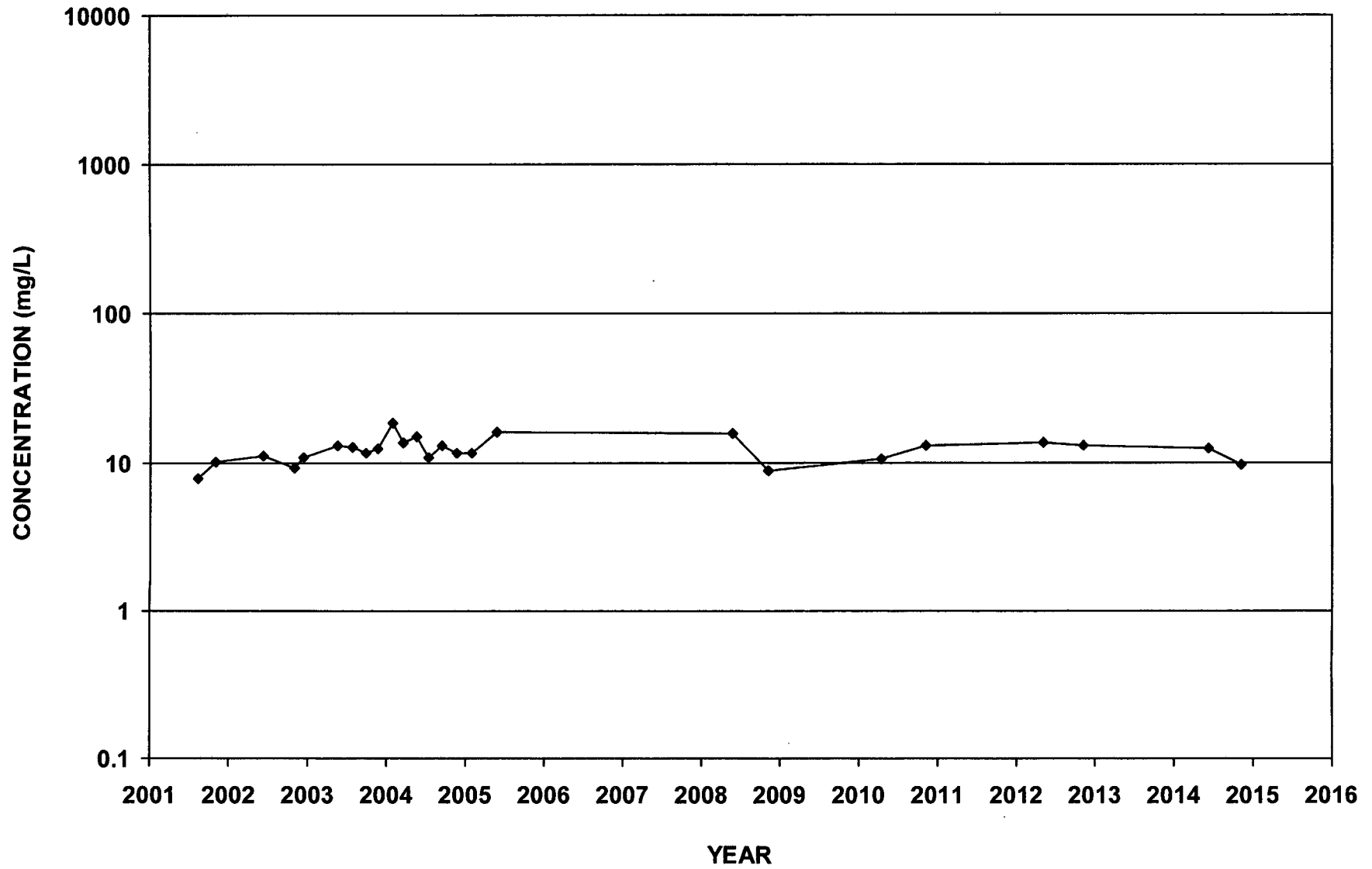


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Sulfate as SO4

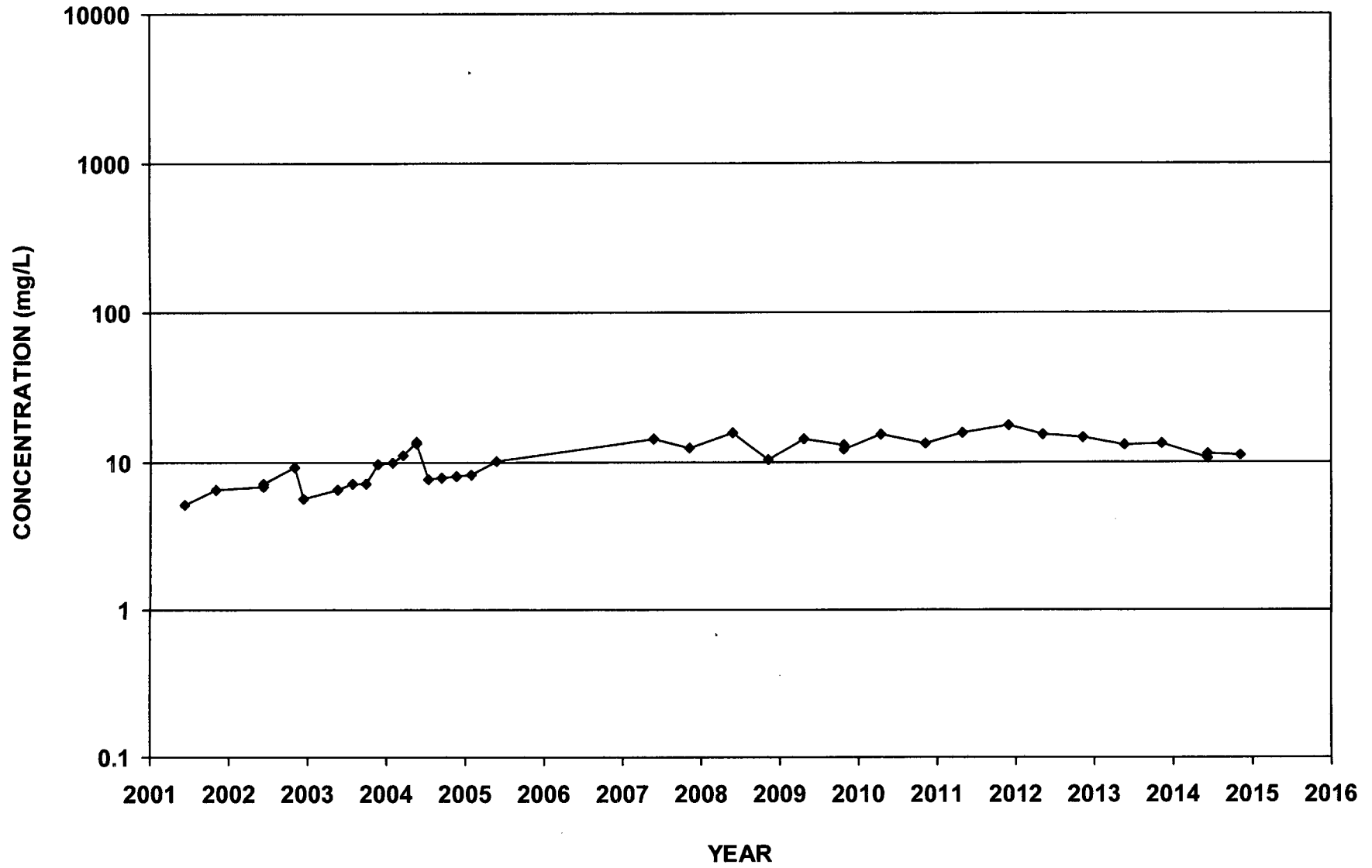




