



March 27, 2017

Mr. Jerry Neill
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Mr. Neill:

Please find the enclosed El Dorado Chemical Company 2016 Groundwater Monitoring Report. This report is being submitted in accordance with CAO LIS Number 06-0153. If you have any questions, please contact Edward L Pearson at (870) 863-1400.

Sincerely,

A handwritten signature in cursive script that reads "Greg Withrow".

Greg Withrow

General Manager

2016 ANNUAL GROUND WATER REPORT

Prepared For:



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Prepared By:



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March 24, 2017

**2016 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS**

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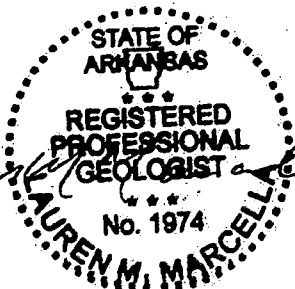
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**2016 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS**

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

Prepared By:



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Date: March 24, 2017

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**2016 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS**

1.0 INTRODUCTION

This report presents the results of ground water sampling activities conducted at the El Dorado Chemical Company (EDCC) facility during 2016. Field sampling techniques, ground water flow, ground water quality and data analysis are discussed. A site map is provided as Figure 1.

2.0 SITE GEOLOGY

The EDCC facility is located west of the Mississippi Embayment in the Gulf Coastal Plain 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 deeper Cook Mountain is overlain by the Cockfield Formation and 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 Sparta aquifer. The Cockfield Formation, locally referred to as the "lignite sand", is generally characterized by fine sand, interbedded silty clay and lignite becoming more massive and containing less silt and clay with depth. The local shallow subsurface consists of interbedded sand, silty sand, silt and clay, with more clay in the northern area of the property and more sand to the south.

3.0 GROUND WATER MONITORING PROGRAM

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

3.1 MONITORING PARAMETERS

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

allow EDCC to continue to collect data to evaluate the potential risk associated with the current ground water conditions, but eliminate parameters for which there is sufficient data.

Further revisions to the monitoring program were proposed in a letter dated April 25, 2007 and approved by the Arkansas Department of Environmental Quality (ADEQ) on June 8, 2007. The changes to the monitoring program that were implemented in 2007-2008 are as follows:

- **Lead and chromium:** These parameters were removed from the monitoring program during 2005; in 2007 ADEQ requested these parameters be sampled semiannually every two years (even numbered 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 2016. Well ECMW-14 was sampled in July 2016 because the area was inaccessible during the May 2016 event. A confirmation sample was collected from ECMW-8 to verify analytical results in August. 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 2016 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 2016 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. Four duplicates were collected in 2016 (two per period). Duplicate samples were tested for all parameters (ammonia, nitrate, sulfate, lead and chromium). The duplicate analyses are evaluated in Section 4.2.3.

3.3 LABORATORY ANALYSIS

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

Ground water samples were analyzed in 2016 for the following constituents:

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

4.0 SAMPLING RESULTS

The following sections present ground water flow and analytical data collected in 2016.

4.1 GROUND WATER FLOW

Ground water elevations from May and November 2016 were used to construct the potentiometric maps included as Figures 2 and 3. The average ground water elevation was approximately 2.7 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

4.2.1 Field Parameters

Indicator parameter data collected during well purging are summarized on Table 3. In 2016, pH values ranged from 3.61 standard units in ECMW-8 to 6.84 standard units (s.u.) in ECMW-1,

with an average of 5.05 s.u. The average of pH readings for 2016 (5.05 s.u.) was very similar to 2015 (5.06 s.u.). Specific conductance values ranged from 43.2 (ECMW-1) to 42,770 (ECMW-6) micro-Siemens/cm ($\mu\text{S}/\text{cm}$) in 2016. The average of specific conductance readings for 2016 (5893 $\mu\text{S}/\text{cm}$) is slightly higher than 2015 (3999 $\mu\text{S}/\text{cm}$) with the highest readings in Wells ECMW-6, ECMW-7 and ECMW-8.

4.2.2 Analytical Results

The 2016 well sampling 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 2016, ammonia concentrations ranged from below the detection limit (0.5 mg/L) to 2270 mg/L (ECMW-8). 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 ground water at the facility. As shown on Figures 4 and 5, the highest ammonia concentrations continue to be located north of the acid and nitrate process areas known as the Production Area.

Trend graphs of ammonia concentrations through 2016 are provided in Appendix B. Wells ECMW-4 and ECMW-6 show an increasing trend. Well ECMW-16 shows a decreasing trend. Wells ECMW-5, ECMW-7, ECMW-8, ECMW-9 and ECMW-22 show generally steady trends, but with recent increases in concentrations. Ammonia concentration trends in all other wells are relatively constant.

Nitrate

For the year 2016, nitrate concentrations ranged from below the detection limit (0.25 mg/L) to 5780 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 ground water at the facility. As shown on Figures 6 and 7, the highest nitrate concentrations continue to be located north of the acid and nitrate process areas known as the Production Area.

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

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

Sulfate

For the year 2016, sulfate concentrations ranged from 1.29 mg/L in ECMW-18 to 973 mg/L in ECMW-4. ECMW-4, ECMW-7, ECMW-8, ECMW-9, ECMW-11 and ECMW-13 exhibited the highest concentrations throughout the year.

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

Trends graphs for sulfate are provided in Appendix B. Sulfate concentrations in Wells ECMW-6, ECMW-7 and ECMW-12 show increasing trends. Wells ECMW-5, ECMW-8, ECMW-11, ECMW-14, ECMW-18 and ECMW-19 show decreasing trends. Sulfate concentration trends in the remaining wells are relatively constant.

Chromium

The monitoring program requires results for total and dissolved chromium for all wells in even numbered years. All total and dissolved chromium analyses were non-detect in the first half of 2016. ECMW-2 had 0.0212 mg/L in November 2016 with the remaining wells non-detect.

Lead

Total and dissolved lead were detected in wells ECMW-6, ECMW-8, ECMW-13 and ECMW-18 at concentrations ranging between 0.0167 mg/L (ECMW-18) and 0.0693 mg/L (ECMW-8), respectively. The concentration in the well nearest to the property line (0.0167 mg/L in ECMW-18) is only slightly above the EPA's Maximum Contaminant Level of 0.015 mg/L. The remaining wells in which lead was detected are located in the middle of the property concentrations do not pose any risk to human health or the environment.

4.2.3 Quality Assurance/Quality Control Results

Precision is the degree of agreement among repeated measurements of the same characteristic on samples collected as close as possible in time and place. It indicates 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:

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

A smaller RPD indicates a more precise analysis. EPA and state guidelines generally consider RPD values below 20-30% to be within acceptable limits.

Well and Duplicate	Date	Ammonia	Nitrate	Sulfate	Lead
		RPD (%)			
ECMW-14	7/6/2016	ND	1.8	15.0	ND
ECMW-8	8/4/2016	10.7	0.2	1.0	1.6
ECMW-5	11/10/2016	ND	11.4	29.6	ND
ECMW-10	11/10/2016	ND	3.5	3.6	ND

The four duplicate samples collected in 2016 and analyzed for ammonia, nitrate, sulfate and lead had RPD values shown on the above table. Chromium was non-detect in all sample pairs.

5.0 GROUND WATER REMEDIATION

Recovery Wells ECRW #1 and ECRW #2 (see Figure 1) operated consistently throughout 2016, with average pumping rates of 0.5 and 0.4 gallons per minute, respectively. A total of 466,560 gallons of ground water were recovered; 259,200 gallons from ECRW #1 and 207,360 gallons from ECRW #2.

TABLES

TABLE 1
MONITORING WELL CONSTRUCTION DETAILS
2016 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
2016 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

Monitor Well	Top of Casing Elevation (ft above Mean Sea Level)	Measurement Date			
		May 23-25, 2016		November 8-10, 2016	
		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	11.78	201.50	15.60	197.68
ECMW-2	196.25	0.00	196.25	2.10	194.15
ECMW-3	192.11	9.27	182.84	12.50	179.61
ECMW-4	194.84	9.12	185.72	11.60	183.24
ECMW-5	182.69	4.66	178.03	4.90	177.79
ECMW-6	191.87	4.46	187.41	5.00	186.87
ECMW-7	195.88	7.16	188.72	7.70	188.18
ECMW-8	197.34	7.00	190.34	8.80	188.54
ECMW-8 ⁽¹⁾	197.34	7.42	189.92	-	-
ECMW-9	198.39	9.66	188.73	13.70	184.69
ECMW-10	205.75	13.19	192.56	15.80	189.95
ECMW-11	201.65	10.86	190.79	13.10	188.55
ECMW-12	184.97	6.16	178.81	6.60	178.37
ECMW-13	177.26	7.41	169.85	9.90	167.36
ECMW-14 ⁽²⁾	178.48	6.56	171.92	8.60	169.88
ECMW-15	180.84	5.09	175.75	6.90	173.94
ECMW-16	180.14	4.10	176.04	6.65	173.49
ECMW-17	185.40	27.00	158.40	29.40	156.00
ECMW-18	155.46	7.01	148.45	8.50	146.96
ECMW-19	150.41	2.49	147.92	4.25	146.16
ECMW-20	192.77	27.02	165.75	28.80	163.97
ECMW-21	176.29	15.26	161.03	17.60	158.69
ECMW-22	173.55	4.91	168.64	7.60	165.95

(1) ECMW-8 was resampled August 4, 2016 to verify anomolous results.

(2) ECMW-14 was inaccessible during the May 2016 sampling event, measurement taken July 6, 2016.

TABLE 3
GROUNDWATER INDICATOR PARAMETER DATA
2016 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

WELL	TEMPERATURE (C)		pH (s.u.)		CONDUCTIVITY (uS)	
	Date		Date		Date	
	5/23-25/2016	11/8-10/2016	5/23-25/2016	11/8-10/2016	5/23-25/2016	11/8-10/2016
ECMW-1	17.5	18.4	4.46	6.84	50	43.2
ECMW-2	20.0	19.0	5.15	6.55	340	280.7
ECMW-3	24.3	18.2	6.26	6.45	220	257.2
ECMW-4	22.6	20.9	3.83	3.75	6710	7650
ECMW-5	19.5	21.9	5.30	5.60	552	643
ECMW-6	20.0	21.2	3.83	3.71	39930	42770
ECMW-7	20.1	21.2	5.30	4.92	30140	24240
ECMW-8	21.1	19.7	3.61	3.61	33810	31950
ECMW-8 ⁽¹⁾	21.8	-	3.74	-	31070	-
ECMW-9	22.5	19.9	5.32	5.87	2248	2500
ECMW-10	22.8	21.8	3.99	4.25	810	770
ECMW-11	21.7	22.9	4.04	4.42	900	909
ECMW-12	21.0	22.9	5.58	5.18	580	696
ECMW-13	19.8	21.2	4.39	5.06	1260	1053
ECMW-14 ⁽²⁾	24.1	22.9	4.93	5.37	546	472
ECMW-15	20.0	23.1	4.29	5.04	80	82.9
ECMW-16	20.7	23.4	4.28	5.30	160	136
ECMW-17	19.8	19.1	3.86	6.42	230	184.9
ECMW-18	18.1	20.4	5.33	6.42	70	75
ECMW-19	18.1	17.8	5.06	6.56	80	83.9
ECMW-20	19.6	18.6	5.37	5.18	70	140.4
ECMW-21	20.3	19.8	4.88	6.25	50	61.6
ECMW-22	20.6	18.9	5.50	6.04	150	144.5

(1) ECMW-8 was resampled August 4, 2016 to verify anomolous results.

(2) ECMW-14 was inaccessible during the May 2016 sampling event, measurement taken July 6, 2016.

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	--	--	--	--	--	--	--	--	--	--
5/24/2016	4.46	<0.5	1.79	5.56	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/10/2016	6.84	<0.5	0.951	5.41	--	<0.0156	<0.0156	<0.0104	<0.0104	--	--

"--" - 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	--	--	--	--	--	--	--	--	--	--
5/24/2016	5.15	1.37	0.645	19.8	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/10/2016	6.55	<0.5	<0.25	22.2	--	<0.0156	<0.0156	0.0212	<0.0104	--	--

"--" - 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	—	—	—	—	—	—	—	—	—	—
5/24/2016	6.26	<0.5	0.252	9.88	—	<0.0156	<0.016	<0.0104	<0.021	—	—
11/10/2016	6.45	<0.5	<0.25	16.2	—	<0.0156	<0.0156	<0.0104	<0.0104	—	—

"—" - 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	--	--	--	--	--	--	--
5/24/2016	3.83	1.13	0.666	843	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/10/2016	3.75	<0.5	<0.25	973	--	<0.0156	<0.0156	<0.0104	<0.0104	--	--

"--" - 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	--	--	--	--	--	--	--
5/24/2016	5.30	<0.5	41.9	49.4	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/10/2016	5.6	<0.5	47.2	59	--	<0.0156	<0.0156	<0.0104	<0.0104	--	--
11/10/2016	--	<0.5	42.1	43.8	--	<0.0156	<0.0156	<0.0104	<0.0104	--	--

"--" - 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	--
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	--

"--" - 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									
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	--	--	--	--	--	--	--
5/24/2016	3.83	1390	4120	30.8	--	0.0379	0.038	<0.0104	<0.021	--	--
11/10/2016	3.71	1890	5780	62.6	--	0.058	0.0634	<0.0104	<0.0104	--	--

"--" - 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	--	--	--	--	--	--	--
5/24/2016	5.30	91.1	135	740	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/10/2016	4.92	1450	2300	165	--	<0.0156	<0.0156	<0.0104	<0.0104	--	--

"--" - 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	--
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	--

"--" - 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									
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	--	--	--	--	--	--	--
5/24/2016	3.61	2020	4060	81	--	0.065	0.065	<0.0104	<0.021	--	--
8/4/2016	3.74	2270	4310	83.6	--	0.0686	0.065	<0.0104	<0.021	--	--
8/4/2016	--	2040	4300	82.9	--	0.0693	0.064	<0.0104	<0.021	--	--
11/10/2016	3.61	1020	1830	270	--	0.0341	0.0313	<0.0104	<0.0104	--	--

"--" - 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	-	-	-	-	-	-	-
5/24/2016	5.32	0.888	29.1	581	-	<0.0156	<0.016	<0.0104	<0.021	-	-
11/10/2016	5.87	4.08	29.1	616	-	<0.0156	<0.0156	<0.0104	<0.0104	-	-

"-" - 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	--	--	--	--	--	--	--
5/25/2016	3.99	<0.5	51.2	134	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/10/2016	4.25	<0.5	44.1	141	--	<0.0156	<0.0156	<0.0104	<0.0104	--	--
11/10/2016	--	<0.5	42.6	136	--	<0.0156	<0.0156	<0.0104	<0.0104	--	--

"--" - 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	--	--	--	--	--	--	--
5/25/2016	4.04	5.86	19.5	233	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/10/2016	4.42	3.86	18.3	245	--	<0.0156	<0.0156	<0.0104	<0.0104	--	--

"--" - 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	--	--	--	--	--	--	--	--	--	--
5/25/2016	5.58	2.24	<0.25	17	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/10/2016	5.18	2.22	<0.25	33	--	<0.0156	<0.0156	<0.0104	<0.0104	--	--

"--" - 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	--	--	--	--	--	--	--	--	--	--
5/25/2016	4.39	<0.5	<0.25	529	--	0.0183	<0.016	<0.0104	<0.021	--	--
11/9/2016	5.06	<0.5	<0.25	439	--	<0.0156	<0.0156	<0.0104	<0.0104	--	--

"--" - 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	--	--	--	--	--	--	--
7/6/2016	4.93	<0.5	8.76	91.2	--	<0.0156	<0.016	<0.0104	<0.021	--	--
7/6/2016	--	<0.5	8.92	106	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/9/2016	5.37	<0.5	4.4	116	--	<0.0156	<0.0156	<0.0104	<0.0104	--	--

"--" - 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	--	--	--	--	--	--	--	--	--	--
5/25/2016	4.29	<0.5	4.52	9.67	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/9/2016	5.04	<0.5	4.07	9.96	--	<0.0156	<0.0156	<0.0104	<0.0104	--	--

"--" - 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	--	--	--	--	--	--	--
5/25/2016	4.28	<0.5	10.2	15.4	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/9/2016	5.3	<0.5	8.86	13.6	--	<0.0156	<0.0156	<0.0104	<0.0104	--	--

"--" - 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	--	--	--	--	--	--	--
5/25/2016	3.86	<0.5	14.3	6.64	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/9/2016	6.42	0.826	12.2	6.86	--	<0.0156	<0.0156	<0.0104	<0.0104	--	--

"--" - 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	5.70	--	<0.25	--	--	--	--	--	--	--	--
5/25/2016	5.33	<0.5	<0.25	1.78	--	0.0167	<0.016	<0.0104	<0.021	--	--
11/10/2016	6.42	0.788	<0.25	1.29	--	0.0248	<0.0156	<0.0104	<0.0104	--	--

"--" - 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	--	--	--	--	--	--	--	--	--	--
5/25/2016	5.06	<0.5	<0.25	2.26	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/9/2016	6.56	<0.5	<0.25	2.25	--	<0.0156	<0.0156	<0.0104	<0.0104	--	--

"--" - 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	--	--	--	--	--	--	--	--	--	--
5/25/2016	5.37	<0.5	<0.25	9.46	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/9/2016	5.18	<0.5	2.31	4.59	--	<0.0156	<0.0156	<0.0104	<0.0104	--	--

"--" - 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	--	--	--	--	--	--	--	--	--	--
5/25/2016	4.88	<0.5	2.25	3.62	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/9/2016	6.25	<0.5	<0.25	21.4	--	<0.0156	<0.0156	<0.0104	<0.0104	--	--

"--" - 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".

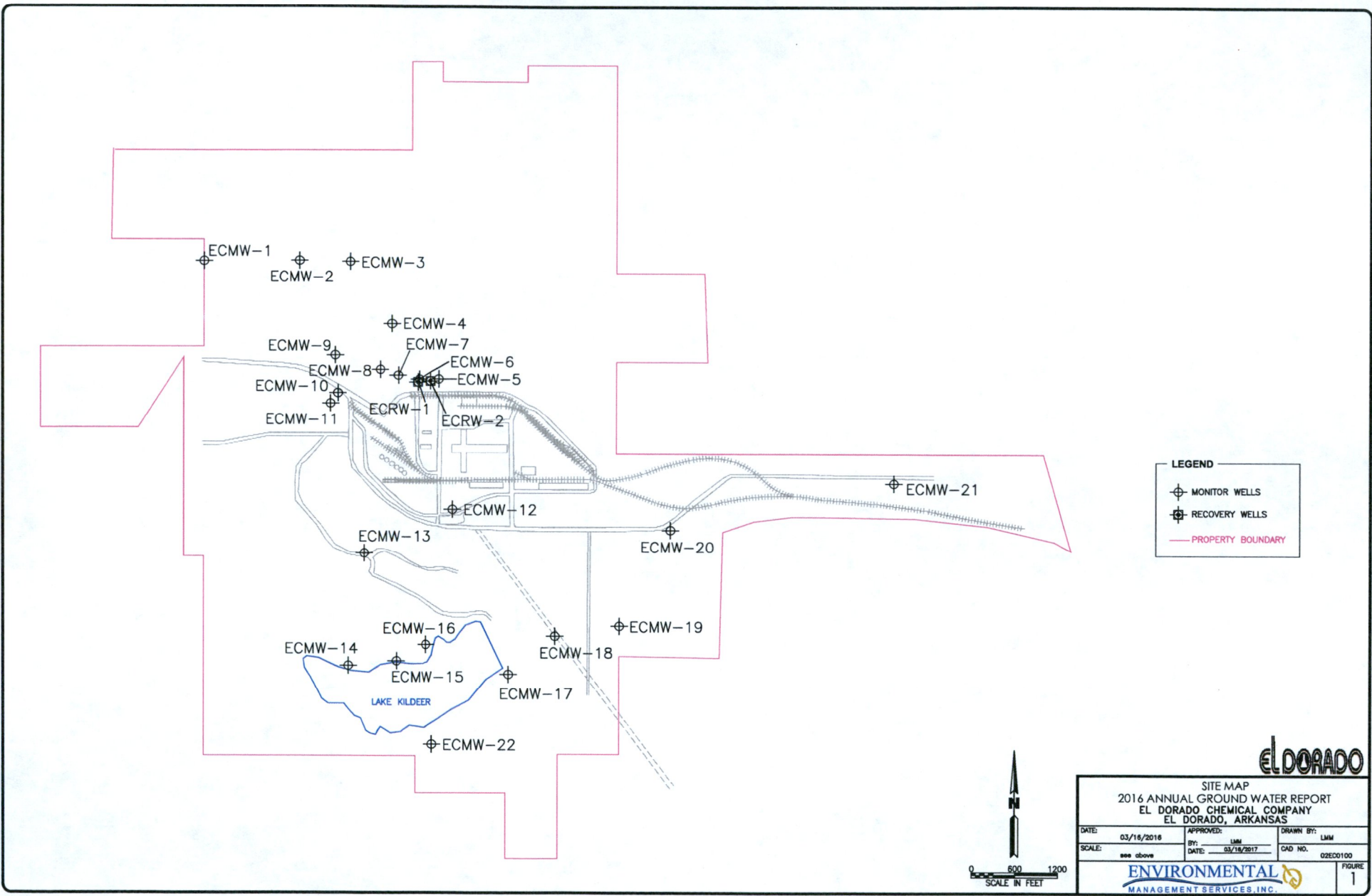
TABLE 25
ECMW-22 ANALYTICAL SUMMARY
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

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	--	--	--	--	--	--	--	--	--	--
5/25/2016	5.50	1.25	4.37	11.8	--	<0.0156	<0.016	<0.0104	<0.021	--	--
11/9/2016	6.04	<0.5	0.53	5.16	--	<0.0156	<0.0156	<0.0104	<0.0104	--	--

"--" - Parameter not analyzed

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

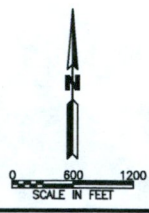
FIGURES



LEGEND

- ⊕ MONITOR WELLS
- ⊕ RECOVERY WELLS
- PROPERTY BOUNDARY

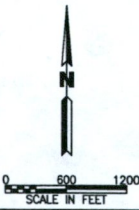
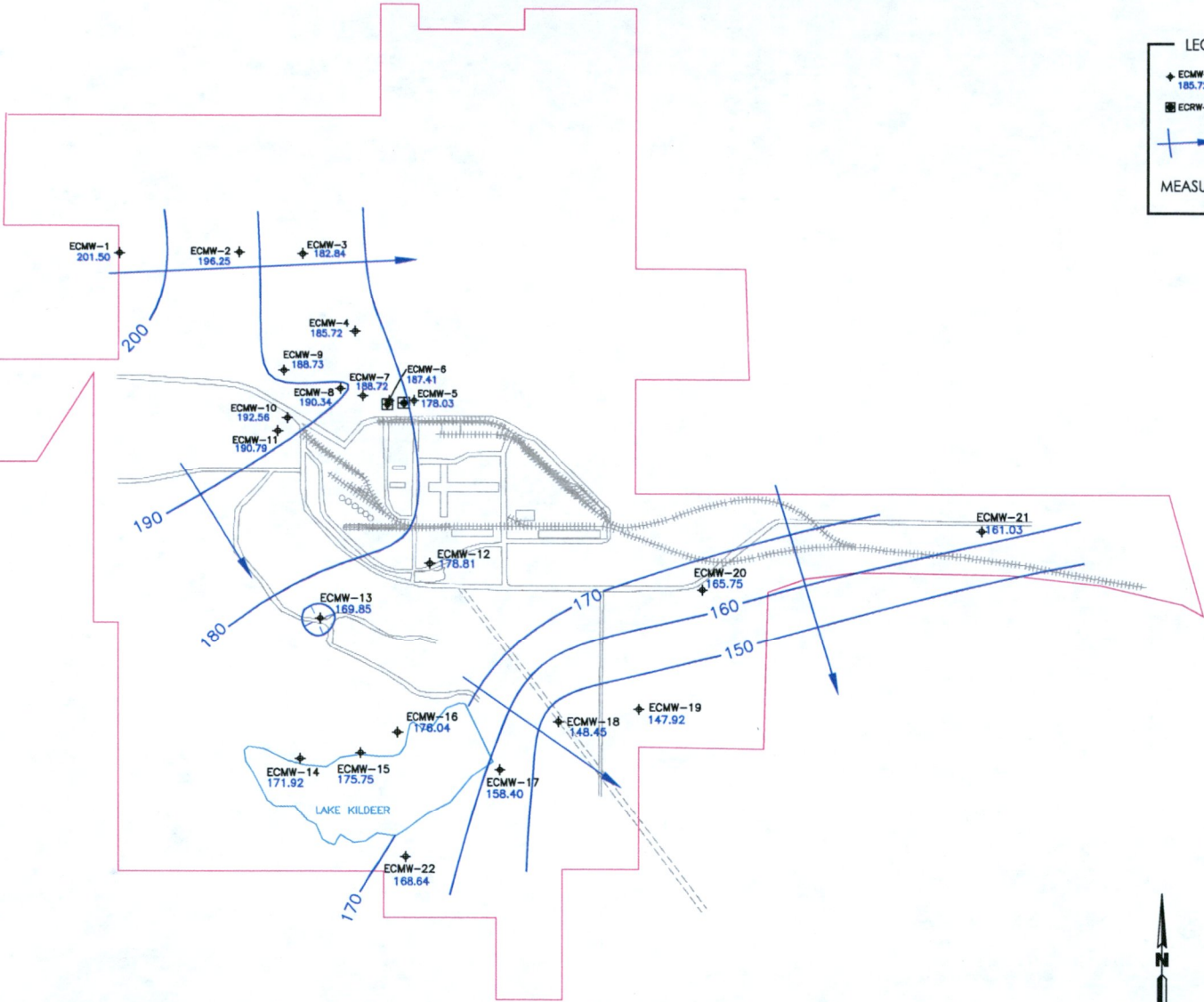
EL DORADO SITE MAP 2016 ANNUAL GROUND WATER REPORT EL DORADO CHEMICAL COMPANY EL DORADO, ARKANSAS			
DATE:	03/18/2016	APPROVED:	LMM
SCALE:	see above	DATE:	03/18/2017
		DRAWN BY:	LMM
		CAD NO.:	02E0100
ENVIRONMENTAL MANAGEMENT SERVICES, INC.			FIGURE 1



LEGEND

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

MEASUREMENTS TAKEN MAY 23-25, 2016



EL DORADO

MAY 2016 GROUND WATER ELEVATION MAP
2016 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

DATE: 03/16/2017	APPROVED: LMM	DRAWN BY: LMM
SCALE: as shown	DATE: 03/16/2017	CAD NO. 02EC0100

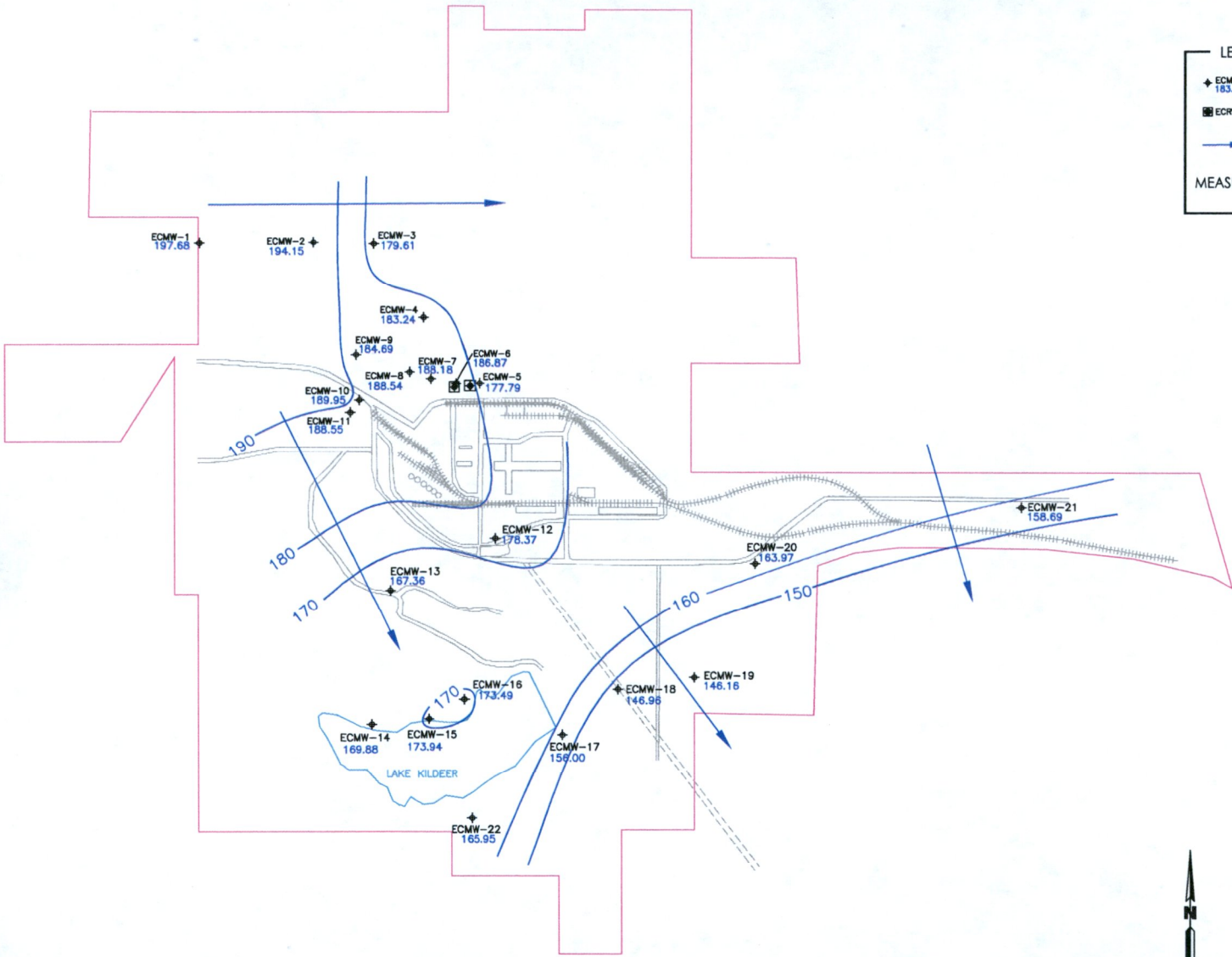
ENVIRONMENTAL
MANAGEMENT SERVICES, INC.

