

2015 ANNUAL GROUND WATER REPORT

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**2015 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS**

TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	SITE GEOLOGY	1
3.0	GROUND WATER MONITORING	1
3.1	MONITORING PARAMETERS	1
3.2	FIELD SAMPLING.....	3
3.3	LABORATORY ANALYSIS	4
4.0	SAMPLING RESULTS.....	4
4.1	GROUND WATER FLOW	4
4.2	GROUND WATER QUALITY	5
	4.2.1 Field Parameters.....	5
	4.2.2 Analytical Results	5
	4.2.3 Quality Assurance/Quality Control Results.....	6
5.0	GROUND WATER REMEDIATION	7

TABLES

Monitoring Well Construction Details.....	1
Ground Water Elevation Data.....	2
Ground Water Indicator Parameter Data	3
ECMW-1 Analytical Summary.....	4
ECMW-2 Analytical Summary.....	5
ECMW-3 Analytical Summary.....	6
ECMW-4 Analytical Summary.....	7
ECMW-5 Analytical Summary.....	8
ECMW-6 Analytical Summary.....	9
ECMW-7 Analytical Summary.....	10
ECMW-8 Analytical Summary.....	11
ECMW-9 Analytical Summary.....	12
ECMW-10 Analytical Summary.....	13
ECMW-11 Analytical Summary.....	14
ECMW-12 Analytical Summary.....	15
ECMW-13 Analytical Summary.....	16
ECMW-14 Analytical Summary.....	17
ECMW-15 Analytical Summary.....	18
ECMW-16 Analytical Summary.....	19
ECMW-17 Analytical Summary.....	20
ECMW-18 Analytical Summary.....	21

**2015 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS**

**TABLE OF CONTENTS
(continued)**

ECMW-19 Analytical Summary.....	22
ECMW-20 Analytical Summary.....	23
ECMW-21 Analytical Summary.....	24
ECMW-22 Analytical Summary.....	25

FIGURES

Site Map.....	1
May 2015 Ground Water Elevation Map.....	2
November 2015 Ground Water Elevation Map.....	3
May 2015 Ammonia Concentration Map.....	4
November 2015 Ammonia Concentration Map.....	5
May 2015 Nitrate Concentration Map.....	6
November 2015 Nitrate Concentration Map.....	7
May 2015 Sulfate Concentration Map.....	8
November 2015 Sulfate Concentration Map.....	9

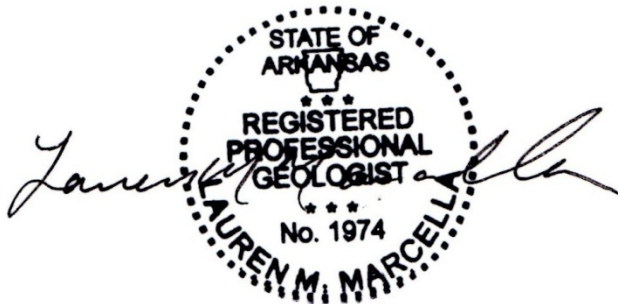
APPENDICES

Sampling Forms and Laboratory Analytical Reports.....	A
Trend Graphs.....	B

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1.0 INTRODUCTION

This report presents the results of ground water sampling activities conducted at the El Dorado Chemical Company (EDCC) facility during 2015. Field sampling techniques, ground water flow and ground water quality are discussed. A site map is provided as Figure 1.

2.0 SITE GEOLOGY

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

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

3.0 GROUND WATER MONITORING

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

3.1 MONITORING PARAMETERS

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 May and November of 2015 with the exception of well EDCC-14. The area around EDCC-14 was inaccessible during the May 2015 sampling event due to high water; therefore, this well was not sampled until September 2015. 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 2015 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 2015 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. Twelve wells were sampled each half, requiring one duplicate sample per half. Duplicate samples were tested for all parameters (ammonia, nitrate and sulfate). 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 2015 for the following constituents:

PARAMETER	ANALYTICAL METHODS
Ammonia-N	4500-NH3 D
Nitrate-N	EPA 300.0/9056A
Sulfate	EPA 300.0/9056A
pH, Temperature, Specific Conductance	Field

4.0 SAMPLING RESULTS

The following sections present ground water flow and analytical data collected in 2015.

4.1 GROUND WATER FLOW

Ground water elevations from May and November 2015 were used to construct the potentiometric maps included as Figures 2 and 3. The average ground water elevation was approximately two feet higher in May 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

The following sections provide an analysis of ground water analytical results from the 2015 sampling events.

4.2.1 Field Parameters

Indicator parameter data collected during well purging are summarized on Table 3. In 2013, pH values ranged from 3.29 standard units in ECMW-4 to 6.28 s.u. in ECMW-22, with an average of 5.06 s.u. The average of pH readings for 2015 (5.06 s.u.) did not differ significantly than 2014 (4.56 s.u.). Specific conductance values ranged from 28 (ECMW-2) to 32,140 (ECMW-6) micro-Siemens/cm ($\mu\text{S}/\text{cm}$) in 2015. The average of specific conductance readings for 2015 (3999 $\mu\text{S}/\text{cm}$) is similar to 2014 (3747 $\mu\text{S}/\text{cm}$) 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 2015, ammonia concentrations ranged from below the detection limit (0.5 mg/L) to 2550 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. However, because the monitoring program specifies that only wells with concentrations above background were sampled and not all wells have data for 2015, no concentration contour lines were drawn. 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 2015 are provided in Appendix B. Wells ECMW-4, ECMW-9, ECMW-11 and ECMW-17 show slight increases with ECMW-6 having a pronounced increasing trend. Wells ECMW-7 and ECMW-16 show a decreasing trend. Wells ECMW-5, ECMW-8 and ECMW-10 show a historical steady or decreasing trend, but with recent increases in concentration. Ammonia concentration trends in other wells are relatively constant.

Nitrate

For the year 2015, nitrate concentrations ranged from below the detection limit (0.25 mg/L) to 3930 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. However, because the monitoring program specifies that only wells with concentrations above background were sampled and not all wells have data for 2015, no concentration contour lines were drawn. 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-7, ECMW-10 and ECMW-16 show decreasing trends. Wells ECMW-4, ECMW-8, ECMW-14 and ECMW-17, while showing overall steady or decreasing trends, recently have shown increasing concentrations. Nitrate concentration trends in the remaining wells are relatively constant.

Sulfate

For the year 2015, sulfate concentrations ranged from 5.63 mg/L in ECMW-18 to 915 mg/L in ECMW-4. ECMW-4, ECMW-7, ECMW-8, ECMW-9 and ECMW-11 exhibited the highest concentrations throughout the year.

Figures 8 and 9 were prepared to show the distribution of sulfate in groundwater at the facility. However, because the monitoring program specifies that only wells with concentrations above background were sampled and not all wells have data for 2015, no concentration contour lines were drawn. 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.

Sulfate concentrations in Wells ECMW-6 and ECMW-7 show increasing trends. Wells ECMW-5, ECMW-11 and ECMW-14 show decreasing trends. Sulfate concentration trends in the remaining wells are relatively constant.

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. The two duplicate samples collected in 2015 and analyzed for ammonia, nitrate and sulfate had RPD values as follows:

Well and Duplicate	Date	Ammonia	Nitrate	Sulfate
		RPD (%)		
ECMW-10	5/20/2015	36	1.8	0.67
ECMW-8	11/18/2015	2.8	14	11

The RPD for ammonia for ECMW-10 slightly exceeded the upper limit of 30%; however, RPD values are not representative when the original and duplicate results are less than 5 times the detection limit (U.S. Environmental Protection Agency. 2004. USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review; EPA-540-R-04-004). The reporting limit for ammonia is 0.5 mg/L, yielding an RPD applicability value of 2.5 mg/L. The duplicate values for ECMW-10 were 1.33 and 1.94 mg/L, less than 2.5 mg/L.

5.0 GROUND WATER REMEDIATION

Recovery Wells ECRW-1 and ECRW-2 operated consistently throughout 2015. Recovery well ECRW-1 pumped at a rate of approximately 0.4 gallons per minute (210,240 gallons of water) and ECRW-2 pumped approximately 1.0 gpm (512,460 gallons of water) for the year 2015.

TABLES

TABLE 1
MONITORING WELL CONSTRUCTION DETAILS
2015 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. ECMW-1 through ECMW-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. ECMW-19, ECMW-20 and ECMW-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. ECMW-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
2015 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

Monitor Well	Top of Casing Elevation (ft above Mean Sea Level)	Measurement Date			
		5/19-22/2015		11/16-18/2015	
		Depth to Water (ft from top of casing)	Ground Water Elevation (ft above MSL)	Depth to Water (ft from top of casing)	Ground Water Elevation (ft above MSL)
ECMW-1	213.28	8.78	204.50	12.56	191.94
ECMW-2	196.25	0.00	196.25	0.00	196.25
ECMW-3	192.11	8.81	183.30	12.42	170.88
ECMW-4	194.84	8.62	186.22	10.24	175.98
ECMW-5	182.69	3.90	178.79	4.35	174.44
ECMW-6	191.87	6.04	185.83	5.03	180.80
ECMW-7	195.88	8.31	187.57	7.77	179.80
ECMW-8	197.34	7.73	189.61	7.73	181.88
ECMW-9	198.39	8.58	189.81	12.22	177.59
ECMW-10	205.75	12.39	193.36	15.42	177.94
ECMW-11	201.65	10.13	191.52	12.00	179.52
ECMW-12	184.97	6.21	178.76	5.86	172.90
ECMW-13	177.26	5.11	172.15	6.06	166.09
ECMW-14*	178.48	6.79	171.69	9.11	162.58
ECMW-15	180.84	3.46	177.38	3.91	173.47
ECMW-16	180.14	2.61	177.53	5.46	172.07
ECMW-17	185.40	26.59	158.81	29.26	129.55
ECMW-18	155.46	4.90	150.56	7.13	143.43
ECMW-19	150.41	0.00	150.41	4.60	145.81
ECMW-20	192.77	27.63	165.14	30.11	135.03
ECMW-21	176.29	15.48	160.81	17.89	142.92
ECMW-22	173.55	3.81	169.74	8.06	161.68

*ECMW-14 was inaccessible during the May 2015 sampling event, measurement taken on 9/8/2015.

TABLE 3
GROUNDWATER INDICATOR PARAMETER DATA
2015 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

WELL	TEMPERATURE (C)		pH (s.u.)		CONDUCTIVITY (uS)	
	Date		Date		Date	
	5/19-22/2015	11/16-18/2015	5/19-22/2015	11/16-18/2015	5/19-22/2015	11/16-18/2015
ECMW-1	19.9	19.7	4.83	5.57	46.8	41.6
ECMW-2	15.7	18.4	5.43	5.84	239.7	27.6
ECMW-3	15.5	19.0	6.18	6.11	179.6	268.2
ECMW-4	17.9	20.5	3.29	4.04	6220	6770
ECMW-5	18.3	20.6	5.27	5.59	540	558
ECMW-6	18.2	20.7	3.91	3.96	24800	32140
ECMW-7	19.2	20.8	4.06	5.31	20790	23720
ECMW-8	18.8	19.5	4.56	3.70	21920	25290
ECMW-9	18.6	19.9	5.52	5.36	2162	2213
ECMW-10	19.0	21.6	4.65	4.22	761	763
ECMW-11	18.1	22.3	4.19	4.13	692	705
ECMW-12	18.1	21.8	6.02	5.73	488	654
ECMW-13	17.4	20.8	5.20	4.68	795	937
ECMW-14*	18.5	21.8	4.89	5.15	79.9	432.8
ECMW-15	18.2	20.3	4.68	5.14	76.9	76.8
ECMW-16	19.1	21.9	4.54	4.64	133.3	130.7
ECMW-17	19.5	18.6	4.10	4.04	203.3	246.6
ECMW-18	19.8	18.8	5.64	5.70	77.9	74.2
ECMW-19	18.3	17.4	5.95	6.13	82.9	82
ECMW-20	18.5	17.3	5.61	6.08	67.3	62.8
ECMW-21	17.4	18.2	5.37	5.39	53.2	54
ECMW-22	18.8	18.8	6.28	6.07	157	144.9

*ECMW-14 was inaccessible during the May 2015 sampling event, parameters were measured on 9/8/2015.

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	--	--
5/22/2015	4.83	--	--	--	--	--	--	--	--	--	--
11/18/2015	5.57	--	--	--	--	--	--	--	--	--	--

"--" - 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	5.10	<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	--	--
5/22/2015	5.43	--	--	--	--	--	--	--	--	--	--
11/18/2015	5.84	--	--	--	--	--	--	--	--	--	--

"--" - 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	--	--
5/22/2015	6.18	--	--	--	--	--	--	--	--	--	--
11/18/2015	6.11	--	--	--	--	--	--	--	--	--	--

--" - 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	4.50	<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	--	--
5/20/2015	3.29	3.5	1.6	915	--	--	--	--	--	--	--
11/18/2015	4.04	0.53	0.332	722	--	--	--	--	--	--	--

"--" - 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	--	--
5/20/2015	5.27	1.27	44.6	54.5	--	--	--	--	--	--	--
11/18/2015	5.59	0.73	27	61.2	--	--	--	--	--	--	--

"--" - 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	--
5/21/2008	4.50	59.1	1130	23.7	--	< 0.015	--	< 0.02	--	< 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	--	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	--	--
5/20/2015	3.91	2550	2960	39.8	--	--	--	--	--	--	--
11/18/2015	3.96	2280	3930	40.2	--	--	--	--	--	--	--

"--" - 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	--	--
5/20/2015	4.06	61	63.6	866	--	--	--	--	--	--	--
11/18/2015	5.31	66.2	104	758	--	--	--	--	--	--	--

"--" - 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	--	--
5/20/2015	4.56	158	791	470	--	--	--	--	--	--	--
11/18/2015	3.7	143	751	431	--	--	--	--	--	--	--
11/18/2015	--	139	654	385	--	--	--	--	--	--	--

"--" - 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	--	--
5/20/2015	5.52	4.13	31.9	540	--	--	--	--	--	--	--
11/18/2015	5.36	2.36	32.7	526	--	--	--	--	--	--	--

"--" - 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	--	--
5/20/2015	4.65	1.91	50	148	--	--	--	--	--	--	--
5/20/2015	--	1.33	49.1	149	--	--	--	--	--	--	--
11/18/2015	4.22	<0.5	61.2	99.9	--	--	--	--	--	--	--

"--" - 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	--	--
5/20/2015	4.19	3.12	28.8	134	--	--	--	--	--	--	--
11/18/2015	4.13	39	35.7	93.4	--	--	--	--	--	--	--

"--" - 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	--	--
5/22/2015	6.02	--	--	--	--	--	--	--	--	--	--
11/18/2015	5.73	--	--	--	--	--	--	--	--	--	--

--" - 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	--	--
5/22/2015	5.20	--	--	--	--	--	--	--	--	--	--
11/18/2015	4.68	--	--	--	--	--	--	--	--	--	--

"--" - 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	--	--
9/8/2015	4.89	<0.5	9.58	77.8	--	--	--	--	--	--	--
11/18/2015	5.15	0.63	17.2	45.6	--	--	--	--	--	--	--

"--" - 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	--	--
5/22/2015	4.68	--	--	--	--	--	--	--	--	--	--
11/18/2015	5.14	--	--	--	--	--	--	--	--	--	--

--" - 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	--	--
5/20/2015	4.54	6.2	8.65	12.9	--	--	--	--	--	--	--
11/18/2015	4.64	0.5	8.43	15.9	--	--	--	--	--	--	--

--" - 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	--	--
5/20/2015	4.10	6.53	10.4	18.7	--	--	--	--	--	--	--
11/18/2015	4.04	3.67	14.3	22.9	--	--	--	--	--	--	--

"--" - 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	--	--
5/20/2015	5.64	--	0.295	5.63	--	--	--	--	--	--	--
11/18/2015	5.7	--	<0.25	--	--	--	--	--	--	--	--

--" - 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	--	--	--	--	--	--	--	--	--	--

"--" - 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									
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	--	--
5/22/2015	5.95	--	--	--	--	--	--	--	--	--	--
11/18/2015	6.13	--	--	--	--	--	--	--	--	--	--

"--" - 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 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									
5/22/2015	5.61	--	--	--	--	--	--	--	--	--	--
11/18/2015	6.08	--	--	--	--	--	--	--	--	--	--

--" - 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 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									
5/22/2015	5.37	--	--	--	--	--	--	--	--	--	--
11/18/2015	5.39	--	--	--	--	--	--	--	--	--	--

--" - 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	--	--	--	--	--	--	--	--	--	--

--" - Parameter not analyzed

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

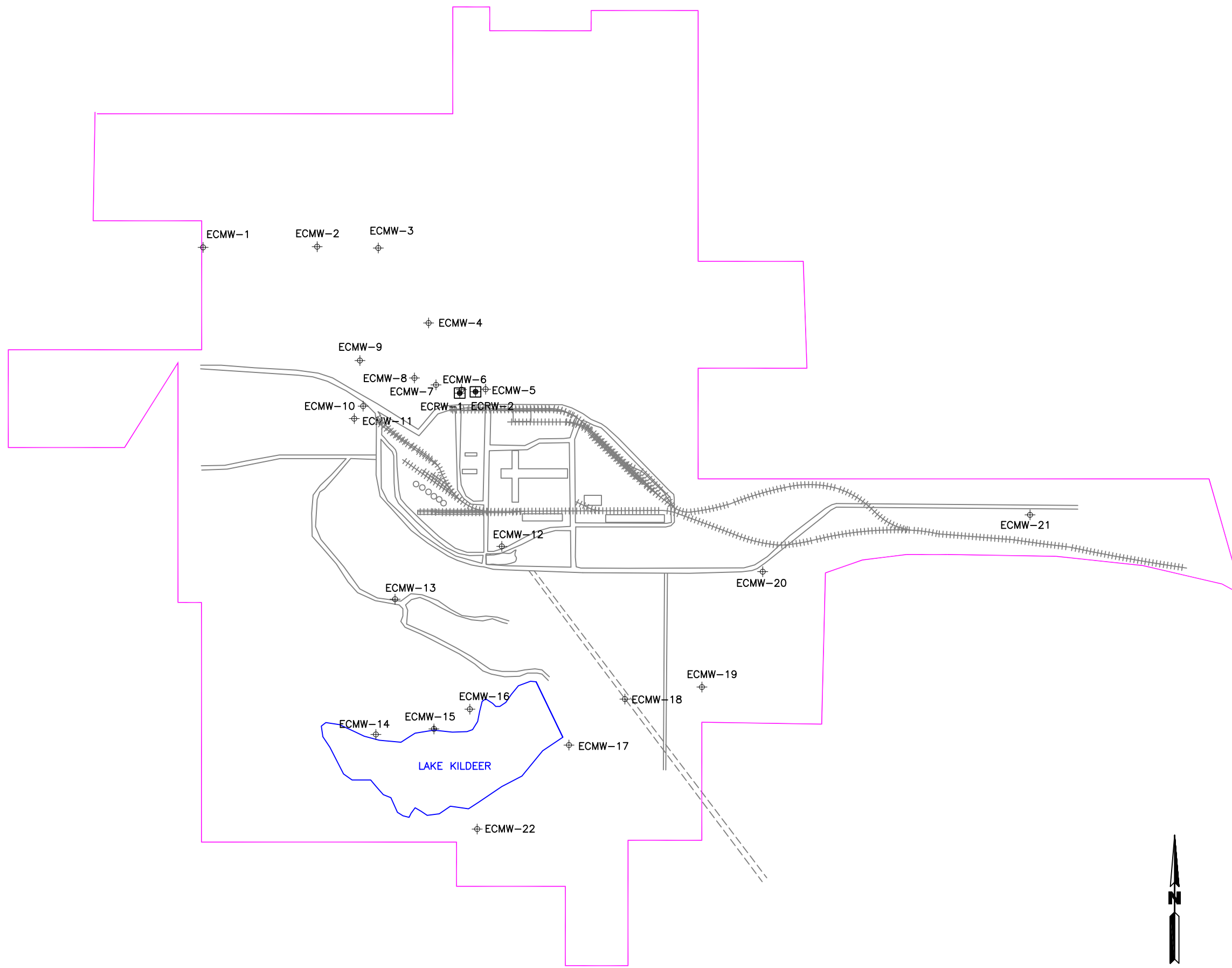
TABLE 25
ECMW-22 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

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									
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	--	--
5/22/2015	6.28	--	--	--	--	--	--	--	--	--	--
11/18/2015	6.07	--	--	--	--	--	--	--	--	--	--

"--" - Parameter not analyzed

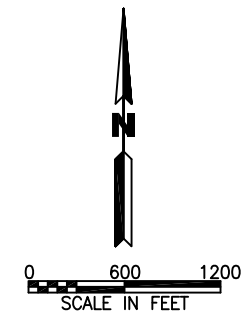
E3 - Incorrect preservation, results qualified as "estimated".

FIGURES



LEGEND

- ⊕ MONITOR WELLS
- ⊕ RECOVERY WELLS
- PROPERTY BOUNDARY



EL DORADO

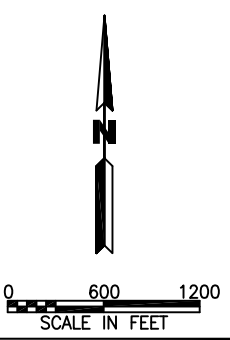
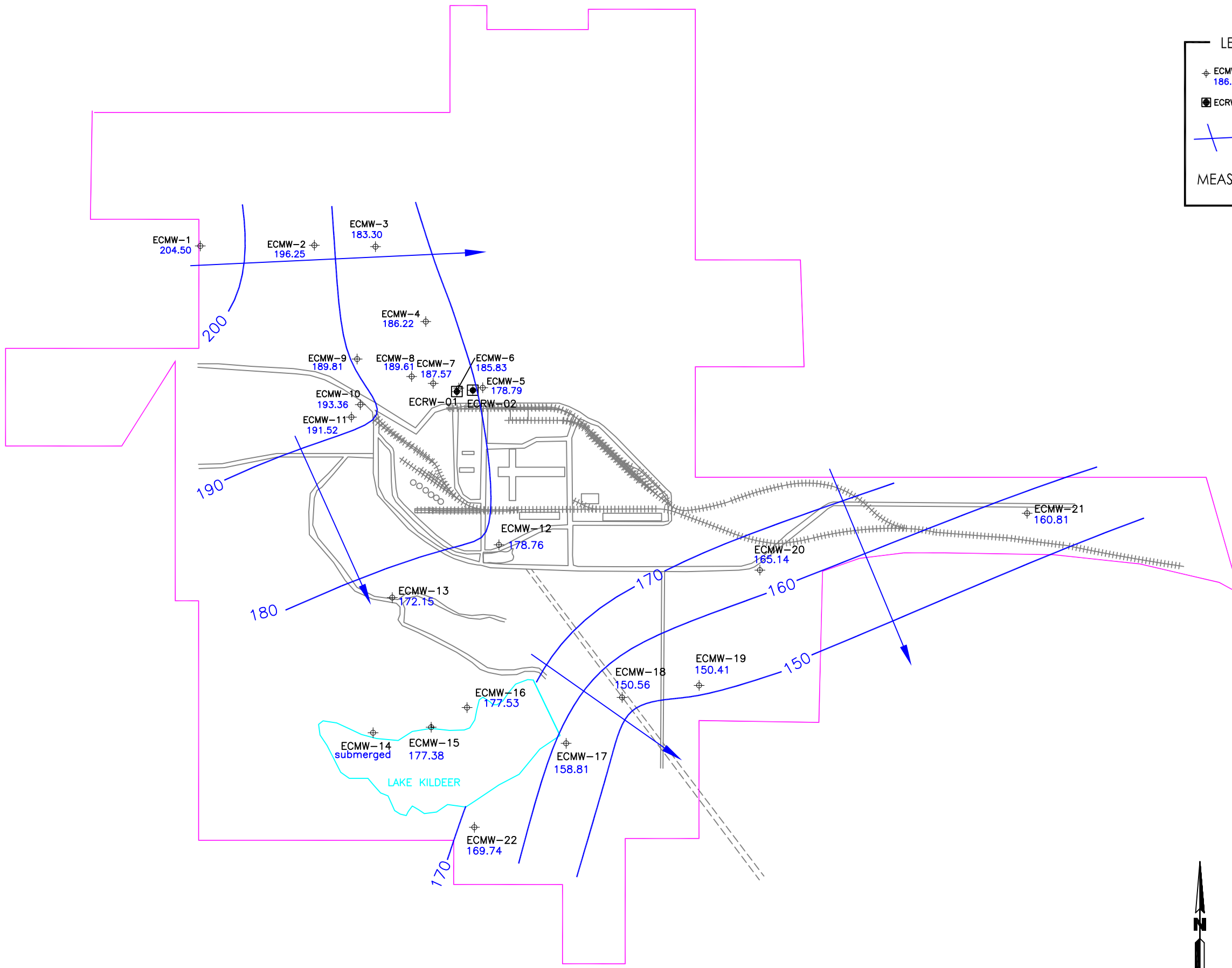
SITE MAP
2015 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

DATE: 03/26/2016	APPROVED: _____	DRAWN BY: LMM
SCALE: see above	BY: _____	CAD NO. 02EC0100
		FIGURE 1

LEGEND

- ⊕ ECMW-4 186.22 Monitor Well with Water Elevation (feet MSL)
- ⊠ ECRW-01 Recovery Well
- Ground Water Flow Direction

MEASUREMENTS TAKEN MAY 19-22, 2015



EL DORADO

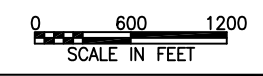
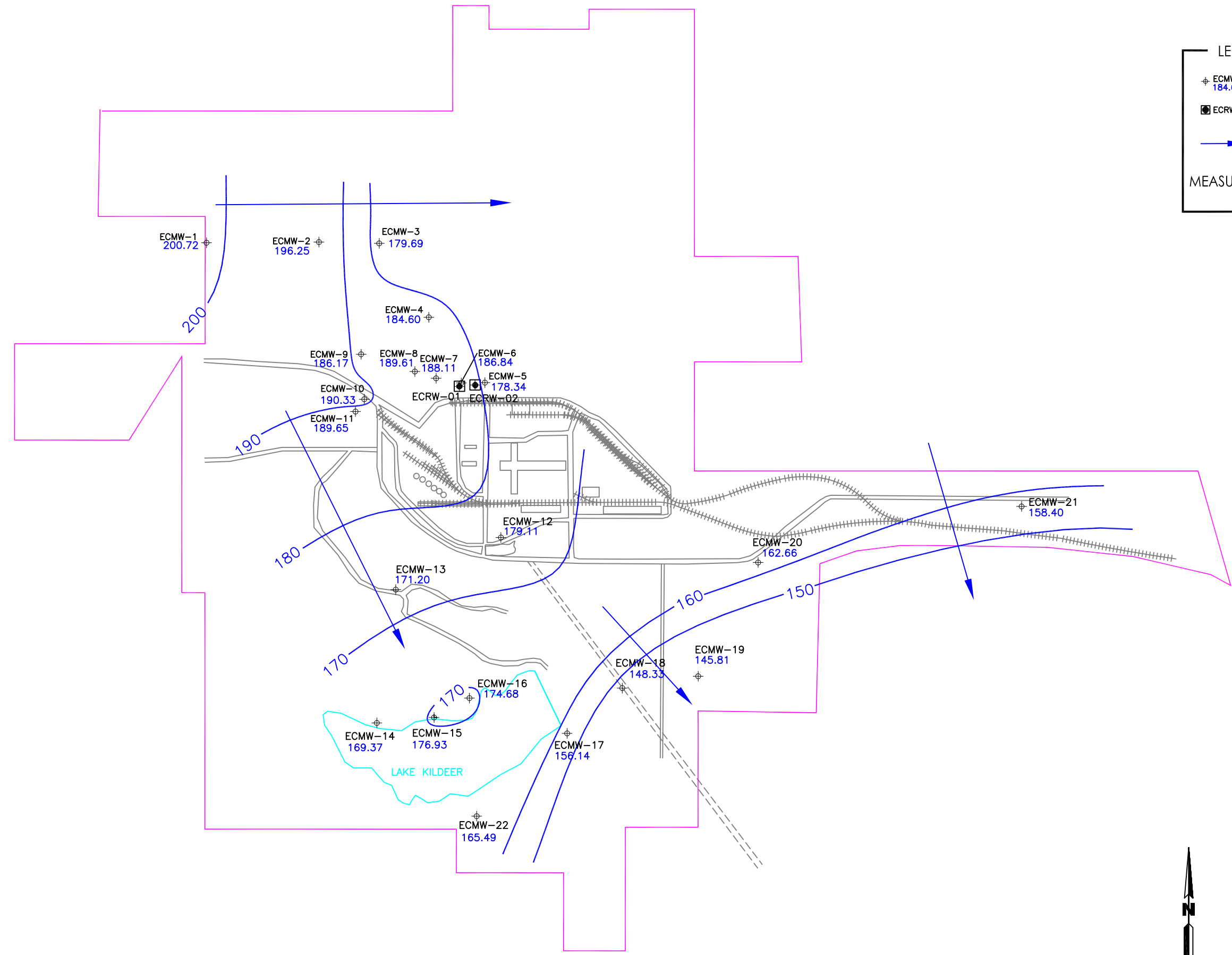
MAY 2015 GROUND WATER ELEVATION MAP
2015 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

DATE: 06/16/2015	APPROVED: _____	DRAWN BY: LMM
SCALE: as shown	BY: _____	CAD NO. 02EC0100
ENVIRONMENTAL MANAGEMENT SERVICES, INC.		FIGURE 2

LEGEND

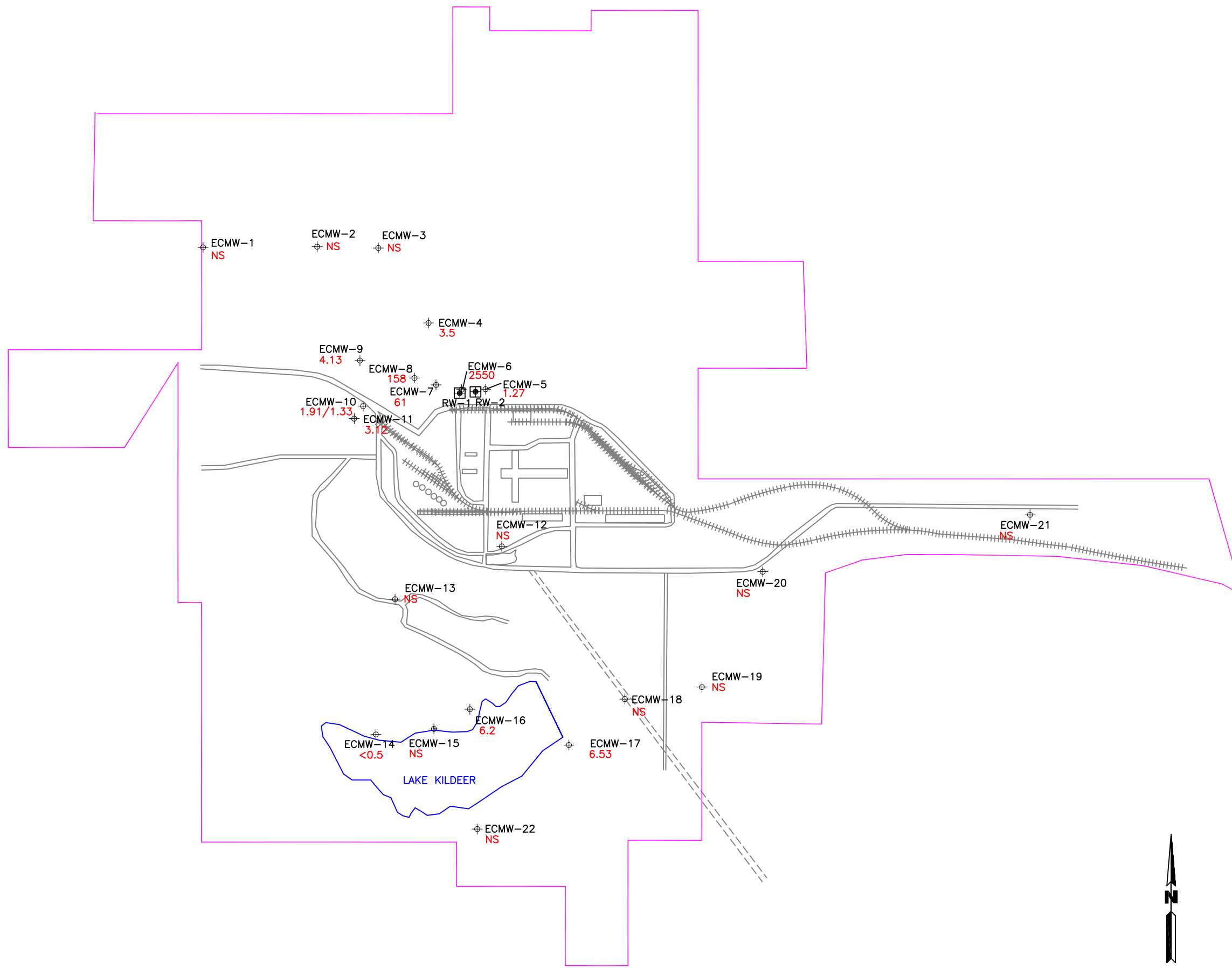
- ⊕ ECMW-4 184.60 Monitor Well with Water Elevation (feet MSL)
- ⊠ ECRW-01 Recovery Well
- Ground Water Flow Direction

MEASUREMENTS TAKEN NOVEMBER 16-18, 2015



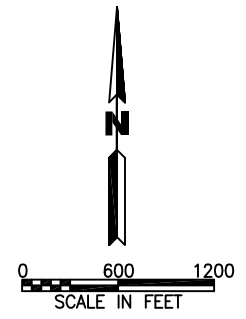
EL DORADO

NOVEMBER 2015 GROUND WATER ELEVATION MAP 2015 ANNUAL GROUND WATER REPORT EL DORADO CHEMICAL COMPANY EL DORADO, ARKANSAS		
DATE: 12/15/2015	APPROVED: BY: _____ DATE: _____	DRAWN BY: LMM
SCALE: as shown	CAD NO. 02EC0100	FIGURE 3
ENVIRONMENTAL MANAGEMENT SERVICES, INC.		