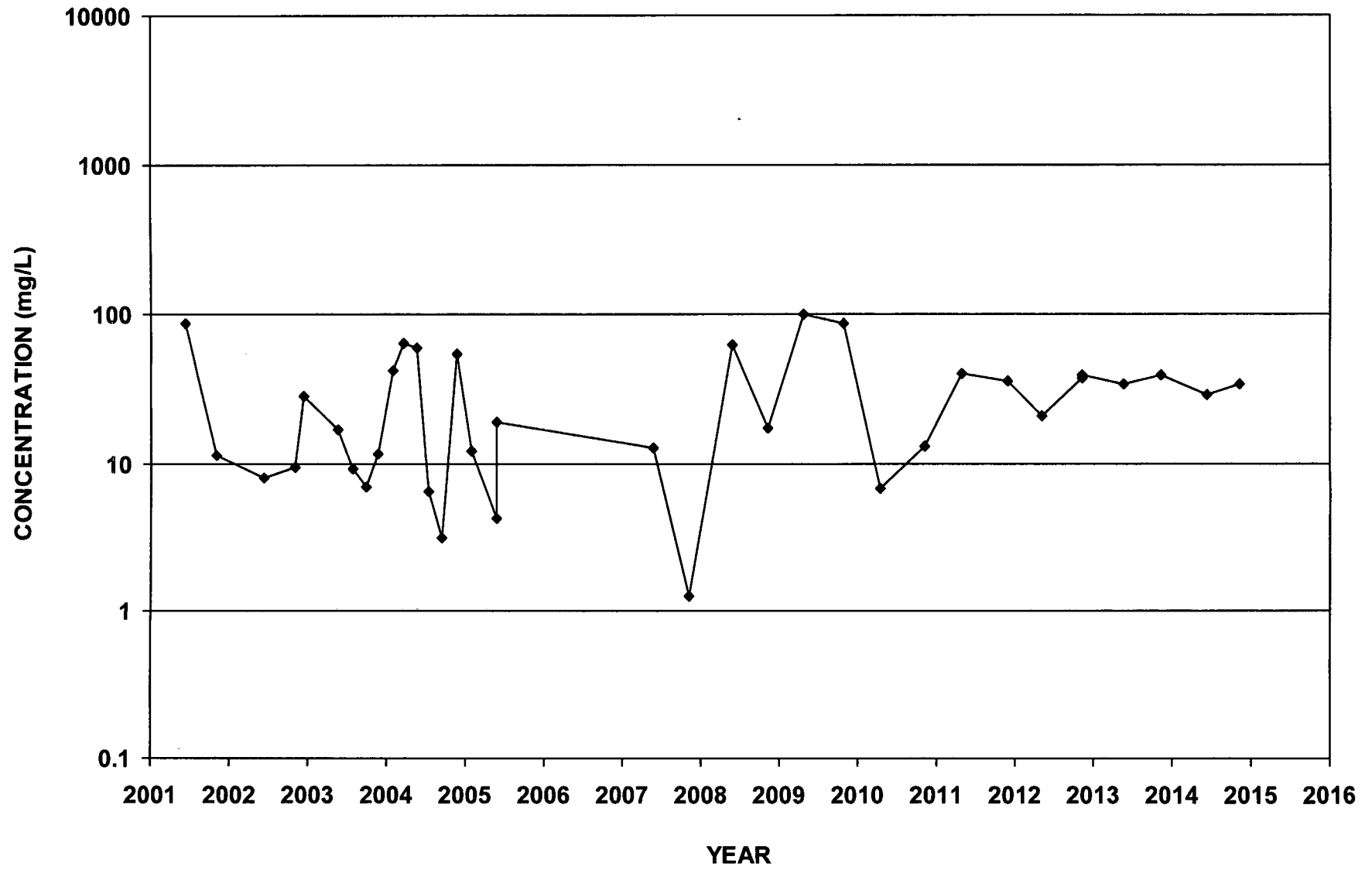
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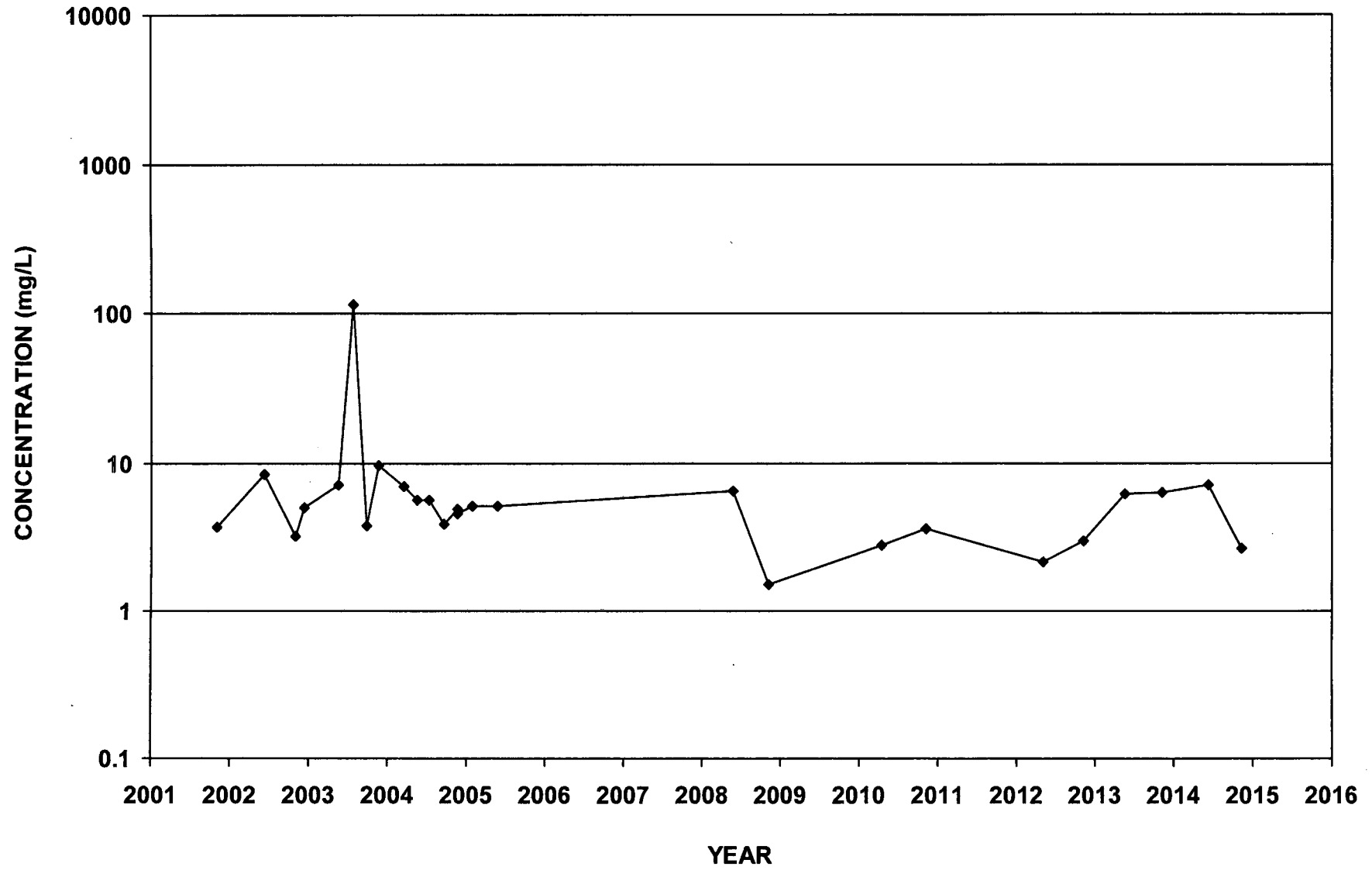