FIGURE
2

LEGEND

- ◆ ECMW-4 183.24 Monitor Well with Water Elevation (feet MSL)
- ECRW-01 Recovery Well
- Ground Water Flow Direction

MEASUREMENTS TAKEN NOVEMBER 9-10, 2016



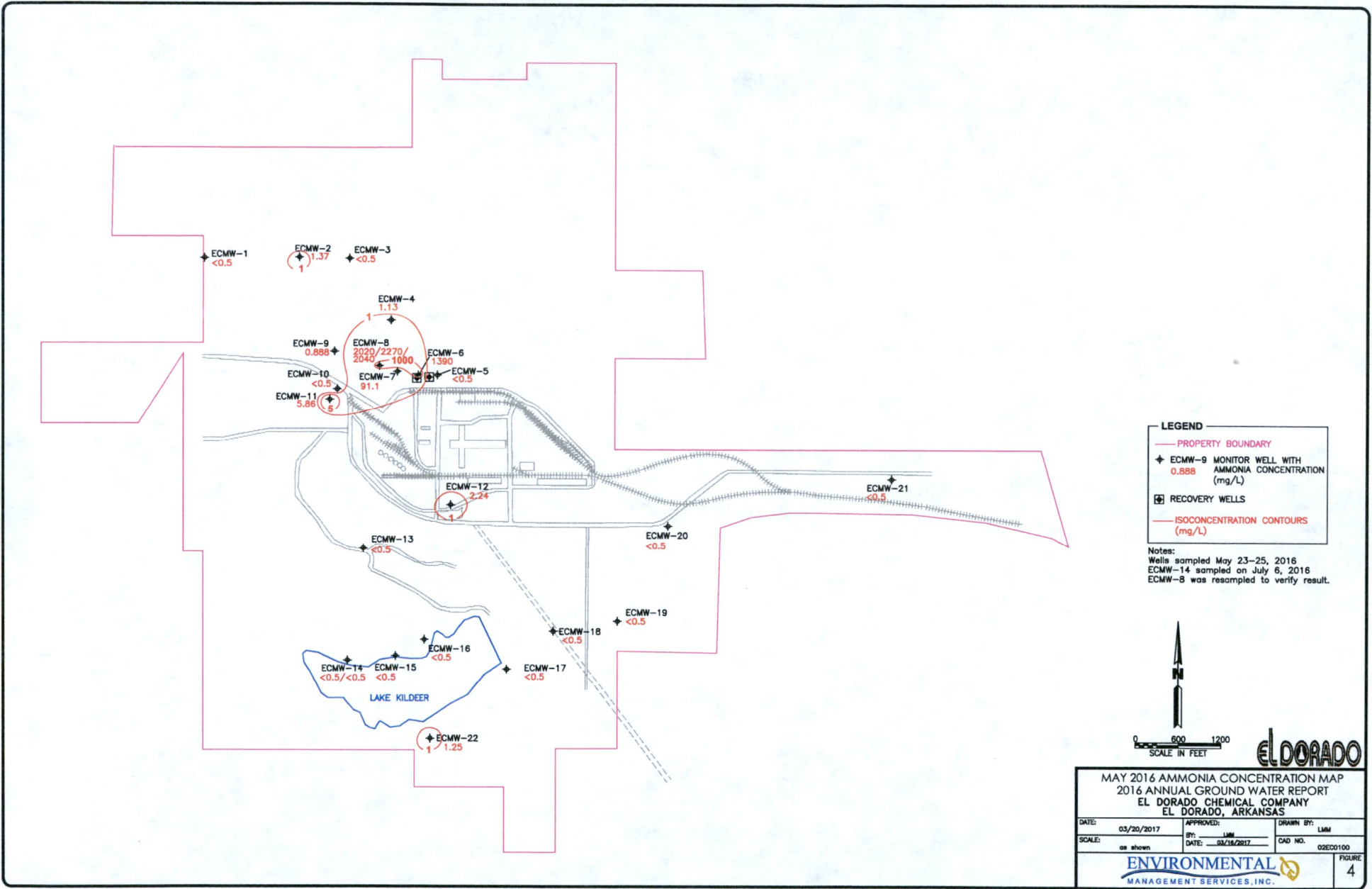
EL DORADO

NOVEMBER 2016 GROUND WATER ELEVATION MAP
 2016 ANNUAL GROUND WATER REPORT
 EL DORADO CHEMICAL COMPANY
 EL DORADO, ARKANSAS

DATE: 03/16/2017	APPROVED: LJM	DRAWN BY: LJM
SCALE: as shown	DATE: 03/16/2017	CAD NO. 02E0100

ENVIRONMENTAL
MANAGEMENT SERVICES, INC.

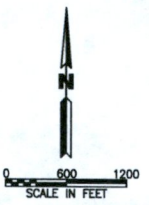
FIGURE
3



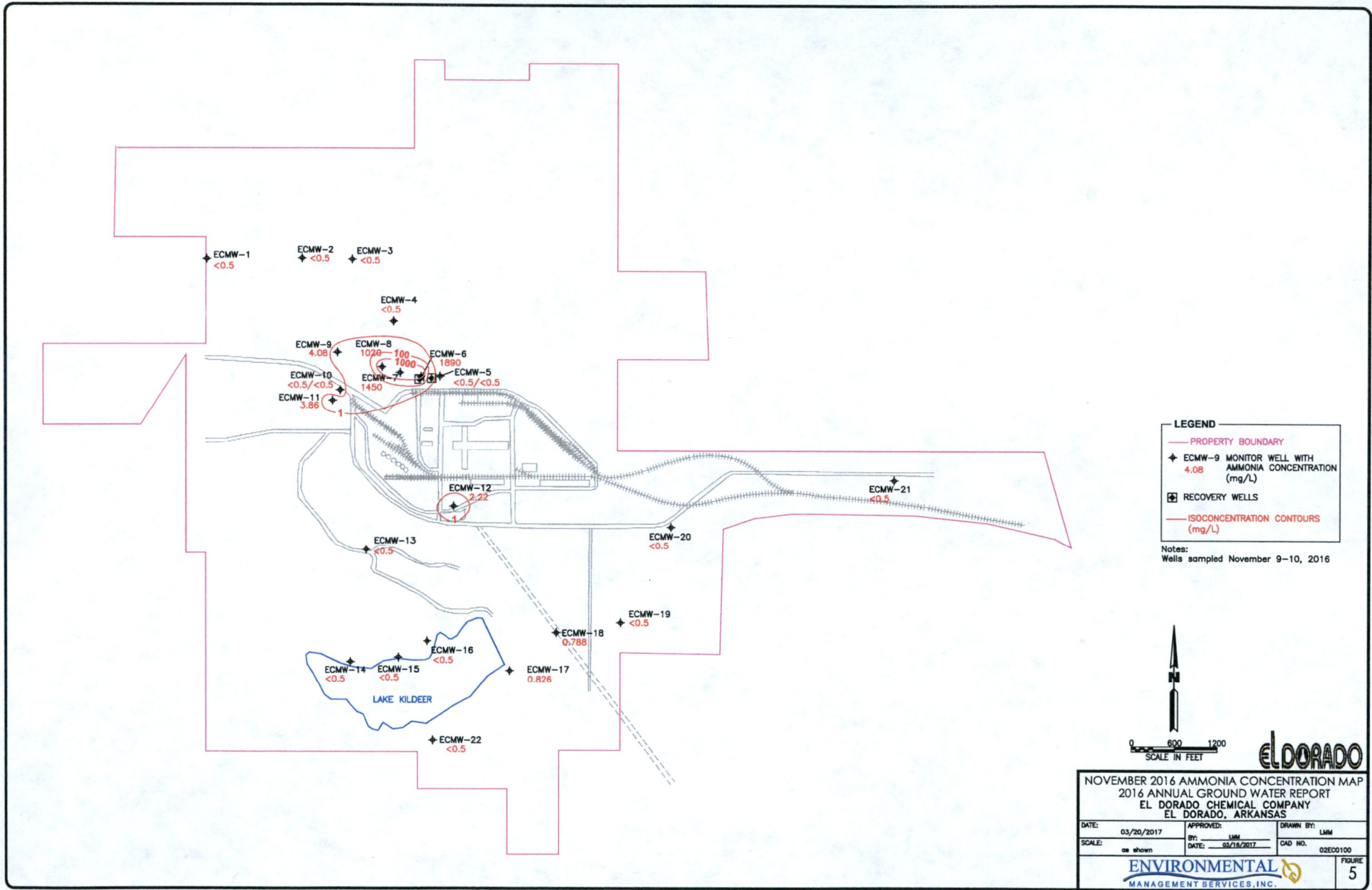
LEGEND

- PROPERTY BOUNDARY
- ◆ ECMW-9 MONITOR WELL WITH 0.888 AMMONIA CONCENTRATION (mg/L)
- ☒ RECOVERY WELLS
- ISOCONCENTRATION CONTOURS (mg/L)

Notes:
 Wells sampled May 23–25, 2016
 ECMW-14 sampled on July 6, 2016
 ECMW-8 was resampled to verify result.



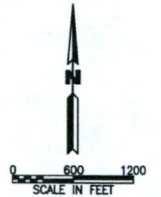
MAY 2016 AMMONIA CONCENTRATION MAP 2016 ANNUAL GROUND WATER REPORT EL DORADO CHEMICAL COMPANY EL DORADO, ARKANSAS			
DATE:	03/20/2017	APPROVED:	LMM
SCALE:	as shown	DATE:	03/18/2017
		DRAWN BY:	LMM
		CAD NO.	02E00100
			FIGURE 4



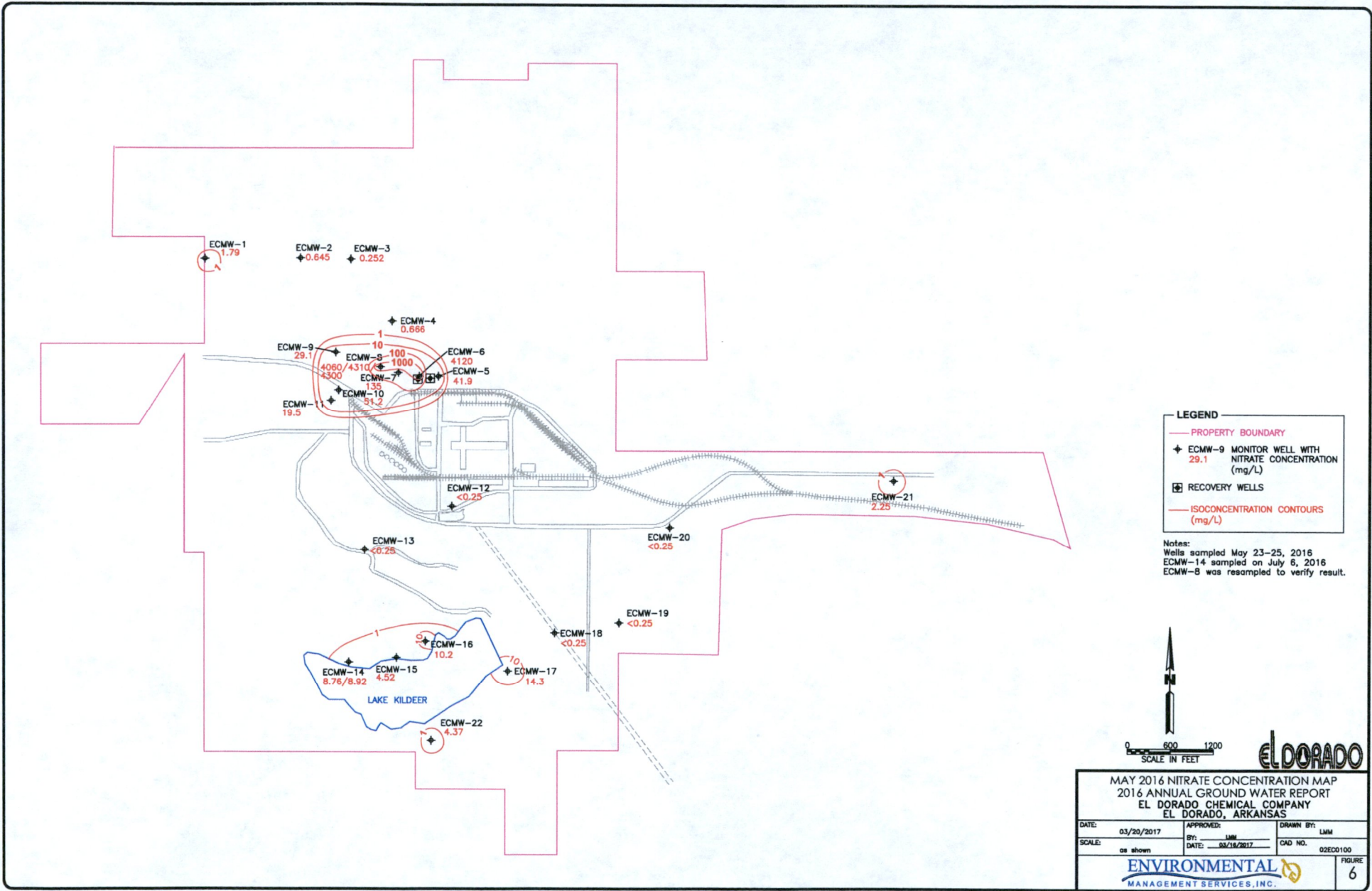
LEGEND

- PROPERTY BOUNDARY
- ✦ ECMW-9 MONITOR WELL WITH AMMONIA CONCENTRATION (mg/L)
- ☒ RECOVERY WELLS
- ISOCONCENTRATION CONTOURS (mg/L)

Notes:
Wells sampled November 9-10, 2016



NOVEMBER 2016 AMMONIA CONCENTRATION MAP 2016 ANNUAL GROUND WATER REPORT EL DORADO CHEMICAL COMPANY EL DORADO, ARKANSAS			
DATE:	03/20/2017	APPROVED:	LMM
SCALE:	as shown	DATE:	03/16/2017
		DRAWN BY:	LMM
		CAD NO.	02ECC100
ENVIRONMENTAL MANAGEMENT SERVICES, INC.			FIGURE 5



ECMW-1
1.79

ECMW-2
0.645

ECMW-3
0.252

ECMW-4
0.666

ECMW-9
29.1

ECMW-8
4120

ECMW-6
41.9

ECMW-5
41.9

ECMW-7
135

ECMW-10
51.2

ECMW-11
19.5

ECMW-12
<0.25

ECMW-21
2.25

ECMW-13
<0.25

ECMW-20
<0.25

ECMW-19
<0.25

ECMW-18
<0.25

ECMW-16
10.2

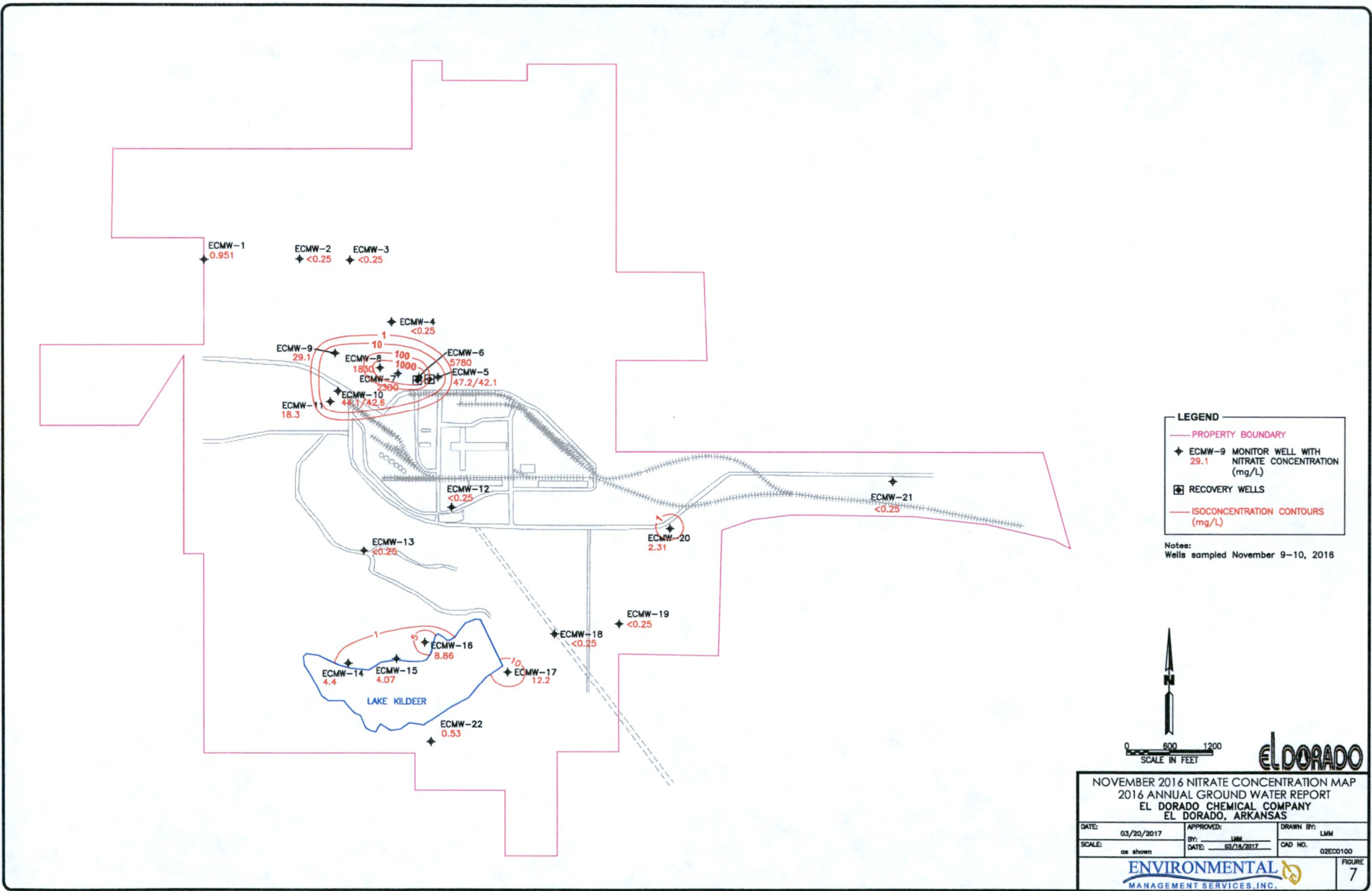
ECMW-14
8.76/8.92


ECMW-15
4.52

ECMW-17
14.3

ECMW-22
4.37

LAKE KILDEER




 0 600 1200
 SCALE IN FEET

EL DORADO

NOVEMBER 2016 NITRATE CONCENTRATION MAP
 2016 ANNUAL GROUND WATER REPORT
 EL DORADO CHEMICAL COMPANY
 EL DORADO, ARKANSAS

DATE: 03/20/2017	APPROVED: LMM	DRAWN BY: LMM
SCALE: as shown	DATE: 03/18/2017	CAD NO. 02E00100


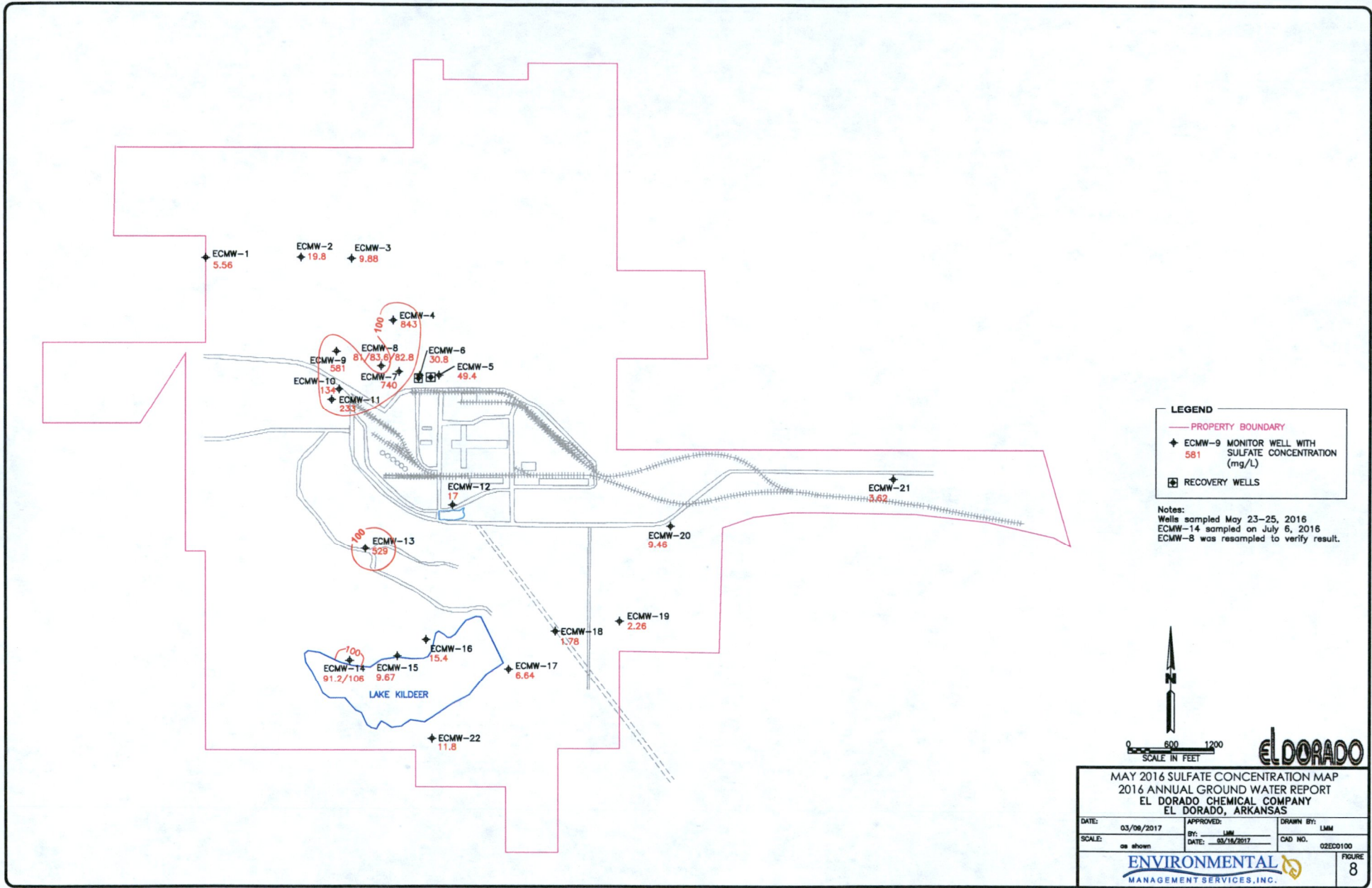


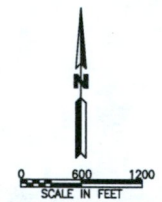
FIGURE 7



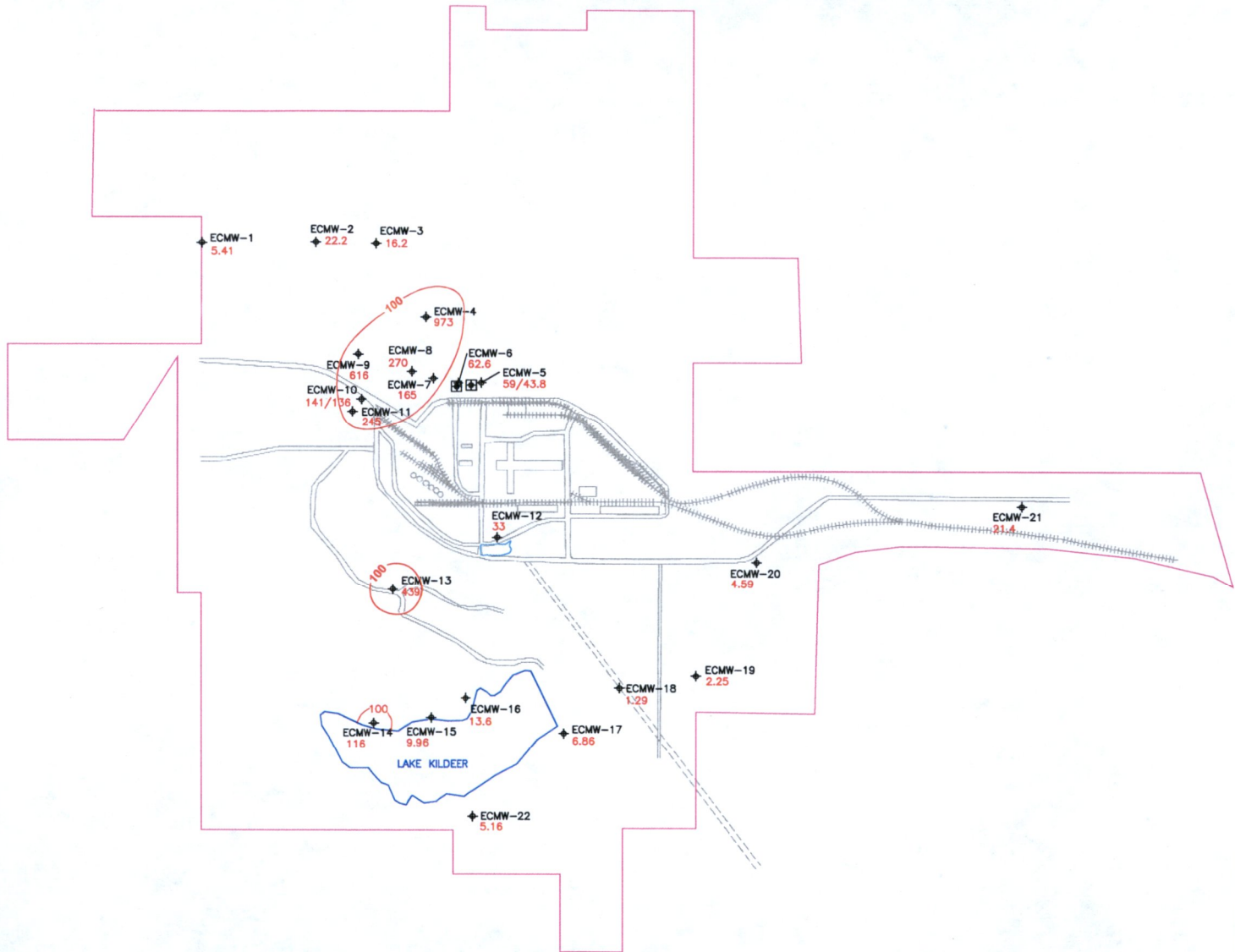
LEGEND

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

Notes:
 Wells sampled May 23–25, 2016
 ECMW-14 sampled on July 6, 2016
 ECMW-8 was resampled to verify result.



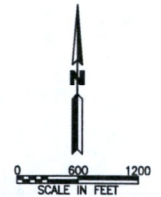
MAY 2016 SULFATE CONCENTRATION MAP 2016 ANNUAL GROUND WATER REPORT EL DORADO CHEMICAL COMPANY EL DORADO, ARKANSAS			
DATE:	03/08/2017	APPROVED:	LMM
SCALE:	as shown	DATE:	03/15/2017
		DRAWN BY:	LMM
		CAD NO.:	02ED0100
			FIGURE 8



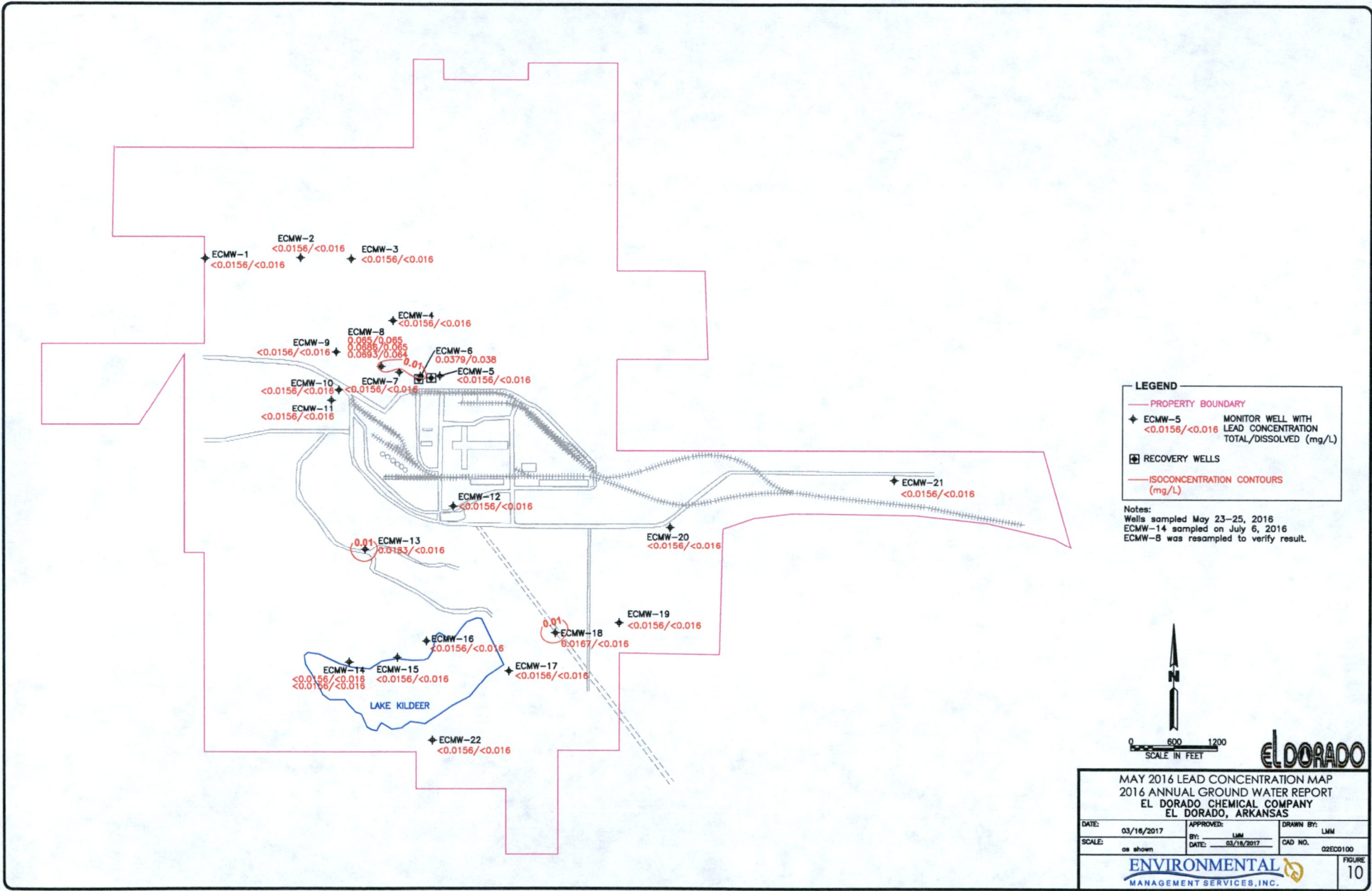
LEGEND

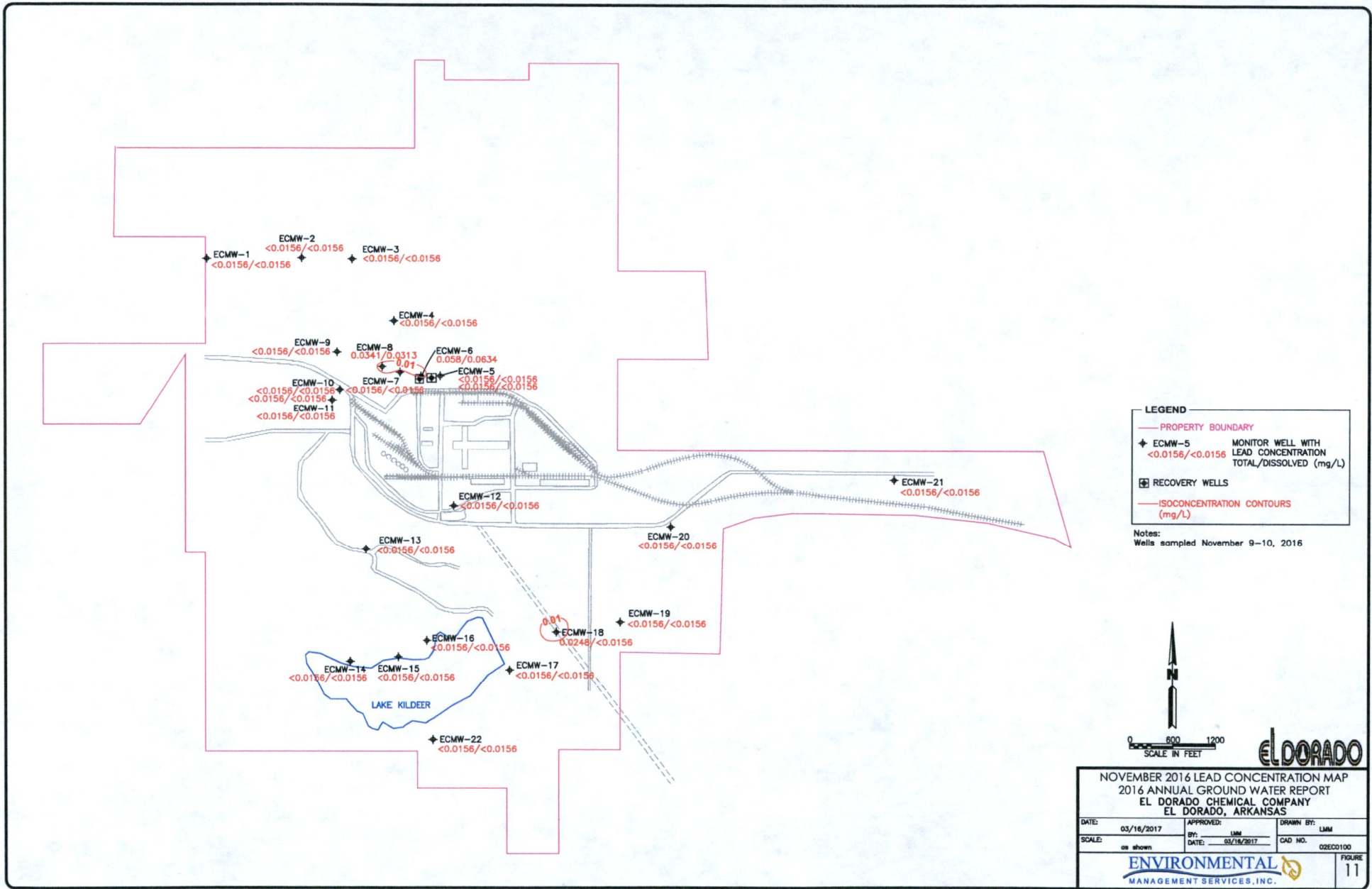
- PROPERTY BOUNDARY
- ◆ ECMW-9 MONITOR WELL WITH Sulfate CONCENTRATION (mg/L)
- ⊠ RECOVERY WELLS