LEGEND

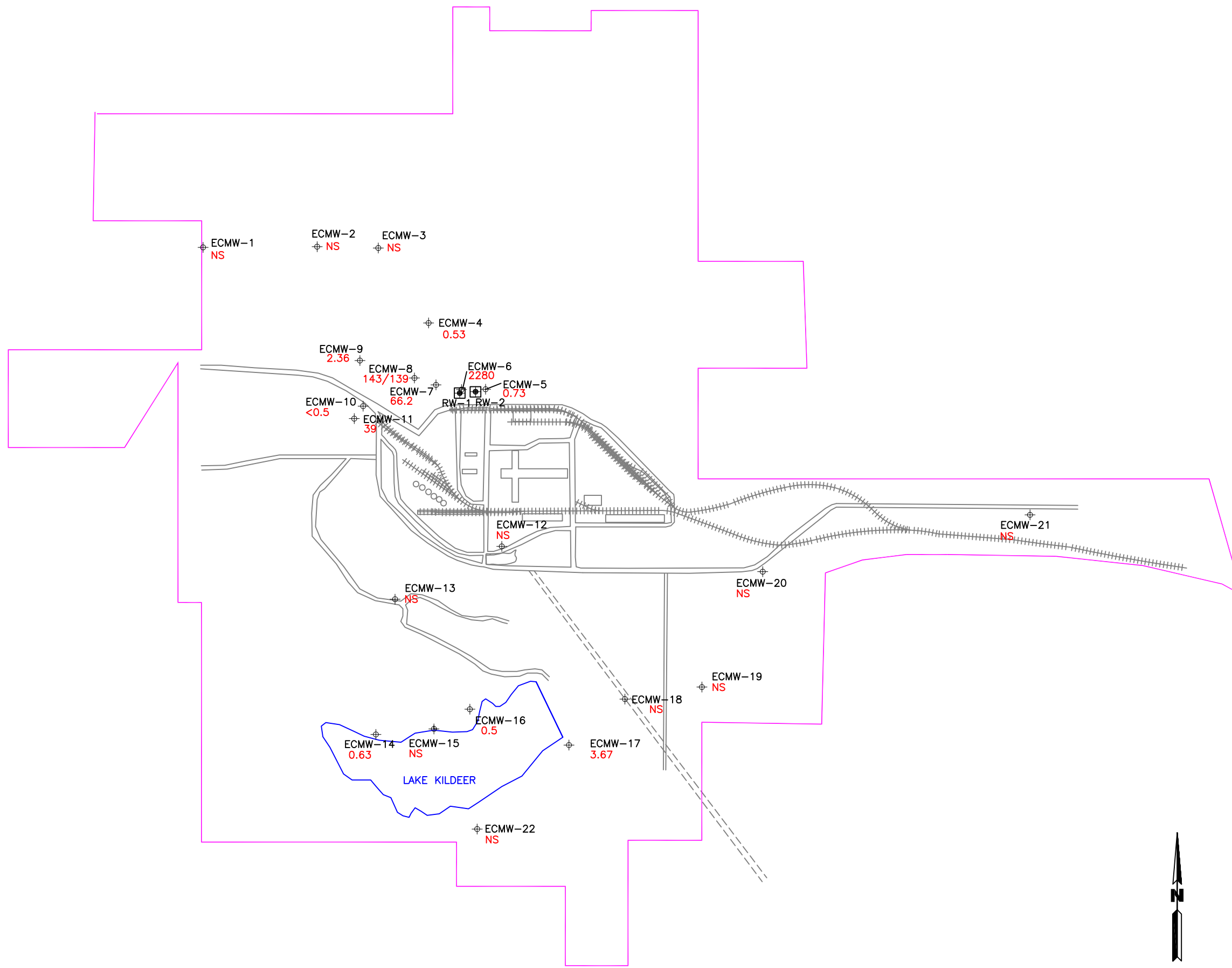
- PROPERTY BOUNDARY
- ⊕ ECMW-4 MONITOR WELL WITH AMMONIA CONCENTRATION (mg/L)
3.5
- ⊕ RECOVERY WELLS
- NS - Not Sampled in Odd Numbered Years



EL DORADO

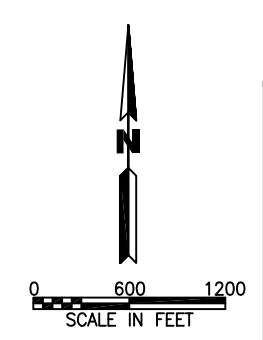
MAY 2015 AMMONIA CONCENTRATION MAP
2015 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

DATE: 02/26/2016	APPROVED: _____	DRAWN BY: LMM	
SCALE: as shown	BY: _____	CAD NO. 02EC0100	
ENVIRONMENTAL MANAGEMENT SERVICES, INC.			FIGURE 4



LEGEND

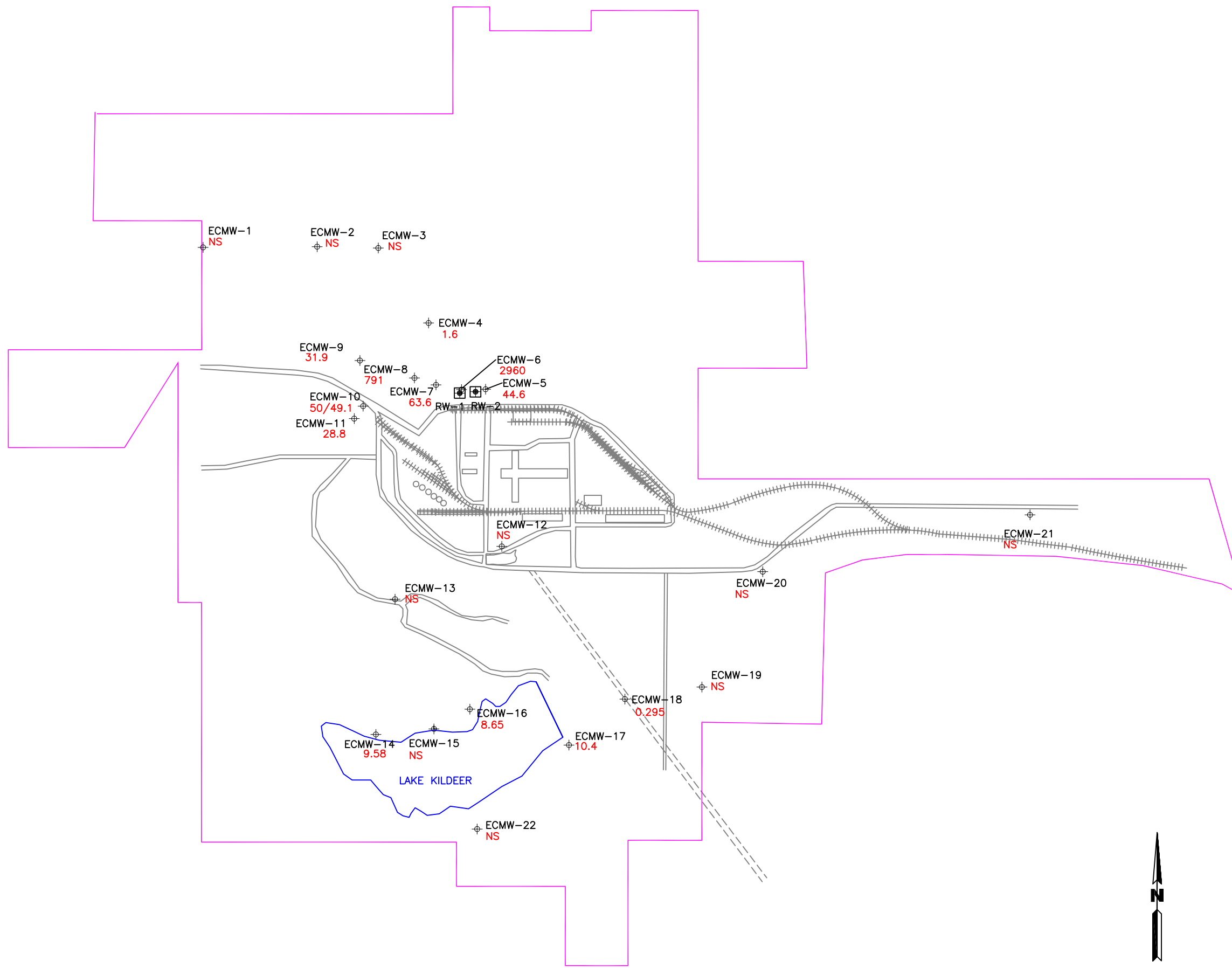
- PROPERTY BOUNDARY
- ⊕ ECMW-4 MONITOR WELL WITH AMMONIA CONCENTRATION (mg/L)
- ⊕ RECOVERY WELLS
- NS - Not Sampled in Odd Numbered Years



EL DORADO

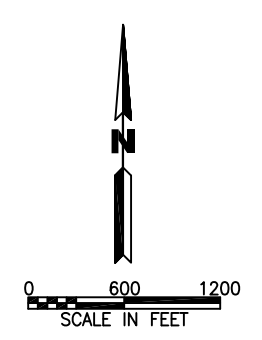
NOVEMBER 2015 AMMONIA CONCENTRATION MAP
2015 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

DATE: 02/26/2016	APPROVED:	DRAWN BY: LMM
SCALE: as shown	BY:	CAD NO. 02EC0100
ENVIRONMENTAL MANAGEMENT SERVICES, INC.		FIGURE 5



LEGEND

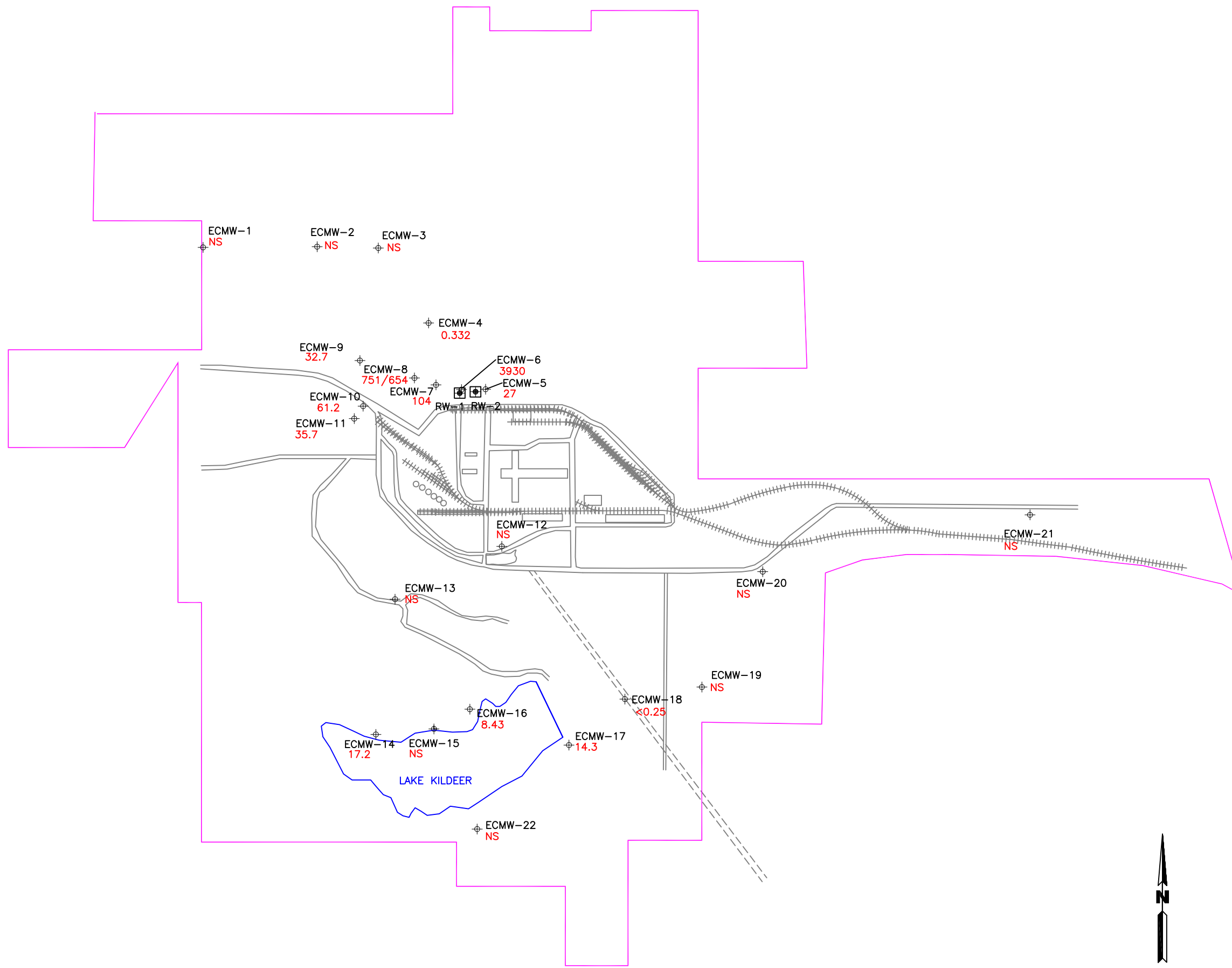
- PROPERTY BOUNDARY
- ⊕ ECMW-4 MONITOR WELL WITH 1.6 NITRATE CONCENTRATION (mg/L)
- ⊕ RECOVERY WELLS
- NS - Not Sampled in Odd Numbered Years



EL DORADO

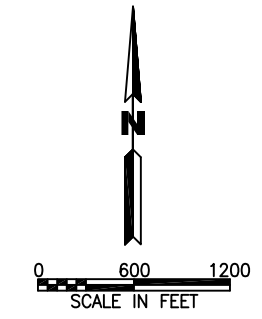
MAY 2015 NITRATE CONCENTRATION MAP
2015 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

DATE: 02/26/2016	APPROVED: _____	DRAWN BY: LMM
SCALE: as shown	BY: _____	CAD NO. 02EC0100
ENVIRONMENTAL MANAGEMENT SERVICES, INC.		FIGURE 6



LEGEND

- PROPERTY BOUNDARY
- ⊕ ECMW-4 MONITOR WELL WITH 0.332 NITRATE CONCENTRATION (mg/L)
- ⊕ RECOVERY WELLS
- NS - Not Sampled in Odd Numbered Years

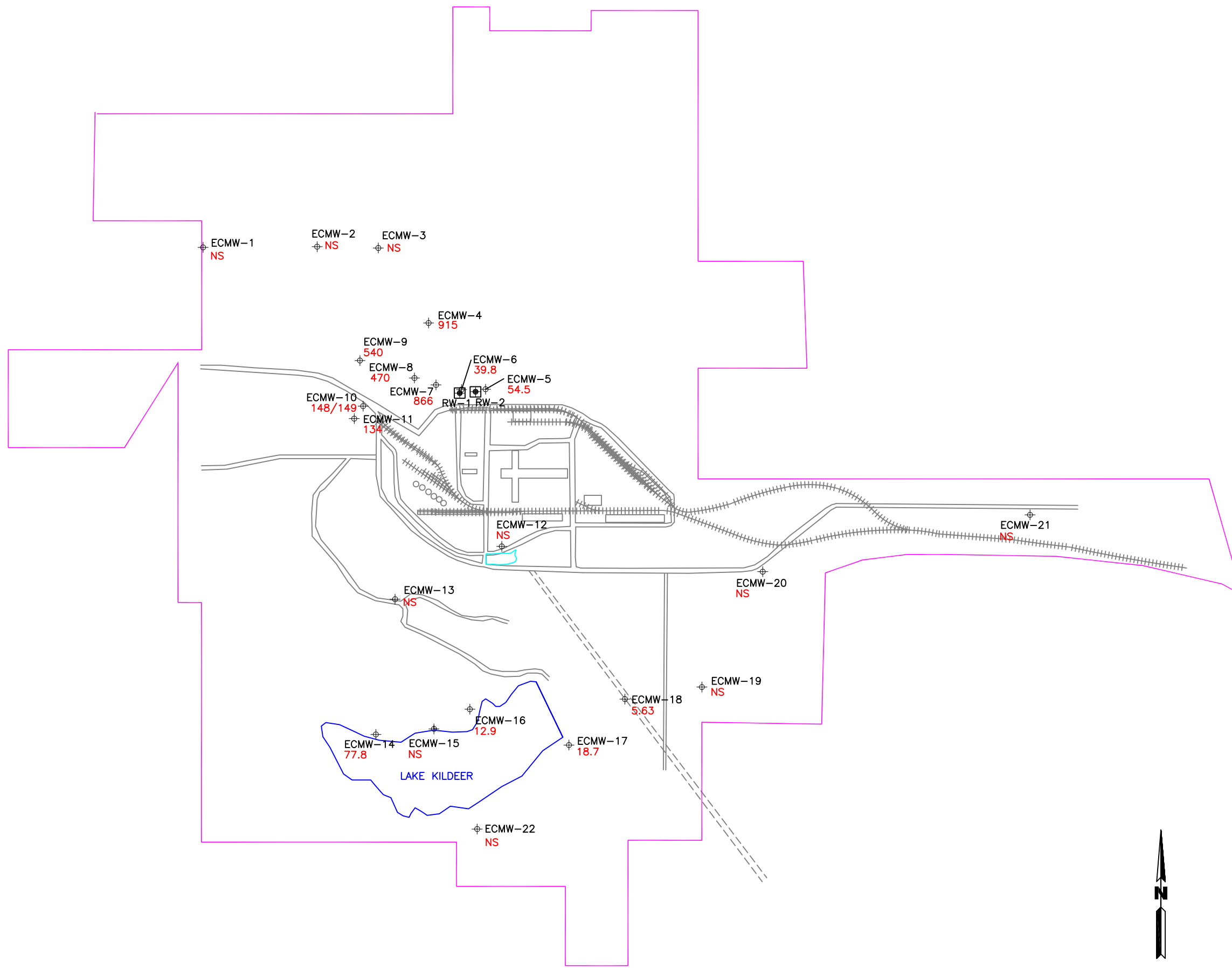


EL DORADO

NOVEMBER 2015 NITRATE CONCENTRATION MAP
2015 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

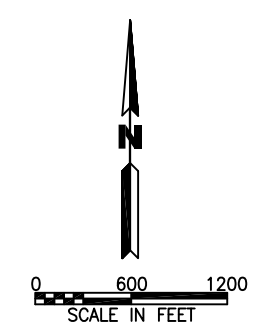
DATE: 02/26/2016	APPROVED: BY: _____ DATE: _____	DRAWN BY: LMM	
SCALE: as shown		CAD NO. 02EC0100	FIGURE 7

ENVIRONMENTAL
MANAGEMENT SERVICES, INC.



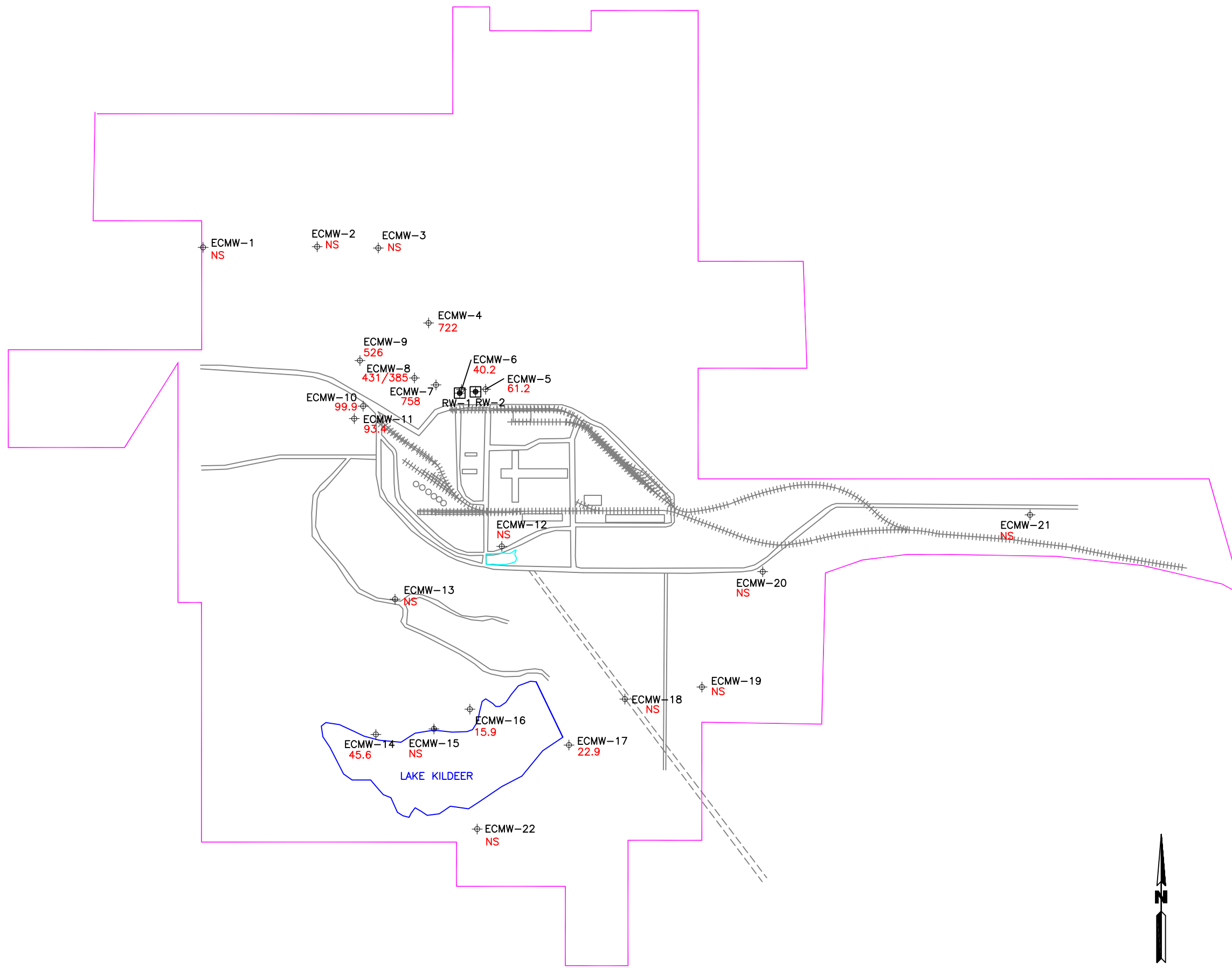
LEGEND

- PROPERTY BOUNDARY
- ⊕ ECMW-4 MONITOR WELL WITH SULFATE CONCENTRATION (mg/L)
915
- ⊕ RECOVERY WELLS
- NS - Not Sampled in Odd Numbered Years



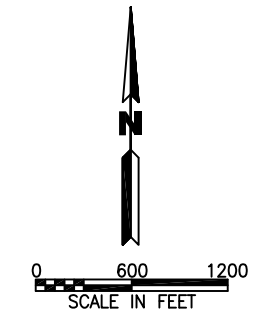
EL DORADO

MAY 2015 SULFATE CONCENTRATION MAP 2015 ANNUAL GROUND WATER REPORT EL DORADO CHEMICAL COMPANY EL DORADO, ARKANSAS		
DATE: 02/26/2016	APPROVED:	DRAWN BY: LMM
SCALE: as shown	BY:	CAD NO. 02EC0100
		FIGURE 8



LEGEND

- PROPERTY BOUNDARY
- ⊕ ECMW-4 MONITOR WELL WITH SULFATE CONCENTRATION (mg/L)
- ⊕ RECOVERY WELLS
- NS - Not Sampled in Odd Numbered Years



EL DORADO

NOVEMBER 2015 SULFATE CONCENTRATION MAP
2015 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

DATE: 02/26/2016	APPROVED: _____	DRAWN BY: LMM
SCALE: as shown	BY: _____	CAD NO. 02ECO100
ENVIRONMENTAL MANAGEMENT SERVICES, INC.		FIGURE 9

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-18
 Colle. R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5-19-15 1345</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>4.90</u> ft	Gallons per well volume	<u>8.0</u>
Top of casing to bottom	<u>17.2</u> ft	Total gallons evacuated	<u>24.0</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>5-20-15 0930</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>22.1</u>	<u>5.77</u>	<u>83.6 μS</u>	_____	_____
<u>19.6</u>	<u>5.49</u>	<u>81.1 μS</u>	_____	_____
<u>19.8</u>	<u>5.64</u>	<u>77.9 μS</u>	_____	_____

GENERAL INFORMATION

Weather conditions at time of sampling: PCLOUDY/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

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 5-19-15 1320 Method of Evacuation ELEC. PUMP
 Top of casing to water level 26.59 ft Gallons per well volume 5.3
 Top of casing to bottom 34.7 ft Total gallons evacuated 15.9
 Water level after evacuation _____ ft Elevation, Top of casing _____
 Sampling: Date/Time 5-26-15 0905 Elevation of well water 1
 Top of casing to water level _____ ft Method of Sampling PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[μ S]	Diss. Oxygen[m^3/l]	Turbidity [NT]
<u>21.4</u>	<u>4.22</u>	<u>209.6 μS</u>		
<u>20.5</u>	<u>4.13</u>	<u>212.2 μS</u>		
<u>19.9</u>	<u>4.10</u>	<u>203.3 μS</u>		

GENERAL INFORMATION

Weather conditions at time of sampling: Partly cloudy / warm
 Sample characteristics: Clean
 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

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

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

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5-19-15 1300</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>2.61</u> ft	Gallons per well volume	<u>10.8</u>
Top of casing to bottom	<u>19.3</u> ft	Total gallons evacuated	<u>32.4</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>5-20-15 0910</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[m%]	Turbidity [NT]
<u>20.7</u>	<u>5.24</u>	<u>173.1 μS</u>	_____	_____
<u>19.8</u>	<u>4.74</u>	<u>206.6 μS</u>	_____	_____
<u>19.1</u>	<u>4.54</u>	<u>133.3 μS</u>	_____	_____

GENERAL INFORMATION

Weather conditions at time of sampling: 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

GROUNDWATER SAMPLING DATA FORM

El Dorado Chemical Company

FIELD LOG

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

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5-19-15 1105</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>10.13</u> ft	Gallons per well volume	<u>6.3</u>
Top of casing to bottom	<u>19.8</u> ft	Total gallons evacuated	<u>18.9</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>5-26-15 0845</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. O_2	Oxygen[mg/l]	Turbidity [NT]
<u>19.2</u>	_____	<u>733 μS</u>	_____	_____	_____
<u>18.3</u>	_____	<u>681 μS</u>	_____	_____	_____
<u>18.1</u>	_____	<u>692 μS</u>	_____	_____	_____
	<u>4.19</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. EC MW-14
 Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time _____ Method of Evacuation ELEC. PUMP
 Top of casing to water level _____ ft Gallons per well volume _____
 _____ ft Total gallons evacuated _____
 Top of casing to bottom _____ ft Elevation, Top of casing _____
 Water level after evacuation _____ ft Elevation of well water _____
 Sampling: Date/Time _____ Method of Sampling PVC BAILER
 Top of casing to water level _____

COULD NOT SAMPLE DUE TO HIGH WATER

SAMPLE D.