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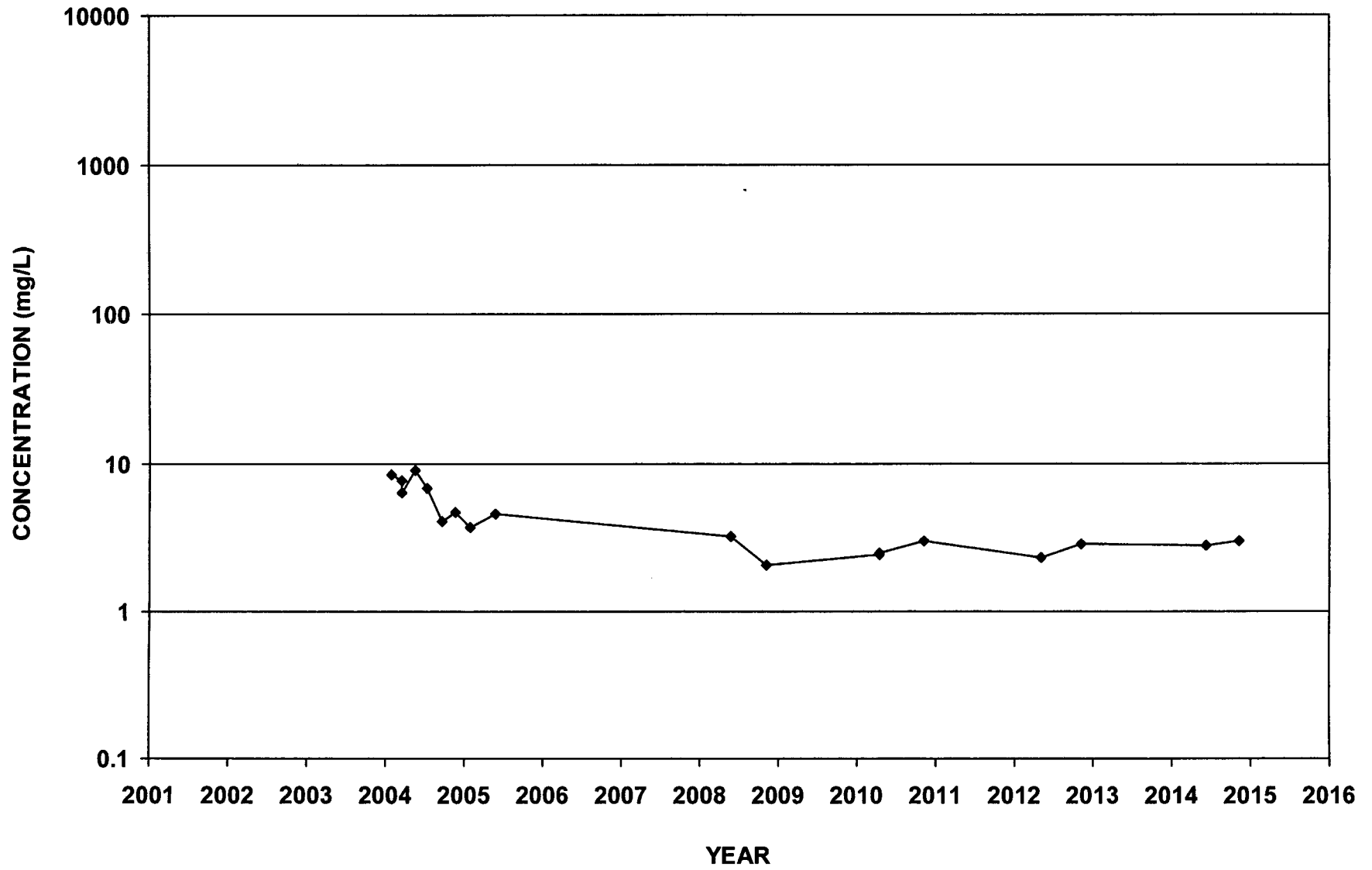
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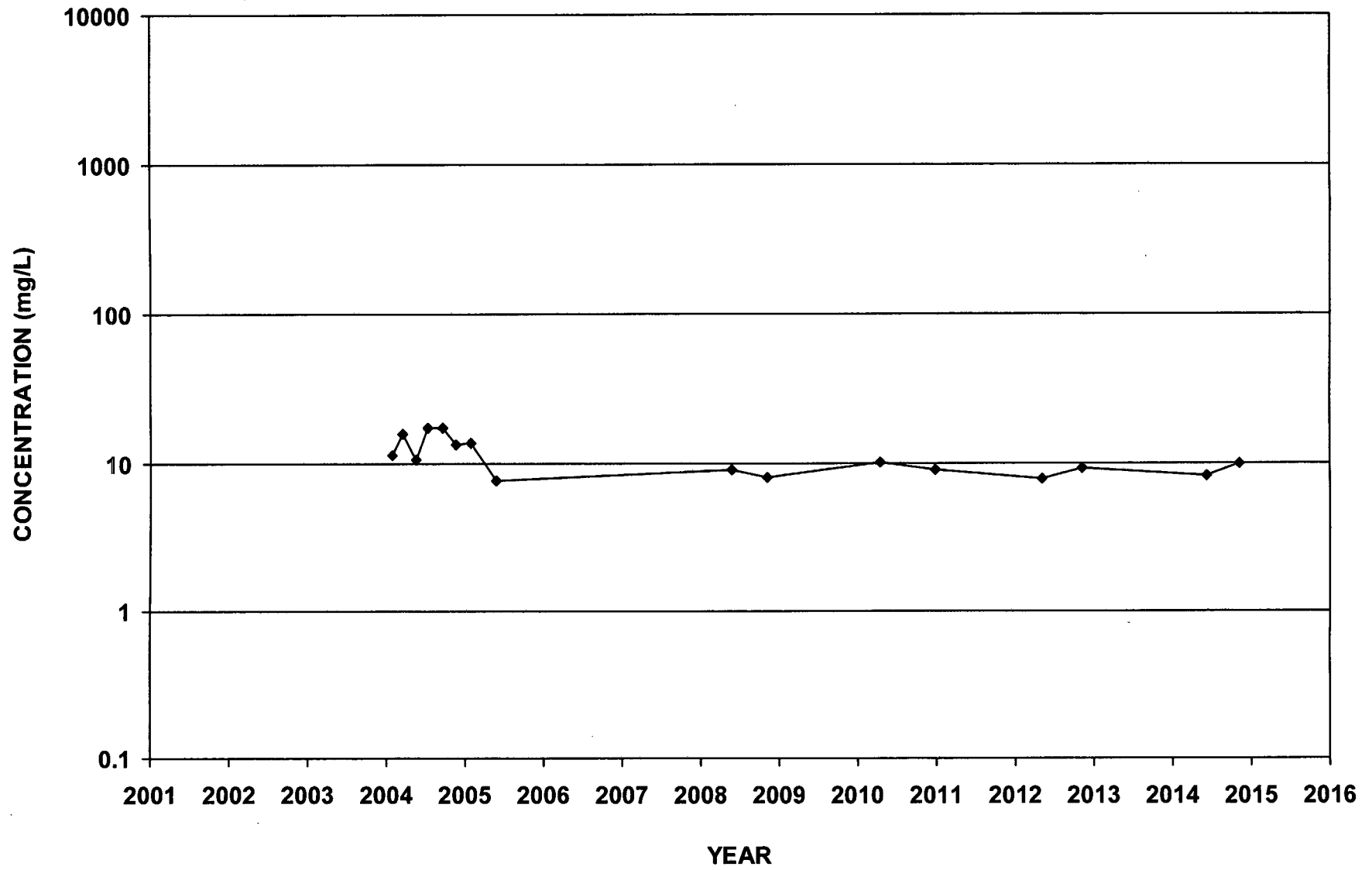