Notes:
Wells sampled November 9-10, 2016



NOVEMBER 2016 SULFATE CONCENTRATION MAP 2016 ANNUAL GROUND WATER REPORT EL DORADO CHEMICAL COMPANY EL DORADO, ARKANSAS			
DATE: 03/16/2017	APPROVED: LMM	DRAWN BY: LMM	
SCALE: as shown	DATE: 03/16/2017	CAD NO. 02EC0100	FIGURE 9





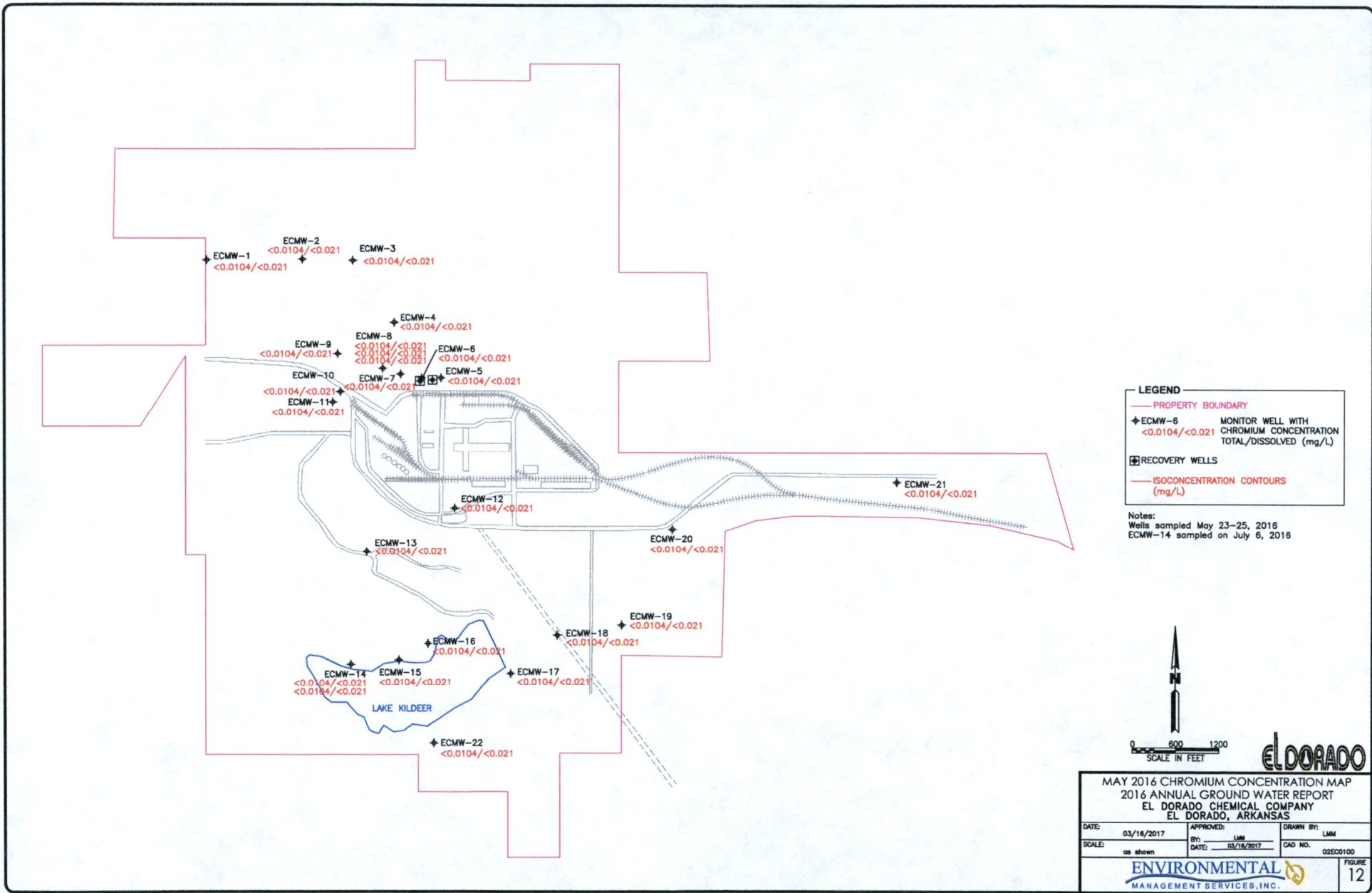
EL DORADO

NOVEMBER 2016 LEAD CONCENTRATION MAP
2016 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

DATE: 03/16/2017	APPROVED: LMM	DRAWN BY: LMM
SCALE: as shown	DATE: 03/16/2017	CAD NO. 02EC0100

ENVIRONMENTAL
MANAGEMENT SERVICES, INC.

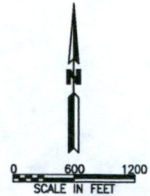
FIGURE
11



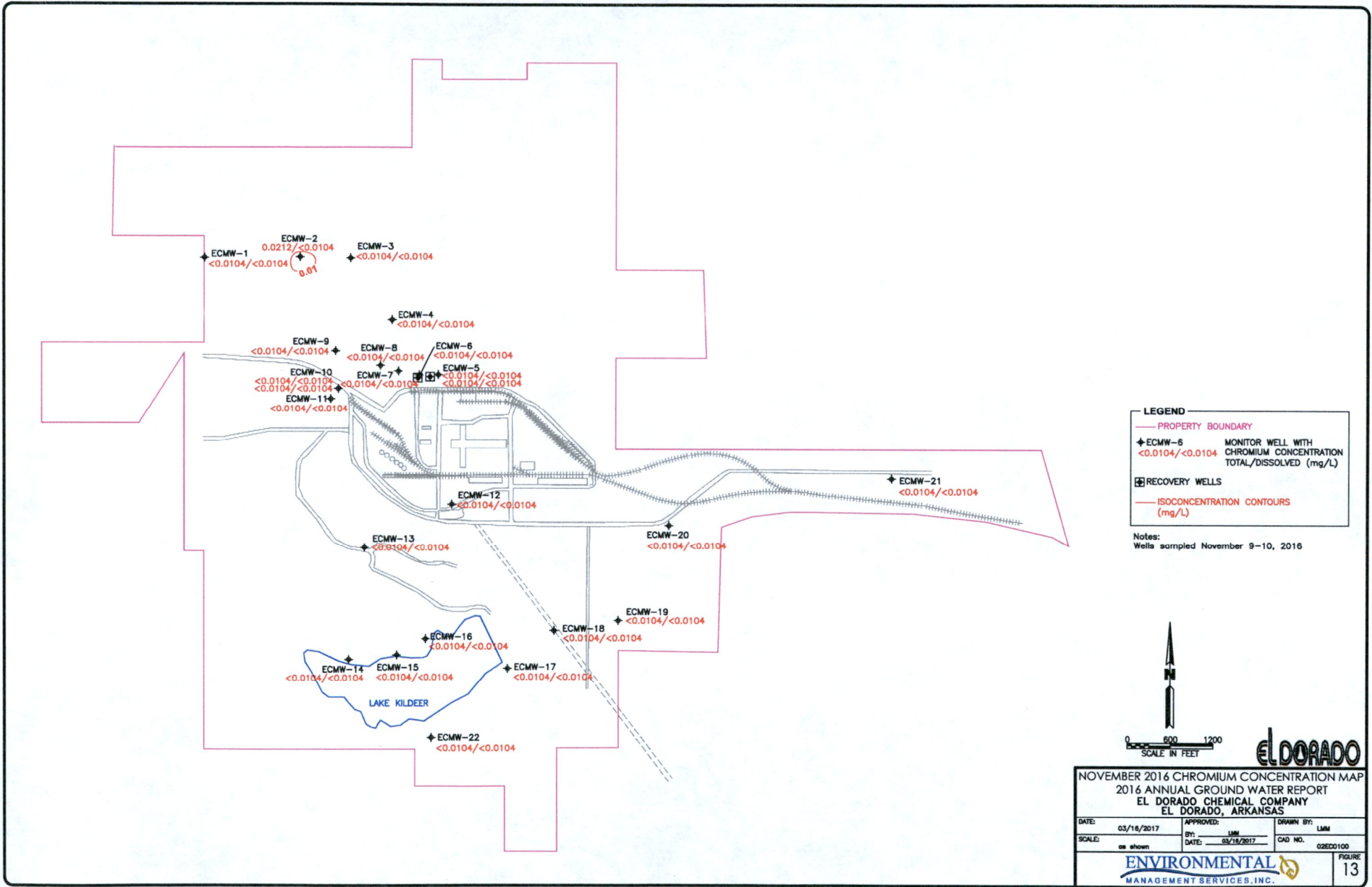
LEGEND

- PROPERTY BOUNDARY
- ◆ ECMW-6 MONITOR WELL WITH CHROMIUM CONCENTRATION TOTAL/DISSOLVED (mg/L)
- ☒ RECOVERY WELLS
- ISOCENTRATION CONTOURS (mg/L)

Notes:
 Wells sampled May 23–25, 2016
 ECMW-14 sampled on July 6, 2016



MAY 2016 CHROMIUM CONCENTRATION MAP 2016 ANNUAL GROUND WATER REPORT EL DORADO CHEMICAL COMPANY EL DORADO, ARKANSAS			
DATE:	03/18/2017	APPROVED:	LMM
SCALE:	as shown	DATE:	03/18/2017
		DRAWN BY:	LMM
		CAD NO.:	02ECO100
			FIGURE 12



LEGEND

- PROPERTY BOUNDARY
- ◆ ECMW-6 MONITOR WELL WITH CHROMIUM CONCENTRATION TOTAL/DISSOLVED (mg/L)
- ☒ RECOVERY WELLS
- - - ISOCONCENTRATION CONTOURS (mg/L)

Notes:
Wells sampled November 9-10, 2016

NOVEMBER 2016 CHROMIUM CONCENTRATION MAP 2016 ANNUAL GROUND WATER REPORT EL DORADO CHEMICAL COMPANY EL DORADO, ARKANSAS			
DATE: 03/18/2017	APPROVED: LMM	DRAWN BY: LMM	
SCALE: as shown	DATE: 03/18/2017	CAD NO. 02EC0100	FIGURE 13

APPENDIX A

SAMPLING FORMS AND LABORATORY ANALYTICAL REPORTS

**GROUND WATER SAMPLING DATA FORM
ENVIRONMENTAL MANAGEMENT SERVICES, INC.**

FIELD LOG

Site EDCC
Collector/Operator CSS/ST

Facility EDCC

Well No. 10

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>8/24/16 13:16</u>	Method of Evacuation	<u>Mini Mainsor</u>
Top of casing to water level	<u>13.19</u> ft	Gallons per well volume	<u>6.24</u> gal
Top of casing to bottom	<u>22.79</u> ft	Total gallons evacuated	<u>7</u> gal
Water level after evacuation	ft	Elevation: Top of casing	ft
Sampling: Date/Time	<u>8/25/16 0715</u>	Elevation of well water	ft
Top of casing to water level	ft	Method of Sampling	<u>BAILER</u>

SAMPLE DATA

<u>WV</u>	<u>Temperature [°C]</u>	<u>pH</u>	<u>Conductivity [uS]</u>	<u>Dissolved Oxygen [mg/l]</u>	<u>Turbidity [NTU]</u>
<u>0</u>	<u>24.3</u>	<u>4.67</u>	<u>0.80 mS</u>		
<u>1</u>	<u>22.8</u>	<u>3.99</u>	<u>0.81 mS</u>		
<u>2</u>	<u>Dry @ 7 Gal</u>				
<u>3</u>					

GENERAL INFORMATION

Weather conditions at time of sampling: Bright, sunny, light BREEZE, DRY

Sample characteristics: Brown, cloudy, cleared during purging

Containers and preservatives: 2x - ml (H²SO⁴ & HNO₃) / x - ml / p, 1x - ml / p

Comments and observations: |

Recommendations:

Certification:

Mickie Jean Thomas

Well Casing Volumes [gal/ft]

<u>1 1/4"=0.077</u>	<u>2"=0.16</u>	<u>3"=0.37</u>	<u>4"=0.65</u>
<u>1 1/2"=0.10</u>	<u>2 1/2"=0.24</u>	<u>3 1/2"=0.50</u>	<u>6"=1.46</u>

**GROUND WATER SAMPLING DATA FORM
ENVIRONMENTAL MANAGEMENT SERVICES, INC.**

FIELD LOG

Site EDCC
Collector/Operator ESS/ST

Facility EDCC

Well No. 11

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5/24/16</u>	Method of Evacuation	<u>MINI MOUSOON</u>
Top of casing to water level	<u>10.86</u> ft	Gallons per well volume	<u>12.51</u> gal
Top of casing to bottom	<u>20.11</u> ft	Total gallons evacuated	<u>37.9</u> gal
Water level after evacuation	ft	Elevation, Top of casing	ft
Sampling: Date/Time	<u>5/25/16 0720</u>	Elevation of well water	ft
Top of casing to water level	ft	Method of Sampling	<u>BALETC</u>

SAMPLE DATA

<u>WV</u>	<u>Temperature [°C]</u>	<u>pH</u>	<u>Conductivity [uS]</u>	<u>Dissolved Oxygen [mg/l]</u>	<u>Turbidity [NTU]</u>
<u>0</u>	<u>22.4°C</u>	<u>4.08</u>	<u>0.74 mS</u>		
<u>1</u>	<u>21.0</u>	<u>4.02</u>	<u>0.77 mS</u>		
<u>2</u>	<u>21.6</u>	<u>4.08</u>	<u>0.92 mS</u>		
<u>3</u>	<u>21.7</u>	<u>4.04</u>	<u>0.90 mS</u>		

GENERAL INFORMATION

Weather conditions at time of sampling: WARM, SUNNY, LT BREEZE, DRY
Sample characteristics: CLEAR

Containers and preservatives: 2x ml (H₂SO₄ & HNO₃) / x - ml / $\frac{1}{4}$ p / x - ml / $\frac{1}{4}$ p

Comments and observations:

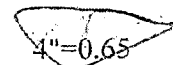
Recommendations:

Certification:

[Signature]

Well Casing Volumes [gal/ft]

<u>1 1/4"=0.077</u>	<u>2"=0.16</u>	<u>3"=0.37</u>	<u>4"=0.65</u>
<u>1 1/2"=0.10</u>	<u>2 1/2"=0.24</u>	<u>3 1/2"=0.50</u>	<u>6"=1.46</u>



a
19

15 gal/well
43

GROUND WATER SAMPLING DATA FORM ENVIRONMENTAL MANAGEMENT SERVICES, INC.

FIELD LOG

Site EDCC
Collector/Operator CSS/ST

Facility EDCC

Well No. 22

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5/24/16 14:31</u>	Method of Evacuation	<u>MINI MONSOON</u>
Top of casing to water level	<u>4.91</u> ft	Gallons per well volume	_____ gal
Top of casing to bottom	_____ ft	Total gallons evacuated	_____ gal
Water level after evacuation	_____ ft	Elevation, Top of casing	_____ ft
Sampling: Date/Time	<u>5/25/16 0800</u>	Elevation of well water	_____ ft
Top of casing to water level	_____ ft	Method of Sampling	<u>BAILER</u>

SAMPLE DATA

<u>WV</u>	<u>Temperature [°C]</u>	<u>pH</u>	<u>Conductivity [µS]</u>	<u>Dissolved Oxygen [mg/l]</u>	<u>Turbidity [NTU]</u>
<u>0</u>	<u>22.2</u>	<u>5.54</u>	<u>0.17 mS</u>		
<u>1</u>	<u>23.4</u>	<u>5.52</u>	<u>0.16 mS</u>		
<u>2</u>	<u>21.1</u>	<u>6.55</u>	<u>0.15 mS</u>		
<u>3</u>	<u>20.6</u>	<u>5.50</u>	<u>0.15 mS</u>		

GENERAL INFORMATION

Weather conditions at time of sampling: SUNNY, WARM, BREEZY, DRY
 Sample characteristics: CLEAR BUT SLIGHTLY BROWN; CLEARED AFTER PURGE

Containers and preservatives: (2x - ml H²SO₄ + HNO₃) 2x - ml 4/0

Comments and observations:

Recommendations: WEEDS AT AROUND WELL

Certification:

Well Casing Volumes [gal/ft]

1 1/4"=0.077	<u>2"=0.16</u>	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

819

GROUND WATER SAMPLING DATA FORM ENVIRONMENTAL MANAGEMENT SERVICES, INC.

FIELD LOG

Site EDCC
Collector/Operator CSS/ST

Facility EDCC

Well No. 2F17

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5/24/16/1511</u>	Method of Evacuation	<u>MINI MONSOON</u>
Top of casing to water level	<u>27.00</u> ft	Gallons per well volume	<u>5.21</u> gal
Top of casing to bottom	<u>35.01</u> ft	Total gallons evacuated	<u>15.75</u> gal
Water level after evacuation	_____ ft	Elevation, Top of casing	_____ ft
Sampling: Date/Time	<u>5/25/16 0810</u>	Elevation of well water	_____ ft
Top of casing to water level	_____ ft	Method of Sampling	<u>BAULER</u>

SAMPLE DATA

<u>WV</u>	<u>Temperature [°C]</u>	<u>pH</u>	<u>Conductivity [µS]</u>	<u>Dissolved Oxygen [mg/l]</u>	<u>Turbidity [NTU]</u>
<u>0</u>	<u>22.5°C</u>	<u>4.75</u>	<u>0.22 mS</u>		
<u>1</u>	<u>20.5°C</u>	<u>4.33</u>	<u>0.21 mS</u>		
<u>2</u>	<u>20.0°C</u>	<u>4.06</u>	<u>0.19 mS</u>		
<u>3</u>	<u>19.8°C</u>	<u>3.86</u>	<u>0.23 mS</u>		

GENERAL INFORMATION

Weather conditions at time of sampling: WARM, DRY, SLT BREEZE, SUNNY

Sample characteristics: CLEAR

Containers and preservatives: 2x ml H₂SO₄ HNO₃ (2x ml %)

Comments and observations:

Recommendations: INSTALL PROPER BOLLARDS

Certification: 

Well Casing Volumes [gal/ft]

1 1/4"=0.077	2"=0.16	3"=0.37	<u>4"=0.63</u>
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

GROUND WATER SAMPLING DATA FORM
ENVIRONMENTAL MANAGEMENT SERVICES, INC.

Site EDCC
Collector/Operator CSS/ST

FIELD LOG
Facility EDCC

Well No. 15

MONITORING WELL INFORMATION

Evacuation: Date/Time	8/24/16 15:38	Method of Evacuation	MINI MARISSON
Top of casing to water level	5.09 ft	Gallons per well volume	7.88 gal
Top of casing to bottom	17.22 ft	Total gallons evacuated	
Water level after evacuation		Elevation. Top of casing	
Sampling: Date/Time	8/25/16 0820	Elevation of well water	
Top of casing to water level		Method of Sampling	RAILER

SAMPLE DATA

WV	Temperature [°C]	pH	Conductivity [µS]	Dissolved Oxygen [mg/l]	Turbidity [NTU]
0	21.3	4.81	0.09 mS		
1	20.5	4.60	0.08 mS		
2	21.7	4.48	0.08 mS		
3	20.0	4.29	0.08 mS		


GENERAL INFORMATION

Weather conditions at time of sampling: WARM, SUNNY, SL BREEZE, DRY
Sample characteristics: CLEAR

Containers and preservatives (2x - ml H₂SO₄ & HNO₃) (2x - ml ^u/p)

Comments and observations:

Recommendations: WEED EAT AROUND WELL.

Certification: 

Well Casing Volumes [gal/ft]

1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

GROUND WATER SAMPLING DATA FORM
ENVIRONMENTAL MANAGEMENT SERVICES, INC.

Site EDCC
 Collector/Operator CSS/ST

FIELD LOG
 Facility EDCC

Well No. 16

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5/24/16 15:57</u>	Method of Evacuation	<u>MINI MONSOON</u>
Top of casing to water level	<u>4.10</u> ft	Gallons per well volume	<u>10 GAL</u> gal
Top of casing to bottom	<u>19.55</u> ft	Total gallons evacuated	_____ gal
Water level after evacuation	_____ ft	Elevation, Top of casing	_____ ft
Sampling: Date/Time	<u>5/25/16 0840</u>	Elevation of well water	_____ ft
Top of casing to water level	_____ ft	Method of Sampling	<u>BALER</u>

SAMPLE DATA

<u>WV</u>	<u>Temperature [°C]</u>	<u>pH</u>	<u>Conductivity [uS]</u>	<u>Dissolved Oxygen [mg/l]</u>	<u>Turbidity [NTU]</u>
<u>0</u>	<u>20.9</u>	<u>4.73</u>	<u>0.17ms</u>		
<u>1</u>	<u>20.6</u>	<u>4.52</u>	<u>0.17ms</u>		
<u>2</u>	<u>20.5</u>	<u>4.42</u>	<u>0.15ms</u>		
<u>3</u>	<u>20.7</u>	<u>4.28</u>	<u>0.16ms</u>		

GENERAL INFORMATION

Weather conditions at time of sampling: WARM, SUNNY, DRY, SL BREEZE
 Sample characteristics: CLEAR

Containers and preservatives: (2x ml H₂SO₄ & HNO₃) 2x ml 4/p

Comments and observations:

Recommendations: WEED EAT AROUND WELL

Certification: 

Well Casing Volumes [gal/ft]

<u>1 1/4"=0.077</u>	<u>2"=0.16</u>	<u>3"=0.37</u>	<u>4"=0.65</u>
<u>1 1/2"=0.10</u>	<u>2 1/2"=0.24</u>	<u>3 1/2"=0.50</u>	<u>6"=1.46</u>

GROUND WATER SAMPLING DATA FORM
ENVIRONMENTAL MANAGEMENT SERVICES, INC.

Site EDCC
Collector/Operator CSS/ST

FIELD LOG
Facility EDCC

Well No. ECMW-13

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5/24/16</u>	Method of Evacuation	<u>MINI MONSOON</u>
Top of casing to water level	<u>7.41</u> ft	Gallons per well volume	<u>8</u> gal
Top of casing to bottom	<u>19.97</u> ft	Total gallons evacuated	<u>25gal</u> gal
Water level after evacuation	ft	Elevation. Top of casing	ft
Sampling: Date/Time	<u>5/25/16 0930</u>	Elevation of well water	ft
Top of casing to water level	ft	Method of Sampling	<u>BAILER</u>

SAMPLE DATA

WV	Temperature [°C]	pH	Conductivity [uS]	Dissolved Oxvgen [mg/l]	Turbidity [NTU]
<u>0</u>	<u>21.0</u>	<u>4.86</u>	<u>.09 mS</u>		
<u>1</u>	<u>19.4</u>	<u>4.73</u>	<u>.08 mS</u>		
<u>2</u>	<u>18.7</u>	<u>4.42</u>	<u>1.12 mS</u>		
<u>3</u>	<u>19.8</u>	<u>4.39</u>	<u>1.26 mS</u>		


GENERAL INFORMATION

Weather conditions at time of sampling: WARM, SUNNY, DRY, SL BREEZY
Sample characteristics:

Containers and preservatives:

Comments and observations: Start purge 0910

Recommendations:

Certification: 

Well Casing Volumes [gal/ft]

1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

GROUND WATER SAMPLING DATA FORM ENVIRONMENTAL MANAGEMENT SERVICES, INC.

Site EDCC

FIELD LOG

Collector/Operator ESS/ST

Facility EDCC

Well No. ECMW18

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5/25/16 0940</u>	Method of Evacuation	
Top of casing to water level	<u>7.01</u> ft	Gallons per well volume	<u>6</u> gal
Top of casing to bottom	<u>17.29</u> ft	Total gallons evacuated	<u>20</u> gal
Water level after evacuation		Elevation, Top of casing	
Sampling: Date/Time	<u>5/25/16 1000</u>	Elevation of well water	
Top of casing to water level		Method of Sampling	

SAMPLE DATA

	Temperature [°C]	pH	Conductivity [uS]	Dissolved Oxygen [mg/l]	Turbidity [NTU]
<u>0</u>	<u>19.6</u>	<u>5.42</u>	<u>.11mS</u>		
<u>1</u>	<u>19.1</u>	<u>5.47</u>	<u>.07mS</u>		
<u>2</u>	<u>18.1</u>	<u>5.33</u>	<u>.07mS</u>		
<u>3</u>					

GENERAL INFORMATION

Weather conditions at time of sampling: Partly Cloudy, Humid
 Sample characteristics: Water very turbid water did not clean w/ pumping (milky B₂)
 Containers and preservatives: 2x - ml H₂SO₄ + HNO₃) 2x - ml / 10
 Comments and observations: weed eat around well location
 Recommendations:

Certification: 

Well Casing Volumes [gal/ft]

1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

**GROUND WATER SAMPLING DATA FORM
ENVIRONMENTAL MANAGEMENT SERVICES, INC.**

Site EDCC
Collector/Operator CSS/ST

FIELD LOG
Facility EDCC

Well No. 19

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>3/25/16 1005</u>	Method of Evacuation	
Top of casing to water level	<u>2.49</u> ft	Gallons per well volume	<u>9</u> gal
Top of casing to bottom	<u>59.10</u> ft	Total gallons evacuated	<u>28</u> gal
Water level after evacuation		Elevation, Top of casing	
Sampling: Date/Time	<u>3/25/16 1030</u>	Elevation of well water	
Top of casing to water level		Method of Sampling	<u>Boiler</u>

SAMPLE DATA

	Temperature [°C]	pH	Conductivity [uS]	Dissolved Oxygen [mg/l]	Turbidity [NTU]
<u>B</u>	<u>19.5°</u>	<u>5.44</u>	<u>1.08 mS</u>		
<u>1</u>	<u>18.6°</u>	<u>5.44</u>	<u>1.08 mS</u>		
<u>2</u>	<u>18.2°</u>	<u>5.09</u>	<u>1.08 mS</u>		
<u>3</u>	<u>18.1°</u>	<u>5.06</u>	<u>1.08 mS</u>		

GENERAL INFORMATION

Weather conditions at time of sampling: Cloudy Humid

Sample characteristics: Clear but Cloudy

Containers and preservatives: (2x - ml H₂SO₄ + HNO₃) (2x - ml 4/p)

Comments and observations:

Recommendations: Clear road to well

Certification:

Sean Thomas

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

GROUND WATER SAMPLING DATA FORM ENVIRONMENTAL MANAGEMENT SERVICES, INC.

Site EDCC
Collector/Operator CSS/sf

FIELD LOG
Facility EDCC

Well No. 20

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5/25/14 1045</u>	Method of Evacuation	
Top of casing to water level	<u>27.02</u> ft	Gallons per well volume	<u>4</u> gal
Top of casing to bottom	<u>53.30</u> ft	Total gallons evacuated	<u>13</u> gal
Water level after evacuation		Elevation, Top of casing	
Sampling: Date/Time	<u>5/25/14 1100</u>	Elevation of well water	
Top of casing to water level		Method of Sampling	

SAMPLE DATA

	Temperature[°C]	pH	Conductivity[µS]	Dissolved Oxygen[mg/l]	Turbidity [NTU]
B	<u>21.5</u>	<u>5.48</u>	<u>1.08 mS</u>		
1	<u>19.3</u>	<u>5.41</u>	<u>0.03 mS</u>		
2	<u>19.7</u>	<u>5.35</u>	<u>0.06 mS</u>		
3	<u>19.4</u>	<u>5.37</u>	<u>0.07 mS</u>		

GENERAL INFORMATION

Weather conditions at time of sampling: Brownish, Cloudy

Sample characteristics:

Containers and preservatives: (2x ml H₂SO₄ & HNO₃) 2x ml 1/4 P

Comments and observations:

Recommendations:

Certification: Sean Thomas

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

GROUND WATER SAMPLING DATA FORM ENVIRONMENTAL MANAGEMENT SERVICES, INC.

Site EDCC
Collector/Operator CSS/ST

FIELD LOG
Facility EDCC

Well No. 21

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5/25/10 1110</u>	Method of Evacuation	
Top of casing to water level	<u>15.26</u> ft	Gallons per well volume	<u>.60</u> gal
Top of casing to bottom	<u>30.12</u> ft	Total gallons evacuated	<u>2</u> gal
Water level after evacuation		Elevation: Top of casing	
Sampling: Date/Time	<u>5/25/10 1120</u>	Elevation of well water	
Top of casing to water level		Method of Sampling	<u>peristaltic</u>

SAMPLE DATA

	Temperature [°C]	pH	Conductivity [µS]	Dissolved Oxygen [mg/l]	Turbidity [NTU]
B	20.7	5.13	106 mS		
1	20.8	4.99	105 mS		
2	19.9	4.89	106 mS		
3	20.3	4.88	105 mS		

GENERAL INFORMATION

Weather conditions at time of sampling: Partly Cloudy, Humid

Sample characteristics: Clear w/ some turbidity

Containers and preservatives:

Comments and observations:

Recommendations: Traffic Guards needed

Certification: [Signature]

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

**GROUND WATER SAMPLING DATA FORM
ENVIRONMENTAL MANAGEMENT SERVICES, INC.**

FIELD LOG

Site EOCC
Collector/Operator CSS/SA

Facility EOCC

Well No. 12

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5/25/16 12:00</u>	Method of Evacuation	
Top of casing to water level	<u>6.14</u> ft	Gallons per well volume	<u>9</u> gal
Top of casing to bottom	<u>20.15</u> ft	Total gallons evacuated	<u>27.5</u> gal
Water level after evacuation		Elevation, Top of casing	
Sampling: Date/Time	<u>5/25/16</u>	Elevation of well water	
Top of casing to water level		Method of Sampling	<u>Bailer</u>

SAMPLE DATA

<u>Temperature [°C]</u>	<u>pH</u>	<u>Conductivity [µS]</u>	<u>Dissolved Oxygen [mg/l]</u>	<u>Turbidity [NTU]</u>
B. <u>22.8°</u>	<u>5.47</u>	<u>.68 mS</u>		
1 <u>21.8°</u>	<u>5.47</u>	<u>.61 mS</u>		
2 <u>21.2°</u>	<u>5.62</u>	<u>.52 mS</u>		
3 <u>21.0°</u>	<u>5.58</u>	<u>.58 mS</u>		

GENERAL INFORMATION

Weather conditions at time of sampling: Sunny, Breezy, Humid
Sample characteristics: Muddy Brown, Clared with pugging

Containers and preservatives:

Comments and observations:

Recommendations:

Certification: S. Thomas

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

GROUND WATER SAMPLING DATA FORM ENVIRONMENTAL MANAGEMENT SERVICES, INC.