Temperature [°C]	pH	Conductivity [µS]	Diss. Oxygen [mg/l]	Turbidity [NT]
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

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

GROUNDWATER SAMPLING DATA FORM

El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. ECMW-10 + DUP
 Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5-19-15 1045</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>12.39</u> ft	Gallons per well volume	<u>6.6</u>
Top of casing to bottom	<u>28.6</u> ft	Total gallons evacuated	<u>19.8</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>5-26-15 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>19.5</u>	_____	<u>898 µS</u>	_____	_____
<u>19.1</u>	_____	<u>769 µS</u>	_____	_____
<u>19.0</u>	<u>4.65</u>	<u>761 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

GROUNDWATER SAMPLING DATA FORM

El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. EDMW-9
 Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5-19-15 1020</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>8.58</u> ft	Gallons per well volume	<u>13.9</u>
Top of casing to bottom	<u>30.0</u> ft	Total gallons evacuated	<u>41.7</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>5-26-15 0815</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 [mS/l]	Turbidity [NT]
<u>19.7</u>	_____	<u>2943µ</u>	_____	_____
<u>18.9</u>	_____	<u>2217µ</u>	_____	_____
<u>18.6</u>	_____	<u>2162µ</u>	_____	_____
	<u>5.52</u>			

GENERAL INFORMATION

Weather conditions at time of sampling: Partly 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

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>5-19-15 1005</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>7.73</u> ft	Gallons per well volume	<u>14.2</u>
Top of casing to bottom	<u>29.9</u> ft	Total gallons evacuated	<u>43.2</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>5-20-15 0805</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>19.3</u>	_____	<u>21.64 MS</u>	_____	_____
<u>18.9</u>	_____	<u>21.68 MS</u>	_____	_____
<u>18.8</u>	<u>4.56</u>	<u>21.92 MS</u>	_____	_____

GENERAL INFORMATION

Weather conditions at time of sampling: P. Cloudy Warm
 Sample characteristics: Clean
 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

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

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

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5-19-15 0935</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>8.31</u> ft	Gallons per well volume	<u>18.1</u>
Top of casing to bottom	<u>23.9</u> ft	Total gallons evacuated	<u>30.3</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>5-26-15 0740</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>20.2</u>	_____	<u>79.1 MS</u>	_____	_____
<u>19.2</u>	_____	<u>22.74 MS</u>	_____	_____
<u>19.2</u>	_____	<u>20.79 MS</u>	_____	_____
	<u>4.06</u>			

GENERAL INFORMATION

Weather conditions at time of sampling: P. Cloudy / Warm
 Sample characteristics: Clean
 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

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

MONITORING WELL INFORMATION

Evacuation: Date/Time 5-19-15 0920 Method of Evacuation ELEC. PUMP
 Top of casing to water level 8.62 ft Gallons per well volume 8.8
 Top of casing to bottom 22.1 ft Total gallons evacuated 26.4
 Water level after evacuation _____ ft Elevation, Top of casing _____
 Sampling: Date/Time 5-26-15 0750 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>19.1</u>	<u>[REDACTED]</u>	<u>7.13MS</u>		
<u>18.1</u>	<u>[REDACTED]</u>	<u>6.45MS</u>		
<u>17.9</u>	<u>3.29</u>	<u>6.22MS</u>		

GENERAL INFORMATION

Weather conditions at time of sampling: H. Cloudy / Warm
 Sample characteristics: Clean
 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

GROUNDWATER SAMPLING DATA FORM

El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. EC-MW-6
 Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5-19-15 0900</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>6.04</u> ft	Gallons per well volume	<u>10.4</u>
Top of casing to bottom	5-20-15 22.0725	Total gallons evacuated	<u>31.2</u>
Water level after evacuation	<u>2.0</u> ft	Elevation, Top of casing	<u> </u>
Sampling: Date/Time	<u>5-20-15 0725</u>	Elevation of well water	<u> </u>
Top of casing to water level	<u> </u> ft	Method of Sampling	<u>PVC BAILER</u>

SAMPLE D.

Temperature [°C]	pH	Conductivity [µS]	Dissolved Oxygen [mg/l]	Turbidity [NT]
<u>18.2</u>	 	<u>29.22 MS</u>	<u> </u>	<u> </u>
<u>18.3</u>	 	<u>24.64 MS</u>	<u> </u>	<u> </u>
<u>18.2</u>	 	<u>24.80 MS</u>	<u> </u>	<u> </u>
	<u>3.91</u>			

GENERAL INFORMATION

Weather conditions at time of sampling: P. Cloudy / 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

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

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

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5-19-15 0840</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>3.90</u> ft	Gallons per well volume	<u>9.0</u>
Top of casing to bottom	<u>12.7</u> ft	Total gallons evacuated	<u>27.0</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>5-28-15 0710</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>19.2</u>	5.27	<u>976 μs</u>	_____	_____
<u>18.2</u>	5.27	<u>587 μs</u>	_____	_____
<u>18.3</u>	5.27	<u>548 μs</u>	_____	_____
	<u>5.27</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

GROUNDWATER SAMPLING DATA FORM

El Dorado Chemical Company

FIELD LOG

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

MONITORING WELL INFORMATION

Evacuation: Date/Time <u>5-22-15 1310</u>	Method of Evacuation <u>ELEC. PUMP</u>
Top of casing to water level <u>15.48</u> ft	Gallons per well volume <u>3.9</u>
Top of casing to bottom <u>39.9</u> ft	Total gallons evacuated <u>11.7</u>
Water level after evacuation _____ ft	Elevation, Top of casing _____
Sampling: Date/Time _____	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[m%]	Turbidity [NT]
<u>19.2</u>	<u>5.84</u>	<u>58.1 us</u>	_____	_____
<u>17.7</u>	<u>5.62</u>	<u>51.4 us</u>	_____	_____
<u>17.4</u>	<u>5.37</u>	<u>53.2 us</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

GROUNDWATER SAMPLING DATA FORM

El Dorado Chemical Company

FIELD LOG

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

MONITORING WELL INFORMATION

Evacuation: Date/Time 5-22-15 0840 Method of Evacuation ELEC. PUMP
 Top of casing to water level 5.78 ft Gallons per well volume 8.7
 Top of casing to bottom 22.1 ft Total gallons evacuated 26.1
 Water level after evacuation _____ ft Elevation, Top of casing _____
 Sampling: Date/Time _____ 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>16.3</u>	<u>5.46</u>	<u>113.3 µS</u>		
<u>16.1</u>	<u>5.08</u>	<u>58.1 µS</u>		
<u>15.9</u>	<u>4.83</u>	<u>46.8 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. EC MW-2
 Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5.22.15 0910</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>0.00</u> ft	Gallons per well volume	<u>13.1</u>
Top of casing to bottom	<u>20.2</u> ft	Total gallons evacuated	<u>39.3</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	_____	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[mg/l]	Turbidity [NT]
<u>16.0</u>	<u>5.48</u>	<u>253.9 μS</u>	_____	_____
<u>15.8</u>	<u>5.49</u>	<u>252.1 μS</u>	_____	_____
<u>15.7</u>	<u>5.43</u>	<u>239.7 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

GROUNDWATER SAMPLING DATA FORM

El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. EC MW-12
 Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5-22-15 0945</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>6.21</u> ft	Gallons per well volume	<u>8.9</u>
Top of casing to bottom	<u>19.9</u> ft	Total gallons evacuated	<u>26.7</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	_____	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>18.2</u>	<u>6.06</u>	<u>504 µS</u>	_____	_____
<u>17.9</u>	<u>6.05</u>	<u>494 µS</u>	_____	_____
<u>18.1</u>	<u>6.02</u>	<u>488 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. EC1AW-3
 Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5-22-15 0930</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>8.81</u> ft	Gallons per well volume	<u>11.9</u>
Top of casing to bottom	<u>27.1</u> ft	Total gallons evacuated	<u>33.7</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	_____	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[m%]	Turbidity [NT]
<u>16.6</u>	<u>6.11</u>	<u>196.7 μS</u>	_____	_____
<u>15.6</u>	<u>6.16</u>	<u>181.5 μS</u>	_____	_____
<u>15.5</u>	<u>6.18</u>	<u>179.6 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

GROUNDWATER SAMPLING DATA FORM

El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. ECMS-22
 Colle. R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5-22-15 1005</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>3.81</u> ft	Gallons per well volume	<u>23.1</u>
Top of casing to bottom	<u>29.8</u> ft	Total gallons evacuated	<u>34.3</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	_____	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>18.0</u>	<u>6.93</u>	<u>168.3 μs</u>	_____	_____
<u>18.8</u>	<u>6.43</u>	<u>162.0 μs</u>	_____	_____
<u>18.8</u>	<u>6.28</u>	<u>157.0 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. ECABW-23
 Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5.22.15 1020</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>5.11</u> ft	Gallons per well volume	<u>9.5</u>
Top of casing to bottom	<u>12.8</u> ft	Total gallons evacuated	<u>28.5</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	_____	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[mg/l]	Turbidity [NT]
<u>18.1</u>	<u>5.46</u>	<u>821 μs</u>	_____	_____
<u>17.5</u>	<u>5.25</u>	<u>820 μs</u>	_____	_____
<u>17.4</u>	<u>5.20</u>	<u>795 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. EC MS-15
 Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5-22-15 1040</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>3.46</u> ft	Gallons per well volume	<u>8.8</u>
Top of casing to bottom	<u>17.0</u> ft	Total gallons evacuated	<u>26.4</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	_____	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>18.7</u>	<u>5.11</u>	<u>188.2 µS</u>	_____	_____
<u>18.5</u>	<u>4.77</u>	<u>79.4 µS</u>	_____	_____
<u>18.2</u>	<u>4.68</u>	<u>76.9 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. ECMLW-09
 Collector R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5-22-15 1240</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>0.00</u> ft	Gallons per well volume	<u>9.8</u>
Top of casing to bottom	<u>61.5</u> ft	Total gallons evacuated	<u>29.4</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	_____	Elevation of well water	<u>1</u>
Top of casing to water level	_____ ft	Method of Sampling	<u>PVC BAILER</u>

SAMPLE DATA

Temperature [°C]	pH	Conductivity [µS]	Dissolved Oxygen [mg/l]	Turbidity [NT]
<u>20.4</u>	<u>6.62</u>	<u>127.7 µS</u>	_____	_____
<u>18.5</u>	<u>6.04</u>	<u>90.5 µS</u>	_____	_____
<u>18.3</u>	<u>5.95</u>	<u>82.9 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. EDPW-21
 Colle. R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>11-18-15 1425</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>17.89</u> ft	Gallons per well volume	<u>1.1</u>
Top of casing to bottom	<u>34.9</u> ft	Total gallons evacuated	<u>5.3</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	_____	Elevation of well water	_____
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>18.1</u>	<u>5.48</u>	<u>51.6 µs</u>	_____	_____
<u>18.1</u>	<u>5.49</u>	<u>50.9 µs</u>	_____	_____
<u>18.2</u>	<u>5.39</u>	<u>54.0 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

GROUNDWATER SAMPLING DATA FORM El Dorado Chemical Company

FIELD LOG

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

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>11-16-15 1405</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>7.13</u> ft	Gallons per well volume	<u>6.5</u>
Top of casing to bottom	<u>17.2</u> ft	Total gallons evacuated	<u>19.5</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>11-18-15 1020</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>19.4</u>	<u>5.58</u>	<u>78.0 μS</u>	_____	_____
<u>19.0</u>	<u>5.68</u>	<u>72.8 μS</u>	_____	_____
<u>18.8</u>	<u>5.70</u>	<u>74.2 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

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	<u>11-16-15 1340</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>29.26</u> ft	Gallons per well volume	<u>3.5</u>
Top of casing to bottom	<u>34.7</u> ft	Total gallons evacuated	<u>14.5</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>11-18-15 1010</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>19.5</u>	<u>4.07</u>	<u>258.8 μs</u>	_____	_____
<u>18.9</u>	<u>3.96</u>	<u>255.3 μs</u>	_____	_____
<u>18.6</u>	<u>4.04</u>	<u>246.6 μs</u>	_____	_____

GENERAL INFORMATION

Weather conditions at time of sampling: CLOUDY / 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

GROUNDWATER SAMPLING DATA FORM

El Dorado Chemical Company

FIELD LOG

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

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>11-16-15 1320</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>5.46</u> ft	Gallons per well volume	<u>9.0</u>
Top of casing to bottom	<u>19.3</u> ft	Total gallons evacuated	<u>27.0</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>11-18-15 0955</u>	Elevation of well water	<u>1</u>
Top of casing to water level	_____ ft	Method of Sampling	<u>PVC BAILER</u>

SAMPLE DATA

Temperature [°C]	pH	Conductivity [µS]	Dissolved Oxygen [mg/l]	Turbidity [NT]
<u>21.4</u>	<u>5.04</u>	<u>131.3 µS</u>	_____	_____
<u>21.7</u>	<u>4.73</u>	<u>132.6 µS</u>	_____	_____
<u>21.9</u>	<u>4.08</u>	<u>130.7 µS</u>	_____	_____

GENERAL INFORMATION

Weather conditions at time of sampling: CLOUDY/COOL
 Sample characteristics: CHEMICAL
 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

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	<u>11-16-15 1305</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>9.11</u> ft	Gallons per well volume	<u>5.9</u>
Top of casing to bottom	<u>18.2</u> ft	Total gallons evacuated	<u>17.7</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>11-18-15 0935</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>21.4</u>	<u>4.96</u>	<u>461.40</u>	_____	_____
<u>21.6</u>	<u>5.14</u>	<u>425.4 µS</u>	_____	_____
<u>21.8</u>	<u>5.15</u>	<u>432.8 µS</u>	_____	_____

GENERAL INFORMATION

Weather conditions at time of sampling: CLOUDY/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

GROUNDWATER SAMPLING DATA FORM

El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. EC MW 11
 Colle. R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>11-16-15 1235</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>12.00</u> ft	Gallons per well volume	<u>5.1</u>
Top of casing to bottom	<u>19.8</u> ft	Total gallons evacuated	<u>15.3</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>11-18-15 0915</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>21.7</u>	<u>4.59</u>	<u>756 uS</u>	_____	_____
<u>22.1</u>	<u>4.31</u>	<u>740 uS</u>	_____	_____
<u>22.3</u>	<u>4.13</u>	<u>705 uS</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

GROUNDWATER SAMPLING DATA FORM

El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. ECMW10
 Colle. R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>11-16-75 1215</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>15.42</u> ft	Gallons per well volume	<u>4.7</u>
Top of casing to bottom	<u>22.6</u> ft	Total gallons evacuated	<u>14.1</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>11-18-75 0905</u>	Elevation of well water	_____
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>21.0</u>	<u>4.83</u>	<u>875 µS</u>	_____	_____
<u>21.4</u>	<u>4.41</u>	<u>752 µS</u>	_____	_____
<u>21.6</u>	<u>4.22</u>	<u>763 µS</u>	_____	_____

GENERAL INFORMATION

Weather conditions at time of sampling: CLOUDY, 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

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	<u>11-16-15 1140</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>12.22</u> ft	Gallons per well volume	<u>34.5 @ 1.5</u>
Top of casing to bottom	<u>30.0</u> ft	Total gallons evacuated	<u>34.5</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>11-18-15 0845</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>20.0</u>	<u>5.09</u>	<u>2501 μs</u>	_____	_____
<u>19.9</u>	<u>5.30</u>	<u>2243 μs</u>	_____	_____
<u>19.9</u>	<u>5.36</u>	<u>2213 μs</u>	_____	_____

GENERAL INFORMATION

Weather conditions at time of sampling: CLOUDY, 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

GROUNDWATER SAMPLING DATA FORM

El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. ECMW 8 + DUF
 Colle. R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>11-16-15 11 25</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>7.73</u> ft	Gallons per well volume	<u>14.4</u>
Top of casing to bottom	<u>29.9</u> ft	Total gallons evacuated	<u>43.2</u>
Water level after evacuation		Elevation, Top of casing	
Sampling: Date/Time	<u>11-18-15 0840</u>	Elevation of well water	<u>1</u>
Top of casing to water level		Method of Sampling	<u>PVC BAILER</u>

SAMPLE D.

Temperature [°C]	pH	Conductivity [µS]	Diss. Oxygen [mg/l]	Turbidity [NT]
<u>19.8</u>	<u>3.78</u>	<u>26.77 MS</u>		
<u>19.6</u>	<u>3.72</u>	<u>25.24 MS</u>		
<u>19.5</u>	<u>3.70</u>	<u>25.29 MS</u>		

GENERAL INFORMATION

Weather conditions at time of sampling: CLOUDY, 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

GROUNDWATER SAMPLING DATA FORM El Dorado Chemical Company

FIELD LOG

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

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>11-16-15 0920</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>22.77</u> ft	Gallons per well volume	<u>10.5</u>
Top of casing to bottom	<u>23.9</u> ft	Total gallons evacuated	<u>31.5</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>11-18-15 0835</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>20.1</u>	<u>5.80</u>	<u>84.3 MS</u>	_____	_____
<u>20.7</u>	<u>5.46</u>	<u>25.02 MS</u>	_____	_____
<u>20.8</u>	<u>5.31</u>	<u>23.72 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

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 11-16-15 1110 Method of Evacuation ELEC. PUMP
 Top of casing to water level 5.03 ft Gallons per well volume 11.0
 Top of casing to bottom 22.0 ft Total gallons evacuated 33.0
 Water level after evacuation _____ ft Elevation, Top of casing _____
 Sampling: Date/Time 11-18-15 0815 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>20.5</u>	<u>4.87</u>	<u>37.04 MS</u>	_____	_____
<u>20.5</u>	<u>4.05</u>	<u>34.42 MS</u>	_____	_____
<u>20.7</u>	<u>3.96</u>	<u>32.14 MS</u>	_____	_____

GENERAL INFORMATION

Weather conditions at time of sampling: CLOUDY, 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

GROUNDWATER SAMPLING DATA FORM

El Dorado Chemical Company

FIELD LOG

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

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>11-18-15 0845</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>4.35</u> ft	Gallons per well volume	<u>8.7</u>
Top of casing to bottom	<u>17.7</u> ft	Total gallons evacuated	<u>26.1</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>11-18-15 0805</u>	Elevation of well water	_____
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>26.7</u>	<u>6.02</u>	<u>646 μs</u>	_____	_____
<u>20.7</u>	<u>5.77</u>	<u>566 μs</u>	_____	_____
<u>20.6</u>	<u>5.58</u>	<u>558 μs</u>	_____	_____

GENERAL INFORMATION

Weather conditions at time of sampling: Cloudy/Cool

Sample characteristics: Clean

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

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

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>11-16-15 0905</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>10.24</u> ft	Gallons per well volume	<u>7.7</u>
Top of casing to bottom	<u>22.1</u> ft	Total gallons evacuated	<u>23.1</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	<u>11-18-15 0825</u>	Elevation of well water	_____
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>19.8</u>	<u>4.52</u>	<u>6.90 MS</u>	_____	_____
<u>20.4</u>	<u>4.09</u>	<u>6.77 MS</u>	_____	_____
<u>20.5</u>	<u>4.04</u>	<u>6.77 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

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	<u>11-18-15 1205</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>12.82</u> ft	Gallons per well volume	<u>9.5</u>
Top of casing to bottom	<u>27.1</u> ft	Total gallons evacuated	<u>28.5</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	_____	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>20.1</u>	<u>6.80</u>	<u>279.1 us</u>	_____	_____
<u>19.3</u>	<u>6.21</u>	<u>273.2 us</u>	_____	_____
<u>19.0</u>	<u>6.11</u>	<u>268.2 us</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

GROUNDWATER SAMPLING DATA FORM

El Dorado Chemical Company

FIELD LOG

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

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>11-18-15 1220</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>0.00</u> ft	Gallons per well volume	<u>13.1</u>
Top of casing to bottom	<u>20.2</u> ft	Total gallons evacuated	<u>29.3</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	_____	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[^{mg/l}]	Turbidity [NT]
<u>18.4</u>	<u>6.29</u>	<u>295.9 μS</u>	_____	_____
<u>18.6</u>	<u>5.93</u>	<u>292.3 μS</u>	_____	_____
<u>18.4</u>	<u>5.84</u>	<u>27.6 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

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	<u>11-18-15 12:40</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>12.56</u> ft	Gallons per well volume	<u>6.2</u>
Top of casing to bottom	<u>22.1</u> ft	Total gallons evacuated	<u>18.6</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	_____	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>18.3</u>	<u>5.57</u>	<u>48.8 µS</u>	_____	_____
<u>19.4</u>	<u>5.39</u>	<u>42.6 µS</u>	_____	_____
<u>19.7</u>	<u>5.57</u>	<u>41.6 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

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

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

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>11-18-15 1255</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>8.06</u> ft	Gallons per well volume	<u>11.5</u>
Top of casing to bottom	<u>79.8</u> ft	Total gallons evacuated	<u>34.5</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	_____	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>18.9</u>	<u>5.96</u>	<u>159.0 μS</u>	_____	_____
<u>19.3</u>	<u>6.04</u>	<u>161.3 μS</u>	_____	_____
<u>18.8</u>	<u>6.07</u>	<u>144.9 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

GROUNDWATER SAMPLING DATA FORM El Dorado Chemical Company

FIELD LOG

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

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>11-18-15 1310</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>3.91</u> ft	Gallons per well volume	<u>8.5</u>
Top of casing to bottom	<u>17.0</u> ft	Total gallons evacuated	<u>25.5</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	_____	Elevation of well water	_____
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>20.3</u>	<u>6.08</u>	<u>73.1 µs</u>	_____	_____
<u>20.8</u>	<u>5.48</u>	<u>71.4 µs</u>	_____	_____
<u>20.3</u>	<u>5.14</u>	<u>76.8 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

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 11-18-15 1320 Method of Evacuation ELEC. PUMP
 Top of casing to water level 6.06 ft Gallons per well volume 8.9
 Top of casing to bottom 19.8 ft Total gallons evacuated 26.7
 Water level after evacuation _____ ft Elevation, Top of casing _____
 Sampling: Date/Time _____ 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>19.5</u>	<u>4.95</u>	<u>1094 us</u>	_____	_____
<u>20.6</u>	<u>4.72</u>	<u>999 us</u>	_____	_____
<u>20.8</u>	<u>4.18</u>	<u>937 us</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

GROUNDWATER SAMPLING DATA FORM El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. ECMLW-12
 Colle. R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>11-18-15 1335</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>5.86</u> ft	Gallons per well volume	<u>9.1</u>
Top of casing to bottom	<u>19.9</u> ft	Total gallons evacuated	<u>27.3</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	_____	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>21.1</u>	<u>5.66</u>	<u>791 μs</u>	_____	_____
<u>21.7</u>	<u>5.72</u>	<u>673 μs</u>	_____	_____
<u>21.8</u>	<u>5.73</u>	<u>654 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

GROUNDWATER SAMPLING DATA FORM

El Dorado Chemical Company

FIELD LOG

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

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>11-18-15 1345</u>	Method of Evacuation	<u>ELEC PUMP</u>
Top of casing to water level	<u>4.60</u> ft	Gallons per well volume	<u>9.1</u>
Top of casing to bottom	<u>61.5</u> ft	Total gallons evacuated	<u>27.3</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	_____	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>17.7°</u>	<u>6.41</u>	<u>94.0 µS</u>	_____	_____
<u>17.4°</u>	<u>6.32</u>	<u>81.7 µS</u>	_____	_____
<u>17.4°</u>	<u>6.13</u>	<u>82.0 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

GROUNDWATER SAMPLING DATA FORM

El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. ECMW-28
 Colle. R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>11-18-15 1410</u>		Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>30.11</u>	ft	Gallons per well volume	<u>3.9</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			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>17.2</u>	<u>6.71</u>	<u>63.1 μs</u>		
<u>17.4</u>	<u>6.23</u>	<u>62.8 μs</u>		
<u>17.3</u>	<u>6.08</u>	<u>62.8 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

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	<u>5-22-15 1255</u>	Method of Evacuation	<u>ELEC. PUMP</u>
Top of casing to water level	<u>27.63</u> ft	Gallons per well volume	<u>3.2</u>
Top of casing to bottom	<u>54.4</u> ft	Total gallons evacuated	<u>9.6</u>
Water level after evacuation	_____ ft	Elevation, Top of casing	_____
Sampling: Date/Time	_____	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[mg/l]	Turbidity [NT]
<u>19.2</u>	<u>6.01</u>	<u>74.1 μS</u>	_____	_____
<u>18.6</u>	<u>5.64</u>	<u>64.3 μS</u>	_____	_____
<u>18.5</u>	<u>5.61</u>	<u>67.3 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



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

27 May 2015

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

Project: Groundwater Sample(s)
Project Number: May 2015
SDG Number: 1505319

Enclosed are the results of analyses for samples received by the laboratory on 20-May-15 13:50. 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 blue ink that reads "Norma James / Teresa Coins".

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

This document is intended only for the use of the person(s) to whom it is expressly addressed. This document may contain information that is confidential and legally privileged. If you are not the intended recipient, you are notified that any disclosure, distribution, or copying of this document is strictly prohibited. If you have received this document in error, please destroy.

27 May 2015



David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: May 2015
Date Received: 20-May-15 13:50

ANALYTICAL RESULTS

Lab Number: 1505319-01
Sample Name: ECMW-5
Date/Time Collected: 5/20/15 7:10
Sample Matrix: Water

Table with 7 columns: Anions, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Rows include Sulfate as SO4 (54.5 mg/L), Nitrate as N (44.6 mg/L), and Ammonia as N (1.27 mg/L).

ANALYTICAL RESULTS

Lab Number: 1505319-02
Sample Name: ECMW-6
Date/Time Collected: 5/20/15 7:25
Sample Matrix: Water

Table with 7 columns: Anions, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Rows include Sulfate as SO4 (39.8 mg/L), Nitrate as N (2960 mg/L), and Ammonia as N (2.55 mg/L).

ANALYTICAL RESULTS

Lab Number: 1505319-03
Sample Name: ECMW-4
Date/Time Collected: 5/20/15 7:50
Sample Matrix: Water

Table with 7 columns: Anions, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Rows include Sulfate as SO4 (915 mg/L), Nitrate as N (1.60 mg/L), and Ammonia as N (3.50 mg/L).

27 May 2015



David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: May 2015
Date Received: 20-May-15 13:50

ANALYTICAL RESULTS

Lab Number: 1505319-04
Sample Name: ECMW-7
Date/Time Collected: 5/20/15 7:40
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	866		5/21/15 11:31	A505246	300.0, 2.1-1993
Nitrate as N	mg/L	63.6		5/21/15 11:31	A505246	300.0, 2.1-1993
<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	6.10		5/21/15 8:45	A505266	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1505319-05
Sample Name: ECMW-8
Date/Time Collected: 5/20/15 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	470		5/21/15 11:54	A505246	300.0, 2.1-1993
Nitrate as N	mg/L	791		5/21/15 11:54	A505246	300.0, 2.1-1993
<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	3.15		5/21/15 8:45	A505266	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1505319-06
Sample Name: ECMW-9
Date/Time Collected: 5/20/15 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	540		5/22/15 9:38	A505246	300.0, 2.1-1993
Nitrate as N	mg/L	31.9		5/21/15 12:18	A505246	300.0, 2.1-1993
<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	4.13		5/21/15 8:45	A505266	4500-NH3 B,D,C-1997

27 May 2015



David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: May 2015
Date Received: 20-May-15 13:50

ANALYTICAL RESULTS

Lab Number: 1505319-07
Sample Name: ECMW-10
Date/Time Collected: 5/20/15 8:30
Sample Matrix: Water

Table with 7 columns: Anions, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Rows include Sulfate as SO4 (148 mg/L), Nitrate as N (50.0 mg/L), and Ammonia as N (1.91 mg/L).

ANALYTICAL RESULTS

Lab Number: 1505319-08
Sample Name: ECMW-11
Date/Time Collected: 5/20/15 8:45
Sample Matrix: Water

Table with 7 columns: Anions, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Rows include Sulfate as SO4 (134 mg/L), Nitrate as N (28.8 mg/L), and Ammonia as N (3.12 mg/L).

ANALYTICAL RESULTS

Lab Number: 1505319-09
Sample Name: ECMW-16
Date/Time Collected: 5/20/15 9:10
Sample Matrix: Water

Table with 7 columns: Anions, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Rows include Sulfate as SO4 (12.9 mg/L), Nitrate as N (8.65 mg/L), and Ammonia as N (6.20 mg/L).

27 May 2015



David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: May 2015
Date Received: 20-May-15 13:50

ANALYTICAL RESULTS

Lab Number: 1505319-10
Sample Name: ECMW-17
Date/Time Collected: 5/20/15 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	18.7		5/21/15 16:13	A505246	300.0, 2.1-1993
Nitrate as N	mg/L	10.4		5/21/15 16:13	A505246	300.0, 2.1-1993

<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	6.53		5/21/15 8:45	A505266	4500-NH3 B.D.C-1997

ANALYTICAL RESULTS

Lab Number: 1505319-11
Sample Name: ECMW-18
Date/Time Collected: 5/20/15 9:30
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	5.63		5/21/15 15:03	A505246	300.0, 2.1-1993
Nitrate as N	mg/L	0.295		5/21/15 15:03	A505246	300.0, 2.1-1993

ANALYTICAL RESULTS

Lab Number: 1505319-12
Sample Name: DUP
Date/Time Collected: 5/20/15 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	149		5/22/15 10:49	A505246	300.0, 2.1-1993
Nitrate as N	mg/L	49.1		5/21/15 15:26	A505246	300.0, 2.1-1993

<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	1.33		5/21/15 8:45	A505266	4500-NH3 B.D.C-1997

27 May 2015



David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: May 2015
Date Received: 20-May-15 13:50

QUALITY CONTROL RESULTS

Anions -- Batch: A505246 (Water)

Prepared: 21-May-15 09:22 By: MB -- Analyzed: 21-May-15 18:20 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	99.1% / NA	103% / 103%		0.354%	
Sulfate as SO4	<0.500 mg/L	96.2% / NA	98.6% / 97.8%		0.552%	

Wet Chemistry -- Batch: A505266 (Water)

Prepared: 21-May-15 08:45 By: RJH -- Analyzed: 21-May-15 08:45 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	117% / NA	118% / 119%		1.24%	

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.

A handwritten signature in blue ink that reads "Norma James / Teresa Coins".