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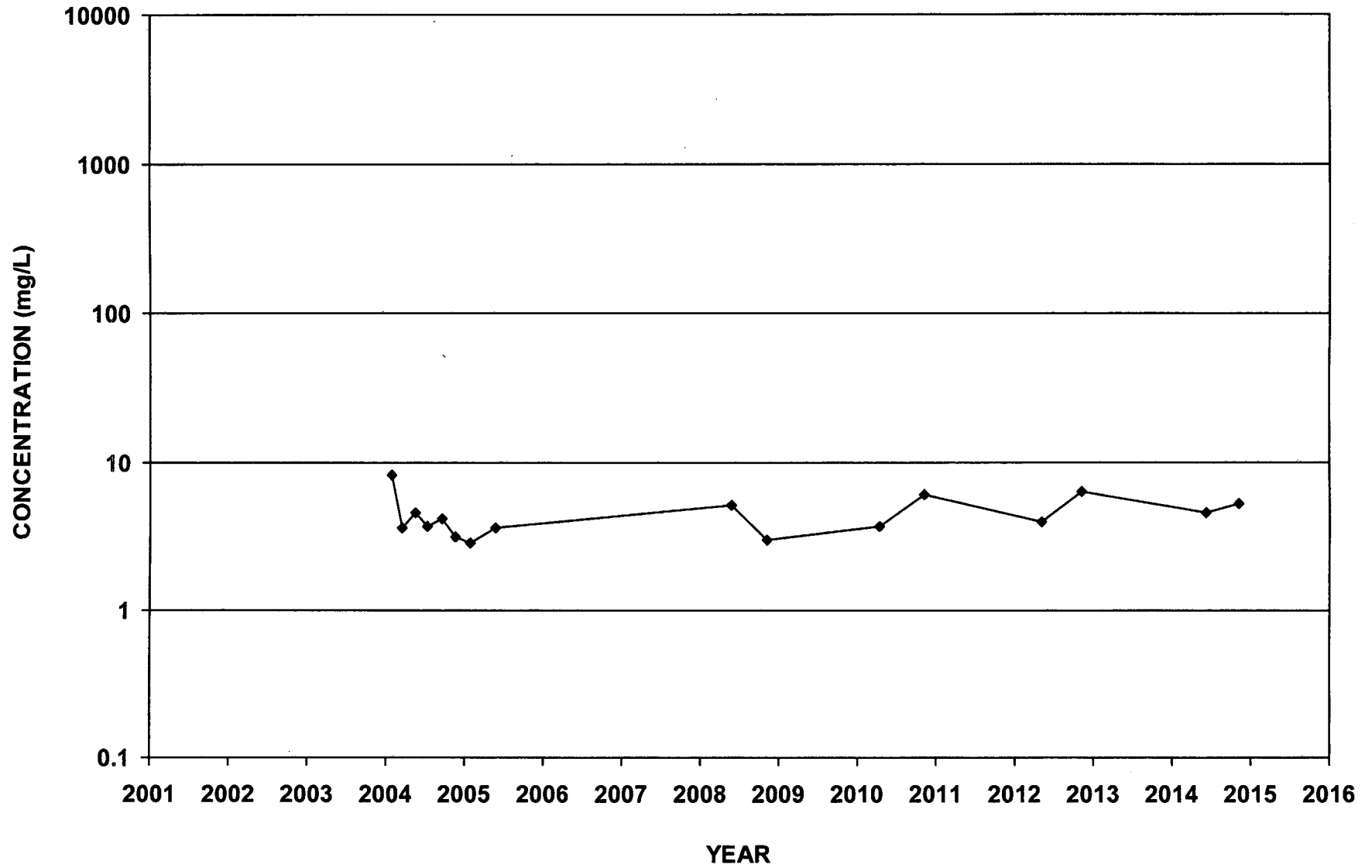
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