FIELD LOG

Site EDCC

Facility EDCC

Well No. 5

Collector/Operator C. SELLERS, S. THOMAS

BEGIN:

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5/23/16 13:22</u>	Method of Evacuation	<u>MINI MONSOON BAKER PUMP</u>
Top of casing to water level	<u>4.66</u> ft	Gallons per well volume	<u>8.55</u> gal
Top of casing to bottom	<u>17.81</u> ft	Total gallons evacuated	<u>25.7</u> gal
Water level after evacuation	_____ ft	Elevation, Top of casing	_____ ft
Sampling: Date/Time	<u>5/24/16 15:45</u>	Elevation of well water	_____ ft
Top of casing to water level	_____ ft	Method of Sampling	<u>BAILER</u>

SAMPLE DATA

<u>WV</u>	<u>Temperature [°C]</u>	<u>pH</u>	<u>Conductivity [µS]</u>	<u>Dissolved Oxygen [mg/l]</u>	<u>Turbidity [NTU]</u>
<u>0</u>	<u>22.63 °C</u>	<u>5.98</u>	<u>585 µS</u>		
<u>1</u>	<u>20.9 °C</u>	<u>5.72</u>	<u>551 µS</u>		
<u>2</u>	<u>19.2 °C</u>	<u>5.45</u>	<u>539 µS</u>		
<u>3</u>	<u>19.5 °C</u>	<u>5.30</u>	<u>552 µS</u>		

GENERAL INFORMATION

Weather conditions at time of sampling: WARM, -75°, CLOUDY, POSSIBLE RAIN SOON

Sample characteristics: Clear, no visual turbidity

Containers and preservatives: 2x mL (H₂SO₄ & HNO₃) 1x - mL U/P, 1x mL U/P

Comments and observations: ORGANICS/SOLIDS @ BOTTOM OF WELL

Recommendations: WELDEAT AROUND WELL

Certification:



Well Casing Volumes [gal/ft]

1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

**GROUND WATER SAMPLING DATA FORM
ENVIRONMENTAL MANAGEMENT SERVICES, INC.**

FIELD LOG

Site EDCC

Facility EDCC

Well No: 4

Collector/Operator C SELLERS / S THOMAS

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5/23/16 14:27</u>	Method of Evacuation	<u>MINI MONSOON</u>
Top of casing to water level	<u>9.2</u> ft	Gallons per well volume	<u>8.53</u> gal
Top of casing to bottom	<u>22.25</u> ft	Total gallons evacuated	<u>192</u> gal
Water level after evacuation	ft	Elevation. Top of casing	ft
Sampling: Date/Time	<u>5/24/16 0801</u>	Elevation of well water	ft
Top of casing to water level	ft	Method of Sampling	<u>BAUER</u>

SAMPLE DATA

<u>WV</u>	<u>Temperature [°C]</u>	<u>pH</u>	<u>Conductivity [uS]</u>	<u>Dissolved Oxygen [mg/l]</u>	<u>Turbidity [NTU]</u>
<u>0</u>	<u>20.8</u>	<u>4.59</u>	<u>7.31 mS</u>		
<u>1</u>	<u>20.2</u>	<u>4.04</u>	<u>6.68 mS</u>		
<u>2</u>	<u>20.6</u>	<u>3.83</u>	<u>6.71 mS</u>		
<u>3</u>					

GENERAL INFORMATION

Weather conditions at time of sampling: WARM, PARTLY CLOUDY, SLIGHT BREEZE

Sample characteristics: CLEAR

Containers and preservatives:

Comments and observations: DRY @ 2 WV (~~0.5 GAL INTO 2ND WV~~) CSS

Recommendations: WEED EAT AROUND WELL

Certification: Chris Smith

Well Casing Volumes [gal/ft]

<u>1 1/4"=0.077</u>	<u>2"=0.16</u>	<u>3"=0.37</u>	<u>4"=0.65</u>
<u>1 1/2"=0.10</u>	<u>2 1/2"=0.24</u>	<u>3 1/2"=0.50</u>	<u>6"=1.46</u>

**GROUND WATER SAMPLING DATA FORM
ENVIRONMENTAL MANAGEMENT SERVICES, INC.**

FIELD LOG

Site EDCC

Facility EDCC

Well No. 6

Collector/Operator C SELLERS/S THOMAS

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5/23/16 13:54</u>	Method of Evacuation	<u>MINI MONSOON PUMP</u>
Top of casing to water level	<u>4.42</u> ft	Gallons per well volume	<u>11.52</u> gal
Top of casing to bottom	<u>22.19</u> ft	Total gallons evacuated	<u>34.56</u> gal
Water level after evacuation	_____ ft	Elevation: Top of casing	_____ ft
Sampling: Date/Time	<u>5/24/16 07:55</u>	Elevation of well water	_____ ft
Top of casing to water level	_____ ft	Method of Sampling	_____

SAMPLE DATA

<u>WV</u>	<u>Temperature[°C]</u>	<u>pH</u>	<u>Conductivity[µS]</u>	<u>Dissolved Oxygen[mg/l]</u>	<u>Turbidity [NTU]</u>
<u>0</u>	<u>21</u>	<u>4.38</u>	<u>42.31 mS</u>		
<u>1</u>	<u>20.2</u>	<u>4.09</u>	<u>39.26 mS</u>		
<u>2</u>	<u>20.3</u>	<u>3.93</u>	<u>39.51 mS</u>		
<u>3</u>	<u>20.0</u>	<u>3.83</u>	<u>39.93 mS</u>		

GENERAL INFORMATION

Weather conditions at time of sampling: WARM, PARTLY CLOUDY, SLIGHT BREEZE

Sample characteristics:

Containers and preservatives:

Comments and observations: CLEAR

Recommendations: WEEDS AROUND WELL

Certification:

[Handwritten Signature]

Well Casing Volumes [gal/ft]

<u>1 1/4"=0.077</u>	<u>2"=0.16</u>	<u>3"=0.37</u>	<u>4"=0.65</u>
<u>1 1/2"=0.10</u>	<u>2 1/2"=0.24</u>	<u>3 1/2"=0.50</u>	<u>6"=1.46</u>

**GROUND WATER SAMPLING DATA FORM
ENVIRONMENTAL MANAGEMENT SERVICES, INC.**

FIELD LOG

Site EDCC

Facility EDCC

Well No. 7

Collector/Operator C SELLERS/STHOMAS

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5/23/16 14:49</u>	Method of Evacuation	<u>Mini Mousster</u>
Top of casing to water level	<u>7.16</u> ft	Gallons per well volume	<u>11.54</u> gal
Top of casing to bottom	<u>24.93</u> ft	Total gallons evacuated	<u>34.5</u> gal
Water level after evacuation	ft	Elevation, Top of casing	ft
Sampling: Date/Time	<u>5/24/16 0812</u>	Elevation of well water	ft
Top of casing to water level	ft	Method of Sampling	<u>BAUER</u>

SAMPLE DATA

<u>WU</u>	<u>Temperature [°C]</u>	<u>pH</u>	<u>Conductivity [µS]</u>	<u>Dissolved Oxygen [mg/l]</u>	<u>Turbidity [NTU]</u>
<u>0</u>	<u>21.5</u>	<u>5.6</u>	<u>32.8 mS</u>		
<u>1</u>	<u>20.6</u>	<u>5.49</u>	<u>29.01 mS</u>		
<u>2</u>	<u>20.5</u>	<u>5.29</u>	<u>29.71 mS</u>		
<u>3</u>	<u>20.1</u>	<u>5.30</u>	<u>30.14 mS</u>		

GENERAL INFORMATION

Weather conditions at time of sampling: Breezy, warm, sunny, dry
 Sample characteristics: Clear

Containers and preservatives:

Comments and observations:

Recommendations:

Certification:

Chris Jones

Well Casing Volumes [gal/ft]

<u>1 1/4"=0.077</u>	<u>2"=0.16</u>	<u>3"=0.37</u>	<u>4"=0.65</u>
<u>1 1/2"=0.10</u>	<u>2 1/2"=0.24</u>	<u>3 1/2"=0.50</u>	<u>6"=1.46</u>

**GROUND WATER SAMPLING DATA FORM
ENVIRONMENTAL MANAGEMENT SERVICES, INC.**

FIELD LOG

Site EDCC Facility EDCC
Collector/Operator C BELLERS / S THOMAS

Well No. 8

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5/24/16 08:21</u>	Method of Evacuation	<u>DRINK MON SOON</u>
Top of casing to water level	<u>7.00</u> ft	Gallons per well volume	<u>14.94</u> gal
Top of casing to bottom	<u>29.99</u> ft	Total gallons evacuated	<u>45</u> gal
Water level after evacuation	_____ ft	Elevation, Top of casing	_____ ft
Sampling: Date/Time	<u>5/24/16 09:00</u>	Elevation of well water	_____ ft
Top of casing to water level	_____ ft	Method of Sampling	<u>BAILER</u>

SAMPLE DATA

<u>WV</u>	<u>Temperature [°C]</u>	<u>pH</u>	<u>Conductivity [µS]</u>	<u>Dissolved Oxygen [mg/l]</u>	<u>Turbidity [NTU]</u>
<u>0</u>	<u>21.5</u>	<u>3.70</u>	<u>31.00 mS</u>		
<u>1</u>	<u>20.4</u>	<u>3.62</u>	<u>32.97 mS</u>		
<u>2</u>	<u>21.2</u>	<u>3.62</u>	<u>33.28 mS</u>		
<u>3</u>	<u>21.1</u>	<u>3.61</u>	<u>33.81 mS</u>		

GENERAL INFORMATION

Weather conditions at time of sampling: BREEZY, WARM, SUNNY, DRY
Sample characteristics: CLEAR

Containers and preservatives:

Comments and observations:

Recommendations: CUT AROUND WELL

Certification: *Mish Jon*

Well Casing Volumes [gal/ft]

<u>1 1/4"=0.077</u>	<u>2"=0.16</u>	<u>3"=0.37</u>	<u>4"=0.65</u>
<u>1 1/2"=0.10</u>	<u>2 1/2"=0.24</u>	<u>3 1/2"=0.50</u>	<u>6"=1.46</u>

**GROUND WATER SAMPLING DATA FORM
ENVIRONMENTAL MANAGEMENT SERVICES, INC.**

FIELD LOG

Site EDCC
Collector/Operator

Facility EDCC
CBEWERS, ST THOMAS

Well No. 9

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5/24/16 09:11</u>	Method of Evacuation	<u>MIN: MENSON</u>
Top of casing to water level	<u>0.66</u> ft	Gallons per well volume	<u>13.38</u> gal
Top of casing to bottom	<u>30.25</u> ft	Total gallons evacuated	<u>40.5</u> gal
Water level after evacuation		Elevation: Top of casing	
Sampling: Date/Time	<u>5/24/16 09:56</u>	Elevation of well water	
Top of casing to water level		Method of Sampling	<u>BAILER</u>

SAMPLE DATA

<u>WV</u>	<u>Temperature [°C]</u>	<u>pH</u>	<u>Conductivity [µS]</u>	<u>Dissolved Oxygen [mg/l]</u>	<u>Turbidity [NTU]</u>
<u>0</u>	<u>21.3</u>	<u>5.27</u>	<u>24.58 MS</u>		
<u>1</u>	<u>21.9</u>	<u>5.30</u>	<u>23.65 MS</u>		
<u>2</u>	<u>22.0</u>	<u>5.28</u>	<u>2.344 MS</u>		
<u>3</u>	<u>22.5</u>	<u>5.32</u>	<u>2.248 MS</u>		

GENERAL INFORMATION

Weather conditions at time of sampling: BREEZY, WARM, SUNNY, DRY
Sample characteristics:

Containers and preservatives:

Comments and observations:

Recommendations: CUT AROUND WELL

Chris [Signature]

Certification:

Well Casing Volumes [gal/ft]

<u>1 1/4"=0.077</u>	<u>2"=0.16</u>	<u>3"=0.37</u>	<u>4"=0.65</u>
<u>1 1/2"=0.10</u>	<u>2 1/2"=0.24</u>	<u>3 1/2"=0.50</u>	<u>6"=1.46</u>

DI Smart 864-0333

DI Harper 863-5135

**GROUND WATER SAMPLING DATA FORM
ENVIRONMENTAL MANAGEMENT SERVICES, INC.**

FIELD LOG

Site EDCC
Collector/Operator CSS/ST

Facility EDCC

Well No. 3

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5/24/16 1008</u>	Method of Evacuation	<u>MINI MONSOON</u>
Top of casing to water level	<u>9.27</u> ft	Gallons per well volume	<u>11.69</u> gal
Top of casing to bottom	<u>27.25</u> ft	Total gallons evacuated	<u>23.2</u> gal
Water level after evacuation	_____ ft	Elevation, Top of casing	_____ ft
Sampling: Date/Time	_____	Elevation of well water	_____ ft
Top of casing to water level	<u>5/24/16 11:03A</u>	Method of Sampling	<u>BAUER</u>

SAMPLE DATA

<u>WV</u>	<u>Temperature[°C]</u>	<u>pH</u>	<u>Conductivity[µS]</u>	<u>Dissolved Oxygen[m%]</u>	<u>Turbidity.[NTU]</u>
<u>0</u>	<u>22.6</u>	<u>6.10</u>	<u>0.21 ms</u>		
<u>1</u>	<u>24.3</u>	<u>6.26</u>	<u>0.22 ms</u>		
<u>2</u>	<u>WELL DRY @ 23.2 gal</u>				
<u>3</u>					

GENERAL INFORMATION

Weather conditions at time of sampling: BREEZY, WARM, SUNNY, DRY

Sample characteristics: ~~CLEAR~~ CLOUDY BROWN

Containers and preservatives:

Comments and observations: ~~CLOUDY BROWN~~ HAD TO "MILK" WELL TOGETHER I
WV 1

Recommendations: OUT AROUND WELL

Certification: *Chris Son*

Well Casing Volumes [gal/ft]

<u>1 1/4"=0.077</u>	<u>2"=0.16</u>	<u>3"=0.37</u>	<u>4"=0.65</u>
<u>1 1/2"=0.10</u>	<u>2 1/2"=0.24</u>	<u>3 1/2"=0.50</u>	<u>6"=1.46</u>

**GROUND WATER SAMPLING DATA FORM
ENVIRONMENTAL MANAGEMENT SERVICES, INC.**

FIELD LOG

Site EDCC
Collector/Operator CSS/ST

Facility EDCC

Well No. 1

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>5/24/16 11:57</u>	Method of Evacuation	
Top of casing to water level	<u>11.78</u> ft	Gallons per well volume	<u>12.89</u> gal
Top of casing to bottom	<u>22.39</u> ft	Total gallons evacuated	<u>21</u> gal
Water level after evacuation		Elevation: Top of casing	
Sampling: Date/Time	<u>5/24/16 12:22</u>	Elevation of well water	
Top of casing to water level		Method of Sampling	<u>BAILER</u>

SAMPLE DATA

<u>WV</u>	<u>Temperature[°C]</u>	<u>pH</u>	<u>Conductivity[µS]</u>	<u>Dissolved Oxygen[mg/l]</u>	<u>Turbidity [NTU]</u>
<u>0</u>	<u>21.5</u>	<u>8.66</u>	<u>0.05 ms</u>		
<u>1</u>	<u>18.6</u>	<u>4.75</u>	<u>0.04 ms</u>		
<u>2</u>	<u>18.1</u>	<u>4.59</u>	<u>0.05 ms</u>		
<u>3</u>	<u>17.5</u>	<u>4.46</u>	<u>0.05 ms</u>		

GENERAL INFORMATION

Weather conditions at time of sampling: CLOUDY, WARM, DRY & BREEZY
 Sample characteristics: CLOUDY BOTTOM, CLEARED UP AFTER PURGING, SAMPLE CLEAR

Containers and preservatives:

Comments and observations:

Recommendations:

Certification:

Chris Jon

Well Casing Volumes [gal/ft]

<u>1 1/4"=0.077</u>	<u>2"=0.16</u>	<u>3"=0.37</u>	<u>4"=0.65</u>
<u>1 1/2"=0.10</u>	<u>2 1/2"=0.24</u>	<u>3 1/2"=0.50</u>	<u>6"=1.46</u>

**GROUND WATER SAMPLING DATA FORM
ENVIRONMENTAL MANAGEMENT SERVICES, INC.**

Site EDCC
Collector/Operator CSS/ST

FIELD LOG
Facility EDCC

Well No. 2

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>11:18 3/24/16</u>	Method of Evacuation	<u>MINI MONITOR</u>
Top of casing to water level	<u>0</u> ft	Gallons per well volume	<u>13.25</u> gal
Top of casing to bottom	<u>20.40</u> ft	Total gallons evacuated	<u>25</u> gal
Water level after evacuation	ft	Elevation, Top of casing	ft
Sampling: Date/Time	<u>3/24/16 11:46</u>	Elevation of well water	ft
Top of casing to water level	ft	Method of Sampling	<u>BAILER</u>

SAMPLE DATA

<u>WV</u>	<u>Temperature [°C]</u>	<u>pH</u>	<u>Conductivity [µS]</u>	<u>Dissolved Oxygen [mg/l]</u>	<u>Turbidity [NTU]</u>
<u>0</u>	<u>20.1</u>	<u>5.53</u>	<u>0.27 mS</u>		
<u>1</u>	<u>19.3</u>	<u>5.22</u>	<u>0.28 mS</u>		
<u>2</u>	<u>DRY @ 25 gal</u>	<u>5.25</u>	<u>0.34 mS</u>		
<u>3</u>	<u>20.0</u>		<u>0.34 mS</u>		

GENERAL INFORMATION

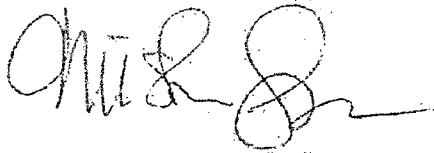
Weather conditions at time of sampling: SUNNY, WARM, BREEZY, DRY
Sample characteristics: CLOUDY, GREENISH BROWN

Containers and preservatives:

Comments and observations:

Recommendations: CUT AROUND WELL

Certification:



Well Casing Volumes [gal/ft]

<u>1 1/4"=0.077</u>	<u>2"=0.16</u>	<u>3"=0.37</u>	<u>4"=0.65</u>
<u>1 1/2"=0.10</u>	<u>2 1/2"=0.24</u>	<u>3 1/2"=0.50</u>	<u>6"=1.46</u>

GROUNDWATER SAMPLING DATA FORM

FIELD LOG

Site El Dorado Chemical Comp. Facility El Dorado AR Well No. ECMW-38
Collector/Operator SEAN THOMAS (Duplicate of ECMW-14)

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>7/6/16 12:15</u>	Method of Evacuation	<u>pump</u>
Top of casing to water level	<u>6.56</u> ft	Gallons per well volume	<u>7</u> gal
Top of casing to bottom	<u>18.2</u> ft	Total gallons evacuated	<u>23</u> gal
Water level after evacuation	ft	Elevation, Top of casing	ft
Sampling: Date/Time	<u>7/6/16 13:10</u>	Elevation of well water	ft
Top of casing to water level	ft	Method of Sampling	<u>MINI MONSOON</u>

SAMPLE DATA

Temperature[°C]	pH	Conductivity[µS]		
<u>25.6</u>	<u>5.95</u>	<u>302.4</u>		
<u>24.5</u>	<u>5.16</u>	<u>241.6</u>		

GENERAL INFORMATION

Weather conditions at time of sampling: Sunny, Humid Clear Skies, hot
Sample characteristics: _____
Containers and preservatives: _____
Comments and observations: _____
Recommendations: _____

Certification: _____

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



GROUNDWATER SAMPLING DATA FORM

FIELD LOG

Site El Dorado Chemical Comp. Facility El Dorado AR Well No. ECMW-14
 Collector/Operator SEAN THOMAS

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>7/6/16 1210</u>	Method of Evacuation	<u>pump</u>
Top of casing to water level	<u>6.56</u> ft	Gallons per well volume	<u>7</u> gal
Top of casing to bottom	<u>18.2</u> ft	Total gallons evacuated	<u>23</u> gal
Water level after evacuation	_____ ft	Elevation, Top of casing	_____ ft
Sampling: Date/Time	<u>7/6/16 1240</u>	Elevation of well water	_____ ft
Top of casing to water level	_____ ft	Method of Sampling	<u>MINI MONSOON</u>

SAMPLE DATA

Temperature[°C]	pH	Conductivity[μS]	_____	_____
<u>25.6</u>	<u>5.95</u>	<u>302.4</u>	_____	_____
<u>24.5</u>	<u>5.16</u>	<u>241.6</u>	_____	_____
<u>24.1</u>	<u>4.93</u>	<u>546</u>	_____	_____

GENERAL INFORMATION

Weather conditions at time of sampling: Sunny, Humid, Clear Skies, Hot
 Sample characteristics: _____

Containers and preservatives: _____

Comments and observations: _____

Recommendations: _____

Certification: _____

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

ENVIRONMENTAL

GROUNDWATER SAMPLING DATA FORM

FIELD LOG

Site EL DORADO CHEMICAL Facility ARKANSAS Well No. ECMW-8
 Collector/Operator SEAN THOMAS

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>8/4/16 1400</u>	Method of Evacuation	<u>Pump</u>
Top of casing to water level	<u>7.42</u> ft	Gallons per well volume	<u>14 gal</u> gal
Top of casing to bottom	<u>29.9</u> ft	Total gallons evacuated	<u>44 gal</u> gal
Water level after evacuation	ft	Elevation. Top of casing	ft
Sampling: Date/Time	<u>8/4/16 1500</u>	Elevation of well water	ft
Top of casing to water level	ft	Method of Sampling	<u>Mini-Monster 2</u>

SAMPLE DATA

Temperature[°C]	pH	Conductivity[µS]
<u>24.8°</u>	<u>4.02</u>	<u>27.34mS</u>
<u>22.9°</u>	<u>3.79</u>	<u>31.98mS</u>
<u>21.8°</u>	<u>3.74</u>	<u>31.07mS</u>

GENERAL INFORMATION

Weather conditions at time of sampling: Sunny, Humid, Slight Breeze from E
 Sample characteristics: _____

Containers and preservatives: 1x Cr, Pb; 1x dCr, dPb; 1x Ammonia, 1x Nitrate, Sulfate

Comments and observations: Grass is High Needs Mowing

Recommendations: Cut Grass

Certification:

Sean Thomas

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

ENVIRONMENTAL MANAGEMENT SERVICES, INC.

GROUNDWATER SAMPLING DATA FORM

FIELD LOG

Site EL DORADO CHEMICAL Facility ARKANSAS Well No. ECMW-39
 Collector/Operator SEAN THOMAS (Duplicate of ECMW-8)

MONITORING WELL INFORMATION

Evacuation: Date/Time	<u>8/4/16 15¹⁰</u>	Method of Evacuation	<u>Pump</u>
Top of casing to water level	<u>7.42</u> ft	Gallons per well volume	<u>14 gal</u> gal
Top of casing to bottom	<u>29.9</u> ft	Total gallons evacuated	<u>44 gal</u> gal
Water level after evacuation	_____ ft	Elevation, Top of casing	_____ ft
Sampling: Date/Time	<u>8/4/16 1600</u>	Elevation of well water	_____ ft
Top of casing to water level	_____ ft	Method of Sampling	<u>Pump</u>

SAMPLE DATA

Temperature[°C]	pH	Conductivity[µS]
<u>24.8°</u>	<u>4.03</u>	<u>27.84 mS</u>
<u>22.9°</u>	<u>3.77</u>	<u>31.98 mS</u>
<u>21.8°</u>	<u>3.74</u>	<u>31.07 mS</u>

GENERAL INFORMATION

Weather conditions at time of sampling: Sunny, Humid, Slight Breeze from E
 Sample characteristics: Clear

Containers and preservatives: 1x Cr, Pb; 1x d Cr, d Pb; 1x Ammonia; 1x Nit, Sul

Comments and observations: Grass is High Needs Mowing

Recommendations: Cut Grass

Certification: Sean Thomas

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

FIELD LOG

Site El Dorado Chemical Company Well No. ECMW-1
 Sampling Personnel Tyler Lollis, Benig Vestal

MONITORING WELL INFORMATION

Evacuation Date 11/10/16 Method of Evacuation Mini-Masson Pump
 Evacuation Time 8:35 AM
 Top of casing to water level ft. 15.6 Gallons per well volume gal 2.52
 Top of casing to bottom ft. 21.4 Total gallons evacuated gal 7.5 ~ 3 WW
 Sampling Date/Time 11/10/16 10:05 Method of Sampling Bailer (ded)

SAMPLE DATA

<u>WW</u>	<u>Temperature [°C]</u>	<u>pH</u>	<u>Conductivity [µS]</u>
0	<u>17.2</u>	<u>8.11</u>	<u>45.7</u>
1	<u>18.7</u>	<u>7.45</u>	<u>43.8</u>
2	<u>18.6</u>	<u>7.11</u>	<u>43.6</u>
3	<u>18.4</u>	<u>6.84</u>	<u>43.2</u>

GENERAL INFORMATION

Weather conditions at time of sampling: Clear, Sunny, Cool
 Sample characteristics: Clear, no noticeable SS
 Containers and preservatives: 1 x 1003 Plastic w/HNO₃, 1 x 1003 Plastic w/H₂SO₄, 1 x 1003 Plastic w/no pres, 1 x 503 plastic w/no pres
 Comments and observations:

Certification: Chris In QC/QA

<u>Well Casing Volumes [gal/ft]</u>			
1 1/4"=0.077	2"=0.16	<u>3"=0.37</u>	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

FIELD LOG

Site El Dorado Chemical Company Well No. ECMW-2
 Sampling Personnel Tyler Lollis, Penny Vestal

MONITORING WELL INFORMATION

Evacuation Date 11/16/16 Method of Evacuation Mini Monsoon
 Evacuation Time 8:05 AM
 Top of casing to water level ft 2.1 Gallons per well volume 6.73
 Top of casing to bottom ft 16.3 Total gallons evacuated gal 50 v 3 wv
 Sampling Date/Time 11/10/16 0955 Method of Sampling Bailer (elec)

SAMPLE DATA

WV	Temperature [°C]	pH	Conductivity [µS]
0	15.6	7.70	251.4
1	18.3	7.15	263.6
2	18.8	7.17	153.4
3	17.0	6.55	280.7

GENERAL INFORMATION

Weather conditions at time of sampling: Clear, Sunny, Cool
 Sample characteristics: Clear, no noticeable SS

Containers and preservatives: 1x1003 Plastic w/HNO₃, 1x1003 Plastic w/H₂SO₄,
 1x1003 Plastic w/NO PRES, 1x503 Plastic w/NO PRES

Comments and observations:

Certification: Christy In QA/QC

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

FIELD LOG

Site El Dorado Chemical Company Well No. ECMW-3
 Sampling Personnel Tyler Lollis Penny Vestal

MONITORING WELL INFORMATION

Evacuation Date 11/10/16 Method of Evacuation Mini-Monsoon
 Evacuation Time 7:35 AM
 Top of casing to water level ft 12.5 Gallons per well volume gal 5.5
 Top of casing to bottom ft 27.4 Total gallons evacuated gal 16.5 - 3 W's
 Sampling Date/Time 11/10/16 0945 Method of Sampling Bailer (clean)

SAMPLE DATA

WV	Temperature [°C]	pH	Conductivity [uS]
0	<u>16.1</u>	<u>7.10</u>	<u>227.5</u>
1	<u>18.5</u>	<u>6.86</u>	<u>240.5</u>
2	<u>17.9</u>	<u>6.83</u>	<u>260.7</u>
3	<u>18.2</u>	<u>6.45</u>	<u>257.2</u>

GENERAL INFORMATION

Weather conditions at time of sampling: Very cool, early morning
 Sample characteristics: clear, no noticeable SS

Containers and preservatives: 1x1003 Plastic w/HNO₃, 1x1003 Plastic w/H₂SO₄,
 1x1003 plastic w/no pres, 1x1003 S O₂ plastic w/no pres

Certification: Chris Jm OAI/OC

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

FIELD LOG

Site El Dorado Chemical Company Well No. ECMW-4
 Sampling Personnel Tyler Lollis, Benny Vestal

MONITORING WELL INFORMATION

Evacuation Date 11/9/16 Method of Evacuation Mini-Monsoon Pump
 Evacuation Time 4:45 PM
 Top of casing to water level ft 11.6 Gallons per well volume gal 3.75
 Top of casing to bottom ft 20.3 Total gallons evacuated gal 1 ~ 3WV
 Sampling Date/Time 11/10/16 0940 Method of Sampling Bailer (ded)

SAMPLE DATA

<u>WV</u>	Temperature [°C]	pH	Conductivity [µS]
0	<u>20.7</u>	<u>6.50</u>	<u>5.48 mS</u>
1	<u>21.5</u>	<u>5.45</u>	<u>6.37 mS</u>
2	<u>21.5</u>	<u>4.02</u>	<u>6.82 mS</u>
3	<u>20.9</u>	<u>3.75</u>	<u>7.65 mS</u>

GENERAL INFORMATION

Weather conditions at time of sampling: Clear, sunny, cool
 Sample characteristics: Clear, no visible SS

Containers and preservatives: 1x100₃ Plastic w/HNO₃, 1x100₃ Plastic w/H₂SO₄, 1x100₃ Plastic w/no pres, 1x50₃ Plastic w/no pres
 Comments and observations:

Certification: Chris Jm QA/QC

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

FIELD LOG

Site El Dorado Chemical Company Well No. ECMW- 5
 Sampling Personnel Tyler Lollis, Benny Vestal

MONITORING WELL INFORMATION

Evacuation Date 11/9/16 Method of Evacuation Mini-Monipon
 Evacuation Time 8:20 PM Pump
 Top of casing to water level ft 4.9 Gallons per well volume gal 4.83
 Top of casing to bottom ft 17.95 Total gallons evacuated gal 14.5 ~ 3 WV
 Sampling Date/Time 11/10/16 0855 Method of Sampling Bailer (ded)

SAMPLE DATA

WV	Temperature [°C]	pH	Conductivity [µS]
0	<u>22.1</u>	<u>7.47</u>	<u>427.3</u>
1	<u>22.4</u>	<u>6.47</u>	<u>598</u>
2	<u>22.1</u>	<u>5.88</u>	<u>599</u>
3	<u>21.9</u>	<u>5.60</u>	<u>643</u>

GENERAL INFORMATION

Weather conditions at time of sampling: clear, sunny, cool
 Sample characteristics: clear, no visible SS

Containers and preservatives: 1x100g Plastic w/HNO₃, 1x100g Plastic w/H₂SO₄,
 1x100g Plastic w/NO pres, 1x50g plastic w/NO pres

Comments and observations: BD-1 collected @ this well

Certification: Chris In QA/QC

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

ENVIRONMENTAL
MANAGEMENT SERVICES, INC.