Reviewed by: _____
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:			
EI Dorado Chemical Inc.		EI Dorado Chemical Inc.		Groundwater Samples		1 Day (100%)		1. Cool, 4 Degrees Centigrade			
4500 Northwest Ave.		P.O. Box 231				2 Day (50%)		2. Sulfuric Acid (H ₂ SO ₄), pH < 2			
EI Dorado, AR 71731		EI Dorado, AR 71731		Reporting Information		3 Day (25%)		3. Nitric Acid (HNO ₃), pH < 2			
Attn: David Sartain		Telephone: 870-863-1484		5 Day (Routine)		TEST PARAMETERS		4. Thiosulfate for Dechlorination			
		Fax: 870-863-1499		Preservative Code:		1		5. Hydrochloric Acid(HCl)			
		Email: dsartain@edc-ark.com; lmarcella@env-ngt.com		Bottle Type:		P		6. Sodium Hydroxide (NaOH), pH > 12			
Sampler(s) Signature		Sampler(s) Printed		SAMPLE IDENTIFICATION/ DESCRIPTION		Nitrate, Sulfate		Ammonia			
R. Dunbar EMS Inc		R. Dunbar EMS Inc									
Field Number	SAMPLE COLLECTION Dates	Times	Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION		Nitrate, Sulfate	Ammonia	Arkansas Analytical Work Order Number:
1	5-20-15	0710	X		2	Water	ECMW-ECMW-5		X	X	1505319-
2		0725	X		2	Water	ECMW-ECMW-6		X	X	02
3		0250	X		2	Water	ECMW-ECMW-7		X	X	03
4		0240	X		2	Water	ECMW-ECMW-7		X	X	04
5		0845	X		2	Water	ECMW-ECMW-8		X	X	05
6		0815	X		2	Water	ECMW-ECMW-9		X	X	06
7		0830	X		2	Water	ECMW-ECMW-10		X	X	07
8		0845	X		2	Water	ECMW-ECMW-11		X	X	08
9		0910	X		2	Water	ECMW-ECMW-14		X	X	09
10		0935	X		2	Water	ECMW-ECMW-15		X	X	10
1. Relinquished by: (Signature)		Date/Time		2. Received by: (Signature)		Date/Time		3. Relinquished by: (Signature)		Date/Time	
R. Dunbar EMS Inc		5-20-15		R. Dunbar EMS Inc		12-30		Edna Ylan		5-20-15, 1350	
4. Received by lab: (Signature)		Date/Time		5. Received by lab: (Signature)		Date/Time		6. Received by lab: (Signature)		Date/Time	
Sydney Adams				Sydney Adams				Sydney Adams			
SAMPLE CONDITION UPON RECEIPT IN LAB										REMARKS / SAMPLE COMMENTS	
1. CUSTODY SEALS: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No											
2. CONTAINERS CORRECT: <input type="checkbox"/> Yes <input type="checkbox"/> No											
3. COC/LABELS AGREE: <input type="checkbox"/> Yes <input type="checkbox"/> No											
4. RECEIVED ON ICE: <input type="checkbox"/> Yes <input type="checkbox"/> No											
5. TEMPERATURE ON RECEIPT: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No											
6. TEMPERATURE GUN ID: HHT #2											
FOR COMPLETION BY LAB ONLY											



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. 4500 Northwest Ave. El Dorado, AR 71731		El Dorado Chemical Inc. P.O. Box 231 El Dorado, AR 71731		Groundwater Samples		1 Day (100%) 2 Day (50%) 3 Day (25%)		1. Cool, 4 Degrees Centigrade 2. Sulfuric Acid (H ₂ SO ₄), pH < 2 3. Nitric Acid (HNO ₃), pH < 2 4. Thiosulfate for Dechlorination 5. Hydrochloric Acid (HCl) 6. Sodium Hydroxide (NaOH), pH > 12					
Attn: David Sartain		Telephone: 870-863-1484 Fax: 870-863-1499		Reporting Information		5 Day (Routine)		TEST PARAMETERS					
Email: dsartain@cdc-ark.com; msarcolla@env-mgt.com		Preservative Code: P		Bottle Type: P		1		1,2		P		Arkansas Analytical Work Order Number: 1505319-12	
Sampler(s) Signature		Sampler(s) Printed		SAMPLE IDENTIFICATION/ DESCRIPTION		Nitrate, Sulfate		Ammonia					
Field Number	SAMPLE COLLECTION Dates	Times	Grab	Comp	Number of Bottles	Sample Mark	SAMPLE IDENTIFICATION/ DESCRIPTION		TEST PARAMETERS		REMARKS / SAMPLE COMMENTS		
11	5-20-15	09:30	X		2	Water	ECMW- ECNR2-18						
12	5-20-15	12:00	X		2	Water	ECMW- DUP						
			X		2	Water	ECMW-						
			X		2	Water	ECMW-						
			X		2	Water	ECMW-						
			X		2	Water	ECMW-						
			X		2	Water	ECMW-						
			X		2	Water	ECMW-						
1. Relinquished by: (Signature) <i>R. Sarban</i>		Date/Time 5-25-15		2. Received by: (Signature) <i>David Sartain</i>		3. RECEIVED ON RECEIPT:		1. CUSTODY SEALS:		2. CONTAINERS CORRECT:		3. COC/LABELS AGREE:	
3. Relinquished by: (Signature) <i>David Sartain</i>		Date/Time 5-20-15		4. Received by lab.: (Signature) <i>Sylvia Adams</i>		4. RECEIVED ON ICE:		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		5. TEMPERATURE ON RECEIPT:		13°C	
		10:30				6. TEMPERATURE GUN ID:		HHT #2					
		1350				FOR COMPLETION BY LAB ONLY							

REVISED REPORT



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

24 June 2015

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

RE: Groundwater Sample(s)
Project Number: May 2015
SDG Number: 1505319

Enclosed are the results of analyses for samples received by the laboratory on 20-May-15 13:50. 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 blue ink that reads "Norma James / Teresa Coins".

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

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24 June 2015

David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: May 2015
Date Received: 20-May-15 13:50



REVISED REPORT

CASE NARRATIVE

Sample Delivery Group – 1505319

Revised Analytical and/or Quality Control Results are Discussed Below:

At client request, samples 1505319-02, -04, and -05 were validated for Ammonia. In the validation process, an error was discovered in the data entry process. The amended/revised results are on the following report page(s).

24 June 2015



David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: May 2015
Date Received: 20-May-15 13:50

REVISED REPORT

ANALYTICAL RESULTS

Lab Number: 1505319-02
Sample Name: ECMW-6
Date/Time Collected: 5/20/15 7:25
Sample Matrix: Water

Table with 7 columns: Wet Chemistry, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Row 1: Ammonia as N, mg/L, 2550, 5/21/15 8:45, A505266, 4500-NH3 B.D.C-1997

ANALYTICAL RESULTS

Lab Number: 1505319-04
Sample Name: ECMW-7
Date/Time Collected: 5/20/15 7:40
Sample Matrix: Water

Table with 7 columns: Wet Chemistry, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Row 1: Ammonia as N, mg/L, 61.0, 5/21/15 8:45, A505266, 4500-NH3 B.D.C-1997

ANALYTICAL RESULTS

Lab Number: 1505319-05
Sample Name: ECMW-8
Date/Time Collected: 5/20/15 8:05
Sample Matrix: Water

Table with 7 columns: Wet Chemistry, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Row 1: Ammonia as N, mg/L, 158, 5/21/15 8:45, A505266, 4500-NH3 B.D.C-1997

QUALITY CONTROL RESULTS

Wet Chemistry -- Batch: A505266 (Water)

Prepared: 21-May-15 08:45 By: RJH -- Analyzed: 21-May-15 08:45 By: RJH

Table with 7 columns: Analyte, BLK, LCS / LCSD, MS / MSD, Dup, RPD, Qualifiers. Row 1: Ammonia as N, <0.50 mg/L, 117% / NA, 118% / 119%, Dup, 1.24%

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: [Signature]
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:			
EI Dorado Chemical Inc.		EI Dorado Chemical Inc.		Groundwater Samples		1 Day (100%)		1. Cool, 4 Degrees Centigrade			
4500 Northwest Ave.		P.O. Box 231				2 Day (50%)		2. Sulfuric Acid (H ₂ SO ₄), pH < 2			
EI Dorado, AR 71731		EI Dorado, AR 71731		Reporting Information		3 Day (25%)		3. Nitric Acid (HNO ₃), pH < 2			
Attn: David Sartain		Telephone: 870-863-1484		5 Day (Routine)		TEST PARAMETERS		4. Thiosulfate for Dechlorination			
Email: dsartain@edc-ark.com; lmarcella@gen-wg.com		Fax: 870-863-1499		Preservative Code: P		Bottle Type Code		5. Hydrochloric Acid(HCl)			
Bottle Type:		1		1,2				6. Sodium Hydroxide (NaOH), pH > 12			
Sampler(s) Signature		Sampler(s) Printed		SAMPLE IDENTIFICATION/ DESCRIPTION		Nitrate, Sulfate		Ammonia			
R. Dunbar EMS Inc		R. Dunbar EMS Inc									
Field Number	SAMPLE COLLECTION Dates	Times	Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION		Nitrate, Sulfate	Ammonia	Arkansas Analytical Work Order Number:
1	5-20-15	0710	X		2	Water	ECMW-ECMW-5		X	X	1505319-
2		0725	X		2	Water	ECMW-ECMW-6		X	X	02
3		0250	X		2	Water	ECMW-ECMW-7		X	X	03
4		0240	X		2	Water	ECMW-ECMW-7		X	X	04
5		0845	X		2	Water	ECMW-ECMW-8		X	X	05
6		0815	X		2	Water	ECMW-ECMW-9		X	X	06
7		0830	X		2	Water	ECMW-ECMW-10		X	X	07
8		0845	X		2	Water	ECMW-ECMW-11		X	X	08
9		0910	X		2	Water	ECMW-ECMW-14		X	X	09
10		0935	X		2	Water	ECMW-ECMW-15		X	X	10
1. Relinquished by: (Signature)		Date/Time		2. Received by: (Signature)		Date/Time		SAMPLE CONDITION UPON RECEIPT IN LAB		REMARKS / SAMPLE COMMENTS	
R. Dunbar EMS Inc		5-20-15		R. Dunbar EMS Inc		12-30		1. CUSTODY SEALS: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
3. Relinquished by: (Signature)		Date/Time		4. Received by lab: (Signature)		Date/Time		2. CONTAINERS CORRECT: <input type="checkbox"/> Yes <input type="checkbox"/> No			
Ednae Ylan		5-20-15, 1350		Sydney Adams		1350		3. COC/LABELS AGREE: <input type="checkbox"/> Yes <input type="checkbox"/> No			
								4. RECEIVED ON ICE: <input type="checkbox"/> Yes <input type="checkbox"/> No			
								5. TEMPERATURE ON RECEIPT: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
								6. TEMPERATURE GUN ID: HHT #2			
								FOR COMPLETION BY LAB ONLY			



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. 4500 Northwest Ave. El Dorado, AR 71731		El Dorado Chemical Inc. P.O. Box 231 El Dorado, AR 71731		Groundwater Samples		1 Day (100%) 2 Day (50%) 3 Day (25%)		1. Cool, 4 Degrees Centigrade 2. Sulfuric Acid (H ₂ SO ₄), pH < 2 3. Nitric Acid (HNO ₃), pH < 2 4. Thiosulfate for Dechlorination 5. Hydrochloric Acid (HCl) 6. Sodium Hydroxide (NaOH), pH > 12					
Attn: David Sartain		Telephone: 870-863-1484 Fax: 870-863-1499		Reporting Information		5 Day (Routine)		TEST PARAMETERS					
Email: dsartain@cdc-ark.com; msarcolla@env-mgt.com		Preservative Code: P		Bottle Type: P		1		1,2		P		P	
Sampler(s) Signature		Sampler(s) Printed		SAMPLE IDENTIFICATION/ DESCRIPTION		Nitrate, Sulfate		Ammonia		Ammonia		Ammonia	
Field Number	SAMPLE COLLECTION Dates	Times	Grab	Comp	Number of Bottles	Sample Mark	SAMPLE IDENTIFICATION/ DESCRIPTION		TEST PARAMETERS		REMARKS / SAMPLE COMMENTS		
11	5-20-15	09:30	X		2	Water	ECMW- ECNR2-18		11		1505319-		
12	5-20-15	12:00	X		2	Water	ECMW- DUF		12				
			X		2	Water	ECMW-						
			X		2	Water	ECMW-						
			X		2	Water	ECMW-						
			X		2	Water	ECMW-						
			X		2	Water	ECMW-						
			X		2	Water	ECMW-						
1. Relinquished by: (Signature) <i>R. S. Sartain</i>		Date/Time 5-25-15		2. Received by: (Signature) <i>David Sartain</i>		Date/Time 10:30		3. SAMPLE CONDITION UPON RECEIPT IN LAB		1. CUSTODY SEALS: <input checked="" type="checkbox"/> Yes ___ No			
3. Relinquished by: (Signature) <i>David Sartain</i>		Date/Time 5-20-15		4. Received by lab.: (Signature) <i>Sydney Adams</i>		Date/Time 13:50		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: 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

14 September 2015

Eddie Pearson
El Dorado Chemical Inc.
P.O.Box 231
El Dorado, AR 71731

Project: Groundwater Sample(s)
Project Number: September 2015
SDG Number: 1509101

Enclosed are the results of analyses for samples received by the laboratory on 09-Sep-15 09:47. 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	2.0°C

Sincerely,

A handwritten signature in blue ink that reads "Norma James / Teresa Coins".

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

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14 September 2015



Eddie Pearson
El Dorado Chemical Inc.
P.O.Box 231
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: September 2015
Date Received: 09-Sep-15 09:47

ANALYTICAL RESULTS

Lab Number: 1509101-01
Sample Name: ECMW #14
Date/Time Collected: 9/8/15 10:35
Sample Matrix: Water

Table with 7 columns: Anions, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Rows for Sulfate as SO4 and Nitrate as N.

Table with 7 columns: Wet Chemistry, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Row for Ammonia as N.

QUALITY CONTROL RESULTS

Anions -- Batch: A509154 (Water)
Prepared: 10-Sep-15 08:38 By: MB -- Analyzed: 10-Sep-15 17:40 By: Mel

Table with 7 columns: Analyte, BLK, LCS / LCSD, MS / MSD, Dup, RPD, Qualifiers. Rows for Nitrate as N and Sulfate as SO4.

Wet Chemistry -- Batch: A509229 (Water)
Prepared: 11-Sep-15 09:00 By: RJH -- Analyzed: 11-Sep-15 09:00 By: RJH

Table with 7 columns: Analyte, BLK, LCS / LCSD, MS / MSD, Dup, RPD, Qualifiers. Row for Ammonia as N.

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: [Signature]
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:			
EI Dorado Chemical Inc. 4500 Northwest Ave. EI Dorado, AR 71731		EI Dorado Chemical Inc. P.O. Box 231 EI Dorado, AR 71731		Reporting Information Telephone: 870-863-1457 Fax: 870-863-1405 Email: EPearson@edc-ar.com		1 Day (100%) 2 Day (50%) 3 Day (25%)		1. Cool, 4 Degrees Centigrade 2. Sulfuric Acid (H ₂ SO ₄), pH < 2 3. Nitric Acid (HNO ₃), pH < 2 4. Thiosulfate for Dechlorination 5. Hydrochloric Acid(HCl) 6. Sodium Hydroxide (NaOH), pH > 12			
Attn: Eddie Pearson		Attn: Accounts Payable		R. DORRAN EMS INC.		5 Day (Routine)* Preservative Code: Bottle Type:		TEST PARAMETERS			
Sampler(s) Signature <i>R. Dorran</i>		Sampler(s) Printed R. DORRAN		SAMPLE IDENTIFICATION/ DESCRIPTION EMC-14		SULFATE		NITRATE		AMMONIA	
Field Number	SAMPLE COLLECTION Date/s	Time/s	Grab	Comp	Number of Sample Boilies Matrix	SAMPLE		TEST PARAMETERS		Bottle Type Code	
1	9-8-15	1035			2	EMC-14	✓	✓	✓	1509101	Ark 002 01
1. Relinquished by: (Signature) <i>R. Dorran</i>		Date/Time 9-8-15 11:30		2. Received by: (Signature) <i>Allen Paker</i>		SAMPLE CONDITION UPON RECEIPT IN LAB 1. CUSTODY SEALS: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 2. CONTAINERS CORRECT: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 3. COC/LABELS AGREE: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 4. RECEIVED ON ICE: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 5. TEMPERATURE ON RECEIPT: 2°C 6. TEMPERATURE GUN ID: HHT#2 FOR COMPLETION BY LAB ONLY		REMARKS / SAMPLE COMMENTS P.O. Number -			
3. Relinquished by: (Signature) <i>Allen Paker</i>		Date/Time 9-9-15 0947		4. Received by lab: (Signature) <i>Juanita Johnson</i>							

LABORATORY REQUEST FOR ANALYSIS

Contact: Lauren Marcella Date: 05/07/2015 Phone: (225) 753-3631

Project Name: El Dorado Chemical Groundwater Monitoring Job Location: El Dorado, AR

Deliver Containers: To facility as usual

Laboratory Contact: Sydney James Randles Laboratory: Arkansas Analytical, Little Rock, AR

Phone: 501 455 3233 Fax: 501 455 6118

Parameter	Method	Matrix	Number of Samples
Sulfate as SO ₄	300.0/9056A	Water	14
Nitrate as N	300.0/9056A	Water	14
Ammonia as N	4500-NH3D	Water	14



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

25 November 2015

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

Project: Groundwater Sample(s)
Project Number: November 2015
SDG Number: 1511276

Enclosed are the results of analyses for samples received by the laboratory on 18-Nov-15 13:00. 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	4.0°C

Sincerely,

A handwritten signature in blue ink that reads "Norma James / Teresa Coins".

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

This document is intended only for the use of the person(s) to whom it is expressly addressed. This document may contain information that is confidential and legally privileged. If you are not the intended recipient, you are notified that any disclosure, distribution, or copying of this document is strictly prohibited. If you have received this document in error, please destroy.

David Sartain
 El Dorado Chemical Inc.
 4500 North West Ave.
 El Dorado, AR 71731
 Project: Groundwater Sample(s)
 Project Number: November 2015
 Date Received: 18-Nov-15 13:00

ANALYTICAL RESULTS

Lab Number: 1511276-01
 Sample Name: ECMW-4
 Date/Time Collected: 11/18/15 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	722		11/23/15 11:00	A511246	300.0, 2.1-1993
Nitrate as N	mg/L	0.332		11/18/15 18:46	A511246	300.0, 2.1-1993
<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	0.530		11/23/15 9:00	A511292	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1511276-02
 Sample Name: ECMW-5
 Date/Time Collected: 11/18/15 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	61.2		11/18/15 19:10	A511246	300.0, 2.1-1993
Nitrate as N	mg/L	27.0		11/18/15 19:10	A511246	300.0, 2.1-1993
<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	0.730		11/23/15 9:00	A511292	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1511276-03
 Sample Name: ECMW-6
 Date/Time Collected: 11/18/15 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	40.2		11/23/15 11:24	A511246	300.0, 2.1-1993
Nitrate as N	mg/L	3930		11/18/15 19:33	A511246	300.0, 2.1-1993
<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	2280		11/23/15 9:00	A511292	4500-NH3 B,D,C-1997

David Sartain
 El Dorado Chemical Inc.
 4500 North West Ave.
 El Dorado, AR 71731
 Project: Groundwater Sample(s)
 Project Number: November 2015
 Date Received: 18-Nov-15 13:00

ANALYTICAL RESULTS

Lab Number: 1511276-04
 Sample Name: ECMW-7
 Date/Time Collected: 11/18/15 8:35
 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	758		11/18/15 19:57	A511246	300.0, 2.1-1993
Nitrate as N	mg/L	104		11/18/15 19:57	A511246	300.0, 2.1-1993
<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	66.2		11/23/15 9:00	A511292	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1511276-05
 Sample Name: ECMW-8
 Date/Time Collected: 11/18/15 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	431		11/18/15 20:20	A511246	300.0, 2.1-1993
Nitrate as N	mg/L	751		11/18/15 20:20	A511246	300.0, 2.1-1993
<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	143		11/23/15 9:00	A511292	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1511276-06
 Sample Name: ECMW-9
 Date/Time Collected: 11/18/15 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	526		11/18/15 20:44	A511246	300.0, 2.1-1993
Nitrate as N	mg/L	32.7		11/18/15 20:44	A511246	300.0, 2.1-1993
<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	2.36		11/23/15 9:00	A511292	4500-NH3 B,D,C-1997

David Sartain
 El Dorado Chemical Inc.
 4500 North West Ave.
 El Dorado, AR 71731
 Project: Groundwater Sample(s)
 Project Number: November 2015
 Date Received: 18-Nov-15 13:00

ANALYTICAL RESULTS

Lab Number: 1511276-07
 Sample Name: ECMW-10
 Date/Time Collected: 11/18/15 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	99.9		11/18/15 21:07	A511246	300.0, 2.1-1993
Nitrate as N	mg/L	61.2		11/18/15 21:07	A511246	300.0, 2.1-1993
<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	< 0.500		11/23/15 9:00	A511292	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1511276-08
 Sample Name: ECMW-11
 Date/Time Collected: 11/18/15 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	93.4		11/18/15 21:31	A511246	300.0, 2.1-1993
Nitrate as N	mg/L	35.7		11/18/15 21:31	A511246	300.0, 2.1-1993
<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	39.0		11/23/15 9:00	A511292	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1511276-09
 Sample Name: ECMW-14
 Date/Time Collected: 11/18/15 9:35
 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	45.6		11/18/15 21:55	A511246	300.0, 2.1-1993
Nitrate as N	mg/L	17.2		11/18/15 21:55	A511246	300.0, 2.1-1993
<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	0.630		11/23/15 9:00	A511292	4500-NH3 B,D,C-1997

David Sartain
 El Dorado Chemical Inc.
 4500 North West Ave.
 El Dorado, AR 71731
 Project: Groundwater Sample(s)
 Project Number: November 2015
 Date Received: 18-Nov-15 13:00

ANALYTICAL RESULTS

Lab Number: 1511276-10
 Sample Name: ECMW-16
 Date/Time Collected: 11/18/15 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	15.9		11/18/15 22:18	A511246	300.0, 2.1-1993
Nitrate as N	mg/L	8.43		11/18/15 22:18	A511246	300.0, 2.1-1993
<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	0.500		11/23/15 9:00	A511292	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1511276-11
 Sample Name: ECMW-17
 Date/Time Collected: 11/18/15 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	22.9		11/18/15 23:29	A511246	300.0, 2.1-1993
Nitrate as N	mg/L	14.3		11/18/15 23:29	A511246	300.0, 2.1-1993
<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	3.67		11/23/15 9:00	A511292	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1511276-12
 Sample Name: ECMW-18
 Date/Time Collected: 11/18/15 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>
Nitrate as N	mg/L	< 0.250		11/18/15 23:52	A511246	300.0, 2.1-1993

ANALYTICAL RESULTS

Lab Number: 1511276-13
 Sample Name: DUP
 Date/Time Collected: 11/18/15 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	385		11/19/15 1:50	A511246	300.0, 2.1-1993
Nitrate as N	mg/L	654		11/19/15 1:50	A511246	300.0, 2.1-1993
<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	139		11/23/15 9:00	A511292	4500-NH3 B,D,C-1997



David Sartain
 El Dorado Chemical Inc.
 4500 North West Ave.
 El Dorado, AR 71731
 Project: Groundwater Sample(s)
 Project Number: November 2015
 Date Received: 18-Nov-15 13:00

QUALITY CONTROL RESULTS

Anions -- Batch: A511246 (Water)

Prepared: 18-Nov-15 15:18 By: MB -- Analyzed: 19-Nov-15 01:27 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	95.7% / NA	102% / 107%		1.79%	
Sulfate as SO4	<0.500 mg/L	92.3% / NA	110% / 109%		0.0953%	

Wet Chemistry -- Batch: A511292 (Water)

Prepared: 23-Nov-15 15:55 By: RJH -- Analyzed: 23-Nov-15 15:55 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	<0.500 mg/L	94.0% / NA	105% / 101%		3.64%	

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 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. 4500 Northwest Ave. El Dorado, AR 71731		El Dorado Chemical Inc. P.O. Box 231 El Dorado, AR 71731		Groundwater Samples		1 Day (100%) 2 Day (50%) 3 Day (25%)		1. Cool, 4 Degrees Centigrade 2. Sulfuric Acid (H ₂ SO ₄), pH < 2 3. Nitric Acid (HNO ₃), pH < 2 4. Thiosulfate for Dechlorination 5. Hydrochloric Acid(HCl) 6. Sodium Hydroxide (NaOH), pH > 12	
Attn: David Sartain		Reporting Information Telephone: 870-863-1484		5 Day (Routine)		TEST PARAMETERS		Bottle Type Code	
Email: dsartain@edc-ark.com; sparsco@edc-ark.com; mtracelab@gov-mgt.com		Fax: 870-863-1499		Preservative Code: P		1		G - Glass; P - Plastic	
				Bottle Type:		1,2		V - Septum; A - Amber	
Rodney Dorian EMS Inc.		Rodney Dorian		Sample(s) Printed		Nitrate, Sulfate		Ammonia	
Field Number	SAMPLE COLLECTION Dates	Time(s)	Grab	Comp	Number of Bottles	Sample Matrix	IDENTIFICATION/ DESCRIPTION		SAMPLE
1	11-18-15	0825	X		2	Water	ECMW-4	X	01
2		0805	X		2	Water	ECMW-5	X	02
3		0815	X		2	Water	ECMW-6	X	03
4		0835	X		2	Water	ECMW-7	X	04
5		0840	X		2	Water	ECMW-8	X	05
6		0845	X		2	Water	ECMW-9	X	06
7		0905	X		2	Water	ECMW-10	X	07
8		0915	X		2	Water	ECMW-11	X	08
9		0935	X		2	Water	ECMW-12	X	09
10		0955	X		2	Water	ECMW-16	X	10
1. Relinquished by: (Signature) <i>R. Dorian</i>		Date/Time 11-18-15		2. Received by: (Signature)		Date/Time 10/25		3. Relinquished by: (Signature) <i>David Sartain</i>	
Date/Time 11/8/15		Date/Time 1/3/00		4. Received by lab: (Signature) <i>Amber Johnson</i>		5. TEMPERATURE ON RECEIPT: 4°C		6. TEMPERATURE GUN ID: H47#2	
SAMPLE CONDITION UPON RECEIPT IN LAB					REMARKS / SAMPLE COMMENTS				
1. CUSTODY SEALS: Yes ___ No ___									
2. CONTAINERS CORRECT: Yes ___ No ___									
3. COC/LABELS AGREE: Yes ___ No ___									
4. RECEIVED ON ICE: Yes ___ No ___									
5. TEMPERATURE ON RECEIPT: 4°C									
6. TEMPERATURE GUN ID: H47#2									
FOR COMPLETION BY LAB ONLY									



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

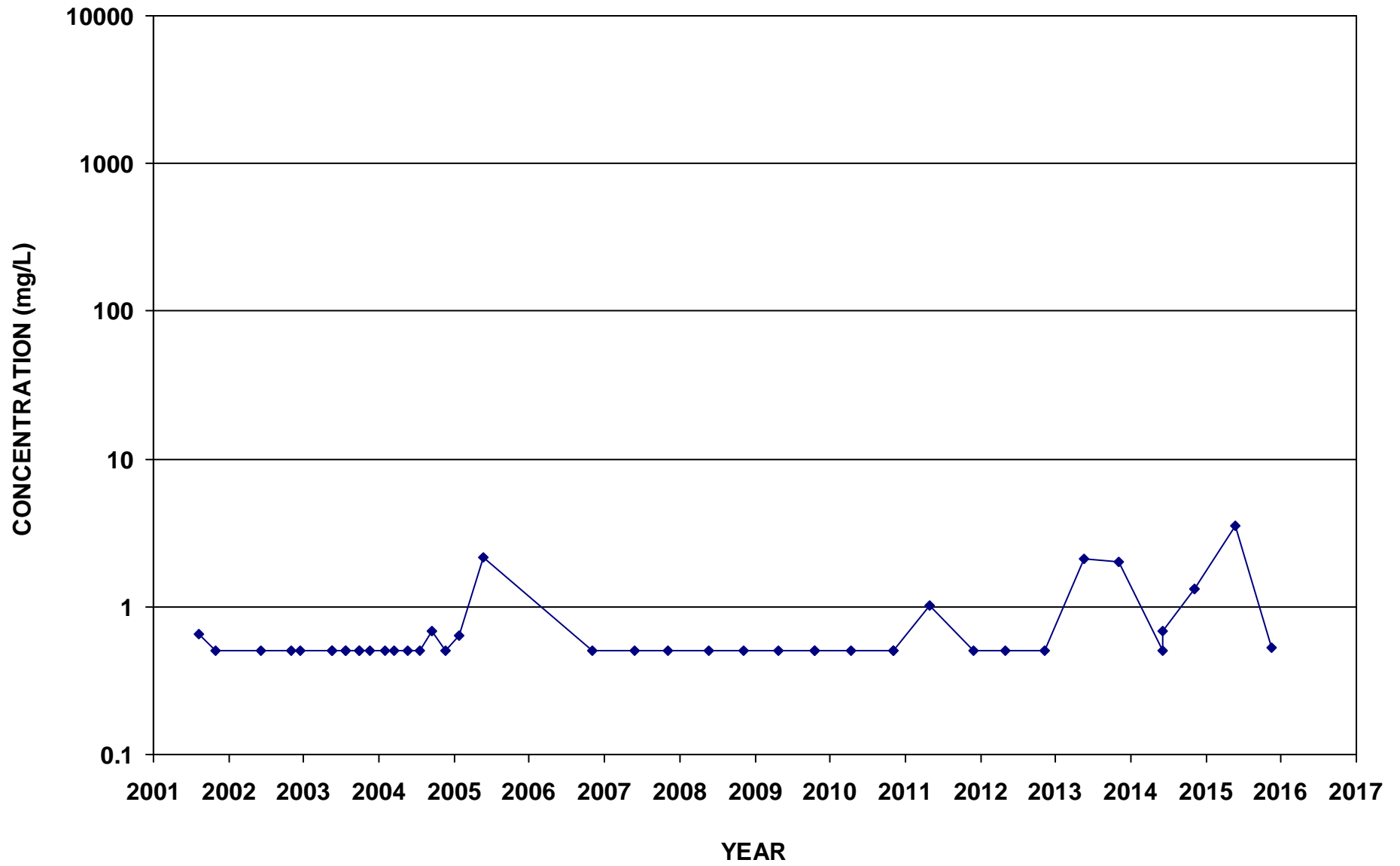
CHAIN OF CUSTODY RECORD

CLIENT INFORMATION		BILLING INFORMATION		Project Description		Turnaround Time		Preservation Codes:			
El Dorado Chemical Inc. 4500 Northwest Ave. El Dorado, AR 71731		El Dorado Chemical Inc. P.O. Box 231 El Dorado, AR 71731		Groundwater Samples		1 Day (100%) 2 Day (50%) 3 Day (25%)		1. Cool, 4 Degrees Centigrade 2. Sulfuric Acid (H ₂ SO ₄), pH < 2 3. Nitric Acid (HNO ₃), pH < 2 4. Thiosulfate for Dechlorination 5. Hydrochloric Acid (HCl) 6. Sodium Hydroxide (NaOH), pH > 12			
Attn: David Sartain		Reporting Information Telephone: 870-863-1484		5 Day (Routine)		TEST PARAMETERS		Bottle Type Code			
Email: dsartain@edc-ark.com; sparsosn@edc-ark.com; fmarcella@envr-nrgl.com		Fax: 870-863-1499		Preservative Code: P		1		1,2		G = Glass, P = Plastic V = Septum, A = Amber	
Sampler(s) Signature <i>Robert Durham</i>		Sampler(s) Printed ROBERT DURHAM		SAMPLE IDENTIFICATION/ DESCRIPTION		Nitrate, Sulfate SULFATE		Ammonia		Arkansas Analytical Work Order Number: 1511236	
Field Number	SAMPLE COLLECTION Dates	Time/s	Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION		TEST PARAMETERS		REMARKS / SAMPLE COMMENTS
11	11-18-15	1010	X		2	Water	ECMW-	17			11
12	"	1020	X		2	Water	ECMW-	18			12
13	"	1200	X		2	Water	ECMW-	DUP			13
			X		2	Water	ECMW-				
			X		2	Water	ECMW-				
			X		2	Water	ECMW-				
			X		2	Water	ECMW-				
			X		2	Water	ECMW-				
			X		2	Water	ECMW-				
			X		2	Water	ECMW-				
1. Relinquished by: (Signature) <i>R. Durham</i>		Date/Time 11-18-15		2. Received by: (Signature)		SAMPLE CONDITION UPON RECEIPT IN LAB		REMARKS / SAMPLE COMMENTS			
3. Relinquished by: (Signature) <i>Ready for</i>		Date/Time 11/18/15		4. Received by: (Signature) <i>Forward Johnson</i>		1. CUSTODY SEALS: <input checked="" type="checkbox"/> Yes ___ No					
		1300				2. CONTAINERS CORRECT: <input type="checkbox"/> Yes ___ No					
						3. COC/LABELS AGREE: <input type="checkbox"/> Yes ___ No					
						4. RECEIVED ON ICE: <input type="checkbox"/> Yes ___ No					
						5. TEMPERATURE ON RECEIPT: <input type="checkbox"/> Yes ___ No					
						6. TEMPERATURE GUN ID: HT#2					
						FOR COMPLETION BY LAB ONLY					