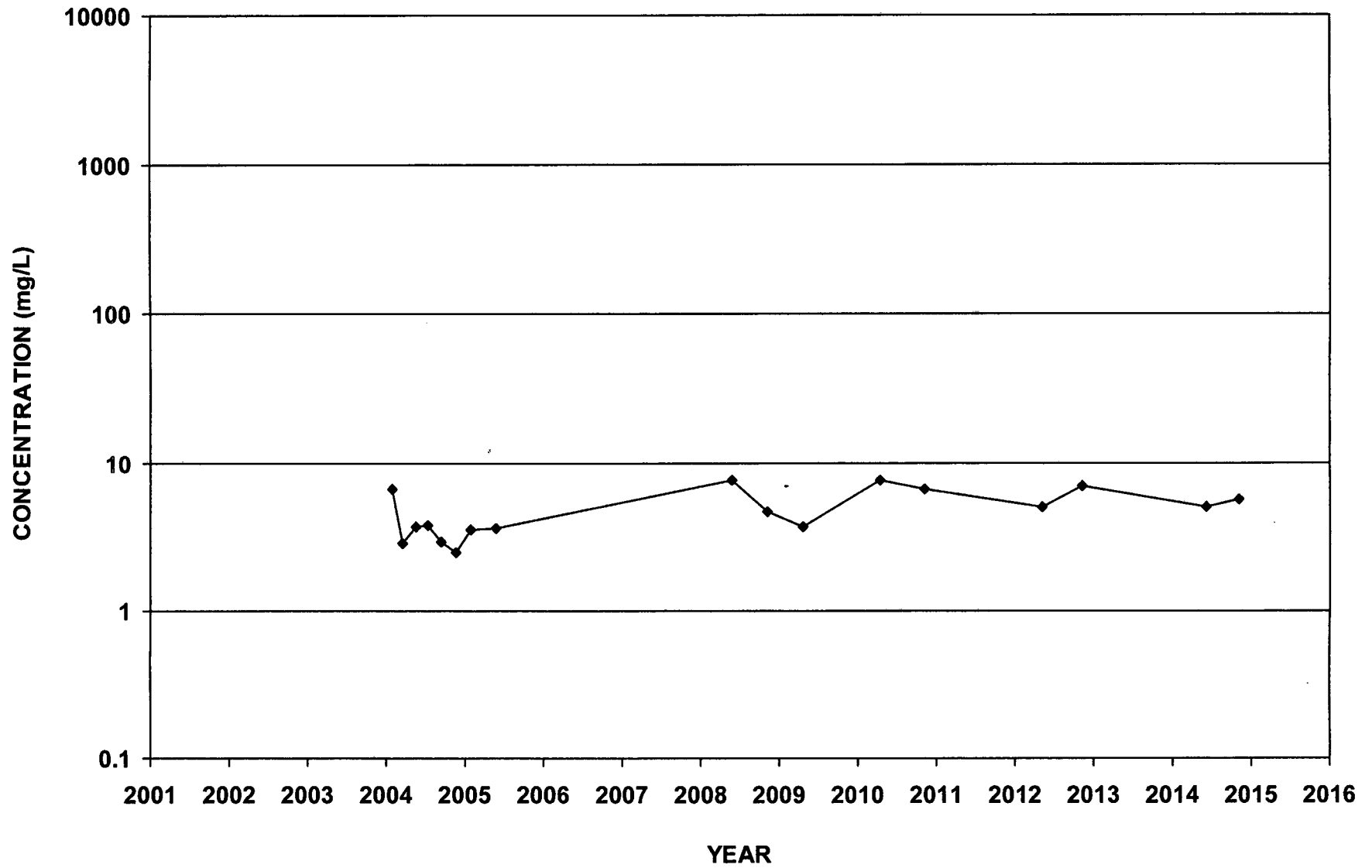
ECMW-20  
Sulfate as SO4



ECMW-21  
Sulfate as SO4



ECMW-22  
Sulfate as SO4





From: (870) 883-1400  
Eddie Pearson  
ELDORADO CHEMICAL COMPANY  
4500 NORTH WEST AVE  
ELDORADO, AR 71730

Origin ID: ELDA



Ship Date: 31MAR15  
ActWgt: 5.0 LB  
CAD: 5887030/NET3610

Delivery Address Bar Code



SHIP TO: (501) 682-0646  
LINDA HANSON  
ADEQ  
5301 NORTSHORE DRIVE  
NORTH LITTLE ROCK, AR 72118

BILL SENDER

Ref #  
Invoice #  
PO #  
Dept #

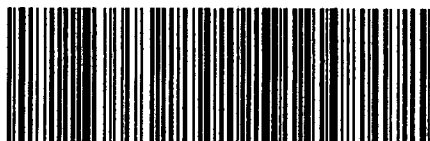
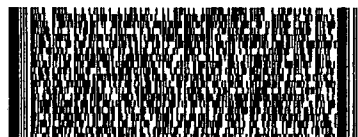
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