GROUNDWATER SAMPLING DATA FORM

FIELD LOG

Site: El Dorado Chemical Company Well No. ECMW-6
 Sampling Personnel: Tyler Lollis, Penny Vestal

MONITORING WELL INFORMATION

Evacuation Date: 11/9/10 Method of Evacuation: Mini-Monsoon Pump
 Evacuation Time: 2:10 PM
 Top of casing to water level ft: 5.0 Gallons per well volume gal: 6.4
 Top of casing to bottom ft: 21.2 Total gallons evacuated gal: 19.2 ~ 3 wv
 Sampling Date/Time: 11/10/10 09:15 Method of Sampling: Bailer (collected)

SAMPLE DATA

WV	Temperature [°C]	pH	Conductivity [µS]
0	22.5	5.40	19.23 mS
1	22.4	4.04	38.95 mS
2	21.7	3.77	41.74 mS
3	21.2	3.71	42.77 mS

GENERAL INFORMATION

Weather conditions at time of sampling: clear, sunny, cool
 Sample characteristics: clear, no noticeable BS

Containers and preservatives: 1x 100oz plastic w/HNO₃, 1x 100oz plastic w/H₂SO₄, 1x 100oz plastic w/NO PRES, 1x 50oz plastic w/NO PRES

Comments and observations:

Certification: Chris Jm QA/QC

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

FIELD LOG

Site El Dorado Chemical Company Well No. ECMW-7
 Sampling Personnel Tyler Lollis, Benny Vestal

MONITORING WELL INFORMATION

Evacuation Date 11/9/16 Method of Evacuation Mini-Manscion Pump
 Evacuation Time 2:31 PM
 Top of casing to water level ft 7.7 Gallons per well volume gal 6.44
 Top of casing to bottom ft 25.1 Total gallons evacuated gal 19.3 ~ 30V
 Sampling Date/Time 11/10/16 0920 Method of Sampling Bailer (ded)

SAMPLE DATA

WV	Temperature [°C]	pH	Conductivity [µS]
0	<u>23.2</u>	<u>6.63</u>	<u>1877</u>
1	<u>21.5</u>	<u>5.02</u>	<u>3114</u>
2	<u>21.0</u>	<u>4.55</u>	<u>18.07 mS</u>
3	<u>21.2</u>	<u>4.92</u>	<u>24.24 mS</u>

GENERAL INFORMATION

Weather conditions at time of sampling: Clear, Sunny, Cool
 Sample characteristics: Clear, no visible SS

Containers and preservatives: 1x100z Plastic w/HNO₃, 1x100z Plastic w/H₂SO₄,
1x100z Plastic w/NO pres, 1x50z Plastic w/NO pres

Comments and observations: _____

Certification: Chris J. O'Neil

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	<u>3"=0.37</u>	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

FIELD LOG

Site El Dorado Chemical Company

Well No: ECMW-8

Sampling Personnel Tyler Lollis, Benny Vestal

MONITORING WELL INFORMATION

Evacuation Date 11/9/16

Method of Evacuation MM - Monsoon

Evacuation Time 3:45 PM

Pump

Top of casing to water level ft. 8.8

Gallons per well volume gal. 7.96

Top of casing to bottom ft. 30.3

Total gallons evacuated gal. 24 ~ 3 wv

Sampling Date/Time 11/10/16 0935

Method of Sampling Boiler (dtd)

SAMPLE DATA

WV	Temperature [°C]	pH	Conductivity [µS]
0	22.3	5.61	11.2 4498
1	21.1	4.09	12.94 mS
2	19.9	3.73	29.78 mS
3	19.7	3.61	31.95 mS

GENERAL INFORMATION

Weather conditions at time of sampling: clear, sunny, cool

Sample characteristics: clear, no visible SS

Containers and preservatives: 1x1003 Plastic w/HNO₃, 1x1003 Plastic w/H₂SO₄, 1x1003 Plastic w/no pres, 1x5003 Plastic w/no pres

Comments and observations:

Certification:

Chris Sam QA/QC

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

FIELD LOG

Site El Dorado Chemical Company Well No. ECMW-9
 Sampling Personnel Tyler Lollis, Benny Vestal

MONITORING WELL INFORMATION

Evacuation Date 11/9/16 Method of Evacuation Mini-Mason Pump
 Evacuation Time 4:10 PM
 Top of casing to water level ft. 13.7 Gallons per well volume gal. 6.18
 Top of casing to bottom ft. 30.4 Total gallons evacuated gal. ~18.5
 Sampling Date/Time 11/10/16 0930 Method of Sampling Bailer (dced)

SAMPLE DATA

WV	Temperature [°C]	pH	Conductivity [µS]
0	21.0	6.87	2546
1	20.5	6.35	2296
2	19.9	6.16	2268
3	19.9	5.87	2500

GENERAL INFORMATION

Weather conditions at time of sampling: Clear, cool, sunny

Sample characteristics: Clear, no visible SS

Containers and preservatives: 1x100g Plastic w/HNO₃, 1x100g Plastic w/H₂SO₄,
 1x100g Plastic w/NO₃ pres, 1x50g Plastic w/NO₃ pres

Comments and observations:

Certification: Amish Sm QA/QC

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

FIELD LOG

Site El Dorado Chemical Company Well No. ECMW-10
 Sampling Personnel Tyler Lotts, Benny Vestal

MONITORING WELL INFORMATION

Evacuation Date 11/9/16 Method of Evacuation Mini Monsoon Pump
 Evacuation Time 1:50 PM
 Top of casing to water level ft 15.8 Gallons per well volume gal 2.00
 Top of casing to bottom ft 23.0 Total gallons evacuated gal 7.9 ~ 3 WV
 Sampling Date/Time 11/10/16 10:15 Method of Sampling Boiler (deci)

SAMPLE DATA

WV	Temperature [°C]	pH	Conductivity [µS]
0	21.9	6.30	440.1
1	22.2	5.1	758
2	22.1	4.52	764
3	21.8	4.25	770

GENERAL INFORMATION

Weather conditions at time of sampling: Clear, cool, sunny
 Sample characteristics: Clear, no visible SS
 Containers and preservatives: 1x 10oz Plastic w/ HNO₃, 1x 10oz Plastic w/ H₂SO₄, 1x 10oz Plastic w/ no pres, 1x 50oz plastic w/ no pres
 Comments and observations: BD-2 collected @ this well

Certification: Chris Jones QA/QC

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

ENVIRONMENTAL
MANAGEMENT SERVICES, INC.

GROUNDWATER SAMPLING DATA FORM

FIELD LOG

Site El Dorado Chemical Company Well No. ECMW-11
 Sampling Personnel Tyler Lollis, Benny Vestal

MONITORING WELL INFORMATION

Evacuation Date 11/9/16 Method of Evacuation Min-Mansion
 Evacuation Time 1:30 PM Pump
 Top of casing to water level ft. 13.1 Gallons per well volume gal 2.63
 Top of casing to bottom ft. 20.2 Total gallons evacuated gal 7.8 ~ 3 WV
 Sampling Date/Time 11/10/16 1030 Method of Sampling Bailer (ded)

SAMPLE DATA

WV	Temperature [°C]	pH	Conductivity [µS]
0	<u>22.8</u>	<u>6.15</u>	<u>777</u>
1	<u>22.9</u>	<u>5.50</u>	<u>743</u>
2	<u>23.0</u>	<u>4.67</u>	<u>824</u>
3	<u>22.9</u>	<u>4.43</u>	<u>909</u>

GENERAL INFORMATION

Weather conditions at time of sampling: Clear, cool, sunny
 Sample characteristics: clear, no visible SS

Containers and preservatives: 1x10oz Plastic w/NO₂, 1x10oz Plastic w/H₂SO₄,
 1x10oz Plastic w/NO pres, 1x5oz Plastic w/NO pres
 Comments and observations:

Certification: Chris Brown QA/QC

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.32	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

ENVIRONMENTAL
MANAGEMENT SERVICES, INC.

GROUNDWATER SAMPLING DATA FORM

FIELD LOG

Site El Dorado Chemical Company Well No. ECMW-12
 Sampling Personnel Tyler Lotts, Benny Vestal

MONITORING WELL INFORMATION

Evacuation Date 11/9/16 Method of Evacuation Mini-Monsoon
 Evacuation Time 12:54 p.m. Pump
 Top of casing to water level ft 6.6 Gallons per well volume gal 5.08
 Top of casing to bottom ft 20.2 Total gallons evacuated gal 15 or 3 wv
 Sampling Date/Time 11/10/16 1035 Method of Sampling Bailer (ded)

SAMPLE DATA

WV	Temperature [°C]	pH	Conductivity [µS]
0	23.7	5.78	274.1
1	23.4	5.41	518
2	23.3	5.16	695
3	22.9	5.18	676

GENERAL INFORMATION

Weather conditions at time of sampling: Clear, cool, sunny

Sample characteristics: Clear no visible SS

Containers and preservatives: 1x10oz Plastic w/HNO₃, 1x10oz Plastic w/H₂SO₄,
 1x10oz Plastic w/NO pres, 1x5oz Plastic w/NO pres

Comments and observations:

Certification: CMW/Sm QA/QC

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

FIELD LOG

Site El Dorado Chemical Company Well No. ECMW-13
 Sampling Personnel Tyler Lollis, Penny Vesial

MONITORING WELL INFORMATION

Evacuation Date 11/8/16 Method of Evacuation Mini-Monsoon
 Evacuation Time 1:35 PM Pump
 Top of casing to water level ft 9.9 Gallons per well volume gal 3.774
 Top of casing to bottom ft 20.1 Total gallons evacuated gal 11.25 v 3WV
 Sampling Date/Time 11/9/16 0810 Method of Sampling Bailer (ded)

SAMPLE DATA

<u>WV</u>	<u>Temperature[°C]</u>	<u>pH</u>	<u>Conductivity[uS]</u>
<u>0</u>	<u>21.7</u>	<u>5.18</u>	<u>845</u>
<u>1</u>	<u>21.7</u>	<u>5.06</u>	<u>999</u>
<u>2</u>	<u>21.4</u>	<u>5.24</u>	<u>1086</u>
<u>3</u>	<u>21.2</u>	<u>5.06</u>	<u>1058</u>

GENERAL INFORMATION

Weather conditions at time of sampling: Cloudy cool
 Sample characteristics: clear, no visible SS
 Containers and preservatives: 1x1003 Plastic w/HNO₃, 1x1003 Plastic w/H₂SO₄,
 1x1003 Plastic w/NO PRES, 1x503 Plastic w/NO PRES.
 Comments and observations:

Certification: Chris [Signature] QA/QC

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

ENVIRONMENTAL
MANAGEMENT SERVICES, INC.

GROUNDWATER SAMPLING DATA FORM

FIELD LOG

Site El Dorado Chemical Company Well No. ECMW-14
 Sampling Personnel Tyler Lollis, Benny Vestal

MONITORING WELL INFORMATION

Evacuation Date: 11/8/16 Method of Evacuation: Mini-Monsoon Pump
 Evacuation Time: 3:00 PM
 Top of casing to water level ft 8.6 Gallons per well volume gal 3.7
 Top of casing to bottom ft 8.6 Total gallons evacuated gal 11 ~ 3 WV
 Sampling Date/Time 11/9/16 0830 Method of Sampling Bailer (dcd)

SAMPLE DATA

<u>WV</u>	<u>Temperature[°C]</u>	<u>pH</u>	<u>Conductivity[µS]</u>
<u>0</u>	<u>22.1</u>	<u>6.96</u>	<u>383.7</u>
<u>1</u>	<u>23.0</u>	<u>6.15</u>	<u>384.8</u>
<u>2</u>	<u>23.0</u>	<u>5.65</u>	<u>425.8</u>
<u>3</u>	<u>22.9</u>	<u>5.37</u>	<u>472.0</u>

GENERAL INFORMATION

Weather conditions at time of sampling: Clear, sunny, cool
 Sample characteristics: Clear, no visible SS
 Containers and preservatives: 1x100% Plastic w/HNO₃, 1x100% Plastic w/H₂SO₄,
1x100% Plastic w/no pres, 1x50% Plastic w/no pres
 Comments and observations:

Certification: Chris [Signature] QA/QC

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

GROUNDWATER SAMPLING DATA FORM

FIELD LOG

Site El Dorado Chemical Company Well No. ECMW-15
 Sampling Personnel Tyler Lollis, Benny Vestal

MONITORING WELL INFORMATION

Evacuation Date 11/8/16 Method of Evacuation Mini-Monsoon
 Evacuation Time 2:24 PM Pump
 Top of casing to water level ft 6.9 Gallons per well volume gal 3.885
 Top of casing to bottom ft 17.4 Total gallons evacuated gal 115 w 3 WW
 Sampling Date/Time 11/9/16 0845 Method of Sampling Boiler (ded)

SAMPLE DATA

<u>WV</u>	<u>Temperature[°C]</u>	<u>pH</u>	<u>Conductivity[µS]</u>
<u>0</u>	<u>22.5</u>	<u>6.15</u>	<u>933</u>
<u>1</u>	<u>22.8</u>	<u>5.55</u>	<u>87.6</u>
<u>2</u>	<u>22.9</u>	<u>5.13</u>	<u>858</u>
<u>3</u>	<u>23.1</u>	<u>5.04</u>	<u>82.9</u>

GENERAL INFORMATION

Weather conditions at time of sampling: Clear, cool, sunny
 Sample characteristics: Clear, no visible SS

Containers and preservatives: 1x10oz Plastic w/HNO₃, 1x10oz Plastic w/H₂SO₄,
1x10oz Plastic w/no pres, 1x5oz Plastic w/no pres

Comments and observations: _____

Certification:  QA/QC

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

GROUNDWATER SAMPLING DATA FORM

FIELD LOG

Site El Dorado Chemical Company Well No. ECMW-16
 Sampling Personnel Tyler Lottis, Benny Vestal

MONITORING WELL INFORMATION

Evacuation Date 11/8/16 Method of Evacuation Mini-Miser
 Evacuation Time 2:00 PM Pump
 Top of casing to water level ft. 6.65 Gallons per well volume gal 4.79
 Top of casing to bottom ft. 19.6 Total gallons evacuated gal 14.46 ~ 3 wells
 Sampling Date/Time 11/9/16 0820 Method of Sampling Boiler (ded)

SAMPLE DATA

WV	Temperature [°C]	pH	Conductivity [µS]
0	<u>22.7</u>	<u>6.78</u>	<u>134.5</u>
1	<u>23.4</u>	<u>5.85</u>	<u>134.2</u>
2	<u>23.5</u>	<u>5.20</u>	<u>132.0</u>
3	<u>23.4</u>	<u>5.30</u>	<u>136.0</u>

GENERAL INFORMATION

Weather conditions at time of sampling: Clear, cool, sunny
 Sample characteristics: Clear, no visible SS

Containers and preservatives: 1x100g Plastic w/ HNO₃, 1x100g Plastic w/ H₂SO₄,
 1x100g Plastic w/ NO₂ pres., 1x50g Plastic w/ NO₂ pres.

Comments and observations:

Certification: Chris G. QA/QC

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

FIELD LOG

Site El Dorado Chemical Company Well No. ECMW-17
 Sampling Personnel Tyler Lollis, Benny Vestal

MONITORING WELL INFORMATION

Evacuation Date 11/8/18 Method of Evacuation Mini Monsoon Pump
 Evacuation Time 4:05 PM
 Top of casing to water level ft 29.4 Gallons per well volume gal 2.3
 Top of casing to bottom ft 35.7 Total gallons evacuated gal ~7
 Sampling Date/Time 11/9/18 0840 Method of Sampling Bailer (dred)

SAMPLE DATA

<u>WV</u>	Temperature [°C]	pH	Conductivity [µS]
<u>0</u>	<u>19.9</u>	<u>7.29</u>	<u>311.1</u>
<u>1</u>	<u>19.1</u>	<u>6.46</u>	<u>187.7</u>
<u>2</u>	<u>18.9</u>	<u>6.09</u>	<u>180.8</u>
<u>3</u>	<u>19.1</u>	<u>6.42</u>	<u>184.9</u>

GENERAL INFORMATION

Weather conditions at time of sampling: clear, cool, sunny
 Sample characteristics: clear, no visible SS

Containers and preservatives: 1x100₂ Plastic w/HNO₃, 1x100₂ Plastic w/H₂SO₄,
 1x100₂ Plastic w/NO pres, 1x50₂ Plastic w/NO pres
 Comments and observations:

Certification: *[Signature]*

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	<u>3"=0.37</u>	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

FIELD LOG

Site El Dorado Chemical Company Well No. ECMW-18
 Sampling Personnel Tyler Lellis, Benny Vestel

MONITORING WELL INFORMATION

Evacuation Date 11/9/16 Method of Evacuation Mini-Monsoon
 Evacuation Time 12:00 PM Pump
 Top of casing to water level ft 8.5 Gallons per well volume gal 3.29
 Top of casing to bottom ft 17.4 Total gallons evacuated gal 10 ~ 3 WV
 Sampling Date/Time 11/16/16 10:55 Method of Sampling Boiler (ded)

SAMPLE DATA

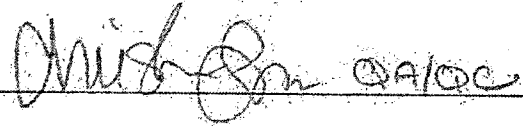
<u>WV</u>	<u>Temperature [°C]</u>	<u>pH</u>	<u>Conductivity [µS]</u>
<u>0</u>	<u>22.5</u>	<u>6.60</u>	<u>3.4</u>
<u>1</u>	<u>21.6</u>	<u>7.34</u>	<u>83.0</u>
<u>2</u>	<u>20.6</u>	<u>6.81</u>	<u>76.7</u>
<u>3</u>	<u>20.4</u>	<u>6.42</u>	<u>75.0</u>

GENERAL INFORMATION

Weather conditions at time of sampling: 70°, slightly cloudy w/ sun, ~5 mph wind
 Sample characteristics: clear, no visible SS

Containers and preservatives: 1x100% Plastic w/HNO₃, 1x100% Plastic w/H₂SO₄,
 1x100% Plastic w/NO PRES, 1x50% plastic w/NO PRES

Comments and observations: _____

Certification:  QA/QC

Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	<u>3"=0.37</u>	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

FIELD LOG

Site El Dorado Chemical Company Well No. ECMW-19
 Sampling Personnel Tyler Lollis, Benny Vestal, Christina Sellers

MONITORING WELL INFORMATION

Evacuation Date 11/8/16 Method of Evacuation Mini-Monsoon
 Evacuation Time 9:20 am Pump
 Top of casing to water level ft 4.25 ft Gallons per well volume gal 8.776
 Top of casing to bottom ft 59.1 ft Total gallons evacuated gal 27 ~ 3WV
 Sampling Date/Time 11/9/16 0915 Method of Sampling Boiler (ded)

SAMPLE DATA

WV
0
1
2
3

Temperature[°C]	pH	Conductivity[µS]
<u>19.7</u>	<u>6.55</u>	<u>166.9</u>
<u>17.9</u>	<u>6.70</u>	<u>81.5</u>
<u>17.8</u>	<u>6.40</u>	<u>85.3</u>
<u>17.8</u>	<u>6.56</u>	<u>83.9</u>

GENERAL INFORMATION

Weather conditions at time of sampling: Cloudy, cool, damp
 Sample characteristics: Clear, no visible SS
 Containers and preservatives: 1x100oz Plastic w/HNO₃, 1x100oz Plastic w/H₂SO₄,
1x100oz Plastic w/HNO₃ Pres, 1x50oz Plastic w/HNO₃ Pres
 Comments and observations:

Certification: *[Signature]* GA/OC

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

FIELD LOG

Site El Dorado Chemical Company Well No. ECMW- 20
 Sampling Personnel Tyler Lellis, Benny Vestal

MONITORING WELL INFORMATION

Evacuation Date 11/18/16 Method of Evacuation Mini-Mason
 Evacuation Time 10:29 am Pump
 Top of casing to water level ft 8.8 Gallons per well volume gal 3.92
 Top of casing to bottom ft 53.3 Total gallons evacuated gal 5 ~ 1.25 WV
 Sampling Date/Time 11/18/16 09:25 Method of Sampling Bailer (ded)

only made it to 1 gal before well ran dry

SAMPLE DATA

WV	Temperature [°C]	pH	Conductivity [uS]
0	18.3	6.62	81.8
1	18.4	6.09	75.4
2	18.6	5.18	140.4
3	Dry	Dry	Dry

GENERAL INFORMATION

Weather conditions at time of sampling: Clear, Cool, Sunny

Sample characteristics: Clear, no visible SS

Containers and preservatives: 1x100% Plastic w/HNO₃, 1x Plastic 100% w/H₂SO₄,
 1x100% Plastic w/NO₂ pres, 1x50% Plastic w/NO₂ pres

Comments and observations:

Certification: *Chris [Signature]*

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

FIELD LOG

Site El Dorado Chemical Company Well No. ECMW- 21
 Sampling Personnel Tyler Lolis, Benny Vestal

MONITORING WELL INFORMATION

Evacuation Date 11/6/16 Method of Evacuation Bailer
 Evacuation Time 11:11 AM
 Top of casing to water level ft 17.6 Gallons per well volume gal 0.016
 Top of casing to bottom ft 30.1 Total gallons evacuated gal 3
 Sampling Date/Time 11/9/16 0940 Method of Sampling Bailer (dred)

SAMPLE DATA

WV	Temperature [°C]	pH	Conductivity [µS]
<u>0</u>	<u>19.8</u>	<u>6.75</u>	<u>61.6</u>
	<u>Just barely got enough water out for an initial reading</u>		

GENERAL INFORMATION

Weather conditions at time of sampling: Clear, Cool, Sunny
 Sample characteristics: Clear, no visible SS
 Containers and preservatives: 1x10oz Plastic w/HNO₃, 1x10oz Plastic w/H₂SO₄, 1x10oz Plastic w/no pres, 1x5oz Plastic w/no pres
 Comments and observations:

Certification: Chris [Signature] QA/QC

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

FIELD LOG

Site El Dorado Chemical Company Well No. ECMW- 22
 Sampling Personnel Tyler Lollis, Benny Vestal

MONITORING WELL INFORMATION

Evacuation Date 11/8/16 Method of Evacuation Mini-Monsoon
 Evacuation Time 3:23 PM Pump
 Top of casing to water level ft 7.6 Gallons per well volume gal 11.6
 Top of casing to bottom ft 80.1 Total gallons evacuated gal 34.8 ~ 3 WV
 Sampling Date/Time 11/9/16 0850 Method of Sampling Boiler (ded)

SAMPLE DATA

WV	Temperature [°C]	pH	Conductivity [µS]
0	21.4	6.65	236.1
1	19.1	6.30	199.6
2	18.9	6.07	144.2
3	18.9	6.04	144.5

GENERAL INFORMATION

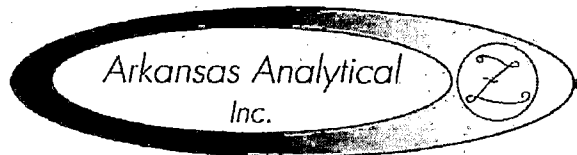
Weather conditions at time of sampling: Clear, Cool, Sunny
 Sample characteristics: Clear, no visible SS

Containers and preservatives: 1x10oz Plastic w/ HNO₃, 1x10oz Plastic w/ H₂SO₄,
 1x10oz Plastic w/ no pres, 1x5oz Plastic w/ no pres

Comments and observations: _____

Certification: [Signature]

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



8100 National Dr. - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

07 June 2016

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

Project: Groundwater Sample(s)
Project Number: May 2016
SDG Number: 1605402

Enclosed are the results of analyses for samples received by the laboratory on 24-May-16 16:18. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

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

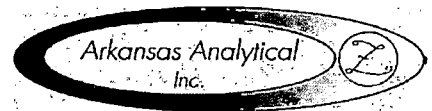
Sincerely,

A handwritten signature in cursive script, appearing to read "Norma James / Teresa Coins".

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

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07 June 2016



David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: May 2016
Date Received: 24-May-16 16:18

ANALYTICAL RESULTS

Lab Number: 1605402-01
Sample Name: ECMW #5
Date/Time Collected: 5/24/16 7:45
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	49.4		5/25/16 17:35	B605377	300.0, 2.1-1993
Nitrate as N	mg/L	41.9		5/25/16 17:35	B605377	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		5/25/16 18:23	B605364	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		5/25/16 18:23	B605364	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		5/25/16 18:23	B605368	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		5/25/16 18:23	B605368	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		5/25/16 10:34	B605362	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1605402-02
Sample Name: ECMW #6
Date/Time Collected: 5/24/16 7:55
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	30.8		5/26/16 3:21	B605377	300.0, 2.1-1993
Nitrate as N	mg/L	4120		5/25/16 17:57	B605377	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		5/25/16 18:27	B605364	200.7, Rev. 4.4 (1994)
Lead	mg/L	0.038		5/25/16 18:27	B605364	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		5/25/16 18:27	B605368	200.7, Rev. 4.4 (1994)
Lead	mg/L	0.0379		5/25/16 18:27	B605368	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	1390		5/25/16 10:34	B605362	4500-NH3 B,D,C-1997

07 June 2016



David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: May 2016
Date Received: 24-May-16 16:18

ANALYTICAL RESULTS

Lab Number: 1605402-03
Sample Name: ECMW #4
Date/Time Collected: 5/24/16 8:01
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	843		5/31/16 10:25	B605377	300.0, 2.1-1993
Nitrate as N	mg/L	0.666		5/25/16 13:26	B605377	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		5/25/16 18:31	B605364	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		5/25/16 18:31	B605364	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		5/25/16 18:31	B605368	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		5/25/16 18:31	B605368	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	1.13		5/25/16 10:34	B605362	4500-NH3 B,D,C-1997

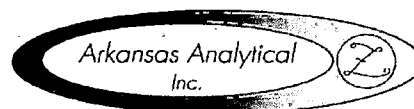
ANALYTICAL RESULTS

Lab Number: 1605402-04
Sample Name: ECMW #7
Date/Time Collected: 5/24/16 8:12
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	740		5/25/16 18:20	B605377	300.0, 2.1-1993
Nitrate as N	mg/L	135		5/25/16 18:20	B605377	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		5/25/16 18:35	B605364	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		5/25/16 18:35	B605364	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		5/25/16 18:35	B605368	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		5/25/16 18:35	B605368	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	91.1		5/25/16 10:34	B605362	4500-NH3 B,D,C-1997

07 June 2016

David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: May 2016
Date Received: 24-May-16 16:18



ANALYTICAL RESULTS

Lab Number: 1605402-05
Sample Name: ECMW #8
Date/Time Collected: 5/24/16 9:00
Sample Matrix: Water

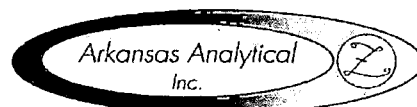
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	81.0		5/25/16 18:42	B605377	300.0, 2.1-1993
Nitrate as N	mg/L	4060		5/25/16 19:05	B605377	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		5/25/16 18:39	B605364	200.7, Rev. 4.4 (1994)
Lead	mg/L	0.065		5/25/16 18:39	B605364	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		5/25/16 18:39	B605368	200.7, Rev. 4.4 (1994)
Lead	mg/L	0.0650		5/25/16 18:39	B605368	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	2020		5/25/16 10:34	B605362	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1605402-06
Sample Name: ECMW #9
Date/Time Collected: 5/24/16 9:56
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	581		5/31/16 10:47	B605377	300.0, 2.1-1993
Nitrate as N	mg/L	29.1		5/25/16 19:28	B605377	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		5/25/16 18:43	B605364	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		5/25/16 18:43	B605364	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		5/25/16 18:43	B605368	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		5/25/16 18:43	B605368	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	0.888		5/25/16 10:34	B605362	4500-NH3 B,D,C-1997

07 June 2016



David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: May 2016
Date Received: 24-May-16 16:18

ANALYTICAL RESULTS

Lab Number: 1605402-07
Sample Name: ECMW #3
Date/Time Collected: 5/24/16 11:03
Sample Matrix: Water

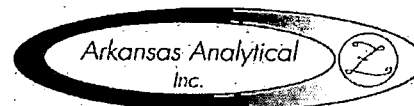
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	9.88		5/25/16 14:56	B605377	300.0, 2.1-1993
Nitrate as N	mg/L	0.252		5/25/16 14:56	B605377	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		5/25/16 19:02	B605364	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		5/25/16 19:02	B605364	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		5/25/16 19:02	B605368	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		5/25/16 19:02	B605368	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		5/25/16 10:34	B605362	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1605402-08
Sample Name: ECMW #2
Date/Time Collected: 5/24/16 11:46
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	19.8		5/25/16 19:50	B605377	300.0, 2.1-1993
Nitrate as N	mg/L	0.645		5/25/16 19:50	B605377	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		5/25/16 19:06	B605364	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		5/25/16 19:06	B605364	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		5/25/16 19:06	B605368	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		5/25/16 19:06	B605368	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	1.37		5/25/16 10:34	B605362	4500-NH3 B,D,C-1997

07 June 2016



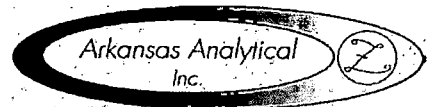
David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: May 2016
Date Received: 24-May-16 16:18

ANALYTICAL RESULTS

Lab Number: 1605402-09
Sample Name: ECMW #1
Date/Time Collected: 5/24/16 12:22
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	5.56		5/25/16 20:13	B605377	300.0, 2.1-1993
Nitrate as N	mg/L	1.79		5/25/16 20:13	B605377	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		5/25/16 19:09	B605364	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		5/25/16 19:09	B605364	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		5/25/16 19:09	B605368	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		5/25/16 19:09	B605368	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		5/25/16 10:34	B605362	4500-NH3 B,D,C-1997

07 June 2016



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QUALITY CONTROL RESULTS

Wet Chemistry -- Batch: B605362 (Water)

Prepared: 25-May-16 10:34 By: ZR -- Analyzed: 25-May-16 10:34 By: ZR

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Ammonia as N	<0.500 mg/L	100% / NA	101% / 100%		0.622%	

Dissolved Metals -- Batch: B605364 (Water)

Prepared: 25-May-16 14:45 By: HF -- Analyzed: 25-May-16 18:20 By: HF

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Chromium	<0.021 mg/L	106% / NA	101% / 103%		1.82%	
Lead	<0.016 mg/L	109% / NA	100% / 101%		0.974%	

Total Metals -- Batch: B605368 (Water)

Prepared: 25-May-16 16:25 By: HF -- Analyzed: 25-May-16 20:14 By: HF

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Chromium	<0.0104 mg/L	101% / NA	98.6% / 99.3%		0.419%	
Lead	<0.0156 mg/L	102% / NA	94.9% / 94.9%		0.00771%	

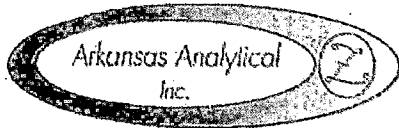
Anions -- Batch: B605377 (Water)

Prepared: 25-May-16 10:23 By: TB -- Analyzed: 26-May-16 00:43 By: Mel

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Nitrate as N	<0.250 mg/L	102% / NA	108% / 110%		0.749%	
Sulfate as SO4	<0.500 mg/L	92.3% / NA	94.2% / 96.9%		1.72%	

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

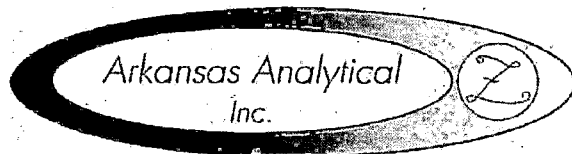
Reviewed by: *Norma James / Teresa Coins*
Norma James and/or Teresa Coins
Technical Director and/or QA Officer



8100 National Dr.
 Little Rock, AR 72209
 PHONE: 501-455-3233
 FAX: 501-455-6118

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION		BILLING INFORMATION		Project Description		Turnaround Time		Preservation Codes:											
El Dorado Chemical Inc.		El Dorado Chemical Inc.		Groundwater Samples		1 Day (100%)		1. Cool, 4 Degrees Centigrade				4. Thiosulfate for Dechlorination							
4500 Northwest Ave.		P.O. Box 231				2 Day (50%)		2. Sulfuric Acid (H ₂ SO ₄), pH < 2				5. Hydrochloric Acid (HCl)							
El Dorado, AR 71731		El Dorado, AR 71731		Reporting Information		3 Day (25%)		3. Nitric Acid (HNO ₃), pH < 2				6. Sodium Hydroxide (NaOH), pH > 12							
Attn: David Sartain				Telephone: 870-863-1484		5 Day (Routine)		TEST PARAMETERS								Bottle Type Code			
				Fax: 870-863-1499		Preservative Code:		1	1,2	1	1,3							G = Glass; P = Plastic	
				Email: dsartain@edo-ark.com; epsarson@edo-ark.com; lmarcilla@ene-mgt.com		Bottle Type:		P	P	P	P							V = Septum; A = Amber	
Sampler(s) Signature				Sampler(s) Printed														Arkansas Analytical Work Order Number:	
Field Number	SAMPLE COLLECTION Date/s Time/s		Grab	Contip	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION				Nitrate, Sulfate	Ammonia	Cd, Cr, d Pb	Cr, Pb					105402
WELL 5	5/24/16 0745		X		4	Water	ECMW- WELL 5				X	X	X	X					01
WELL 6	5/24/16 0755		X		4	Water	ECMW- WELL 6				X	X	X	X					02
WELL 4	5/24/16 0801		X		4	Water	ECMW- WELL 4				X	X	X	X					03
WELL 7	5/24/16 0812		X		4	Water	ECMW- WELL 7				X	X	X	X					04
WELL 8	5/24/16 0900		X		4	Water	ECMW- WELL 8				X	X	X	X					05
WELL 9	5/24/16 0956		X		4	Water	ECMW- WELL 9				X	X	X	X					06
	5/24/16 11:03		X		4	Water	ECMW- WELL 3 ³⁵⁵ 3				X	X	X	X					07
	5/24/16 11:46		X		4	Water	ECMW- WELL 3 ³⁵⁵ 2				X	X	X	X					08
	5/24/16 12:22		X		4	Water	ECMW- WELL 1				X	X	X	X					09
			X		4	Water	ECMW-				X	X	X	X					TR-10
1. Relinquished by: (Signature)		Date/Time		2. Received by: (Signature)		SAMPLE CONDITION UPON RECEIPT IN LAB				REMARKS / SAMPLE COMMENTS									
<i>Chris Smith</i>		5/24/16 13:00		<i>Allen Parker</i>		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													
3. Relinquished by: (Signature)		Date/Time		4. Received by lab: (Signature)		4. RECEIVED ON ICE: <input type="checkbox"/> Yes <input type="checkbox"/> No													
<i>Allen Parker</i>		1618 5-24-16		<i>Johnny Riddle</i>		5. TEMPERATURE ON RECEIPT: 13°C													
						6. TEMPERATURE GUN ID: HHT# 2													
FOR COMPLETION BY LAB ONLY																			



8100 National Dr. - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

03 June 2016

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

Project: Groundwater Sample(s)

Project Number: May 2016

SDG Number: 1605426

Enclosed are the results of analyses for samples received by the laboratory on 25-May-16 15:30. 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	11.0°C

Sincerely,

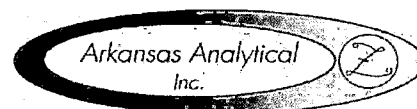
A handwritten signature in cursive script that reads "Norma James / Teresa Coins".