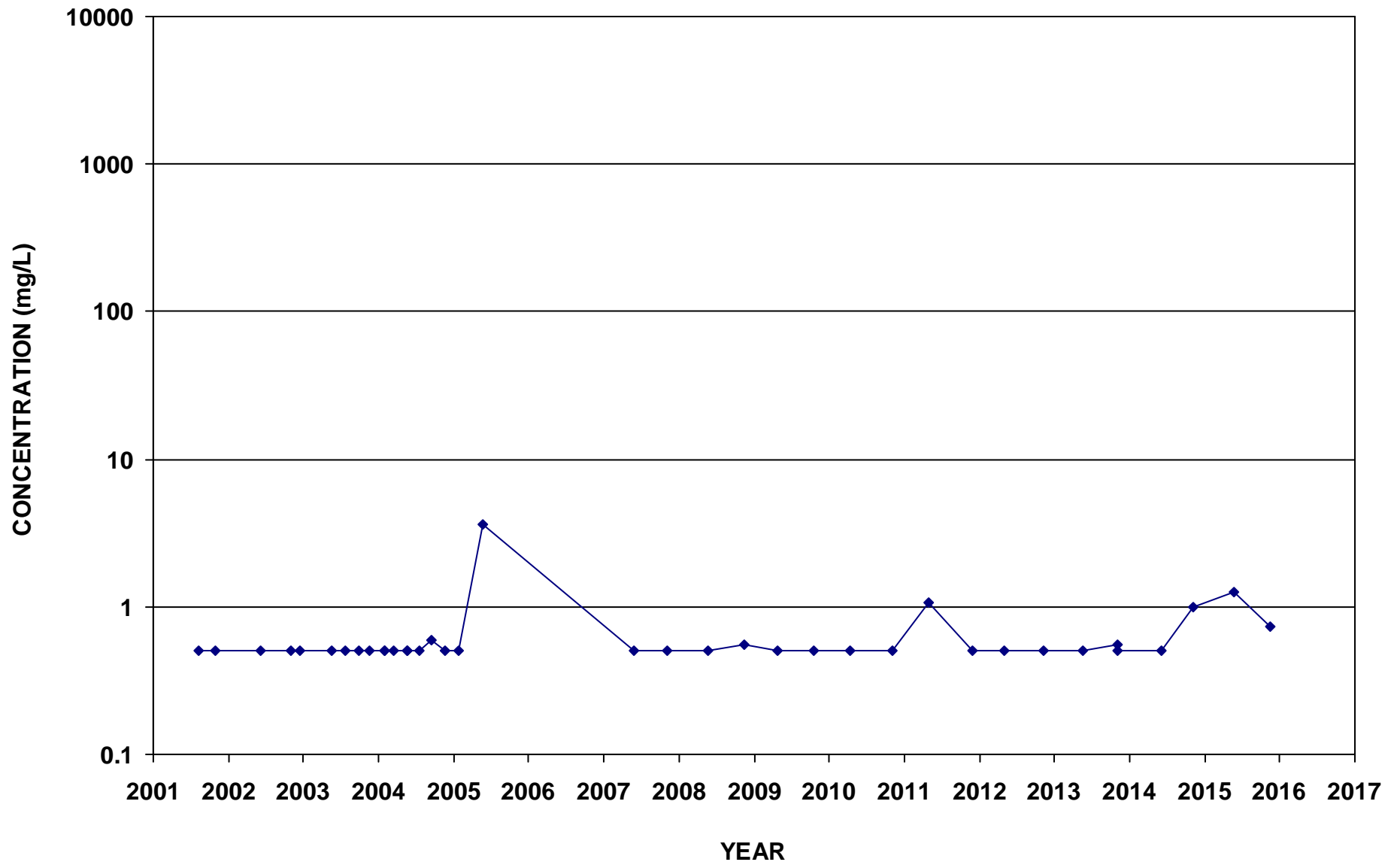
APPENDIX B

TREND GRAPHS

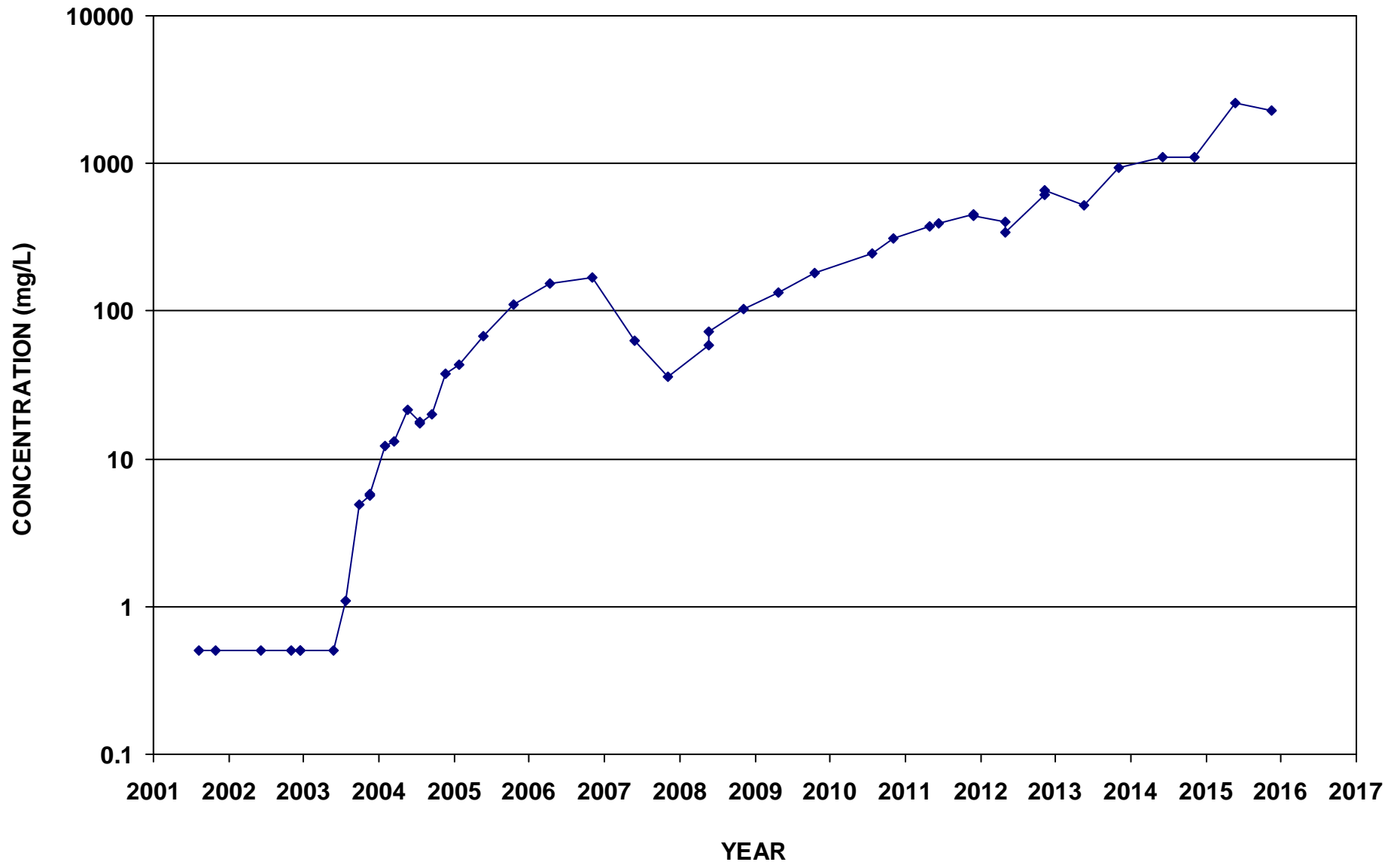
ECMW-4
Ammonia-N



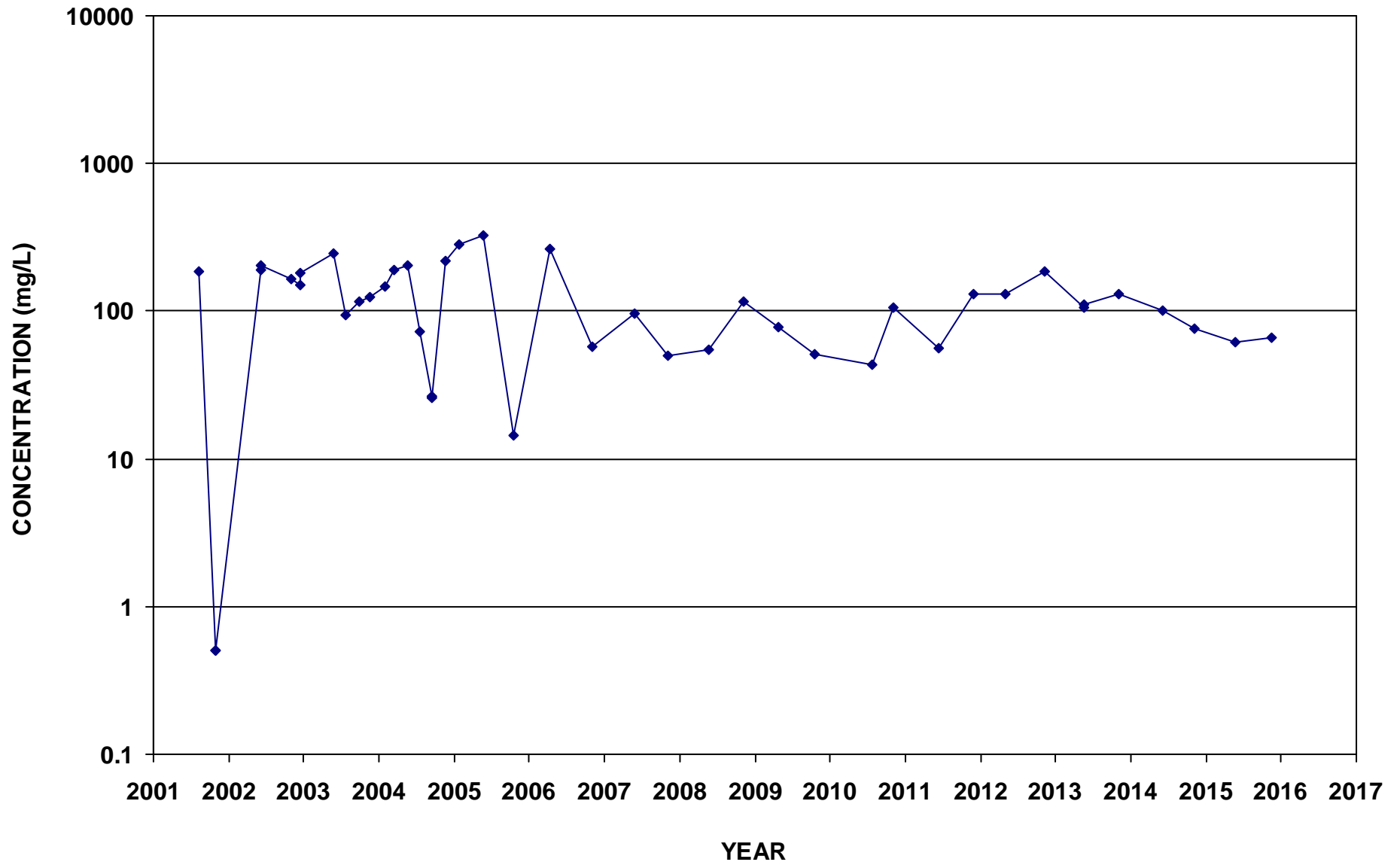
ECMW-5
Ammonia-N



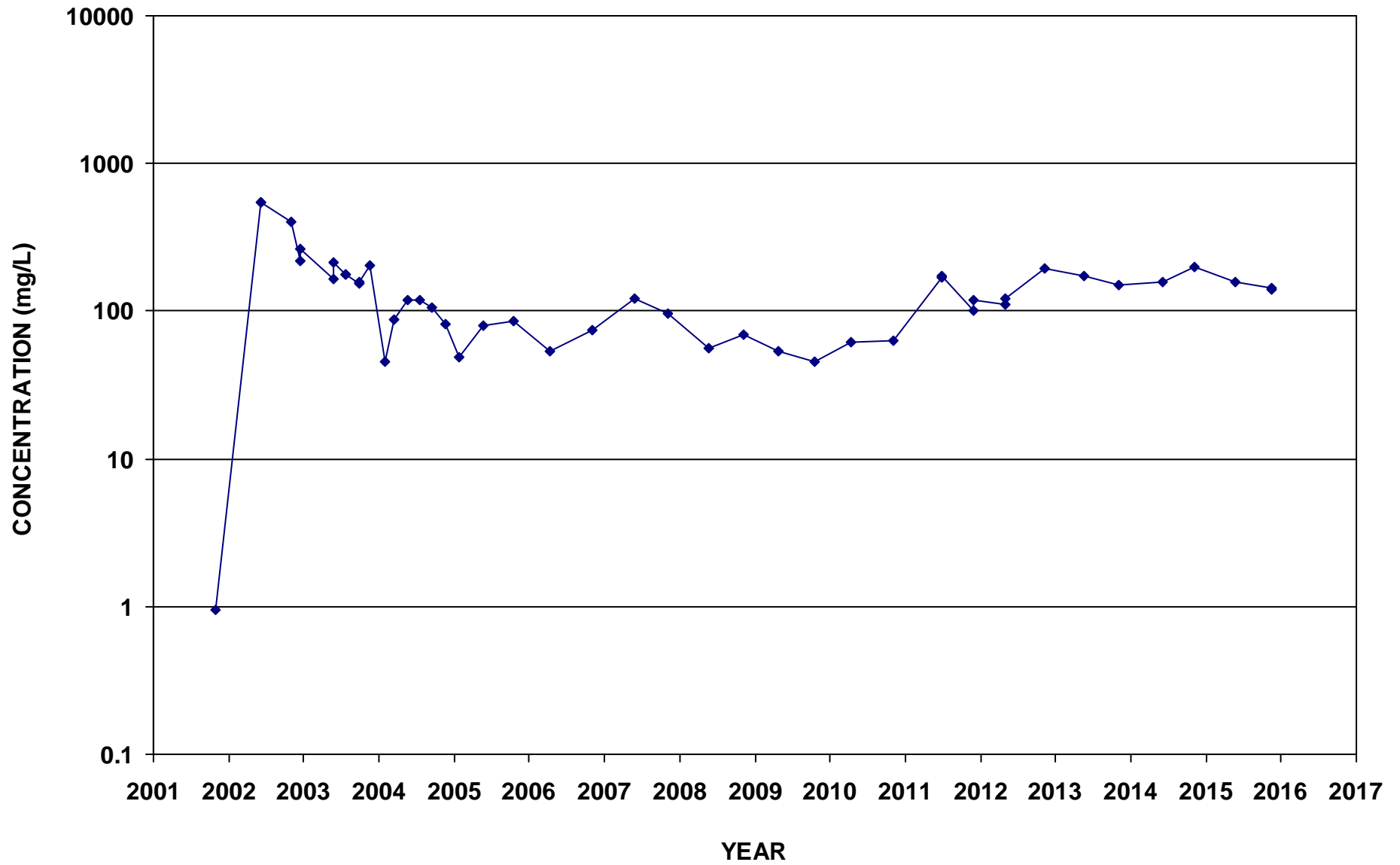
ECMW-6
Ammonia-N



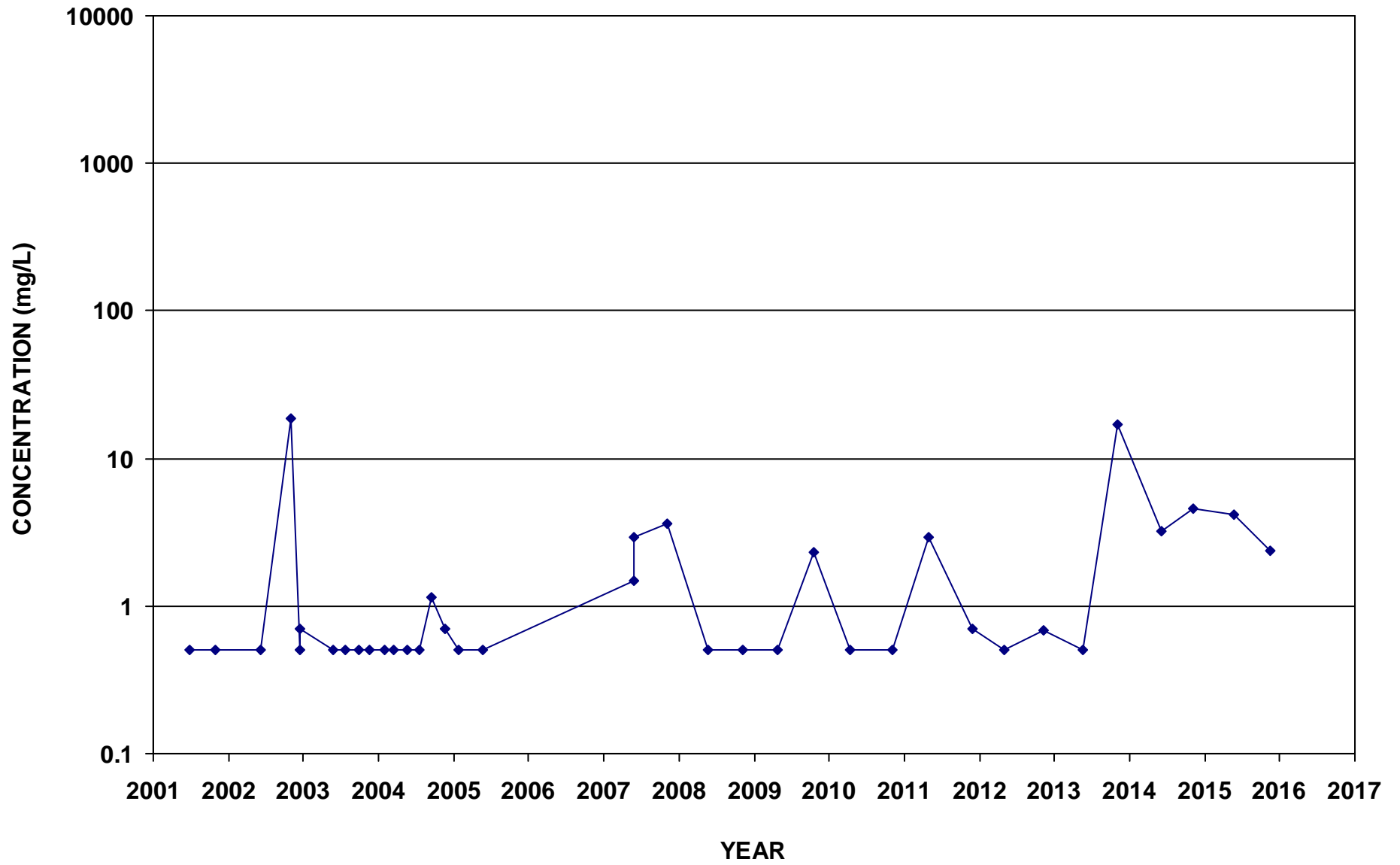
ECMW-7
Ammonia-N



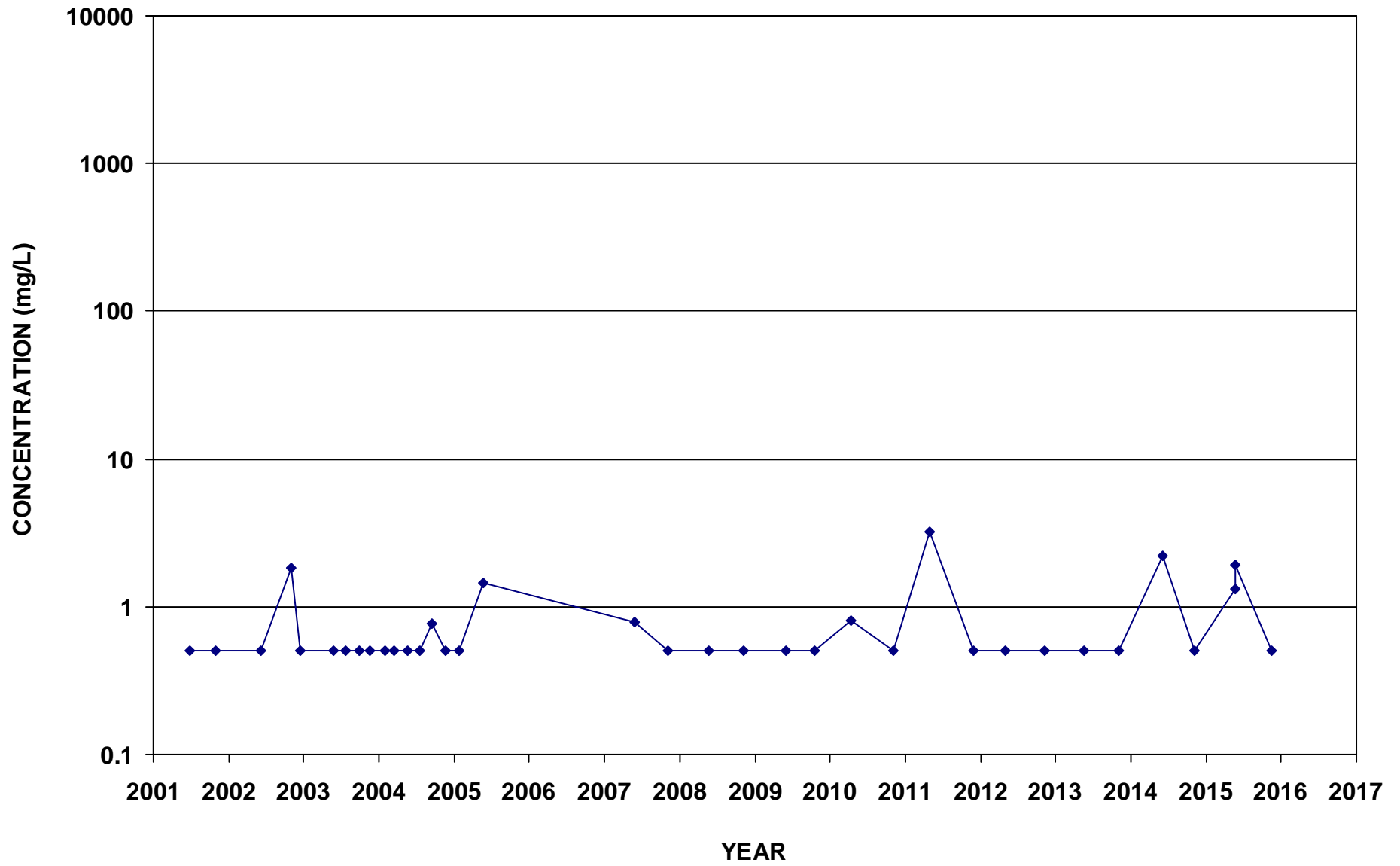
ECMW-8
Ammonia-N



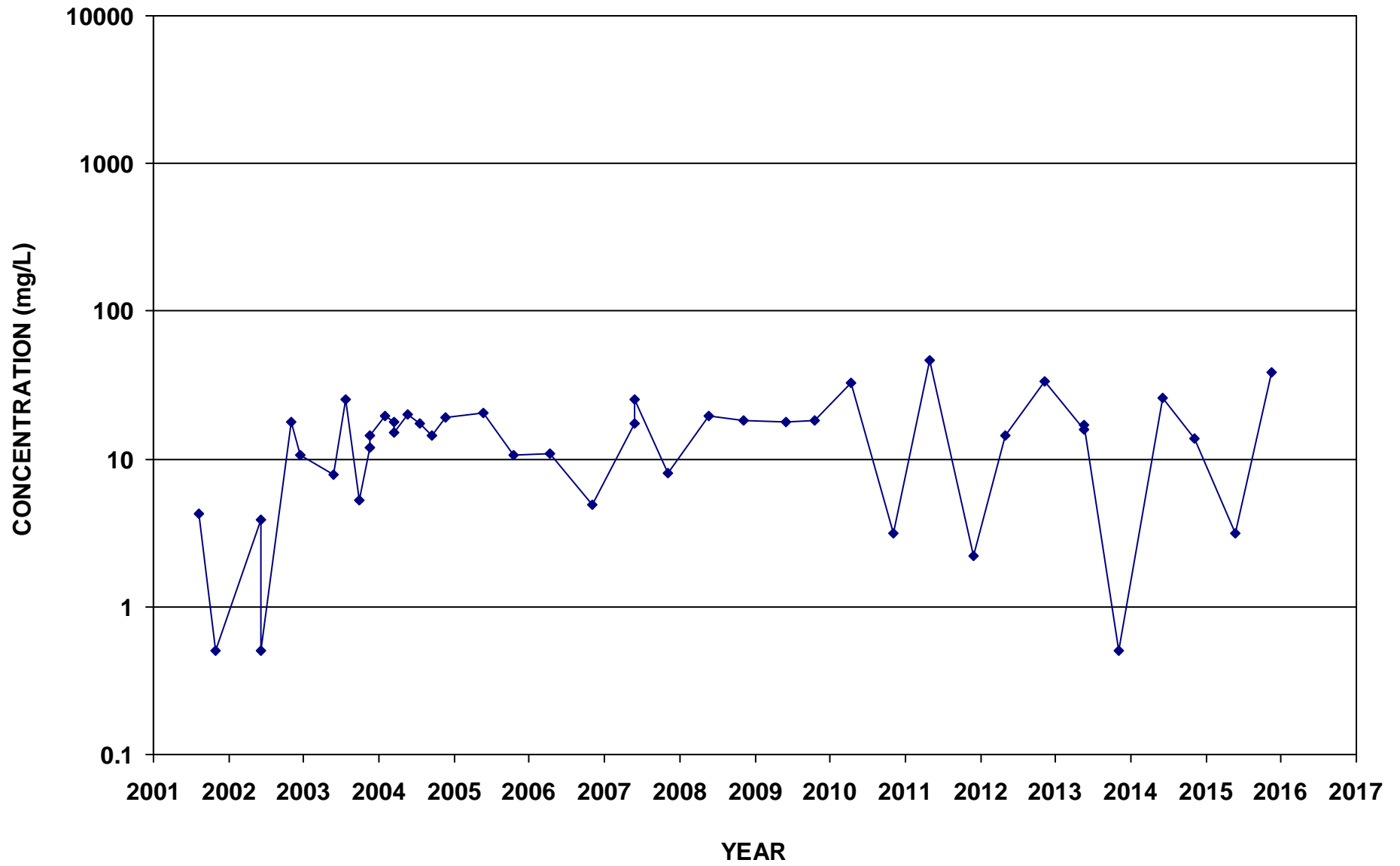
ECMW-9
Ammonia-N



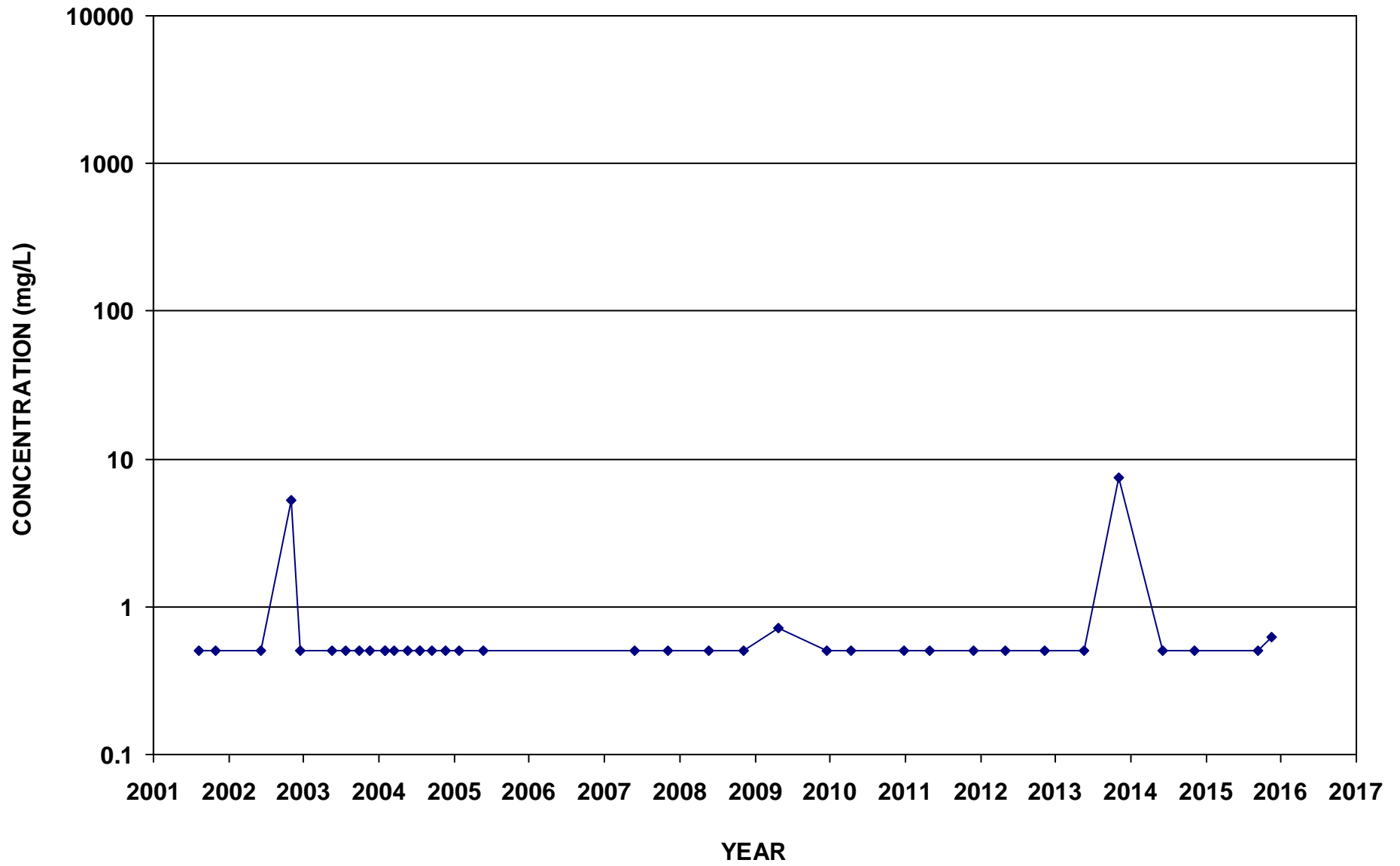
ECMW-10
Ammonia-N



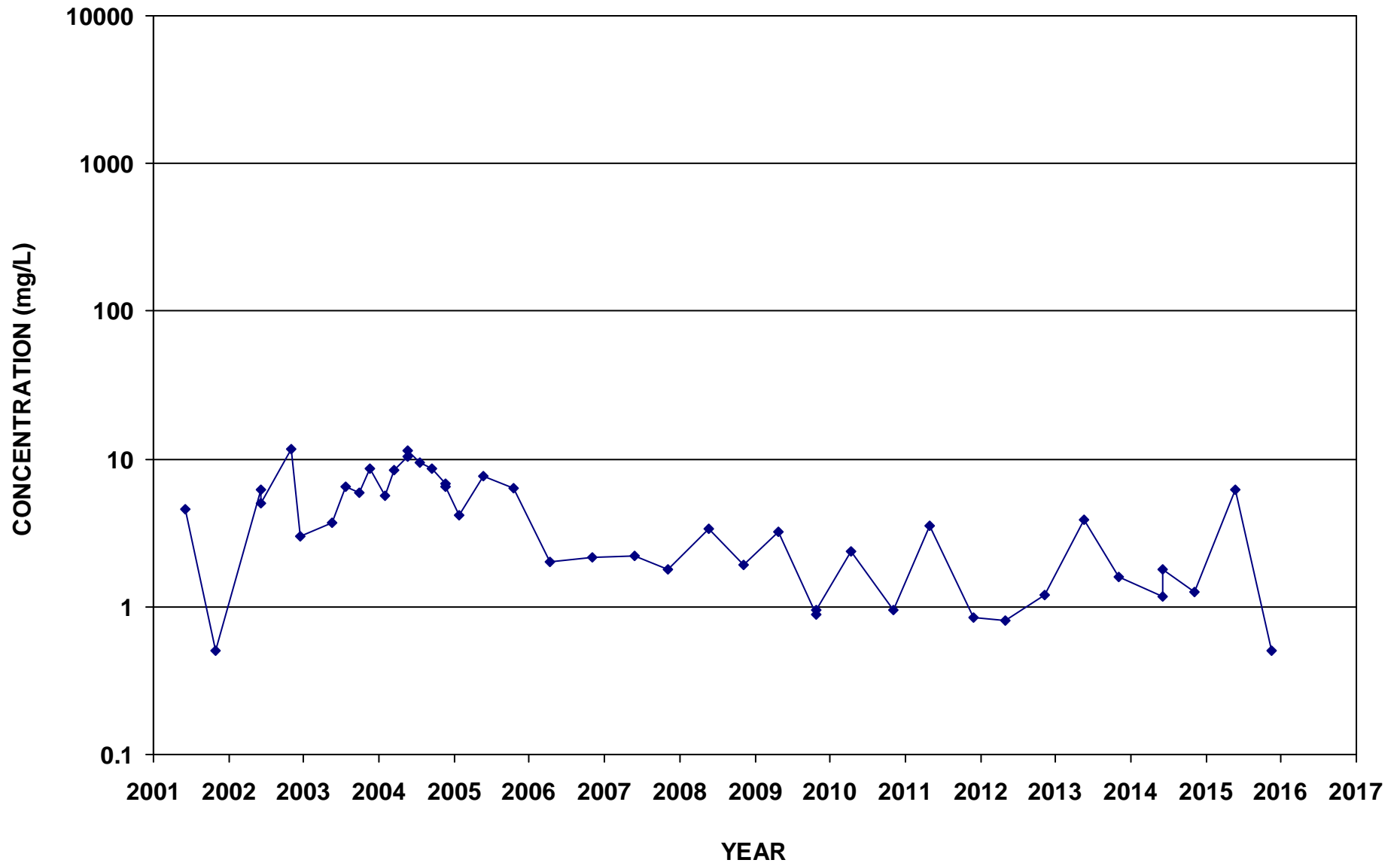