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

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03 June 2016

David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: May 2016
Date Received: 25-May-16 15:30



CASE NARRATIVE

Sample Delivery Group – 1605426

One OR more of the qualifiers described below may appear in this report.

SAMPLE RECEIPT QUALIFIERS:

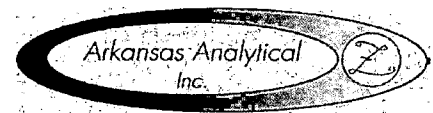
<u>Qualifier</u>	<u>Description</u>
ET	Samples received above required temperature.
ET	Samples received above required temperature. Although collected and received the same day, no ice was present to indicate the cooling preservation was attempted.
E2	Result qualified as it was received and analyzed outside of holding time. Analysis is considered a "Field" analysis.
E2	Result qualified as it was received and/or analyzed outside of holding time.
E3	Result qualified as it was received in the incorrect container and/or preservation.

QUALITY CONTROL QUALIFIERS:

<u>Qualifier</u>	<u>Description</u>
E20	Sample used as "parent" for the associated analytical batch.
%D3/S-01 / E1	Surrogate failed to recover within acceptance criteria (%D3/S-01). Results associated with this surrogate were qualified as "estimated" (E1).
B	Present in the Associated Blank
B1	Present in Blank, but Not In the Sample.
%D2 / E5	Laboratory Control Spike (LCS) and/or Laboratory Control Spike Duplicate (LCSD) failed to recover with acceptance criteria (%D2). Associated results were qualified as "estimated" (E5).
%D1	Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) failed acceptance criteria.
MBA	Failed criteria due the high concentration of analyte in the parent sample.
MBI	Failed criteria due an interference in the parent sample.
%D3	Quality Control Surrogate failed acceptance criteria.
NREC	Quality Control Surrogate failed.

03 June 2016

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4500 North West Ave.
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Project: Groundwater Sample(s)
Project Number: May 2016
Date Received: 25-May-16 15:30



ANALYTICAL RESULTS

Lab Number: 1605426-01
Sample Name: ECMW #10
Date/Time Collected: 5/25/16 7:15
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	134	E20	5/26/16 9:17	B605388	300.0, 2.1-1993
Nitrate as N	mg/L	51.2	E20	5/26/16 9:17	B605388	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		5/26/16 17:19	B605417	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		5/26/16 17:19	B605417	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		5/26/16 15:36	B605405	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		5/26/16 15:36	B605405	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		5/26/16 10:59	B605409	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1605426-02
Sample Name: ECMW #11
Date/Time Collected: 5/25/16 7:20
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	233		5/31/16 14:40	B605388	300.0, 2.1-1993
Nitrate as N	mg/L	19.5		5/26/16 9:40	B605388	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		5/26/16 17:23	B605417	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		5/26/16 17:23	B605417	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		5/26/16 15:40	B605405	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		5/26/16 15:40	B605405	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	5.86		5/26/16 10:59	B605409	4500-NH3 B,D,C-1997

03 June 2016

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El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: May 2016
Date Received: 25-May-16 15:30



ANALYTICAL RESULTS

Lab Number: 1605426-03
Sample Name: ECMW #22
Date/Time Collected: 5/25/16 8:00
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	11.8		5/31/16 15:18	B605388	300.0, 2.1-1993
Nitrate as N	mg/L	4.37		5/26/16 10:02	B605388	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		5/26/16 17:27	B605417	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		5/26/16 17:27	B605417	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		5/26/16 15:59	B605405	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		5/26/16 15:59	B605405	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	1.25		5/26/16 10:59	B605409	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1605426-04
Sample Name: ECMW #17
Date/Time Collected: 5/25/16 8:10
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	6.64		5/26/16 10:25	B605388	300.0, 2.1-1993
Nitrate as N	mg/L	14.3		5/26/16 10:25	B605388	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		5/26/16 17:46	B605417	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		5/26/16 17:46	B605417	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		5/26/16 16:03	B605405	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		5/26/16 16:03	B605405	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		5/26/16 10:59	B605409	4500-NH3 B,D,C-1997

03 June 2016

David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: May 2016
Date Received: 25-May-16 15:30



ANALYTICAL RESULTS

Lab Number: 1605426-05
Sample Name: ECMW #15
Date/Time Collected: 5/25/16 8:22
Sample Matrix: Water

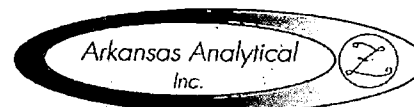
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	9.67		5/26/16 10:47	B605388	300.0, 2.1-1993
Nitrate as N	mg/L	4.52		5/26/16 10:47	B605388	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		5/26/16 17:50	B605417	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		5/26/16 17:50	B605417	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		5/26/16 16:06	B605405	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		5/26/16 16:06	B605405	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		5/26/16 10:59	B605409	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1605426-06
Sample Name: ECMW #16
Date/Time Collected: 5/25/16 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	15.4		5/26/16 11:10	B605388	300.0, 2.1-1993
Nitrate as N	mg/L	10.2		5/26/16 11:10	B605388	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		5/26/16 17:54	B605417	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		5/26/16 17:54	B605417	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		5/26/16 16:10	B605405	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		5/26/16 16:10	B605405	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		5/26/16 10:59	B605409	4500-NH3 B,D,C-1997

03 June 2016



David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
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ANALYTICAL RESULTS

Lab Number: 1605426-07
Sample Name: ECMW #13
Date/Time Collected: 5/25/16 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	529		5/31/16 15:41	B605388	300.0, 2.1-1993
Nitrate as N	mg/L	< 0.250		5/26/16 11:33	B605388	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		5/26/16 17:58	B605417	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		5/26/16 17:58	B605417	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		5/26/16 16:14	B605405	200.7, Rev. 4.4 (1994)
Lead	mg/L	0.0183		5/26/16 16:14	B605405	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		5/26/16 10:59	B605409	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1605426-08
Sample Name: ECMW #18
Date/Time Collected: 5/25/16 10:00
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	1.78		5/26/16 11:55	B605388	300.0, 2.1-1993
Nitrate as N	mg/L	< 0.250		5/26/16 11:55	B605388	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		5/26/16 18:01	B605417	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		5/26/16 18:01	B605417	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		5/26/16 16:18	B605405	200.7, Rev. 4.4 (1994)
Lead	mg/L	0.0167		5/26/16 16:18	B605405	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		5/26/16 10:59	B605409	4500-NH3 B,D,C-1997

03 June 2016



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ANALYTICAL RESULTS

Lab Number: 1605426-09
Sample Name: ECMW #19
Date/Time Collected: 5/25/16 10:30
Sample Matrix: Water

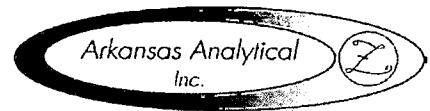
Table with 7 columns: Anions, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Rows include Sulfate as SO4, Nitrate as N, Dissolved Metals (Chromium, Lead), Total Metals (Chromium, Lead), and Wet Chemistry (Ammonia as N).

ANALYTICAL RESULTS

Lab Number: 1605426-10
Sample Name: ECMW #20
Date/Time Collected: 5/25/16 11:00
Sample Matrix: Water

Table with 7 columns: Anions, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Rows include Sulfate as SO4, Nitrate as N, Dissolved Metals (Chromium, Lead), Total Metals (Chromium, Lead), and Wet Chemistry (Ammonia as N).

03 June 2016



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El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: May 2016
Date Received: 25-May-16 15:30

ANALYTICAL RESULTS

Lab Number: 1605426-11
Sample Name: ECMW #21
Date/Time Collected: 5/25/16 11:20
Sample Matrix: Water

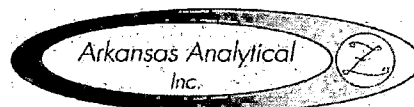
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	3.62		5/26/16 14:09	B605388	300.0, 2.1-1993
Nitrate as N	mg/L	2.25		5/26/16 14:09	B605388	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		5/26/16 18:13	B605417	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		5/26/16 18:13	B605417	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		5/26/16 16:29	B605405	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		5/26/16 16:29	B605405	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		5/26/16 10:59	B605409	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1605426-12
Sample Name: ECMW #12
Date/Time Collected: 5/25/16 12:30
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	17.0		5/31/16 16:03	B605388	300.0, 2.1-1993
Nitrate as N	mg/L	< 0.250		5/26/16 14:31	B605388	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		5/26/16 18:17	B605417	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		5/26/16 18:17	B605417	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		5/26/16 16:33	B605405	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		5/26/16 16:33	B605405	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	2.24		5/26/16 10:59	B605409	4500-NH3 B,D,C-1997

03 June 2016



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4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: May 2016
Date Received: 25-May-16 15:30

ANALYTICAL RESULTS

Lab Number: 1605426-13
Sample Name: ECMW - Field Blank
Date/Time Collected: 5/25/16 12:00
Sample Matrix: Water

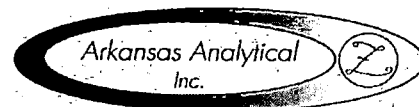
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	< 0.500		5/26/16 14:54	B605388	300.0, 2.1-1993
Nitrate as N	mg/L	< 0.250		5/26/16 14:54	B605388	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		5/26/16 18:21	B605417	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		5/26/16 18:21	B605417	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		5/26/16 16:52	B605405	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		5/26/16 16:52	B605405	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		5/26/16 10:59	B605409	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1605426-14
Sample Name: ECMW - Field Blank
Date/Time Collected: 5/24/16 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	< 0.500		5/26/16 15:16	B605388	300.0, 2.1-1993
Nitrate as N	mg/L	< 0.250	E2	5/26/16 15:16	B605388	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		5/26/16 18:40	B605417	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		5/26/16 18:40	B605417	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		5/26/16 16:56	B605405	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		5/26/16 16:56	B605405	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		5/26/16 10:59	B605409	4500-NH3 B,D,C-1997

03 June 2016



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QUALITY CONTROL RESULTS

Anions -- Batch: B605388 (Water)

Prepared: 26-May-16 09:07 By: MB -- Analyzed: 26-May-16 16:47 By: Mel

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

Total Metals -- Batch: B605405 (Water)

Prepared: 26-May-16 10:15 By: ST -- Analyzed: 26-May-16 15:28 By: ST

Table with 7 columns: Analyte, BLK, LCS / LCSD, MS / MSD, Dup, RPD, Qualifiers. Rows include Chromium and Lead.

Wet Chemistry -- Batch: B605409 (Water)

Prepared: 26-May-16 10:59 By: ZR -- Analyzed: 26-May-16 10:59 By: ZR

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

Dissolved Metals -- Batch: B605417 (Water)

Prepared: 26-May-16 12:10 By: HF -- Analyzed: 26-May-16 17:15 By: ST

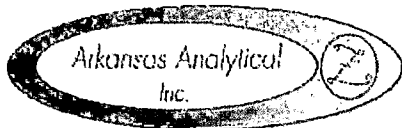
Table with 7 columns: Analyte, BLK, LCS / LCSD, MS / MSD, Dup, RPD, Qualifiers. Rows include Chromium and Lead.

QUALIFIER(S)

- *E2: Estimated Result; Analyzed Outside of Holding Time
*E20: Estimated Result Due to Matrix Spike and/or Matrix Spike Duplicate Failure; This sample was used as the "parent sample" in MS/MSD prep.
*MBA: Masked By Analyte

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.

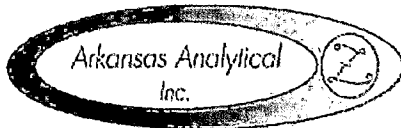
Reviewed by: [Signature]
Norma James and/or Teresa Coins
Technical Director and/or QA Officer



8100 National Dr.
 Little Rock, AR 72209
 PHONE: 501-455-3233
 FAX: 501-455-6118

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION		BILLING INFORMATION		Project Description		Turnaround Time		Preservation Codes:										
El Dorado Chemical Inc.		El Dorado Chemical Inc.		Groundwater Samples		1 Day (100%)		1. Cool, 4 Degrees Centigrade				4. Thiosulfate for Dechlorination						
4500 Northwest Ave.		P.O. Box 231				2 Day (50%)		2. Sulfuric Acid (H ₂ SO ₄), pH < 2				5. Hydrochloric Acid(HCl)						
El Dorado, AR 71731		El Dorado, AR. 71731		Reporting Information		3 Day (25%)		3. Nitric Acid (HNO ₃), pH < 2				6. Sodium Hydroxide (NaOH), pH > 12						
Attn: David Sartain				Telephone: 870-863-1484		5 Day (Routine)		TEST PARAMETERS								Bottle Type Code		
				Fax: 870-863-1499		Preservative Code:		1	1,2	1	1,3							G = Glass; P = Plastic
				Email: dsartain@edc-ark.com; epearson@edc-ark.com; tmarella@gov-mgt.com		Bottle Type:		P	P	P	P							V = Septum; A = Amber
Sampler(s) Signature				Sampler(s) Printed				Nitrate, Sulfate		Ammonia		d Cr, d Pb		Cr, Pb		Arkansas Analytical Work Order Number:		
Field Number	SAMPLE COLLECTION		Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION								1605426			
	5/25/16	0715	X		4	Water	ECMW-10				X	X	X	X			01	
	5/25/16	0720	X		4	Water	ECMW-11				X	X	X	X			02	
	5/25/16	0800	X		4	Water	ECMW-22				X	X	X	X			03	
	5/25/16	0810	X		4	Water	ECMW-17				X	X	X	X			04	
	5/25/16	0822	X		4	Water	ECMW-15				X	X	X	X			05	
	5/25/16	0840	X		4	Water	ECMW-16				X	X	X	X			06	
	5/25/16	0930	X		4	Water	ECMW-13				X	X	X	X			07	
	5/25/16	1000	X		4	Water	ECMW-18				X	X	X	X			08	
	5/25/16	1030	X		4	Water	ECMW-19				X	X	X	X			09	
	5/25/16	1150	X		4	Water	ECMW-20				X	X	X	X			10	
1. Relinquished by: (Signature)			Date/Time		2. Received by: (Signature)			SAMPLE CONDITION UPON RECEIPT IN LAB				REMARKS / SAMPLE COMMENTS						
<i>David Sartain</i>			5/25/16 1230		<i>Edward Hearn</i> 5/25/16 12:50			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										
3. Relinquished by: (Signature)			Date/Time		4. Received by lab: (Signature)			4. RECEIVED ON ICE: <input type="checkbox"/> Yes <input type="checkbox"/> No										
<i>Edward Hearn</i> 5/25/16 330			5/25/16 330		<i>Amanda Johnson</i>			5. TEMPERATURE ON RECEIPT: 11 °C										
								6. TEMPERATURE GUN ID: HHT# 2										
FOR COMPLETION BY LAB ONLY																		



8100 National Dr.
 Little Rock, AR 72209
 PHONE: 501-455-3233
 FAX: 501-455-6118

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION		BILLING INFORMATION		Project Description		Turnaround Time		Preservation Codes:											
El Dorado Chemical Inc.		El Dorado Chemical Inc.		Groundwater Samples		1 Day (100%)		1. Cool, 4 Degrees Centigrade				4. Thiosulfate for Dechlorination							
4500 Northwest Ave.		P.O. Box 231				2 Day (50%)		2. Sulfuric Acid (H ₂ SO ₄), pH < 2				5. Hydrochloric Acid (HCl)							
El Dorado, AR 71731		El Dorado, AR 71731		Reporting Information		3 Day (25%)		3. Nitric Acid (HNO ₃), pH < 2				6. Sodium Hydroxide (NaOH), pH > 12							
Attn: David Sartain				Telephone: 870-863-1484		5 Day (Routine)		TEST PARAMETERS								Bottle Type Code			
				Fax: 870-863-1499		Preservative Code:		1	1,2	1	1,3							G = Glass; P = Plastic	
				Email: dsartain@eds-ark.com; epsarsen@eds-ark.com; lmarcells@env-mgt.com		Bottle Type:		P	P	P	P							V = Septum; A = Amber	
Sampler(s) Signature				Sampler(s) Printed															
Field Number	SAMPLE COLLECTION		Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION				Nitrate, Sulfate	Ammonia	d Cr, d Pb	Cr, Pb	Arkansas Analytical Work Order Number:				
	5/25/16	1120	X		4	Water	ECMW-21				X	X	X	X	11005426				
	5/25/16	1230	X		4	Water	ECMW-12				X	X	X	X	11				
	5/25/16	1200	X		4	Water	ECMW- Field Blank				X	X	X	X	12				
	5/24/16	1200	X		4	Water	ECMW- Field Blank				X	X	X	X	13				
			X		4	Water	ECMW-				X	X	X	X	14				
			X		4	Water	ECMW-				X	X	X	X					
			X		4	Water	ECMW-				X	X	X	X					
			X		4	Water	ECMW-				X	X	X	X					
			X		4	Water	ECMW-				X	X	X	X					
			X		4	Water	ECMW-				X	X	X	X					
1. Relinquished by: (Signature)		Date/Time		2. Received by: (Signature)		SAMPLE CONDITION UPON RECEIPT IN LAB						REMARKS / SAMPLE COMMENTS							
<i>David Sartain</i>		5/25/16 1230		<i>Edward Allen</i> 5/25/16 1230		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													
3. Relinquished by: (Signature)		Date/Time		4. Received by lab: (Signature)		4. RECEIVED ON ICE: <input type="checkbox"/> Yes <input type="checkbox"/> No													
<i>Edward Allen</i>		5/25/16 330		<i>Amanda Pugh</i>		5. TEMPERATURE ON RECEIPT: 11 °C													
						6. TEMPERATURE GUN ID: HHT# 2													
FOR COMPLETION BY LAB ONLY																			



8100 National Dr. - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

14 July 2016

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

Project: Groundwater Sample(s)
Project Number: July 2016
SDG Number: 1607084

Enclosed are the results of analyses for samples received by the laboratory on 07-Jul-16 14:30. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✓
Containers Correct	✓
COC/Labels Agree	✓
Received On Ice	✓
Temperature on Receipt	5.0°C

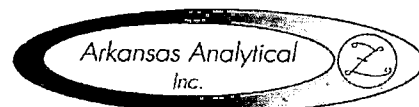
Sincerely,

A handwritten signature in cursive script, appearing to read "Norma James / Teresa Coins".

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

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14 July 2016



David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: July 2016
Date Received: 07-Jul-16 14:30

ANALYTICAL RESULTS

Lab Number: 1607084-01
Sample Name: ECMW #14
Date/Time Collected: 7/6/16 12:40
Sample Matrix: Water

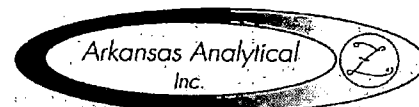
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	91.2		7/11/16 13:43	B607104	300.0, 2.1-1993
Nitrate as N	mg/L	8.76		7/7/16 14:41	B607050	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		7/14/16 12:02	B607187	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		7/14/16 12:02	B607187	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		7/12/16 18:54	B607131	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		7/12/16 18:54	B607131	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		7/12/16 15:33	B607102	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1607084-02
Sample Name: ECMW #38
Date/Time Collected: 7/6/16 13:10
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	106		7/11/16 14:06	B607104	300.0, 2.1-1993
Nitrate as N	mg/L	8.92		7/7/16 15:05	B607050	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		7/14/16 12:06	B607187	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.016		7/14/16 12:06	B607187	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		7/12/16 18:58	B607131	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		7/12/16 18:58	B607131	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		7/12/16 15:33	B607102	4500-NH3 B,D,C-1997

14 July 2016



David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: July 2016
Date Received: 07-Jul-16 14:30

QUALITY CONTROL RESULTS

Anions -- Batch: B607050 (Water)

Prepared: 06-Jul-16 14:53 By: MB -- Analyzed: 06-Jul-16 21:11 By: Melis

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Nitrate as N	<0.250 mg/L	95.8% / 95.6%	93.8% / NA		0.157%	

Wet Chemistry -- Batch: B607102 (Water)

Prepared: 11-Jul-16 08:30 By: SC -- Analyzed: 12-Jul-16 15:33 By: SC

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Ammonia as N	<0.500 mg/L	98.6% / NA	103% / 104%		0.451%	

Anions -- Batch: B607104 (Water)

Prepared: 11-Jul-16 10:40 By: MB -- Analyzed: 11-Jul-16 12:56 By: MB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Sulfate as SO4	<0.500 mg/L	108% / NA	103% / 107%		2.19%	

Total Metals -- Batch: B607131 (Water)

Prepared: 12-Jul-16 14:25 By: HF -- Analyzed: 12-Jul-16 17:53 By: HF

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Chromium	<0.0104 mg/L	100% / NA	98.1% / 98.2%		0.0955%	
Lead	<0.0156 mg/L	102% / NA	96.6% / 96.4%		0.189%	

Dissolved Metals -- Batch: B607187 (Water)

Prepared: 14-Jul-16 09:35 By: HF -- Analyzed: 14-Jul-16 11:59 By: HF

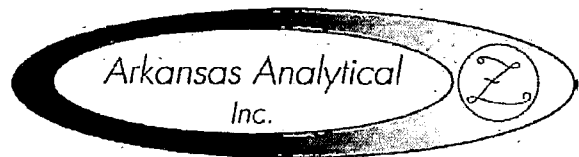
Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Chromium	<0.021 mg/L	109% / NA	98.0% / 95.8%		2.27%	
Lead	<0.016 mg/L	108% / NA	93.0% / 90.5%		2.66%	

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

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

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION		Billing		Project Description		Turnaround Time		Preservation Codes:									
El Dorado Chemical Inc.		El Dorado Chemical Inc.		Groundwater		(CIRCLE ONE) 24 hour		1. Cool, 4 degrees Centigrade			4. Thiosulfate for dechlorination						
4500 Northwest Ave.		P.O. Box 231		Reporting Information		48 hour		2. Sulfuric Acid, pH <2			5. Hydrochloric Acid for VOA						
El Dorado, AR 71731		El Dorado, AR 71731		Telephone: 1-870-863-1484		48 hour <u>routing</u>		3. Nitric Acid, pH <2			6. Sodium Hydroxide, pH >12						
Attn: Wesley Moran David Sartain		Bill to/P.O.		FAX: 1-870-863-1499		Preservative Code:		TEST PARAMETERS									
						Bottle Type		1	1	1	1,2	Bottle type code G=glass; P=HDPE V=septum; A=amber					
								P	P	P	P						
								DC, DPb Nitrate-Sulfate Ammonia Cr, Pb				1607084					
Samplers: (Signature/s)		Samplers: (Printed)										Arkansas Analytical Lab #					
Field Number	Sample Collection		# of			Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION										
	Date/s	Time/s	Grab	Comp	Containers			1	1	1	1,2						
ECMW-14	7/6/10	1240	✓		4	H ₂ O	ECMW-14	X	X		X	X					01
ECMW-38	7/6/10	1310	✓		4	H ₂ O	ECMW-38	X	X		X	X					02
1. Relinquished by: (Signature)		Date/Time		1. Received by: (Signature)		For completion by laboratory						REMARKS					
Sean Jones		7/6/10		Edward [Signature]		Condition of samples: yes no											
						A. Containers Correct? <input checked="" type="checkbox"/> <input type="checkbox"/>											
2. Relinquished by: (Signature)		Date/Time		2. Received by Laboratory: (Signature)		B. Preservation Correct? <input checked="" type="checkbox"/> <input type="checkbox"/>											
Edward [Signature]		7/9/10		Manda [Signature]		C. Seals Intact? <input checked="" type="checkbox"/> <input type="checkbox"/>											
		2:30 PM		med on ice		5°C HH [Signature]											



8100 National Dr. - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

11 August 2016

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

Project: Groundwater Sample(s)
Project Number: August 2016
SDG Number: 1608093

Enclosed are the results of analyses for samples received by the laboratory on 05-Aug-16 08:00. 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

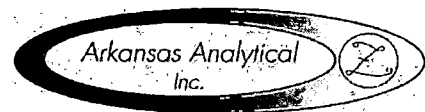
Sincerely,

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

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

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11 August 2016



David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: August 2016
Date Received: 05-Aug-16 08:00

ANALYTICAL RESULTS

Lab Number: 1608093-01
Sample Name: ECMW #8
Date/Time Collected: 8/4/16 15:00
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	83.6		8/5/16 12:59	B608081	300.0, 2.1-1993
Nitrate as N	mg/L	4310		8/5/16 12:02	B608081	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		8/5/16 12:50	B608069	200.7, Rev. 4.4 (1994)
Lead	mg/L	0.065		8/5/16 12:50	B608069	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		8/9/16 13:53	B608131	200.7, Rev 4.4 (1994)
Lead	mg/L	0.0686		8/9/16 13:53	B608131	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	2270		8/9/16 10:21	B608113	4500-NH3 B,D,C-1997

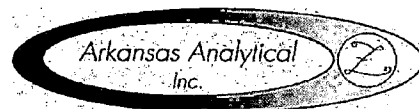
ANALYTICAL RESULTS

Lab Number: 1608093-02
Sample Name: ECMW #39
Date/Time Collected: 8/4/16 16:00
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	82.8		8/5/16 13:23	B608081	300.0, 2.1-1993
Nitrate as N	mg/L	4300		8/5/16 12:26	B608081	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.021		8/5/16 12:54	B608069	200.7, Rev. 4.4 (1994)
Lead	mg/L	0.064		8/5/16 12:54	B608069	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		8/9/16 13:56	B608131	200.7, Rev 4.4 (1994)
Lead	mg/L	0.0693		8/9/16 13:56	B608131	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	2040		8/9/16 10:21	B608113	4500-NH3 B,D,C-1997

11 August 2016

David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: August 2016
Date Received: 05-Aug-16 08:00



QUALITY CONTROL RESULTS

Dissolved Metals -- Batch: B608069 (Water)

Prepared: 05-Aug-16 10:30 By: HF -- Analyzed: 05-Aug-16 12:39 By: HF

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Chromium	<0.021 mg/L	103% / NA	102% / 96.1%		5.88%	
Lead	<0.016 mg/L	104% / NA	101% / 95.3%		5.70%	

Anions -- Batch: B608081 (Water)

Prepared: 05-Aug-16 14:02 By: MB -- Analyzed: 05-Aug-16 15:44 By: MB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Nitrate as N	<0.250 mg/L	93.7% / 95.3%	94.1% / NA		1.80%	
Sulfate as SO4	<0.500 mg/L	101% / 106%	96.4% / NA		4.75%	

Wet Chemistry -- Batch: B608113 (Water)

Prepared: 08-Aug-16 08:05 By: SP -- Analyzed: 09-Aug-16 10:21 By: SP

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Ammonia as N	<0.500 mg/L	98.7% / NA	95.9% / 97.7%		1.31%	

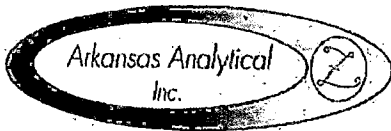
Total Metals -- Batch: B608131 (Water)

Prepared: 09-Aug-16 09:30 By: HF -- Analyzed: 09-Aug-16 12:58 By: HF

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Chromium	<0.0104 mg/L	100% / NA	97.5% / 103%		5.84%	
Lead	<0.0156 mg/L	101% / NA	95.1% / 100%		5.23%	

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

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



8100 National Dr.
 Little Rock, AR 72209
 PHONE: 501-455-3233
 FAX: 501-455-6118

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION		BILLING INFORMATION		Project Description		Turnaround Time		Preservation Codes:										
El Dorado Chemical Inc.		El Dorado Chemical Inc.		Groundwater Samples		1 Day (100%)		1. Cool, 4 Degrees Centigrade				4. Thiosulfate for Dechlorination						
4500 Northwest Ave.		P.O. Box 231				2 Day (50%)		2. Sulfuric Acid (H ₂ SO ₄), pH < 2				5. Hydrochloric Acid (HCl)						
El Dorado, AR 71731		El Dorado, AR 71731		Reporting Information		3 Day (25%)		3. Nitric Acid (HNO ₃), pH < 2				6. Sodium Hydroxide (NaOH), pH > 12						
Attn: David Sartain				Telephone: 870-863-1484		5 Day (Request)		TEST PARAMETERS								- Bottle Type Code		
				Fax: 870-863-1499		Preservative Code:		1	1,2	1	1,3							G = Glass, P = Plastic
				Email: dsartain@ede-ark.com; opearson@ede-ark.com; lmarcolling@env-mgt.com		Bottle Type:		P	P	P	P							V = Septum, A = Amber
Sampler(s) Signature				Sampler(s) Printed												Arkansas Analytical Work Order Number:		
Field Number	SAMPLE COLLECTION		Grab	Comp	Number of Bottles	Sample Matrix	IDENTIFICATION/ DESCRIPTION	Nitrate/ Sulfate	Ammonia	d Cr, d Pb	Cr, Pb							
ECMW-8	8/4/16	1500	X		4	Water	ECMW-8	X	X	X	X							1602093
ECMW-39	8/4/16	1600	X		4	Water	ECMW-39	X	X	X	X							01
			X		4	Water	ECMW-	X	X	X	X							02
			X		4	Water	ECMW-	X	X	X	X							
1. Relinquished by: (Signature)		Date/Time		2. Received by: (Signature)		SAMPLE CONDITION UPON RECEIPT IN LAB				REMARKS / SAMPLE COMMENTS								
<i>David Sartain</i>		8/4/16 1600		<i>Edward L. James</i>		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												
3. Relinquished by: (Signature)		Date/Time		4. Received by lab: (Signature)		4. RECEIVED ON ICE: <input type="checkbox"/> Yes <input type="checkbox"/> No												
<i>Edward L. James</i>		8/5/16 0800		<i>Sydney James</i>		5. TEMPERATURE ON RECEIPT: 4 °C												
						6. TEMPERATURE GUN ID: IHT# 2												
FOR COMPLETION BY LAB ONLY																		



8100 National Dr. - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

16 November 2016

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

Project: Groundwater Sample(s)
Project Number: Nov 2016
SDG Number: 1611140

Enclosed are the results of analyses for samples received by the laboratory on 09-Nov-16 13:20. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

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

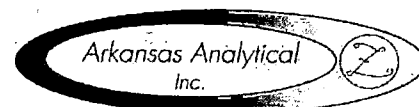
Sincerely,

A handwritten signature in cursive script, appearing to read "Norma James / Teresa Coins".

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

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16 November 2016



David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: Nov 2016
Date Received: 09-Nov-16 13:20

ANALYTICAL RESULTS

Lab Number: 1611140-01
Sample Name: ECMW #13
Date/Time Collected: 11/9/16 8:10
Sample Matrix: Water

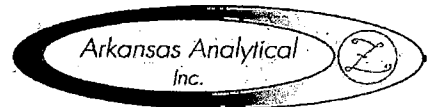
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	439		11/10/16 10:50	B611173	300.0, 2.1-1993
Nitrate as N	mg/L	< 0.250		11/9/16 21:05	B611173	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 13:44	B611267	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 13:44	B611267	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 17:06	B611269	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 17:06	B611269	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		11/15/16 9:45	B611252	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1611140-02
Sample Name: ECMW #14
Date/Time Collected: 11/9/16 8:30
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	116		11/10/16 11:13	B611173	300.0, 2.1-1993
Nitrate as N	mg/L	4.40		11/9/16 21:28	B611173	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 13:40	B611267	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 13:40	B611267	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 18:00	B611269	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 18:00	B611269	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		11/15/16 9:45	B611252	4500-NH3 B,D,C-1997

16 November 2016



David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: Nov 2016
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ANALYTICAL RESULTS

Lab Number: 1611140-03
Sample Name: ECMW #15
Date/Time Collected: 11/9/16 8:25
Sample Matrix: Water

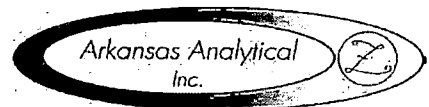
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	9.96		11/9/16 21:52	B611173	300.0, 2.1-1993
Nitrate as N	mg/L	4.07		11/9/16 21:52	B611173	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 13:47	B611267	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 13:47	B611267	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 18:04	B611269	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 18:04	B611269	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		11/15/16 9:45	B611252	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1611140-04
Sample Name: ECMW #16
Date/Time Collected: 11/9/16 8:20
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	13.6		11/9/16 22:15	B611173	300.0, 2.1-1993
Nitrate as N	mg/L	8.86		11/9/16 22:15	B611173	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 13:51	B611267	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 13:51	B611267	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 18:08	B611269	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 18:08	B611269	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		11/15/16 9:45	B611252	4500-NH3 B,D,C-1997

16 November 2016



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

Lab Number: 1611140-05
Sample Name: ECMW #17
Date/Time Collected: 11/9/16 8:40
Sample Matrix: Water

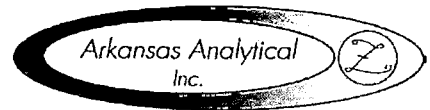
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	6.86		11/9/16 22:39	B611173	300.0, 2.1-1993
Nitrate as N	mg/L	12.2		11/9/16 22:39	B611173	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 14:10	B611267	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 14:10	B611267	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 18:12	B611269	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 18:12	B611269	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	0.826		11/15/16 9:45	B611252	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1611140-06
Sample Name: ECMW #19
Date/Time Collected: 11/9/16 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	2.25		11/9/16 23:02	B611173	300.0, 2.1-1993
Nitrate as N	mg/L	< 0.250		11/9/16 23:02	B611173	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 14:14	B611267	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 14:14	B611267	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 18:16	B611269	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 18:16	B611269	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		11/15/16 9:45	B611252	4500-NH3 B,D,C-1997

16 November 2016



David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: Nov 2016
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ANALYTICAL RESULTS

Lab Number: 1611140-07
Sample Name: ECMW #20
Date/Time Collected: 11/9/16 9:25
Sample Matrix: Water

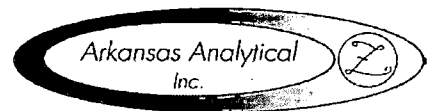
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	4.59		11/9/16 23:26	B611173	300.0, 2.1-1993
Nitrate as N	mg/L	2.31		11/9/16 23:26	B611173	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 14:18	B611267	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 14:18	B611267	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 18:19	B611269	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 18:19	B611269	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		11/15/16 9:45	B611252	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1611140-08
Sample Name: ECMW #21
Date/Time Collected: 11/9/16 9:40
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	21.4		11/10/16 11:37	B611173	300.0, 2.1-1993
Nitrate as N	mg/L	< 0.250		11/10/16 0:37	B611173	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 14:22	B611267	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 14:22	B611267	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 18:23	B611269	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 18:23	B611269	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		11/15/16 9:45	B611252	4500-NH3 B,D,C-1997

16 November 2016



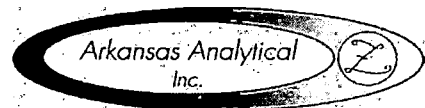
David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: Nov 2016
Date Received: 09-Nov-16 13:20

ANALYTICAL RESULTS

Lab Number: 1611140-09
Sample Name: ECMW #22
Date/Time Collected: 11/9/16 8:50
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	5.16		11/10/16 1:00	B611173	300.0, 2.1-1993
Nitrate as N	mg/L	0.530		11/10/16 1:00	B611173	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 14:26	B611267	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 14:26	B611267	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 18:27	B611269	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 18:27	B611269	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		11/15/16 9:45	B611252	4500-NH3 B,D,C-1997

16 November 2016



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4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: Nov 2016
Date Received: 09-Nov-16 13:20

QUALITY CONTROL RESULTS

Anions -- Batch: B611173 (Water)

Prepared: 09-Nov-16 14:33 By: MB -- Analyzed: 09-Nov-16 20:41 By: MB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Nitrate as N	<0.250 mg/L	102% / NA	104% / 103%		1.01%	
Sulfate as SO4	<0.500 mg/L	94.0% / NA	103% / 102%		0.209%	

Wet Chemistry -- Batch: B611252 (Water)

Prepared: 14-Nov-16 09:30 By: SC -- Analyzed: 15-Nov-16 09:45 By: SC

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Ammonia as N	<0.500 mg/L	101% / NA	99.2% / 99.0%		0.120%	

Dissolved Metals -- Batch: B611267 (Water)

Prepared: 14-Nov-16 15:30 By: HF -- Analyzed: 15-Nov-16 13:36 By: HF

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Chromium	<0.0104 mg/L	101% / NA	94.8% / 101%		5.87%	
Lead	<0.0156 mg/L	99.9% / NA	90.0% / 95.3%		5.69%	

Total Metals -- Batch: B611269 (Water)

Prepared: 14-Nov-16 17:00 By: HF -- Analyzed: 15-Nov-16 16:46 By: HF

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Chromium	<0.0104 mg/L	100% / NA	102% / 97.3%		4.63%	
Lead	<0.0156 mg/L	99.5% / NA	97.6% / 93.0%		4.83%	

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

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



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 Little Rock, AR 72209
 PHONE: 501-455-3233
 FAX: 501-455-6118

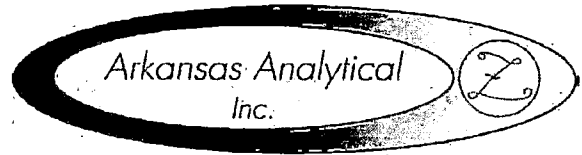
CHAIN OF CUSTODY RECORD

CLIENT INFORMATION		Project Description		Turnaround Time	Preservation Codes:								
El Dorado Chemical Corporation 4500 N West Ave El Dorado, AR 71730		El Dorado Chemical Corp GW Samp		1 Day (100%) 2 Day (50%) 3 Day (25%) 5 Day (freeze)	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					
		Reporting Information			TEST PARAMETERS								
Telephone: 225-753-3631		Fax:		Preservative Code:	2	1	3						Bottle Type Code
Email: lmarcella@env-mgl.com				Bottle Type:	P	P	P						G = Glass; P = Plastic V = Septum; A = Amber

Sampler(s) Signature: *Tyler Lollis*
 Sampler(s) Printed: Tyler Lollis

Field Number	SAMPLE COLLECTION		Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION	Ammonia & Nitrate	Sulfate, Nitrate	Chromium & Lead	As-Cr-Pb						Arkansas Analytical Work Order Number:
	Date/s	Time/s															
1	11/9/2016	0810	X		4	GW	ECMW-13	X	X	X	X						1611140
2	11/9/2016	0830	X		4	GW	ECMW-14	X	X	X	X						01
3	11/9/2016	0805	X		4	GW	ECMW-15	X	X	X	X						02
4	11/9/2016	0820	X		4	GW	ECMW-16	X	X	X	X						03
5	11/9/2016	0840	X		4	GW	ECMW-17	X	X	X	X						04
6	11/9/2016	0915	X		4	GW	ECMW-19	X	X	X	X						05
7	11/9/2016	0925	X		4	GW	ECMW-20	X	X	X	X						06
8	11/9/2016	0940	X		4	GW	ECMW-21	X	X	X	X						07
9	11/9/2016	0850	X		4	GW	ECMW-22	X	X	X	X						08

1. Relinquished by: (Signature) <i>Tyler Lollis</i>		Date/Time 11/9/16 1005	2. Received by: (Signature) <i>Edmund Shear</i> 1005 11/9/16		SAMPLE CONDITION UPON RECEIPT IN LAB		REMARKS / SAMPLE COMMENTS	
3. Relinquished by: (Signature) <i>Edmund Shear</i>		Date/Time 11/9/16 120 PM	4. Received by lab: (Signature) <i>Sammy Riddle</i>		1 CUSTODY SEALS: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		*Changes made per containers received - TR 11/9/16	
					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: 9 °C			
					6 TEMPERATURE GUN ID: HHT# 2			
FOR COMPLETION BY LAB ONLY								



8100 National Dr. - Little Rock, AR 72209
501-455-3233 Fax 501-455-6118

18 November 2016

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

Project: Groundwater Sample(s)
Project Number: Nov 2016
SDG Number: 1611163

Enclosed are the results of analyses for samples received by the laboratory on 10-Nov-16 13:40. 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	8.0°C

Sincerely,

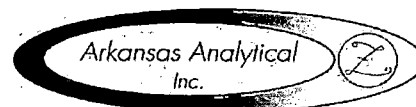
A handwritten signature in cursive script that reads "Norma James / Teresa Coins".

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

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18 November 2016

David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: Nov 2016
Date Received: 10-Nov-16 13:40



CASE NARRATIVE

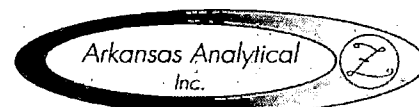
Sample Delivery Group – 1611163

One OR more of the qualifiers described below may appear in this report.

SAMPLE RECEIPT QUALIFIERS:

<u>Qualifier</u>	<u>Description</u>
ET	Samples received above required temperature.
ET	Samples received above required temperature. Although collected and received the same day, no ice was present to indicate the cooling preservation was attempted.
E2	Result qualified as it was received and analyzed outside of holding time. Analysis is considered a "Field" analysis.
E2	Result qualified as it was received and/or analyzed outside of holding time.
E3	Result qualified as it was received in the incorrect container and/or preservation.

18 November 2016



David Sartain
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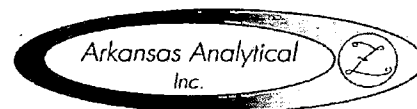
ANALYTICAL RESULTS

Lab Number:	1611163-01					
Sample Name:	ECMW #1					
Date/Time Collected:	11/10/16 10:05					
Sample Matrix:	Water					
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	5.41		11/11/16 11:43	B611195	300.0, 2.1-1993
Nitrate as N	mg/L	0.951		11/11/16 11:43	B611195	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 15:10	B611268	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 15:10	B611268	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/16/16 17:11	B611294	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/16/16 17:11	B611294	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		11/15/16 9:45	B611252	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number:	1611163-02					
Sample Name:	ECMW #2					
Date/Time Collected:	11/10/16 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	22.2		11/16/16 10:31	B611195	300.0, 2.1-1993
Nitrate as N	mg/L	< 0.250		11/11/16 12:06	B611195	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 15:14	B611268	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 15:14	B611268	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	0.0212		11/16/16 17:22	B611294	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/16/16 17:22	B611294	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		11/15/16 9:45	B611252	4500-NH3 B,D,C-1997

18 November 2016



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ANALYTICAL RESULTS

Lab Number: 1611163-03
Sample Name: ECMW #3
Date/Time Collected: 11/10/16 9:45
Sample Matrix: Water

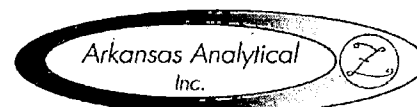
Table with 7 columns: Anions, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Rows include Sulfate as SO4, Nitrate as N, Dissolved Metals (Chromium, Lead), Total Metals (Chromium, Lead), and Wet Chemistry (Ammonia as N).

ANALYTICAL RESULTS

Lab Number: 1611163-04
Sample Name: ECMW #4
Date/Time Collected: 11/10/16 9:40
Sample Matrix: Water

Table with 7 columns: Anions, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Rows include Sulfate as SO4, Nitrate as N, Dissolved Metals (Chromium, Lead), Total Metals (Chromium, Lead), and Wet Chemistry (Ammonia as N).

18 November 2016



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ANALYTICAL RESULTS

Lab Number: 1611163-05
Sample Name: ECMW #5
Date/Time Collected: 11/10/16 8:55
Sample Matrix: Water

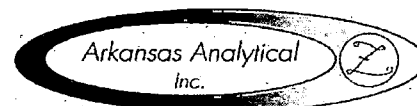
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	59.0		11/11/16 13:17	B611195	300.0, 2.1-1993
Nitrate as N	mg/L	47.2		11/11/16 13:17	B611195	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 15:25	B611268	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 15:25	B611268	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/16/16 17:34	B611294	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/16/16 17:34	B611294	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		11/16/16 14:45	B611284	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1611163-06
Sample Name: ECMW #6
Date/Time Collected: 11/10/16 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	62.6		11/16/16 11:19	B611195	300.0, 2.1-1993
Nitrate as N	mg/L	5780		11/11/16 13:40	B611195	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 15:29	B611268	200.7, Rev. 4.4 (1994)
Lead	mg/L	0.0634		11/15/16 15:29	B611268	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/16/16 17:53	B611294	200.7, Rev 4.4 (1994)
Lead	mg/L	0.0580		11/16/16 17:53	B611294	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	1890		11/16/16 14:45	B611284	4500-NH3 B,D,C-1997

18 November 2016



David Sartain
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Project: Groundwater Sample(s)
Project Number: Nov 2016
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ANALYTICAL RESULTS

Lab Number: 1611163-07
Sample Name: ECMW #7
Date/Time Collected: 11/10/16 9:20
Sample Matrix: Water

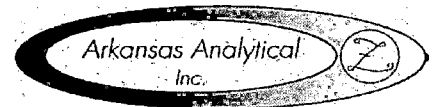
Table with 7 columns: Anions, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Rows include Sulfate as SO4, Nitrate as N, Dissolved Metals (Chromium, Lead), Total Metals (Chromium, Lead), and Wet Chemistry (Ammonia as N).

ANALYTICAL RESULTS

Lab Number: 1611163-08
Sample Name: ECMW #8
Date/Time Collected: 11/10/16 9:25
Sample Matrix: Water

Table with 7 columns: Anions, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Rows include Sulfate as SO4, Nitrate as N, Dissolved Metals (Chromium, Lead), Total Metals (Chromium, Lead), and Wet Chemistry (Ammonia as N).

18 November 2016



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ANALYTICAL RESULTS

Lab Number: 1611163-09
Sample Name: ECMW #9
Date/Time Collected: 11/10/16 9:30
Sample Matrix: Water

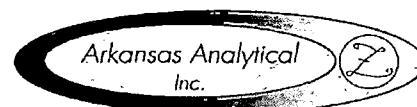
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	616		11/14/16 9:44	B611195	300.0, 2.1-1993
Nitrate as N	mg/L	29.1		11/11/16 17:33	B611195	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 15:41	B611268	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 15:41	B611268	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/16/16 18:04	B611294	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/16/16 18:04	B611294	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	4.08		11/16/16 14:45	B611284	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1611163-10
Sample Name: ECMW #10
Date/Time Collected: 11/10/16 10:15
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	141		11/14/16 10:08	B611195	300.0, 2.1-1993
Nitrate as N	mg/L	44.1		11/11/16 17:56	B611195	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 16:07	B611268	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 16:07	B611268	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/16/16 18:08	B611294	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/16/16 18:08	B611294	200.7, Rev. 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		11/16/16 14:45	B611284	4500-NH3 B,D,C-1997

18 November 2016



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ANALYTICAL RESULTS

Lab Number: 1611163-11
Sample Name: ECMW #11
Date/Time Collected: 11/10/16 10:30
Sample Matrix: Water

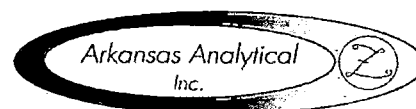
<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	245		11/14/16 10:31	B611195	300.0, 2.1-1993
Nitrate as N	mg/L	18.3		11/11/16 18:20	B611195	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 16:11	B611268	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 16:11	B611268	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/16/16 18:12	B611294	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/16/16 18:12	B611294	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	3.86		11/16/16 14:45	B611284	4500-NH3 B,D,C-1997

ANALYTICAL RESULTS

Lab Number: 1611163-12
Sample Name: ECMW #12
Date/Time Collected: 11/10/16 10:35
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	33.0		11/14/16 10:55	B611195	300.0, 2.1-1993
Nitrate as N	mg/L	< 0.250		11/11/16 18:43	B611195	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 16:15	B611268	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 16:15	B611268	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/16/16 18:16	B611294	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/16/16 18:16	B611294	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	2.22		11/16/16 14:45	B611284	4500-NH3 B,D,C-1997

18 November 2016



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El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: Nov 2016
Date Received: 10-Nov-16 13:40

ANALYTICAL RESULTS

Lab Number: 1611163-13
Sample Name: ECMW #18
Date/Time Collected: 11/10/16 10:55
Sample Matrix: Water

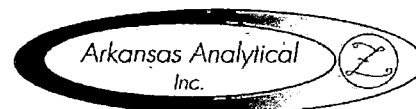
Table with 7 columns: Anions, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Rows include Sulfate as SO4, Nitrate as N, Dissolved Metals (Chromium, Lead), Total Metals (Chromium, Lead), and Wet Chemistry (Ammonia as N).

ANALYTICAL RESULTS

Lab Number: 1611163-14
Sample Name: BD-1
Date/Time Collected: 11/10/16 0:00
Sample Matrix: Water

Table with 7 columns: Anions, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Rows include Sulfate as SO4, Nitrate as N, Dissolved Metals (Chromium, Lead), Total Metals (Chromium, Lead), and Wet Chemistry (Ammonia as N).

18 November 2016



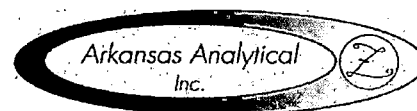
David Sartain
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731
Project: Groundwater Sample(s)
Project Number: Nov 2016
Date Received: 10-Nov-16 13:40

ANALYTICAL RESULTS

Lab Number: 1611163-15
Sample Name: BD-2
Date/Time Collected: 11/10/16 0:00
Sample Matrix: Water

<u>Anions</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Sulfate as SO4	mg/L	136		11/11/16 16:22	B611195	300.0, 2.1-1993
Nitrate as N	mg/L	42.6		11/11/16 16:22	B611195	300.0, 2.1-1993
<u>Dissolved Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/15/16 16:30	B611268	200.7, Rev. 4.4 (1994)
Lead	mg/L	< 0.0156		11/15/16 16:30	B611268	200.7, Rev. 4.4 (1994)
<u>Total Metals</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Chromium	mg/L	< 0.0104		11/16/16 18:27	B611294	200.7, Rev 4.4 (1994)
Lead	mg/L	< 0.0156		11/16/16 18:27	B611294	200.7, Rev 4.4 (1994)
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
Ammonia as N	mg/L	< 0.500		11/16/16 14:45	B611284	4500-NH3 B,D,C-1997

18 November 2016



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QUALITY CONTROL RESULTS

Anions -- Batch: B611195 (Water)

Prepared: 11-Nov-16 09:06 By: MB -- Analyzed: 11-Nov-16 21:28 By: MB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Nitrate as N	<0.250 mg/L	106% / NA	106% / 105%		0.673%	
Sulfate as SO4	<0.500 mg/L	108% / NA	109% / 109%		0.0987%	

Wet Chemistry -- Batch: B611252 (Water)

Prepared: 14-Nov-16 09:30 By: SC -- Analyzed: 15-Nov-16 09:45 By: SC

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Ammonia as N	<0.500 mg/L	101% / NA	99.2% / 99.0%		0.120%	

Dissolved Metals -- Batch: B611268 (Water)

Prepared: 14-Nov-16 16:00 By: HF -- Analyzed: 15-Nov-16 15:06 By: HF

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Chromium	<0.0104 mg/L	98.7% / NA	101% / 97.3%		4.09%	
Lead	<0.0156 mg/L	97.3% / NA	98.6% / 94.7%		4.08%	

Wet Chemistry -- Batch: B611284 (Water)

Prepared: 16-Nov-16 09:30 By: SC -- Analyzed: 16-Nov-16 14:45 By: SC

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Ammonia as N	<0.500 mg/L	97.0% / NA	88.3% / 98.3%		10.7%	

Total Metals -- Batch: B611294 (Water)

Prepared: 16-Nov-16 15:50 By: HF -- Analyzed: 16-Nov-16 17:07 By: HF

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Chromium	<0.0104 mg/L	97.9% / NA	98.7% / 96.8%		1.94%	
Lead	<0.0156 mg/L	98.1% / NA	97.7% / 96.0%		1.79%	

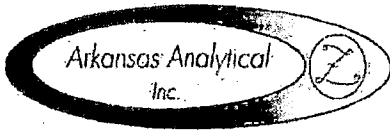
QUALIFIER(S)

*E2: Estimated Result; Analyzed Outside of Holding Time

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

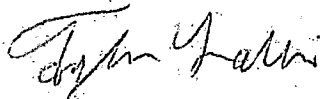
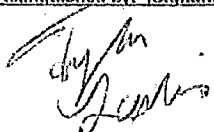
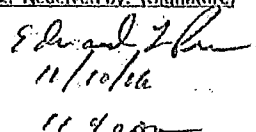
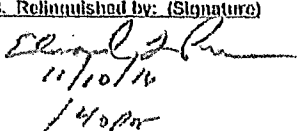
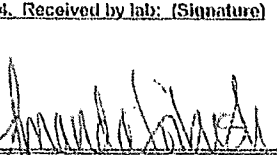
Reviewed by:

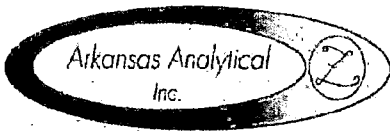
Norma James / Teresa Coins
Norma James and/or Teresa Coins
Technical Director and/or QA Officer



8100 National Dr.
 Little Rock, AR 72209
 PHONE: 501-455-3233
 FAX: 501-455-6118

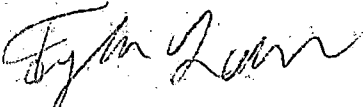
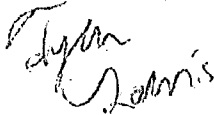
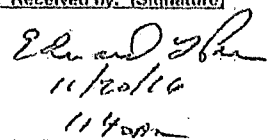
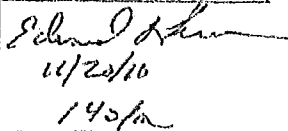
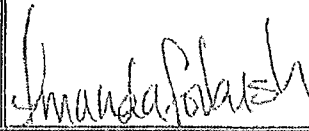
CHAIN OF CUSTODY RECORD

CLIENT INFORMATION				Project Description			Turnaround Time		Preservation Codes:													
El Dorado Chemical Corporation 4500 N West Ave El Dorado, AR 71730				El Dorado Chemical Corp GW Samp			1 Day (100%) 2 Day (50%) 3 Day (25%) 5 Day (Routine)		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									
Telephone: 225-753-3631 Fax: Email: lmarcella@env-mgt.com				Reporting Information			Preservative Code:		TEST PARAMETERS								Bottle Type Code					
							2 1 3										G = Glass; P = Plastic V = Septum; A = Amber					
 Sampler(s) Signature				Sampler(s) Printed: Tyler Lollis			Ammonia & Nitrate *		Sulfate Nitrate *		Chromium & Lead		d-c, d-pl *		Arkansas Analytical Work Order Number: 1611163							
Field Number	SAMPLE COLLECTION		Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION															
1	11/10/2016	1005	X		4	GW	ECMW-1	X	X	X	X							01				
2	11/10/2016	0955	X		4	GW	ECMW-2	X	X	X	X							02				
3	11/10/2016	0945	X		4	GW	ECMW-3	X	X	X	X							03				
4	11/10/2016	0940	X		4	GW	ECMW-4	X	X	X	X							04				
5	11/10/2016	0855	X		4	GW	ECMW-5	X	X	X	X							05				
6	11/10/2016	0915	X		4	GW	ECMW-6	X	X	X	X							06				
7	11/10/2016	0920	X		4	GW	ECMW-7	X	X	X	X							07				
8	11/10/2016	0925	X		4	GW	ECMW-8	X	X	X	X							08				
1. Relinquished by: (Signature)			Date/Time		2. Received by: (Signature)			SAMPLE CONDITION UPON RECEIPT IN LAB						REMARKS / SAMPLE COMMENTS								
			11/10/16 11:10am					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 type="checkbox"/> Yes <input type="checkbox"/> No 5. TEMPERATURE ON RECEIPT: 8 °C 6. TEMPERATURE GUN ID: HHT# 2						* changes made per containers received - TR 11/10/16								
3. Relinquished by: (Signature)			Date/Time		4. Received by lab: (Signature)			FOR COMPLETION BY LAB ONLY														
			11-10-16 1:40pm																			



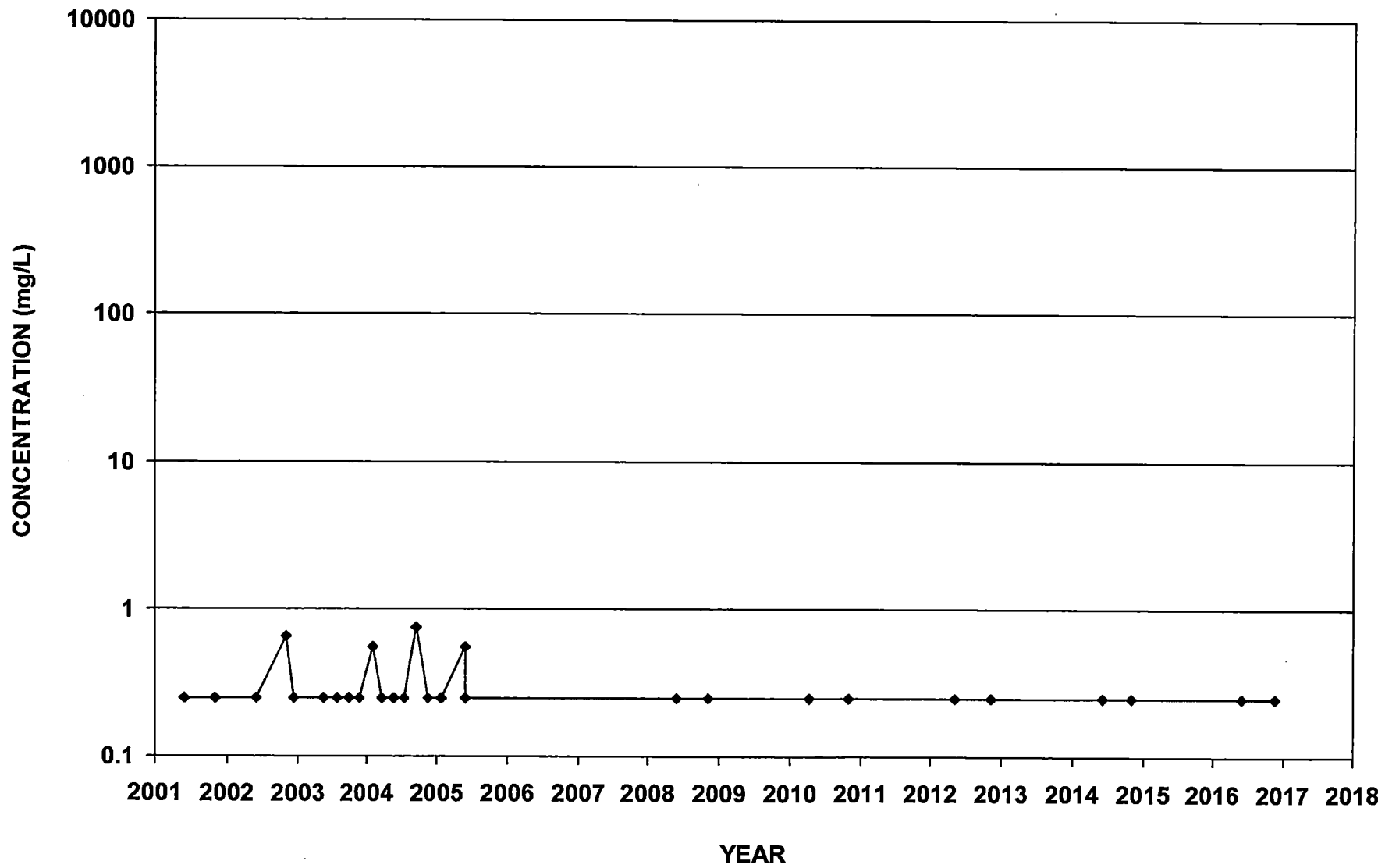
8100 National Dr.
 Little Rock, AR 72209
 PHONE: 501-455-3233
 FAX: 501-455-6118