ECMW-11
Ammonia-N



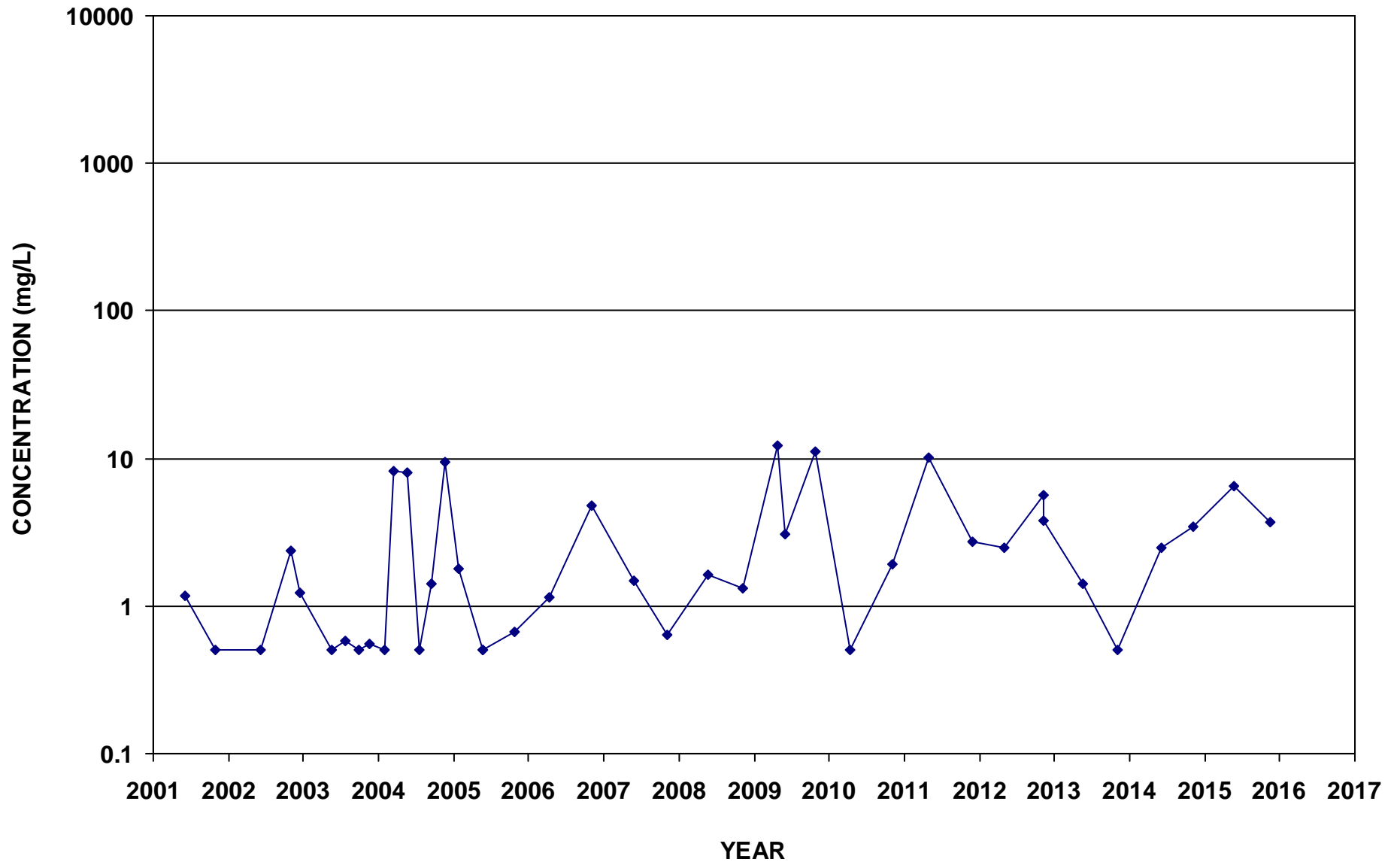
ECMW-14
Ammonia-N



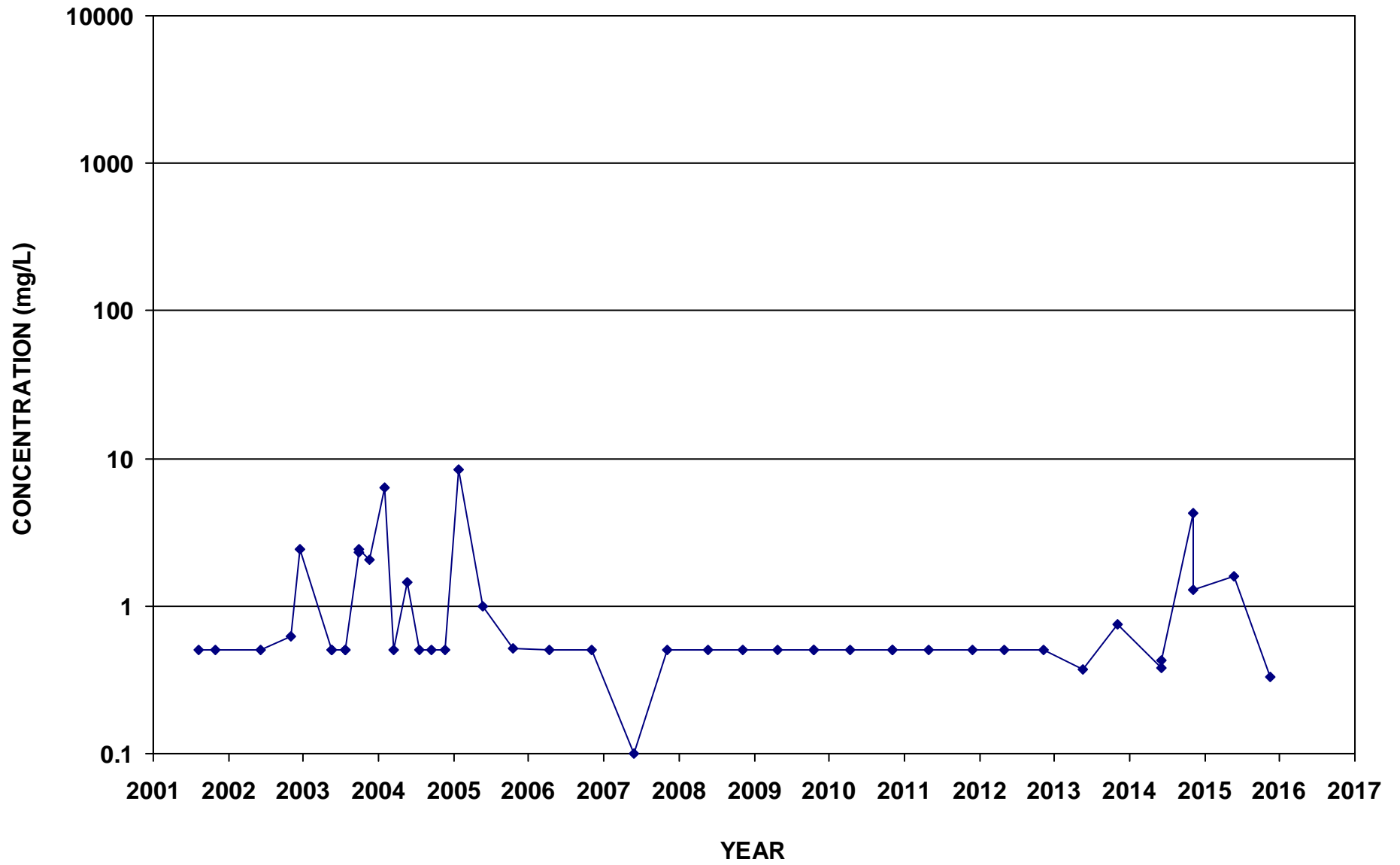
ECMW-16
Ammonia-N



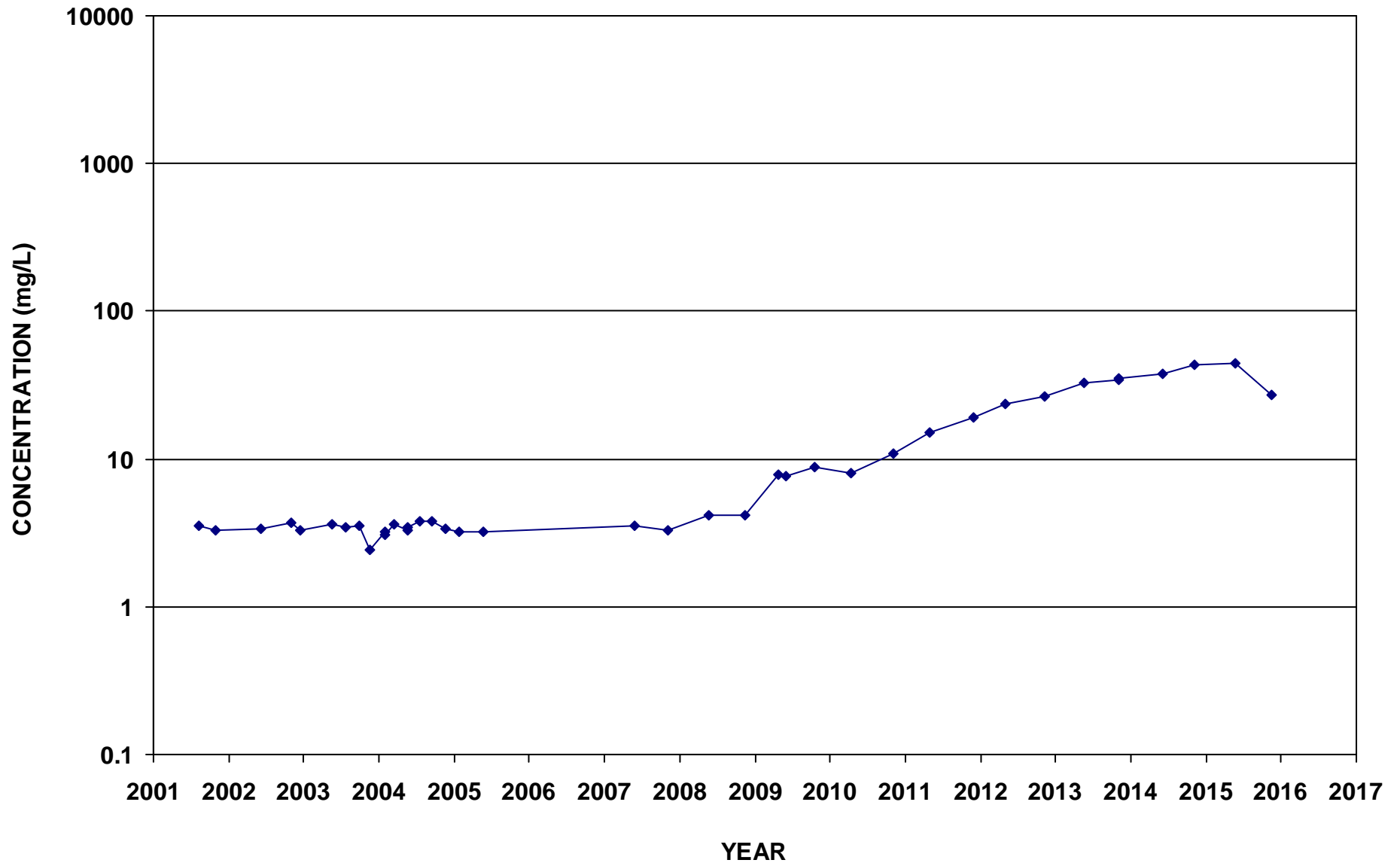
ECMW-17
Ammonia-N



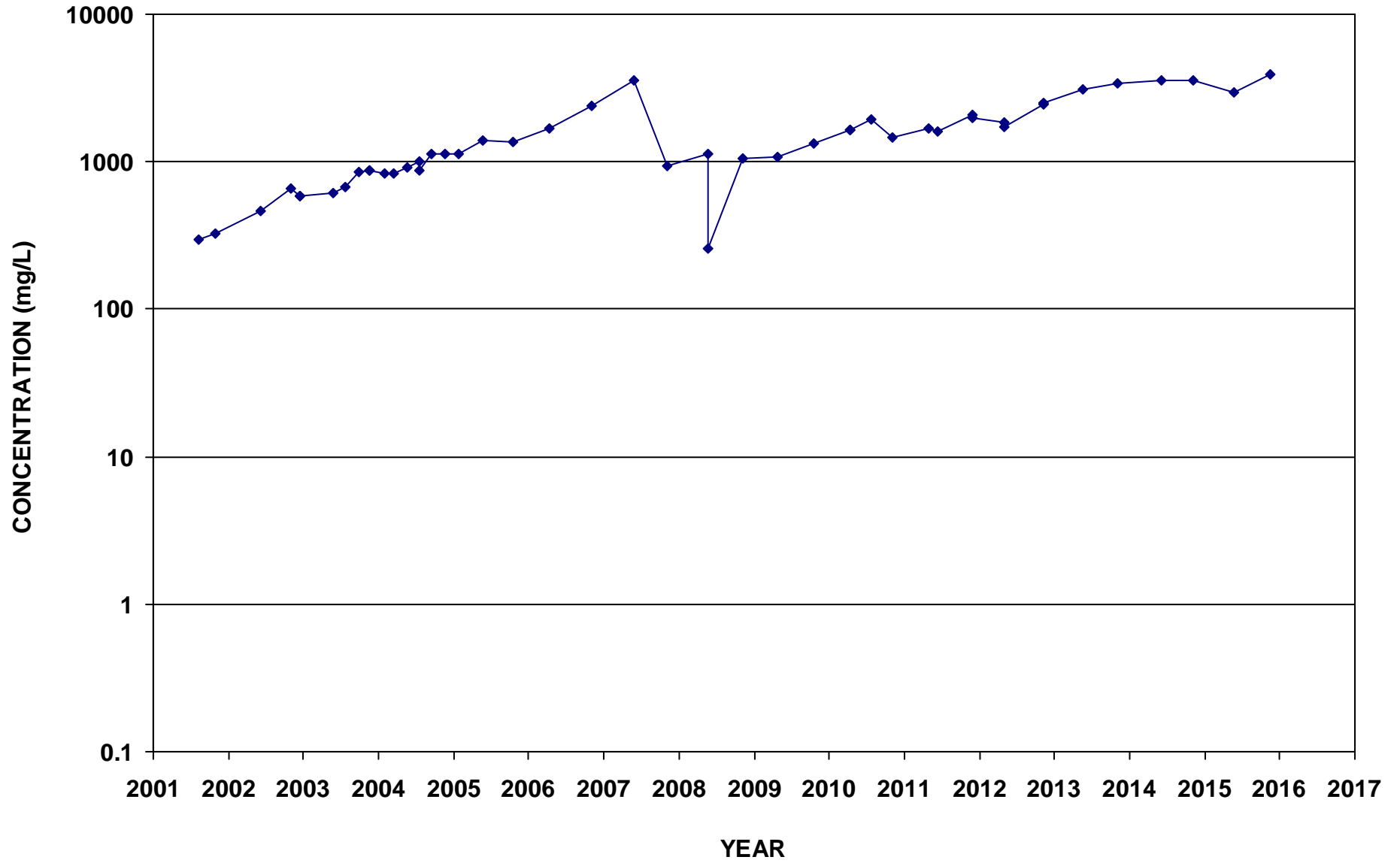
ECMW-4
Nitrate-N



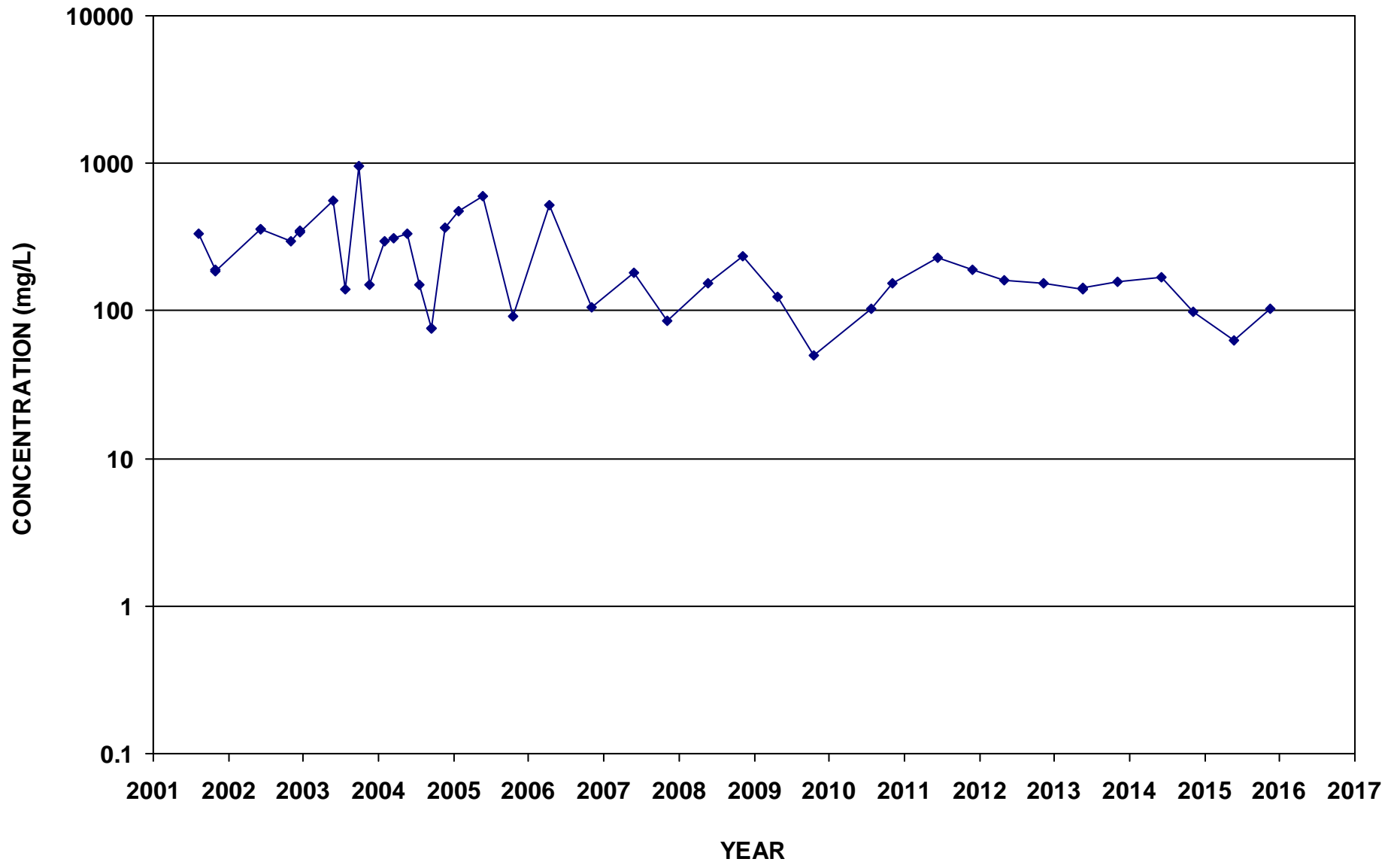
ECMW-5
Nitrate-N



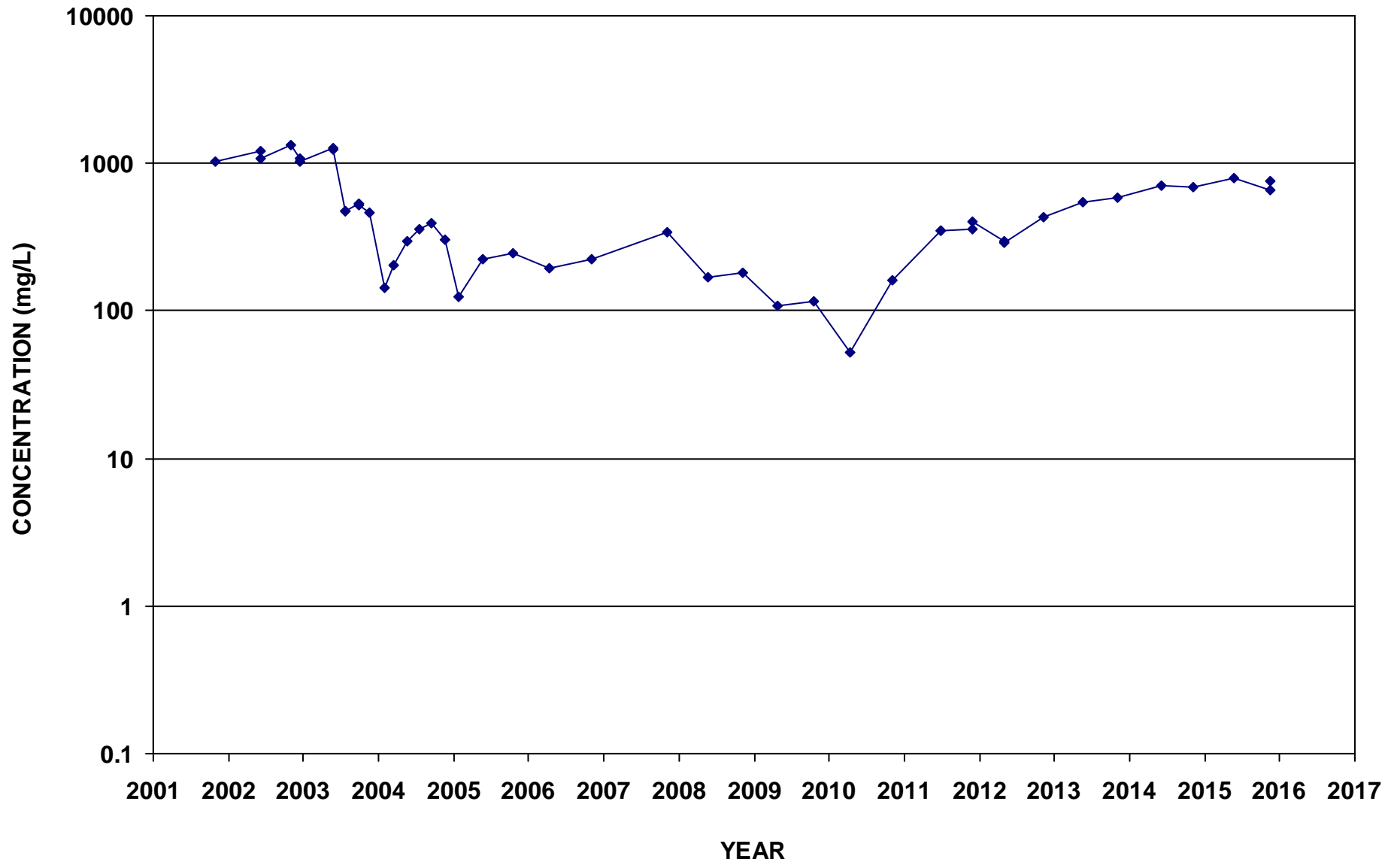
ECMW-6
Nitrate-N



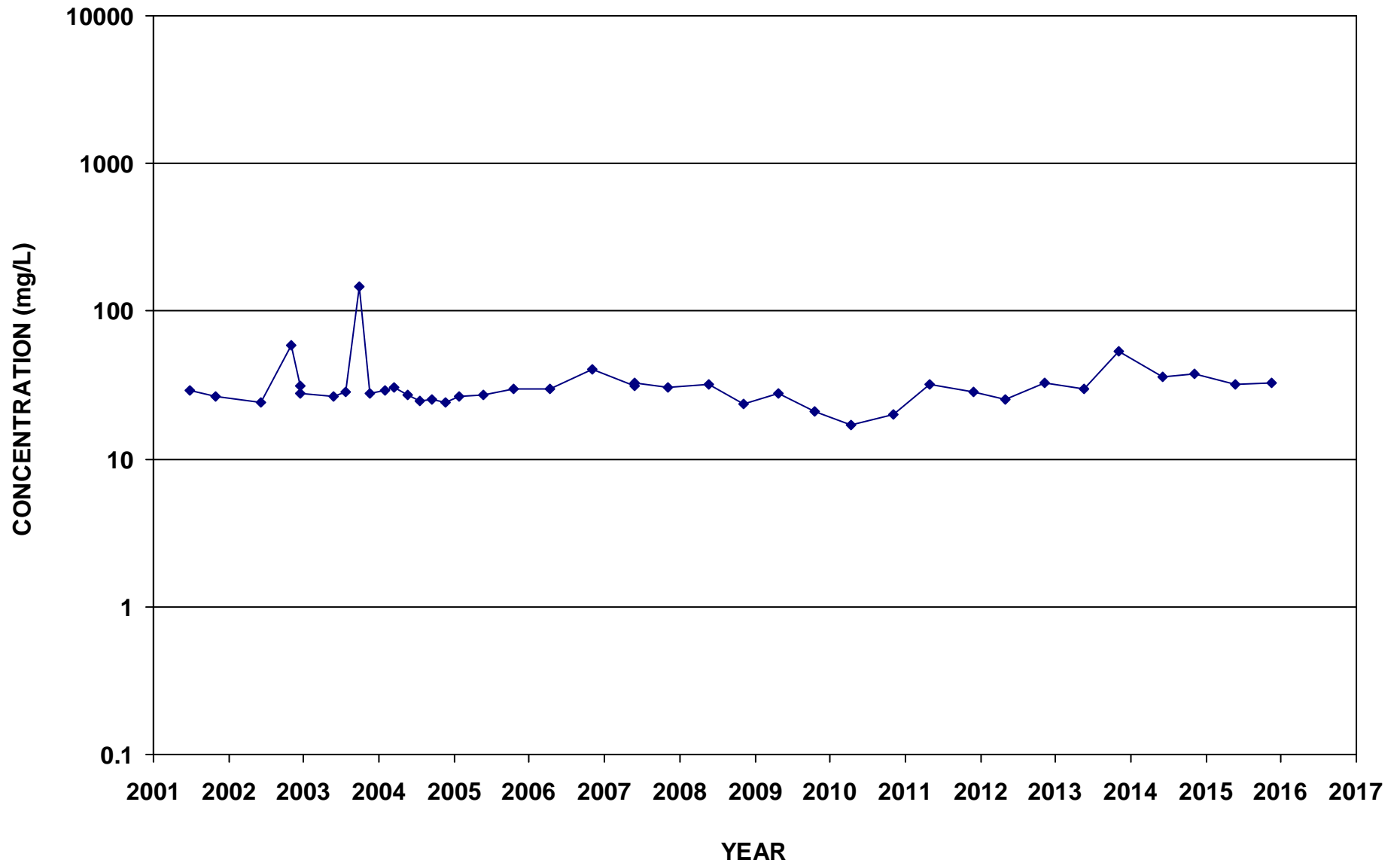
ECMW-7
Nitrate-N



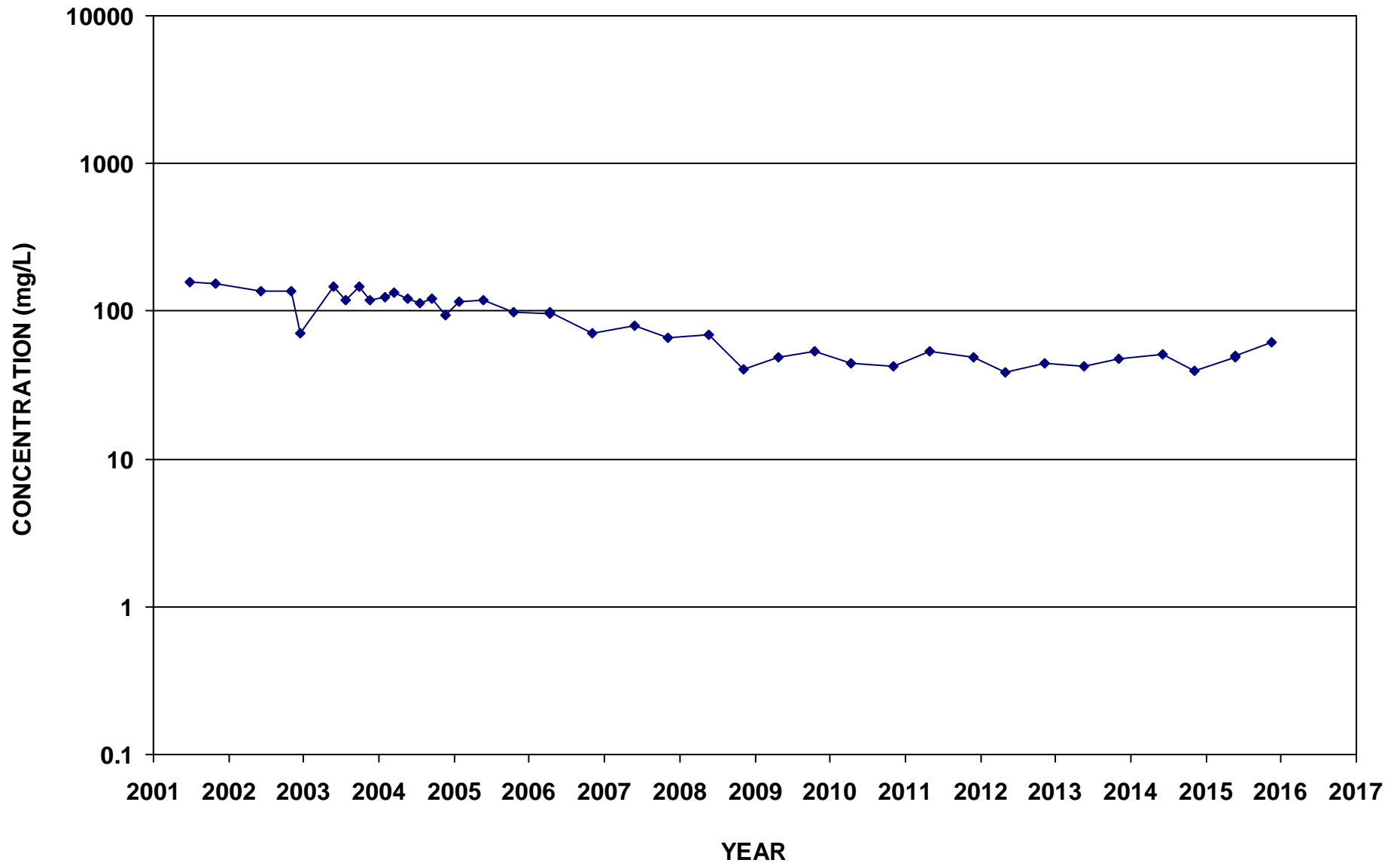
ECMW-8
Nitrate-N



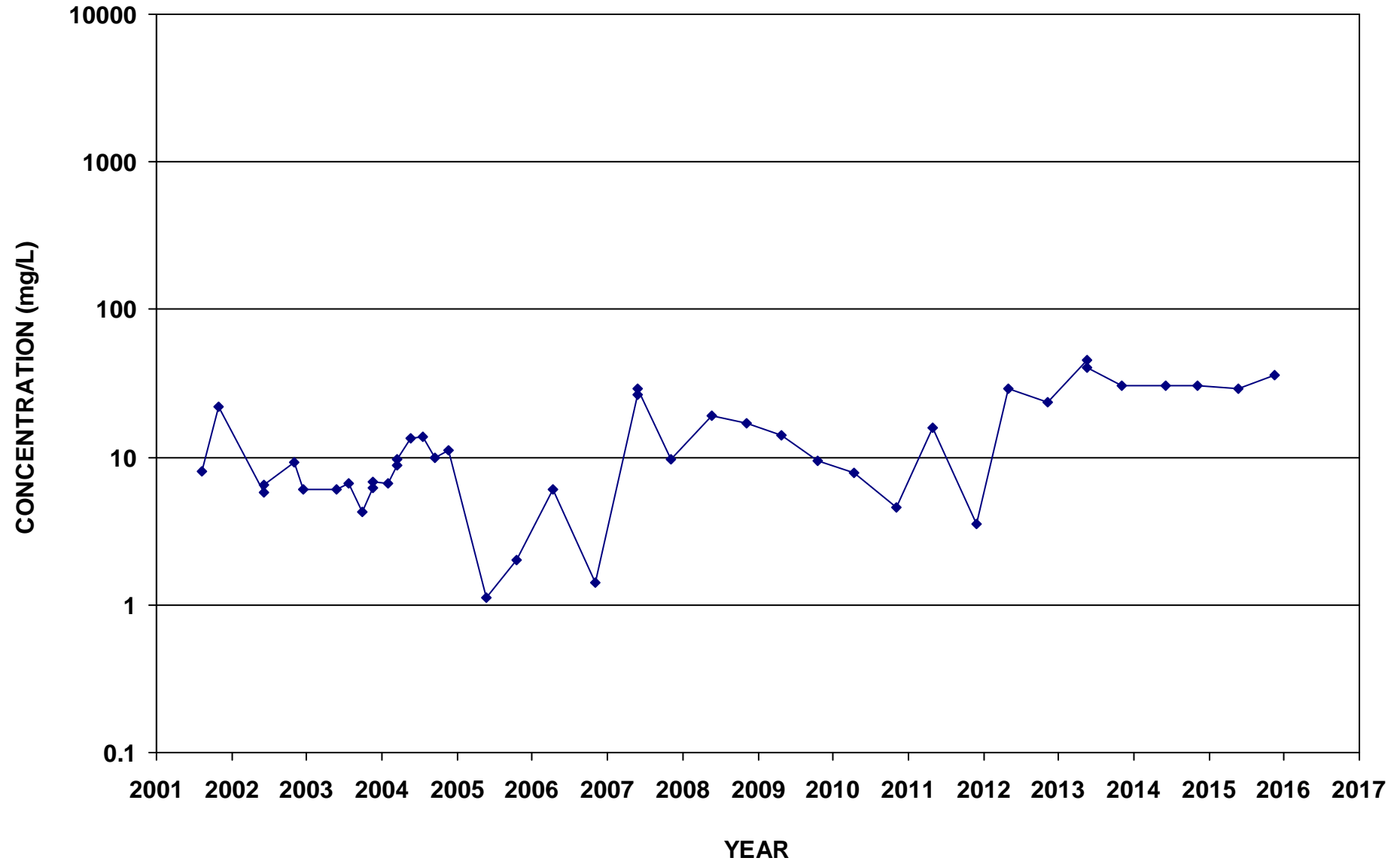
ECMW-9
Nitrate-N



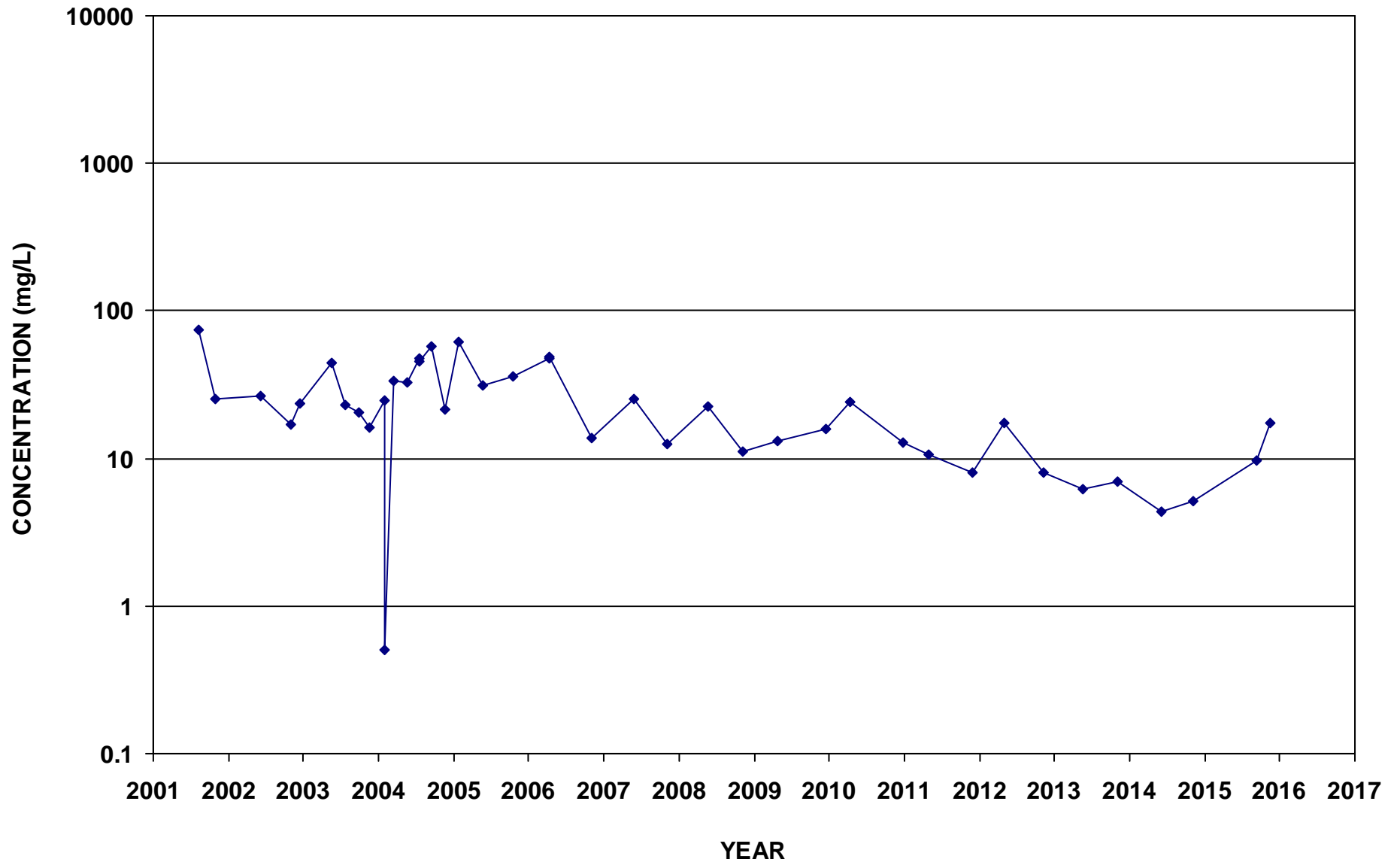
ECMW-10
Nitrate-N



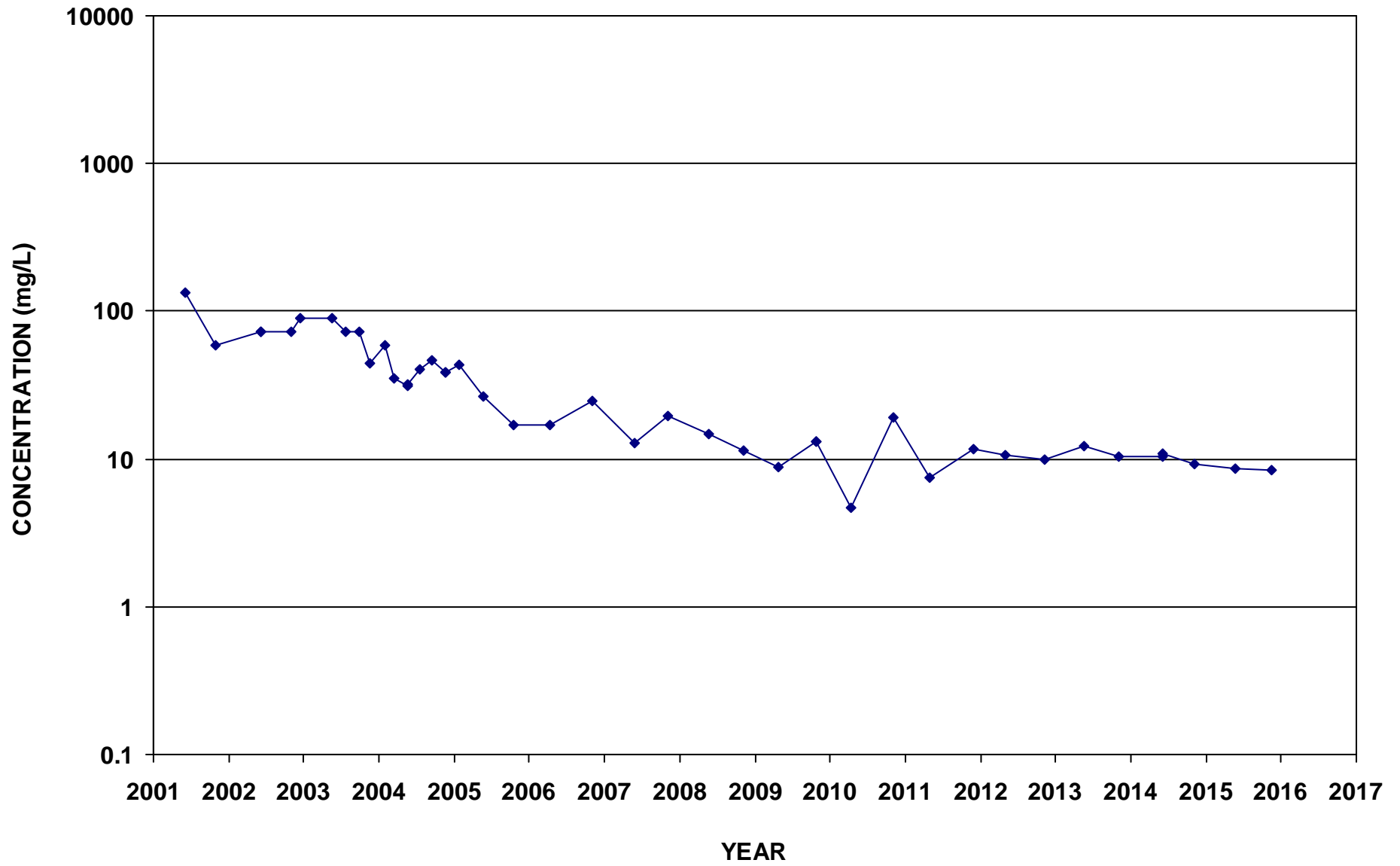
ECMW-11
Nitrate-N



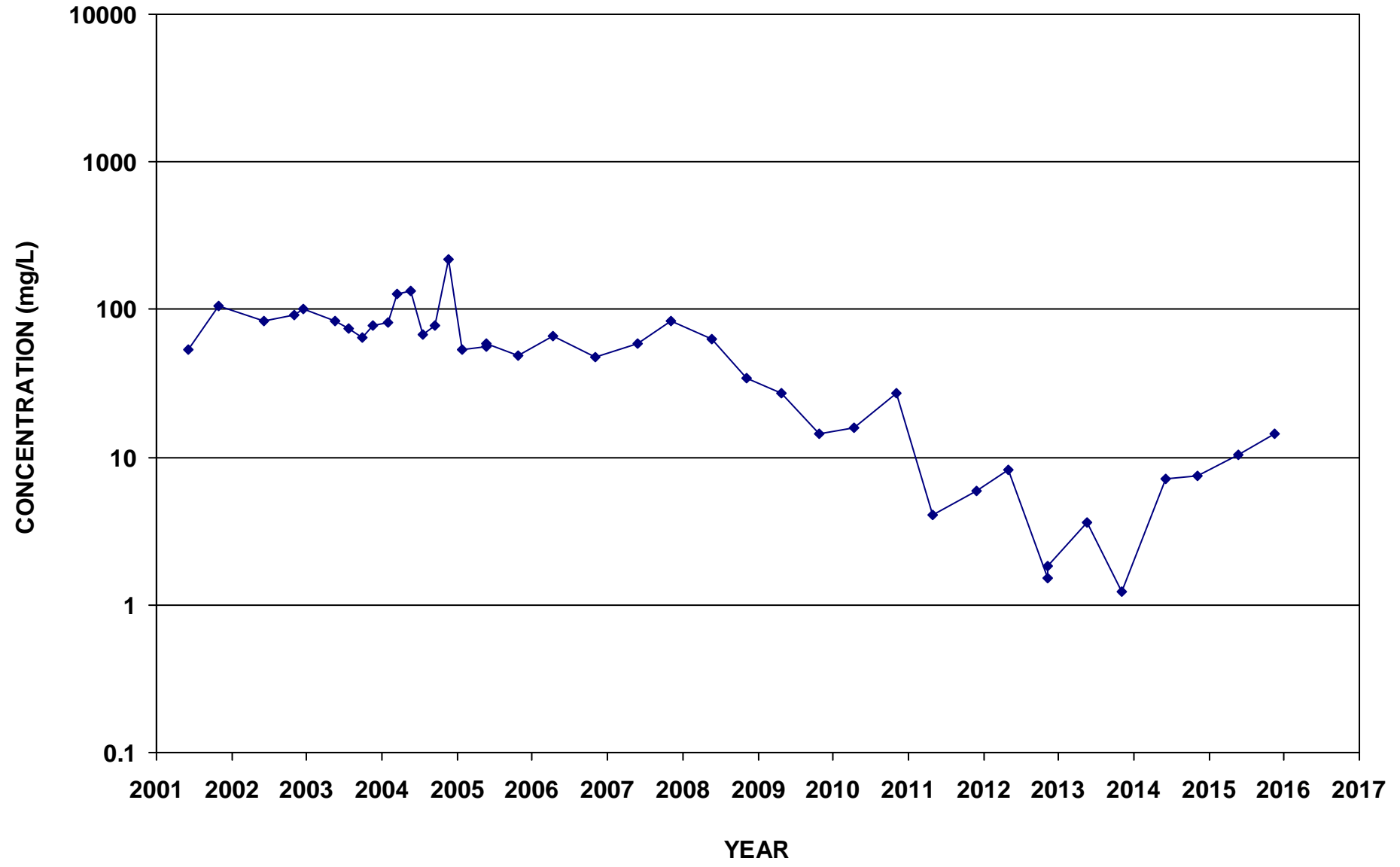
ECMW-14
Nitrate-N



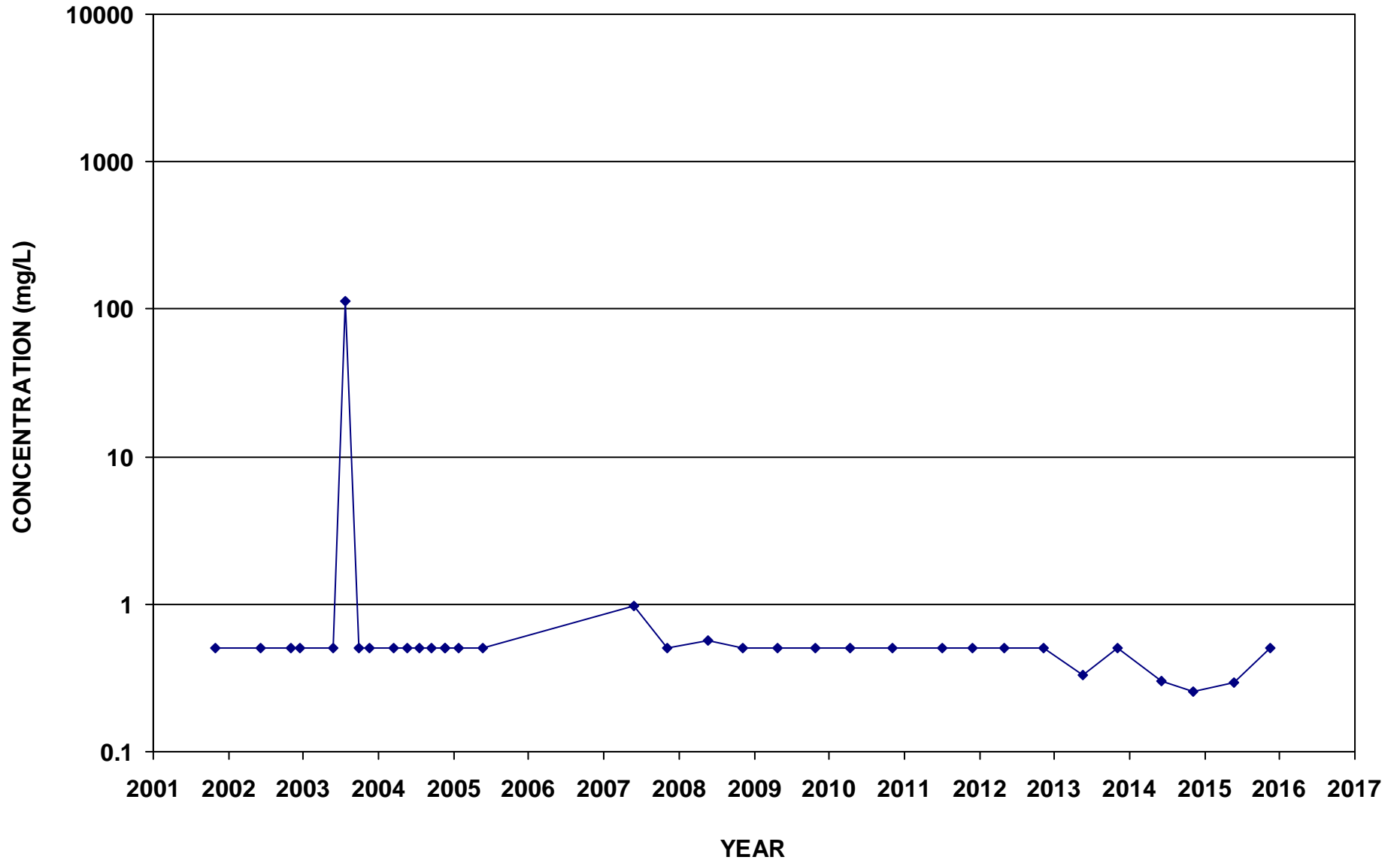
ECMW-16
Nitrate-N



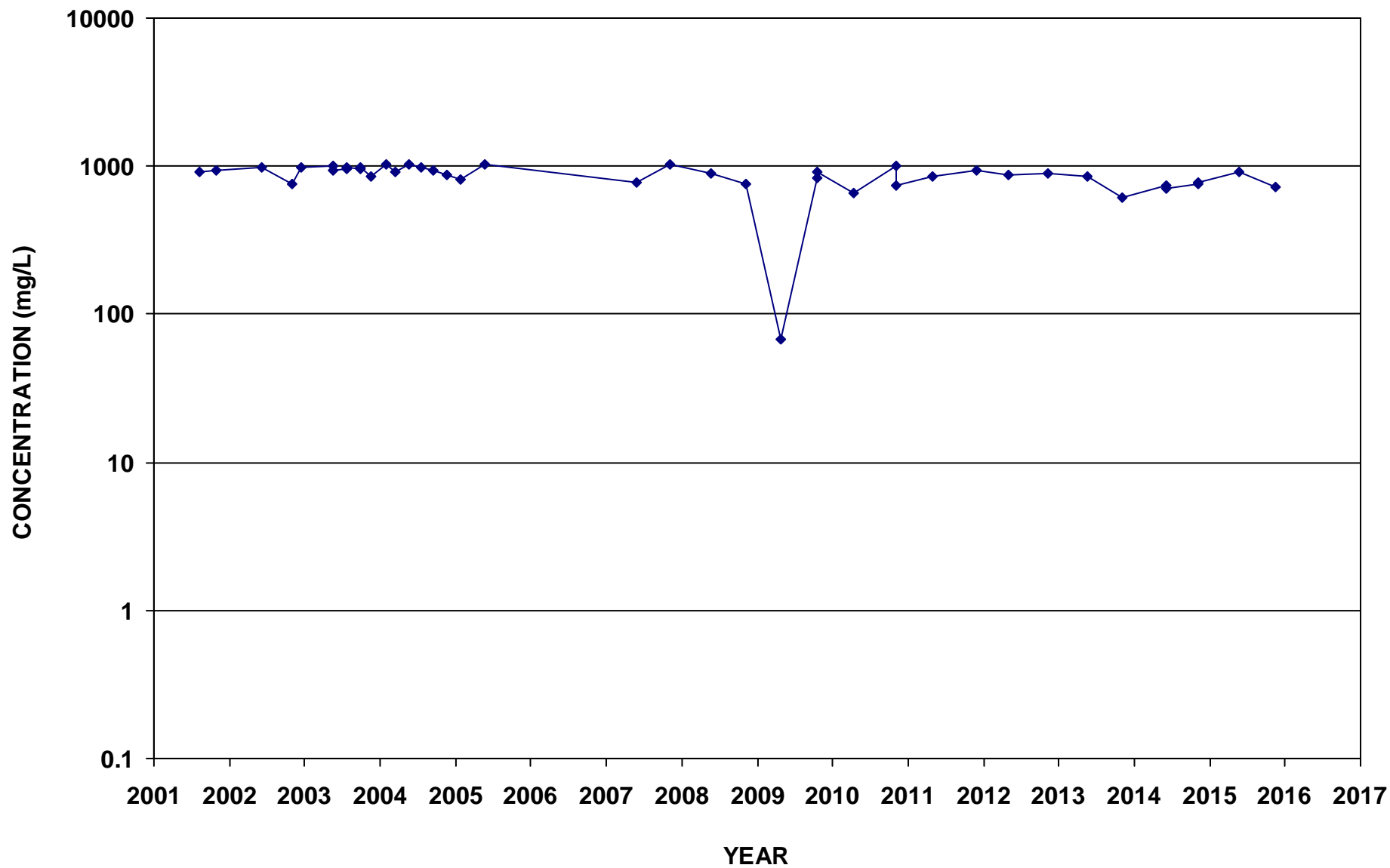
ECMW-17
Nitrate-N



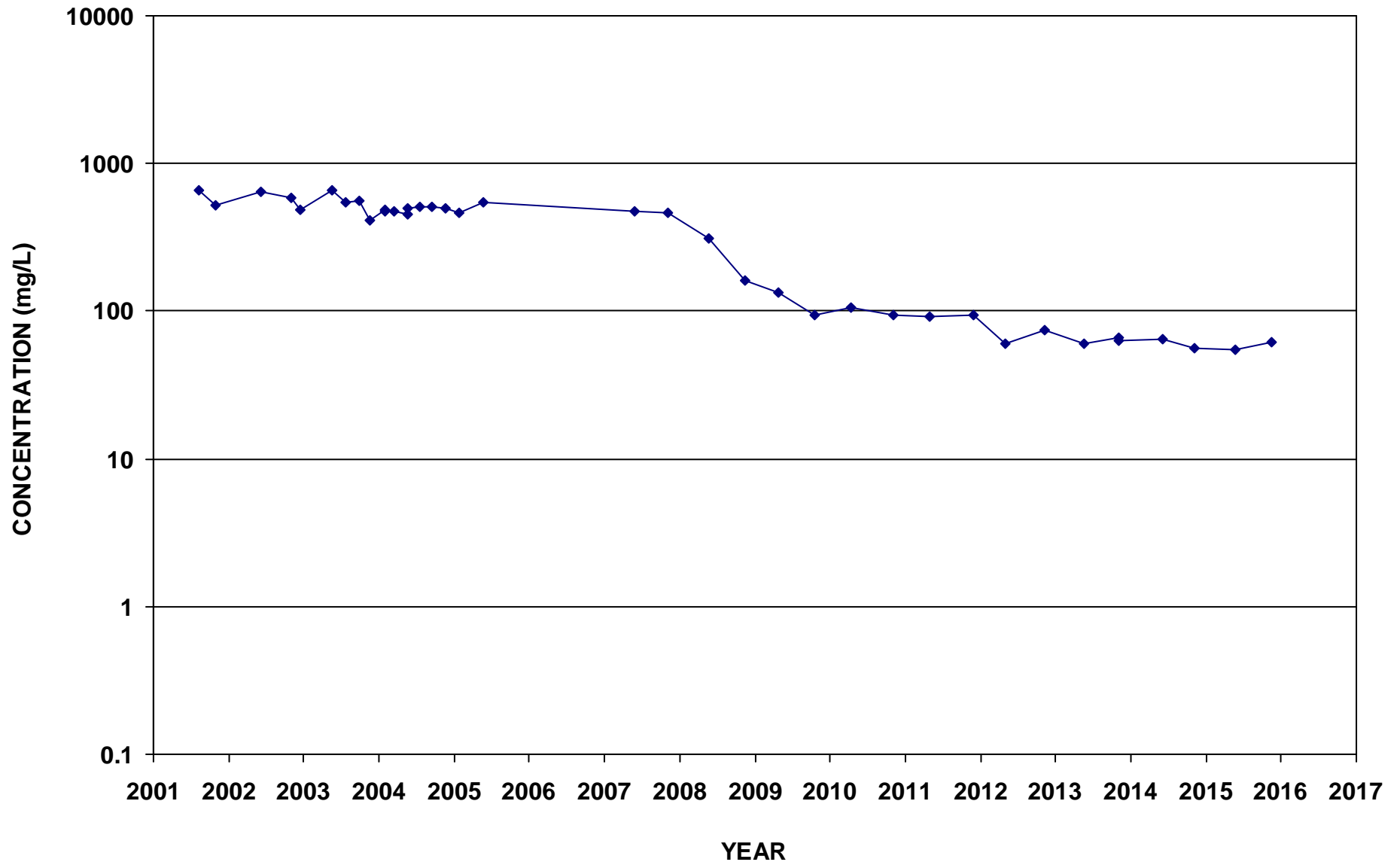
ECMW-18
Nitrate-N



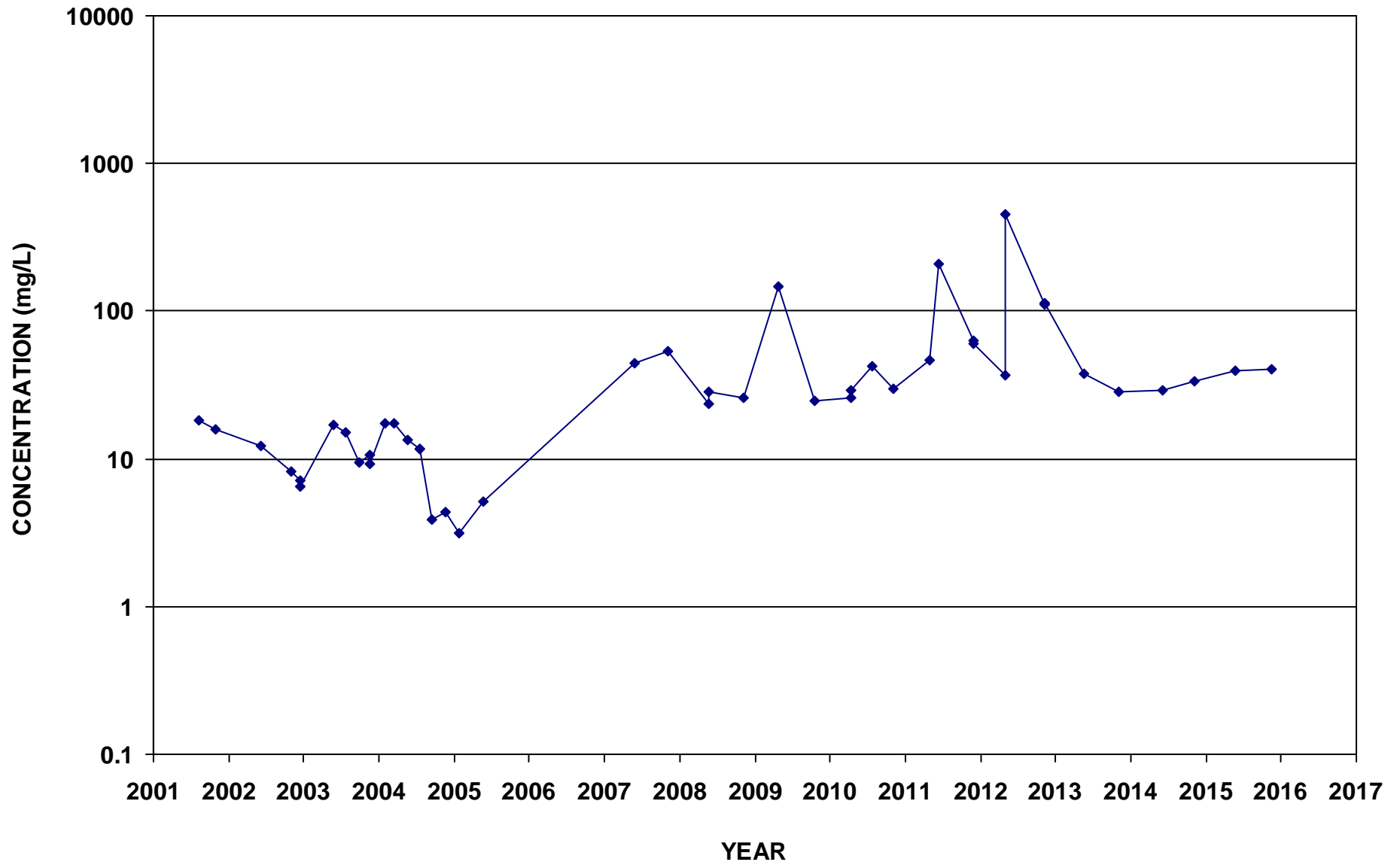
ECMW-4
Sulfate as SO4



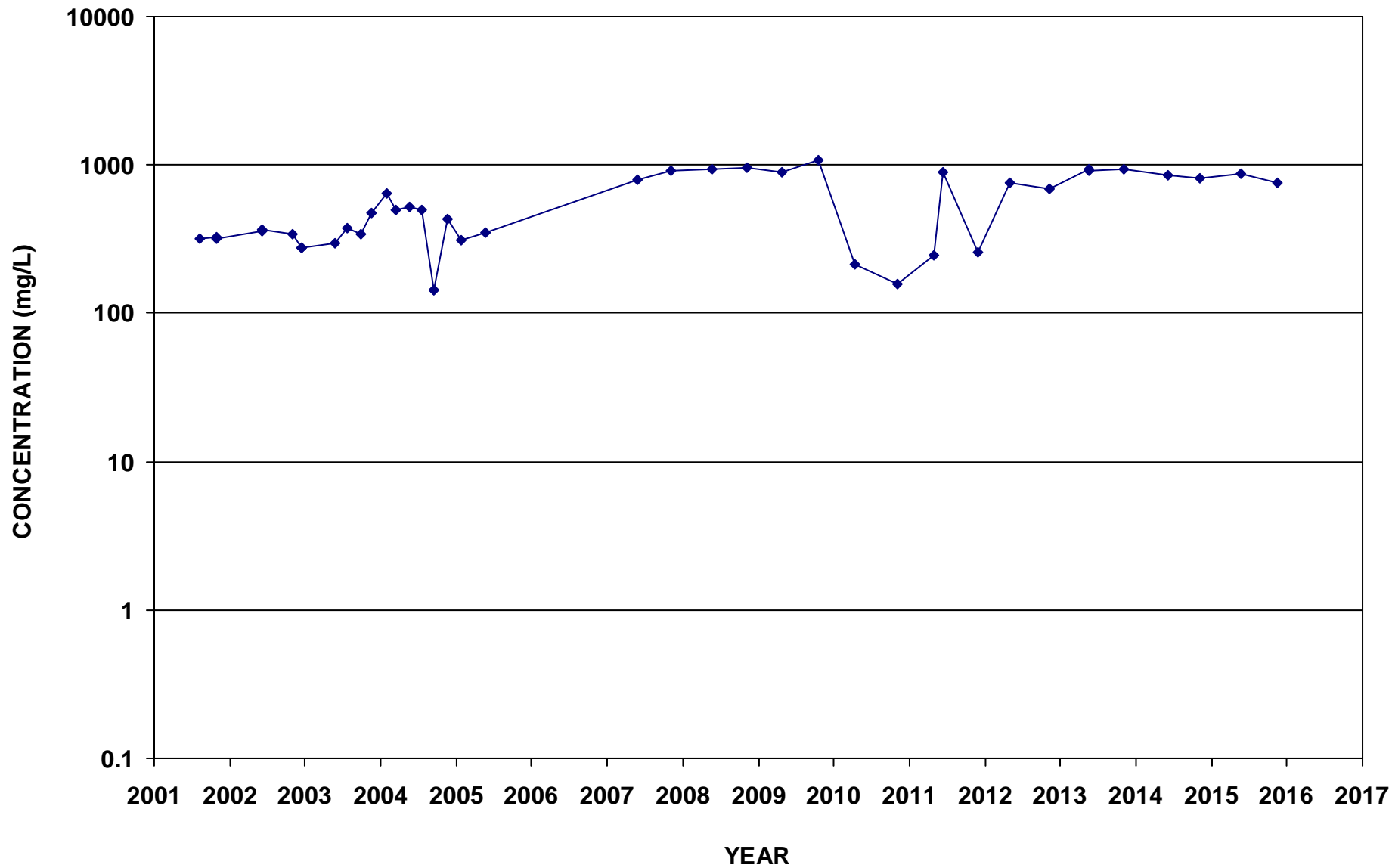
ECMW-5
Sulfate as SO4



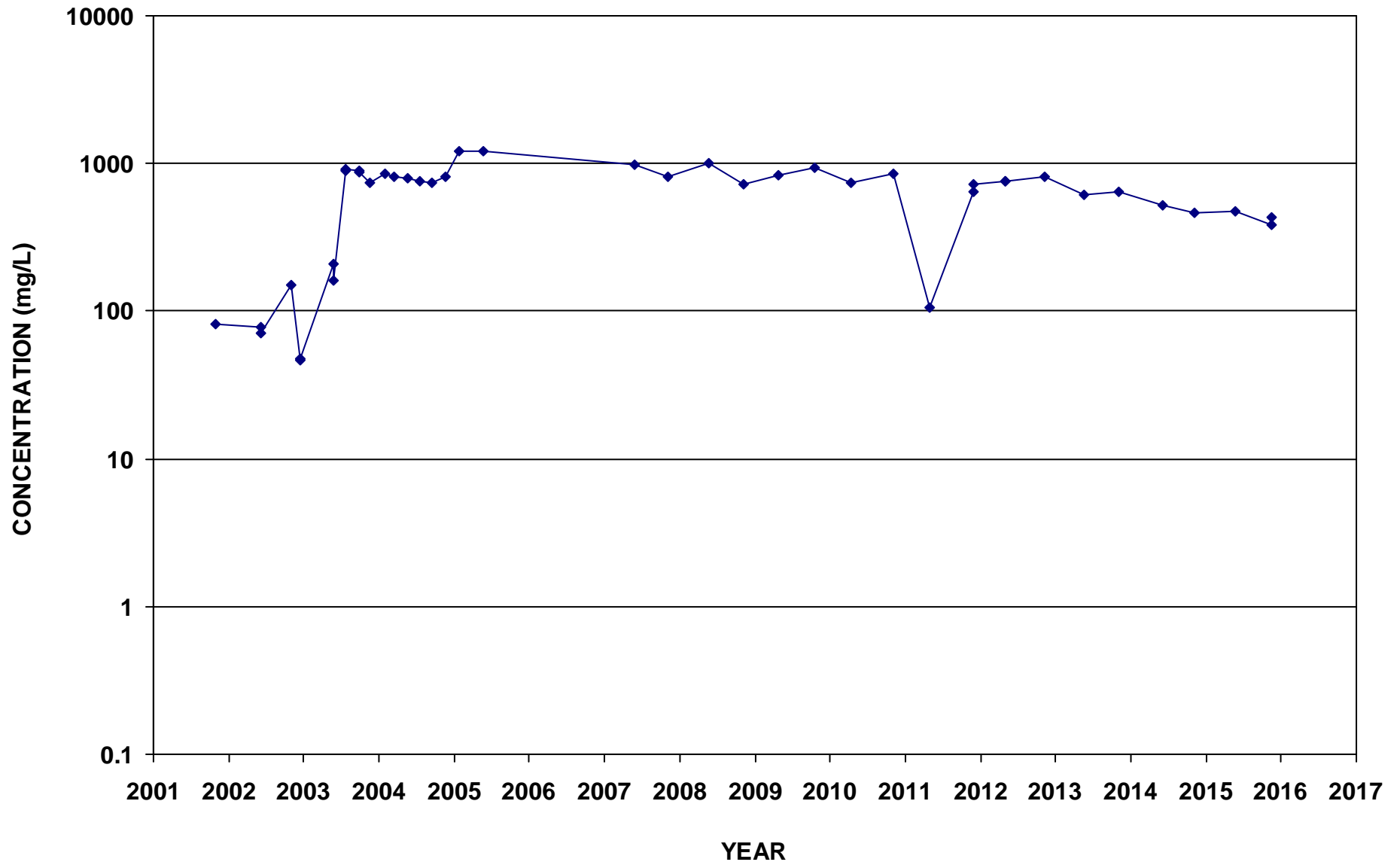
ECMW-6
Sulfate as SO4



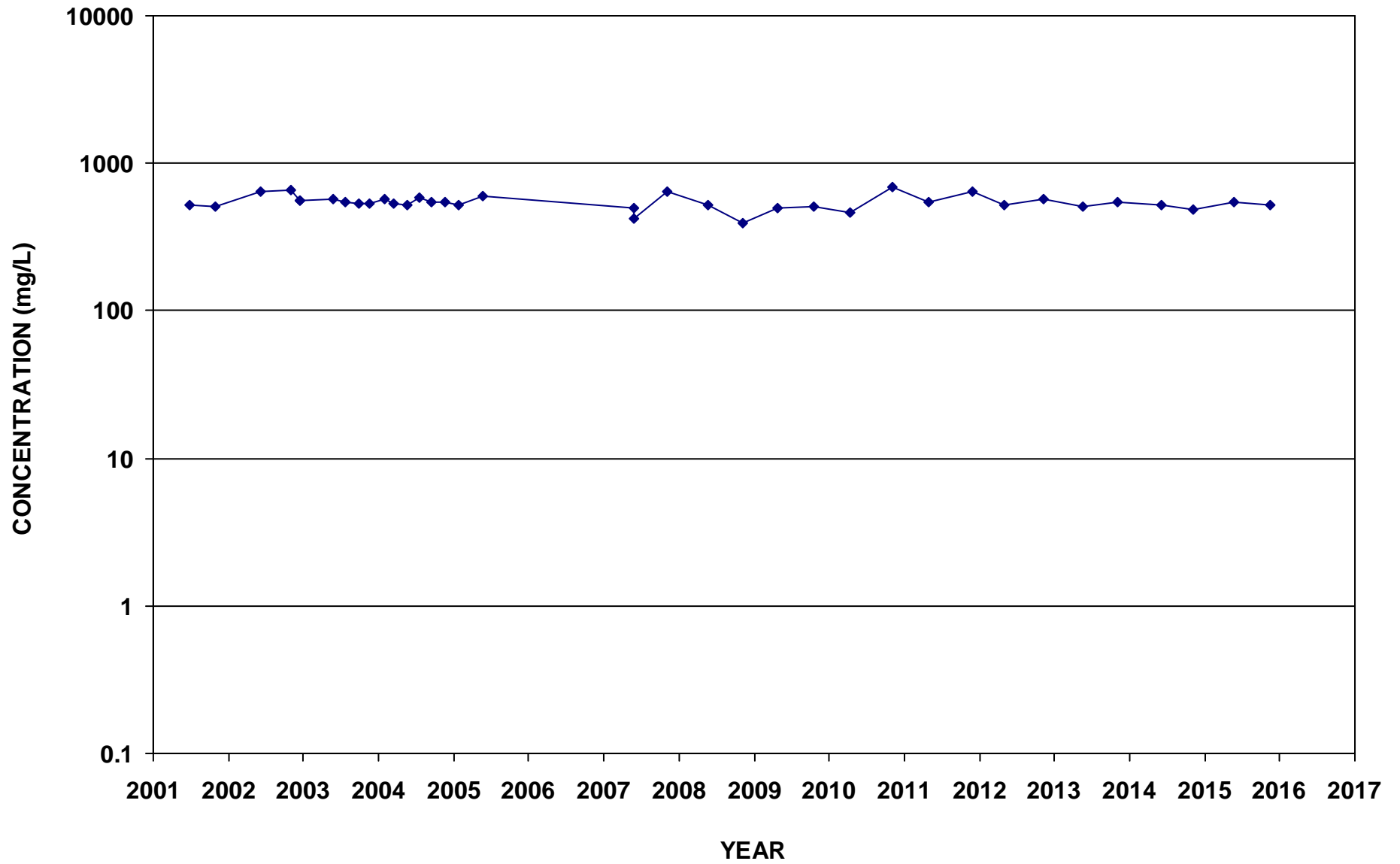
ECMW-7
Sulfate as SO4



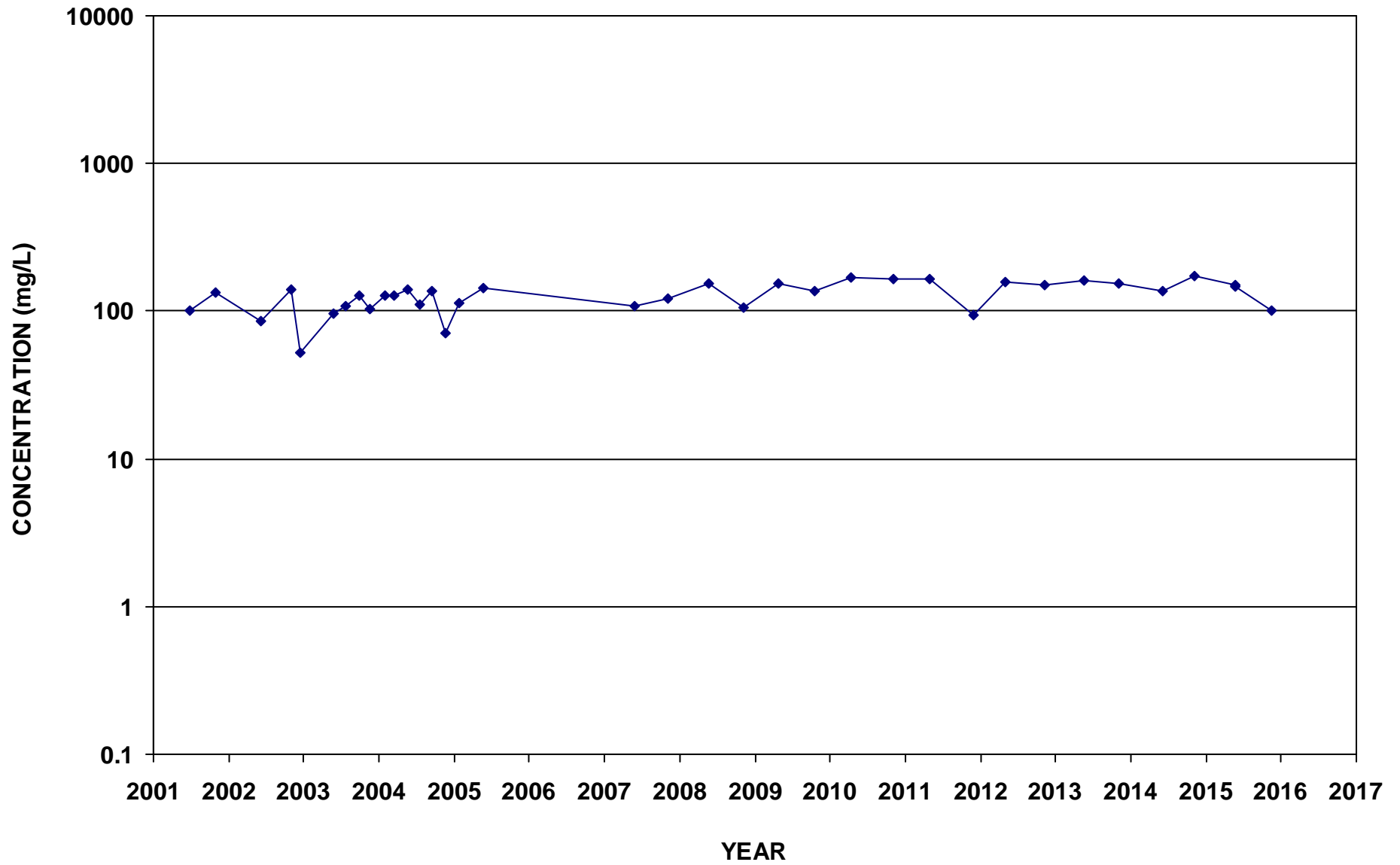
ECMW-8
Sulfate as SO4



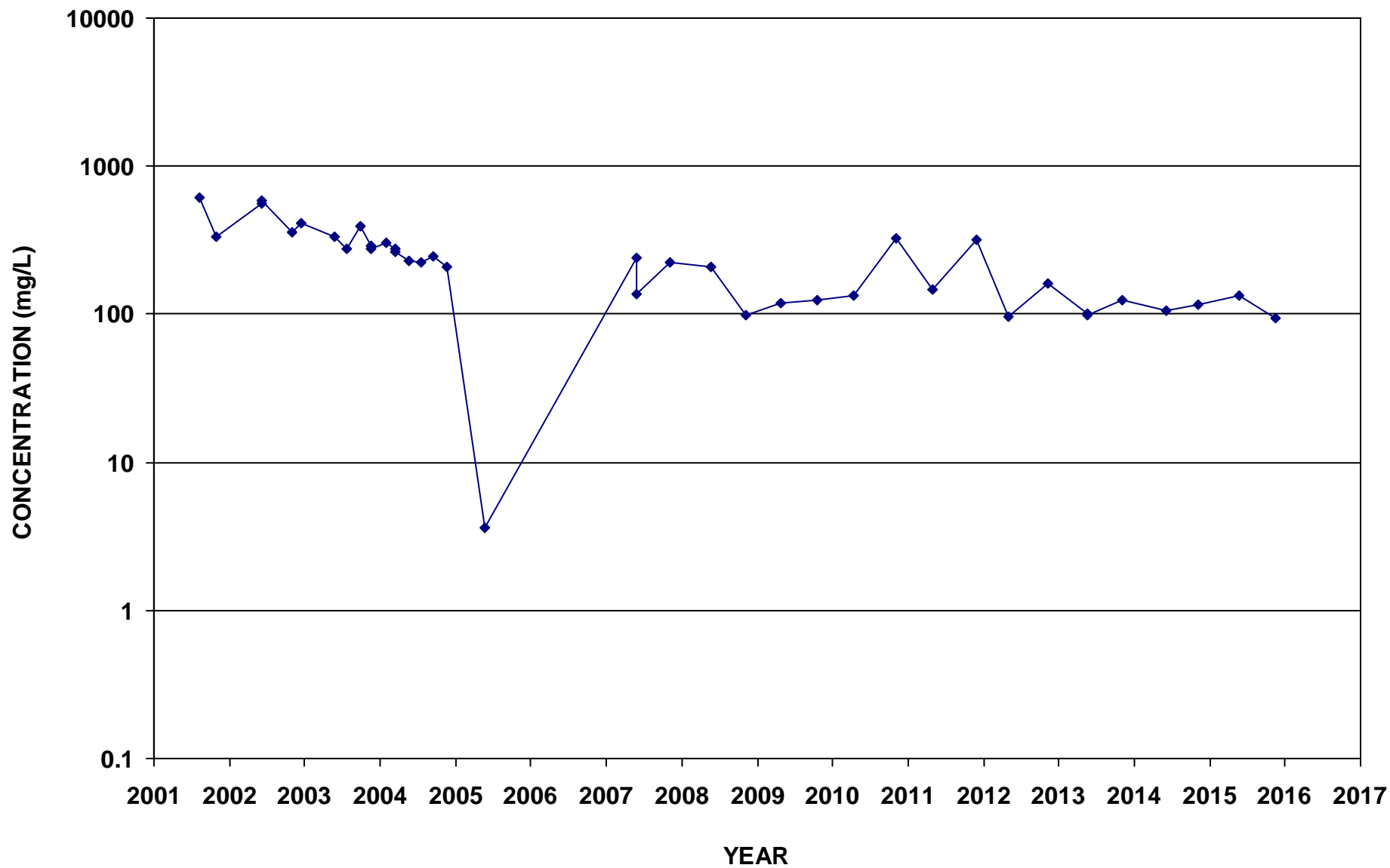
ECMW-9
Sulfate as SO4



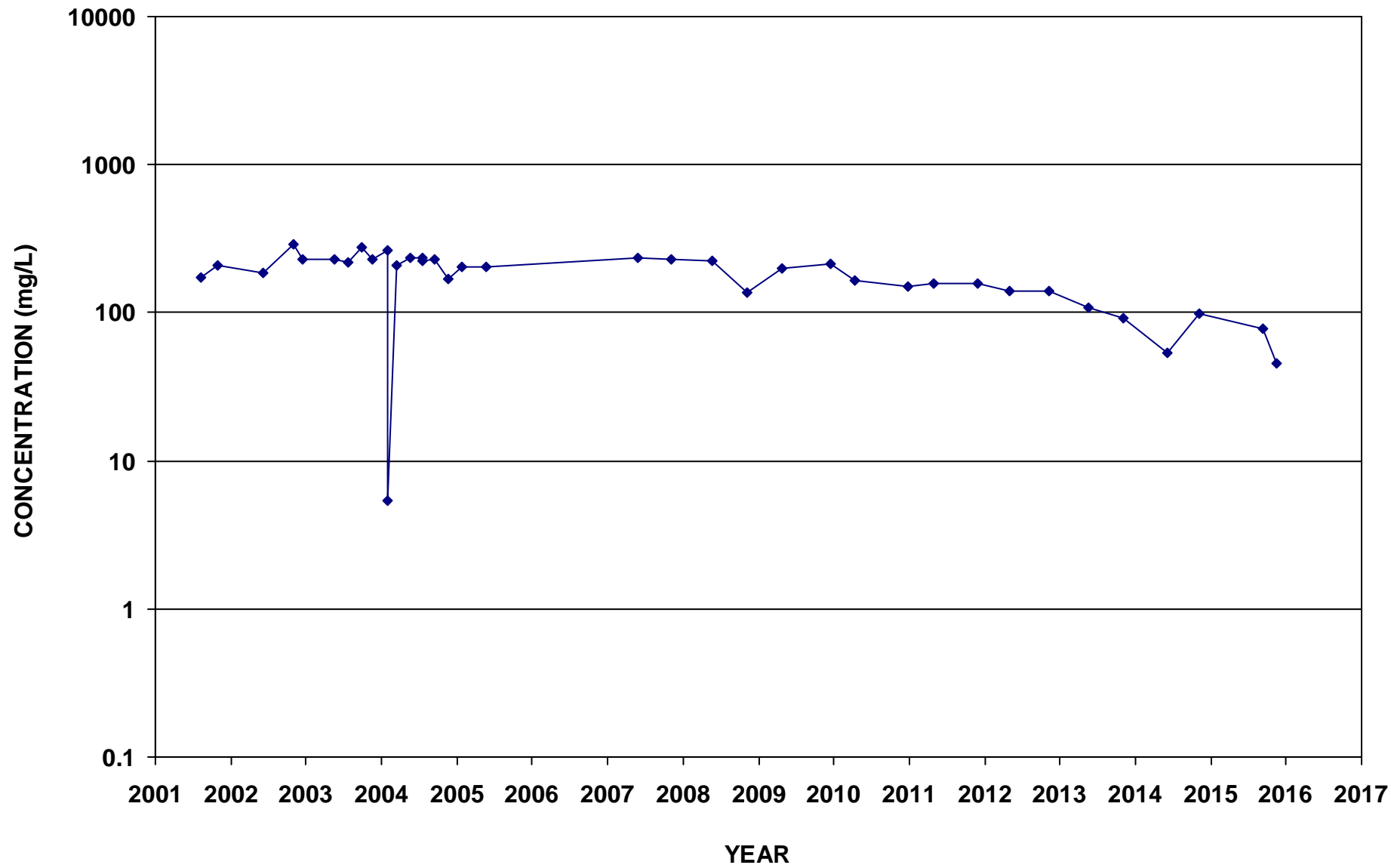
ECMW-10
Sulfate as SO4



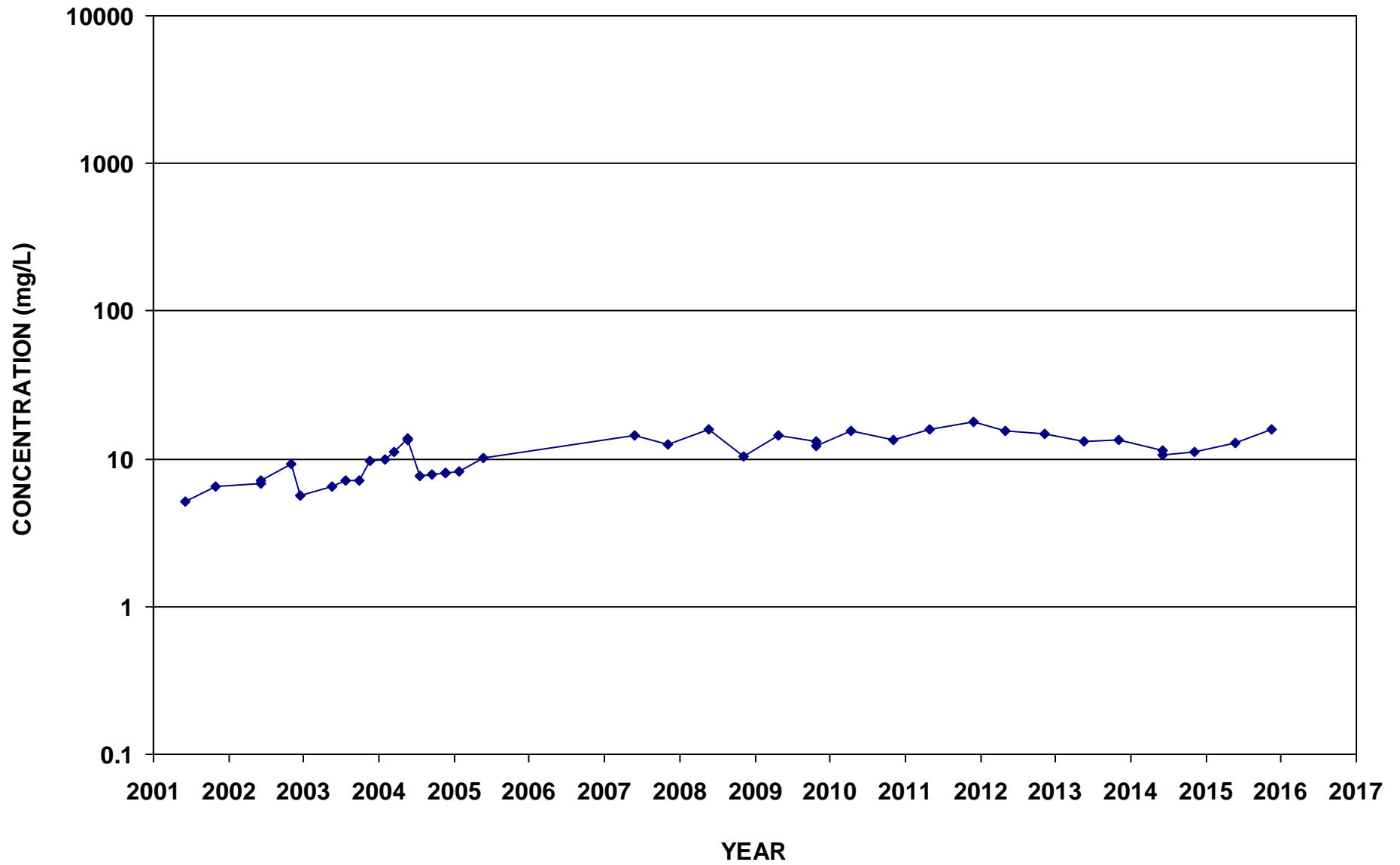
ECMW-11
Sulfate as SO4



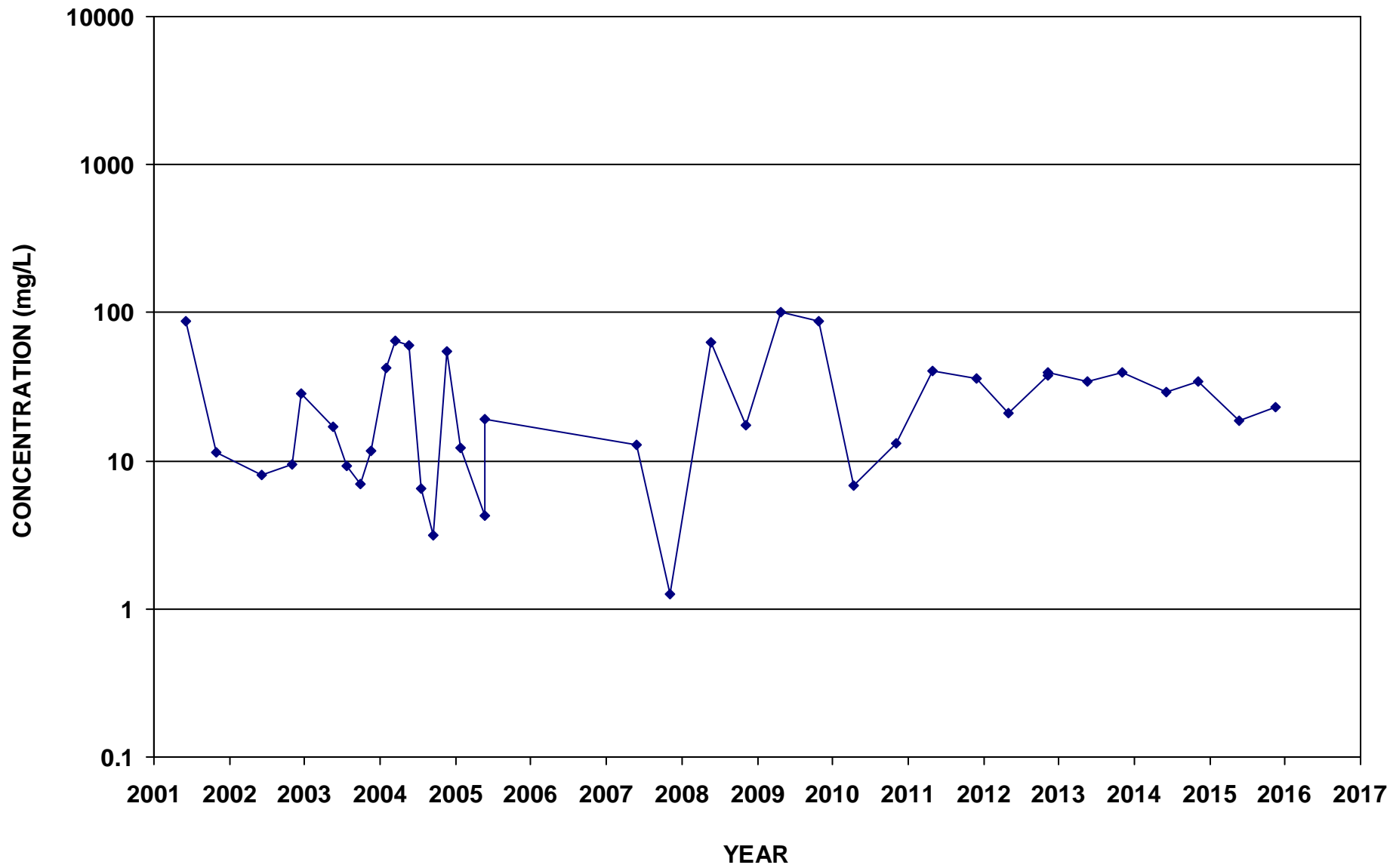
ECMW-14
Sulfate as SO4



ECMW-16
Sulfate as SO4



ECMW-17
Sulfate as SO4



ECMW-18
Sulfate as SO4