CHAIN OF CUSTODY RECORD

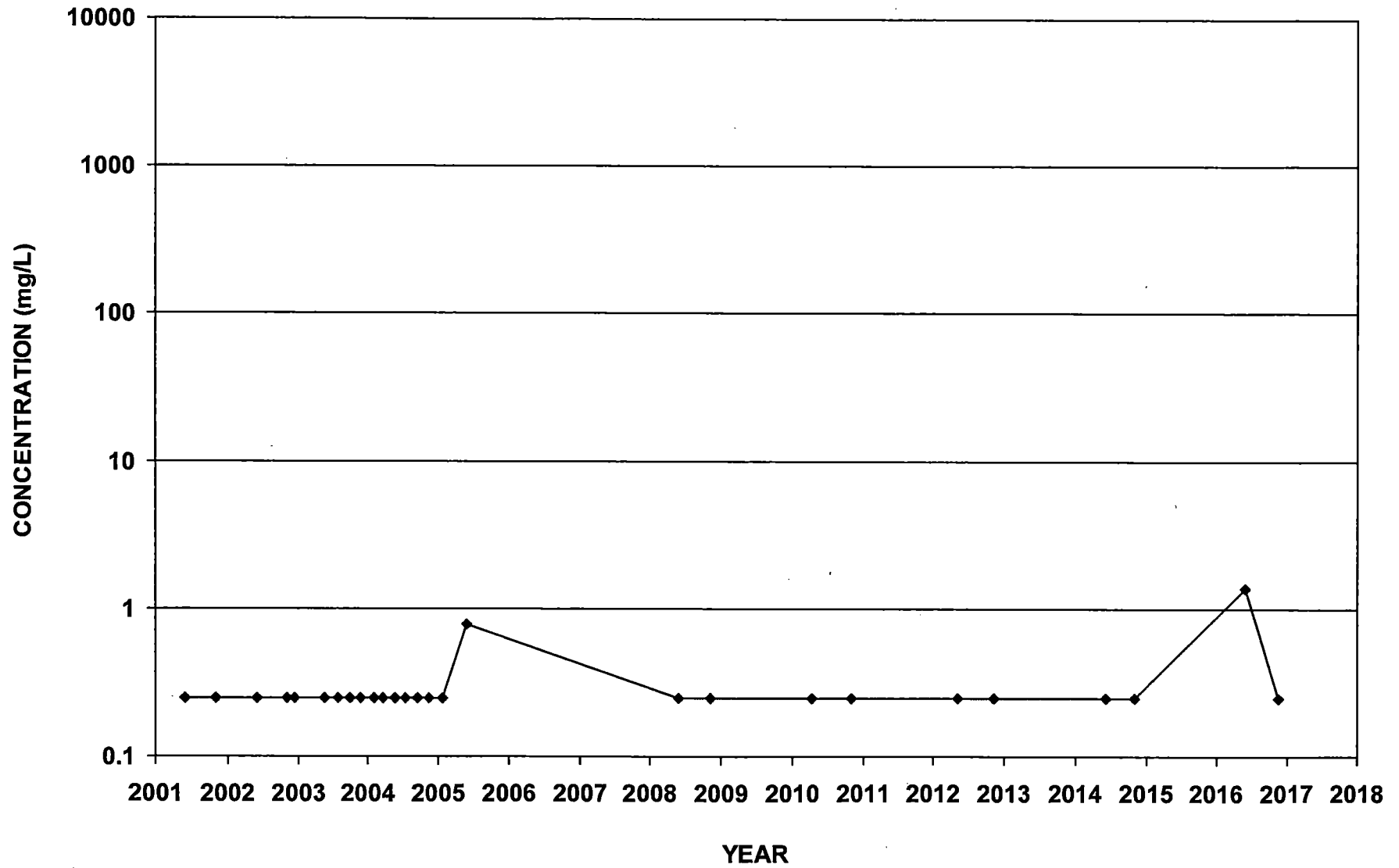
CLIENT INFORMATION			Project Description			Turnaround Time		Preservation Codes:														
El Dorado Chemical Corporation 4500 N West Ave El Dorado, AR 71730			El Dorado Chemical Corp GW Samp			1 Day (100%) 2 Day (50%) 3 Day (25%)		1. Cool, 4 Degrees Centigrade 2. Sulfuric Acid (H ₂ SO ₄), pH < 2 3. Nitric Acid (HNO ₃), pH < 2			4. Thiosulfate for Dechlorination 5. Hydrochloric Acid (HCl) 6. Sodium Hydroxide (NaOH), pH > 12											
Telephone: 225-753-3631			Reporting Information			5 Day (100%)		TEST PARAMETERS						Bottle Type Code								
Fax:			Email: lmarcella@env-mgt.com			Preservative Code:		2	1	3						G = Glass; P = Plastic V = Septum; A = Amber						
Bottle Type:						P	P	P								Arkansas Analytical Work Order Number:						
 Sampler(s) Signature			Sampler(s) Printed: Tyler Lollis																			
Field Number	SAMPLE COLLECTION		Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION						Ammonia & Nitrate	Sulfate, Nitrite	Chromium & Lead	pH	DO	Temp	Other			
9	11/10/2016	0930	X		4	GW	ECMW-9						X	X	X	X						
10	11/10/2016	1015	X		4	GW	ECMW-10						X	X	X	X						
11	11/10/2016	1030	X		4	GW	ECMW-11						X	X	X	X						
12	11/10/2016	1035	X		4	GW	ECMW-12						X	X	X	X						
13	11/10/2016	1055	X		4	GW	ECMW-18						X	X	X	X						
14	11/10/2016		X		4	GW	BD-1						X	X	X	X						
15	11/10/2016		X		4	GW	BD-2						X	X	X	X						
	11/10/2016		X		4	GW	EQUIP BLANK						X	X	X							
1. Relinquished by: (Signature)			Date/Time		2. Received by: (Signature)			SAMPLE CONDITION UPON RECEIPT IN LAB						REMARKS / SAMPLE COMMENTS								
 Tyler Lollis			11:10 am 11/10/16		 Edward Johnson 11/20/16 1140am			1. CUSTODY SEALS: <input checked="" type="checkbox"/> Yes ___ No 2. CONTAINERS CORRECT: <input checked="" type="checkbox"/> Yes ___ No 3. COC/LABELS AGREE: <input checked="" type="checkbox"/> Yes ___ No 4. RECEIVED ON ICE: <input checked="" type="checkbox"/> Yes ___ No 5. TEMPERATURE ON RECEIPT: 8°C 6. TEMPERATURE GUN ID: HHT# 2						* Changes made per containers received TR 11/16/16								
3. Relinquished by: (Signature)			Date/Time		4. Received by lab: (Signature)			FOR COMPLETION BY LAB ONLY														
 Edward Johnson 11/20/16 140pm			11-10-16 1340		 Amanda Johnson																	

APPENDIX B
TREND GRAPHS

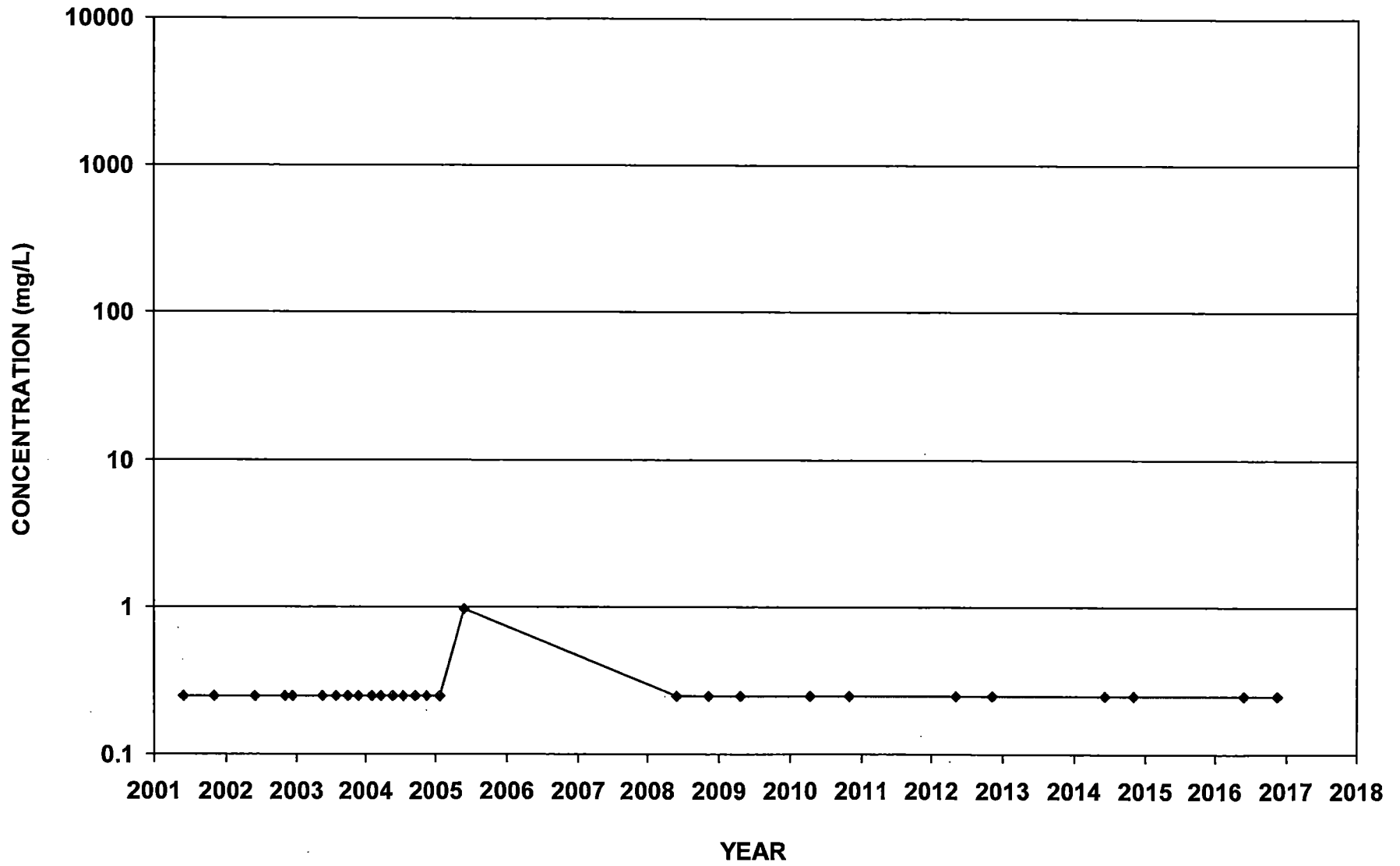
ECMW-1
Ammonia-N



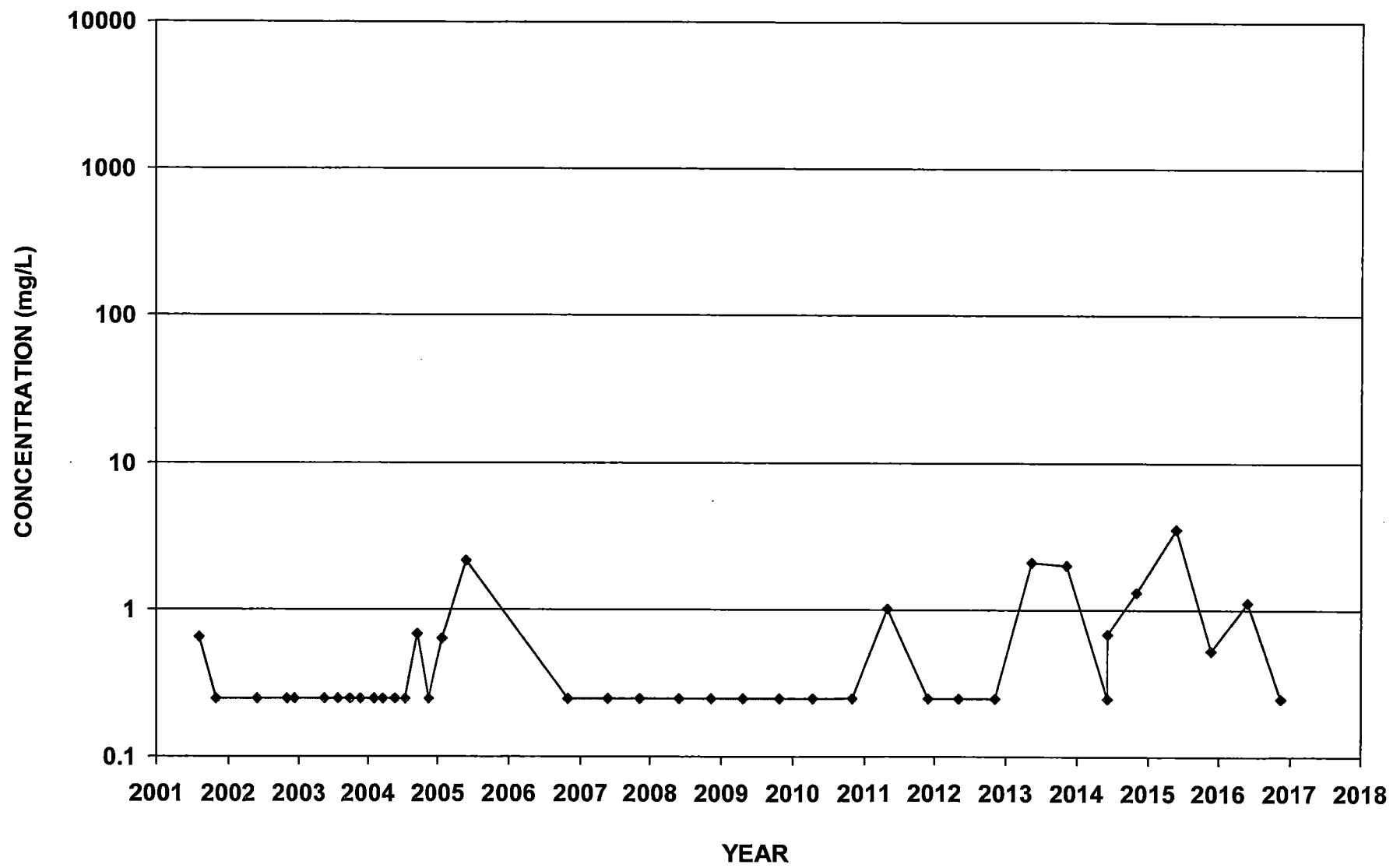
ECMW-2
Ammonia-N



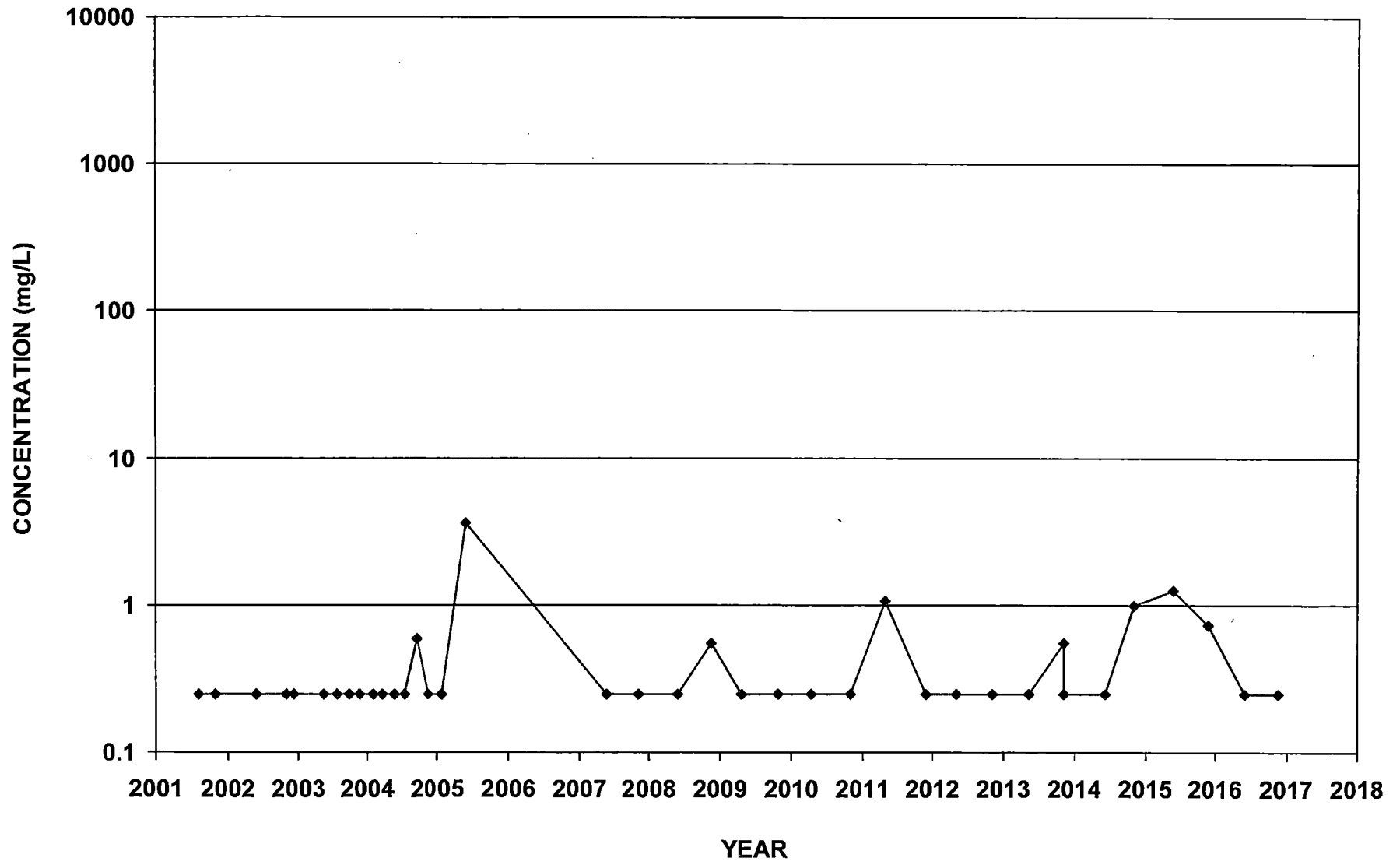
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Ammonia-N



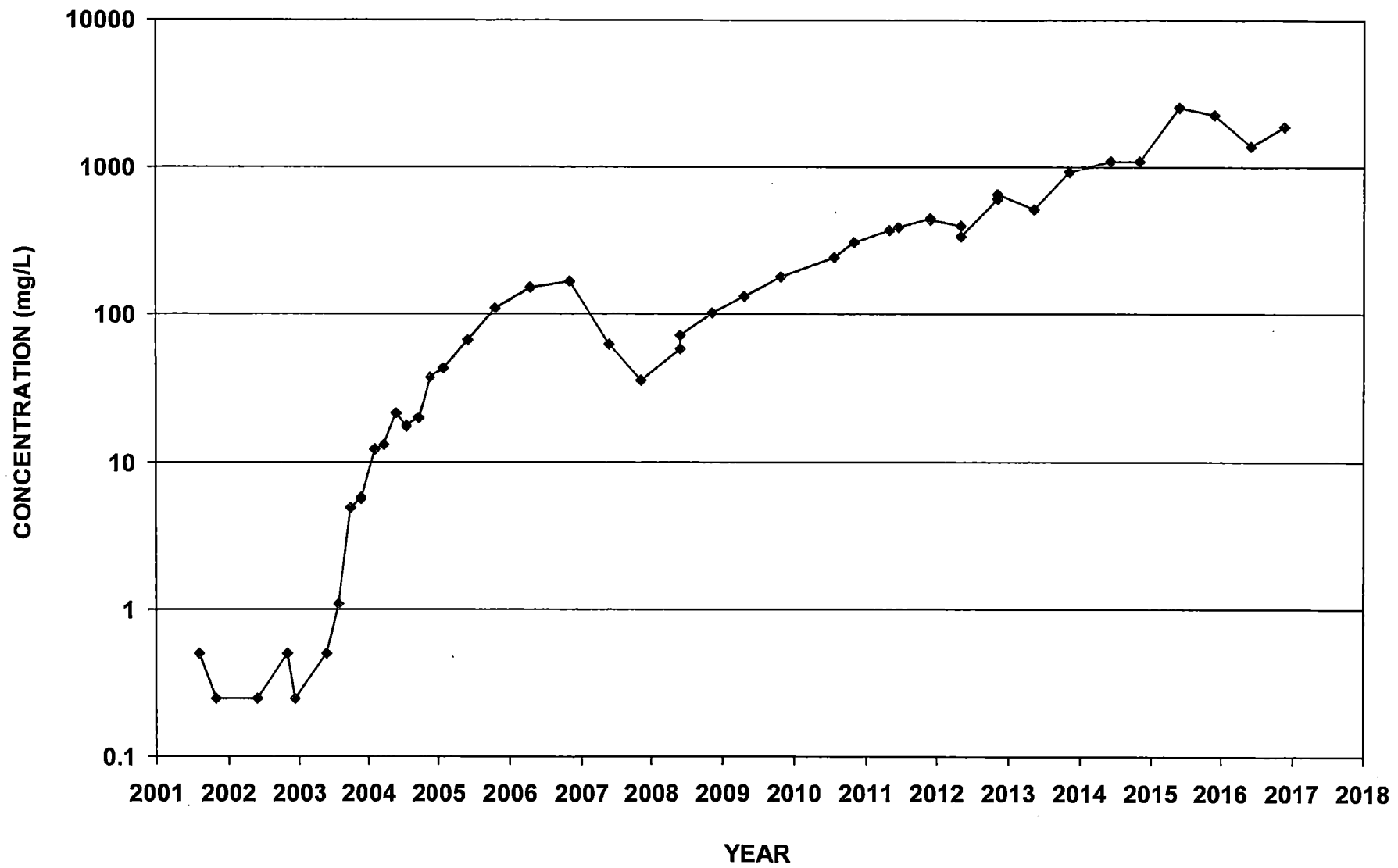
ECMW-4
Ammonia-N



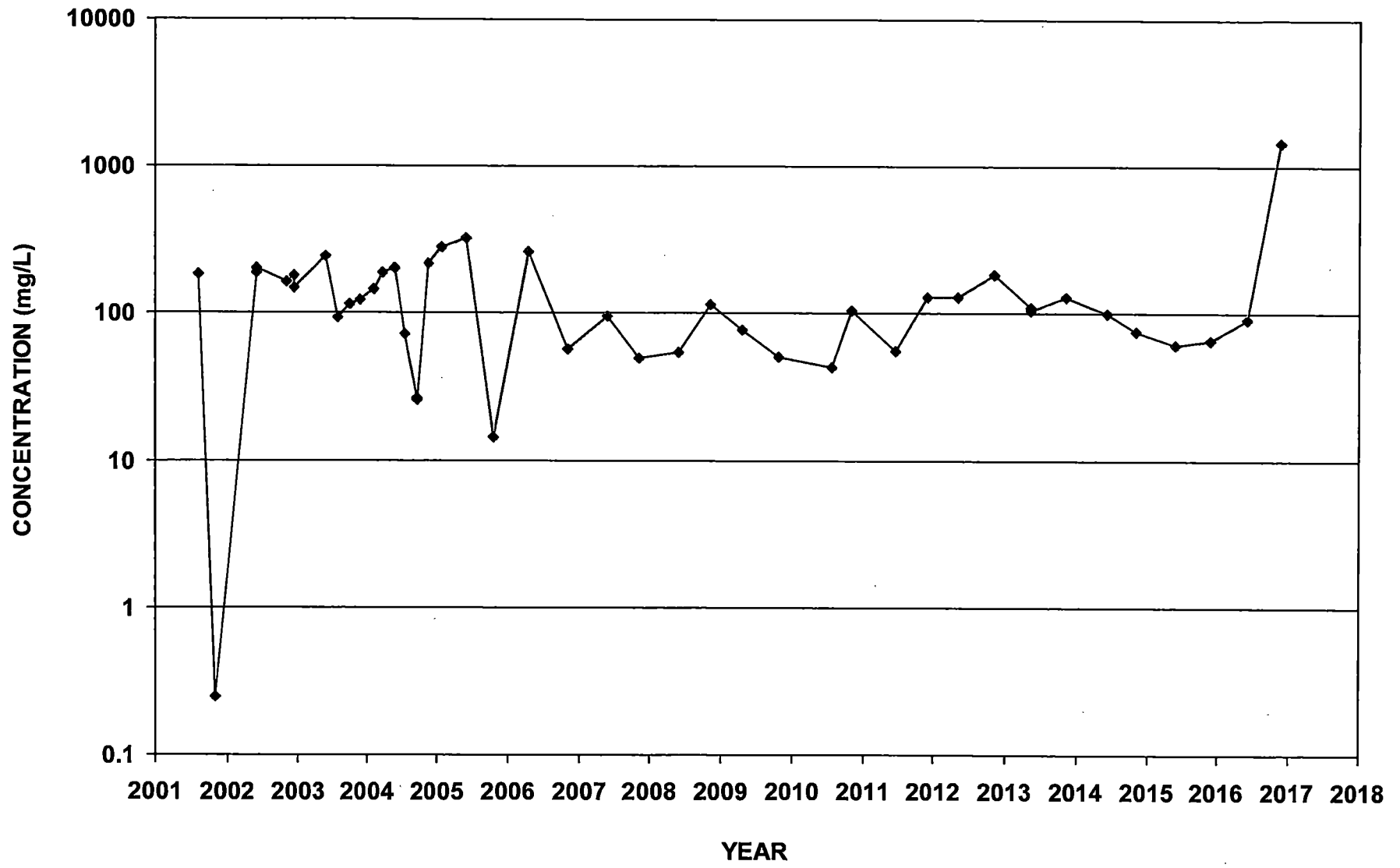
ECMW-5
Ammonia-N



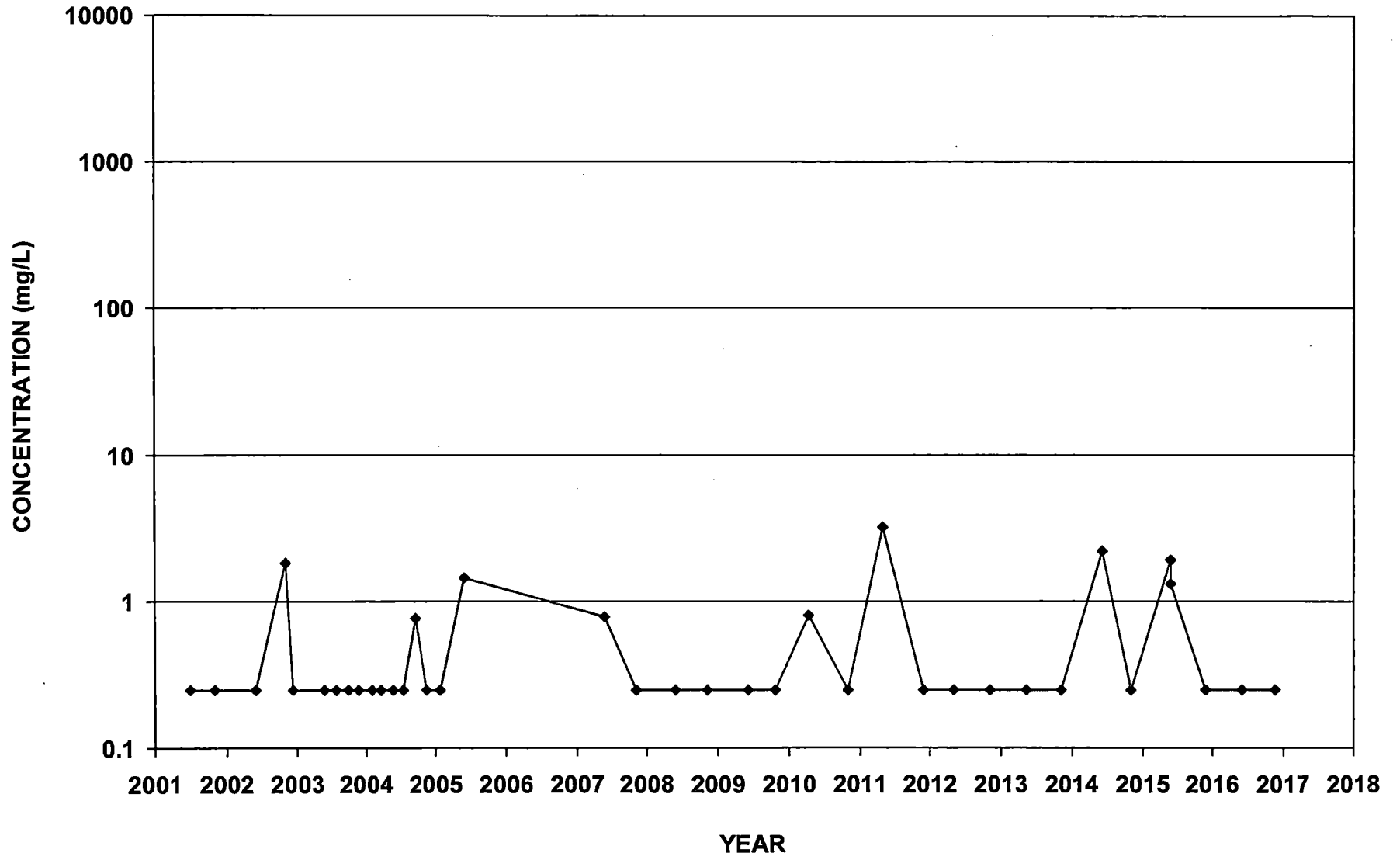
ECMW-6
Ammonia-N



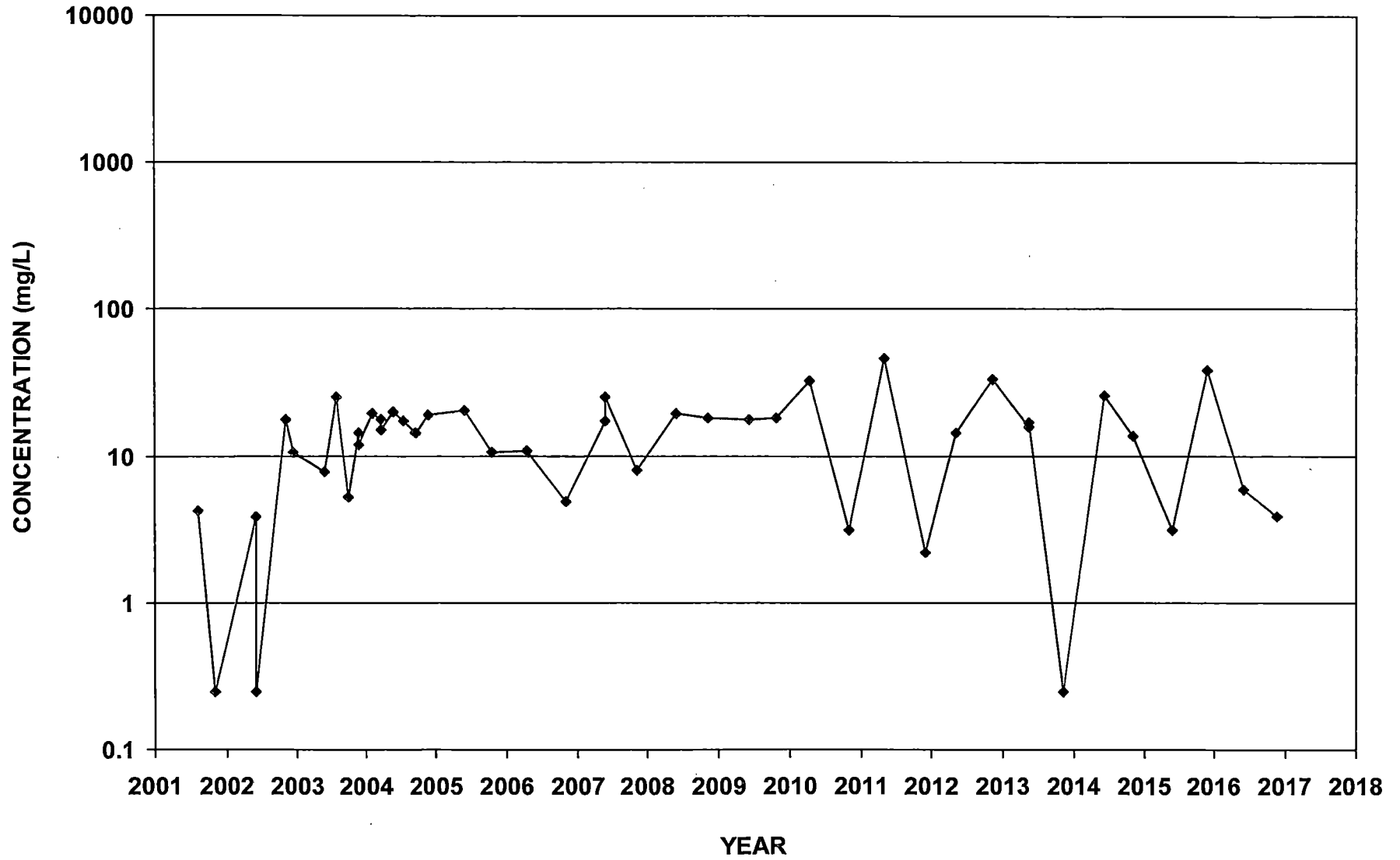
ECMW-7
Ammonia-N



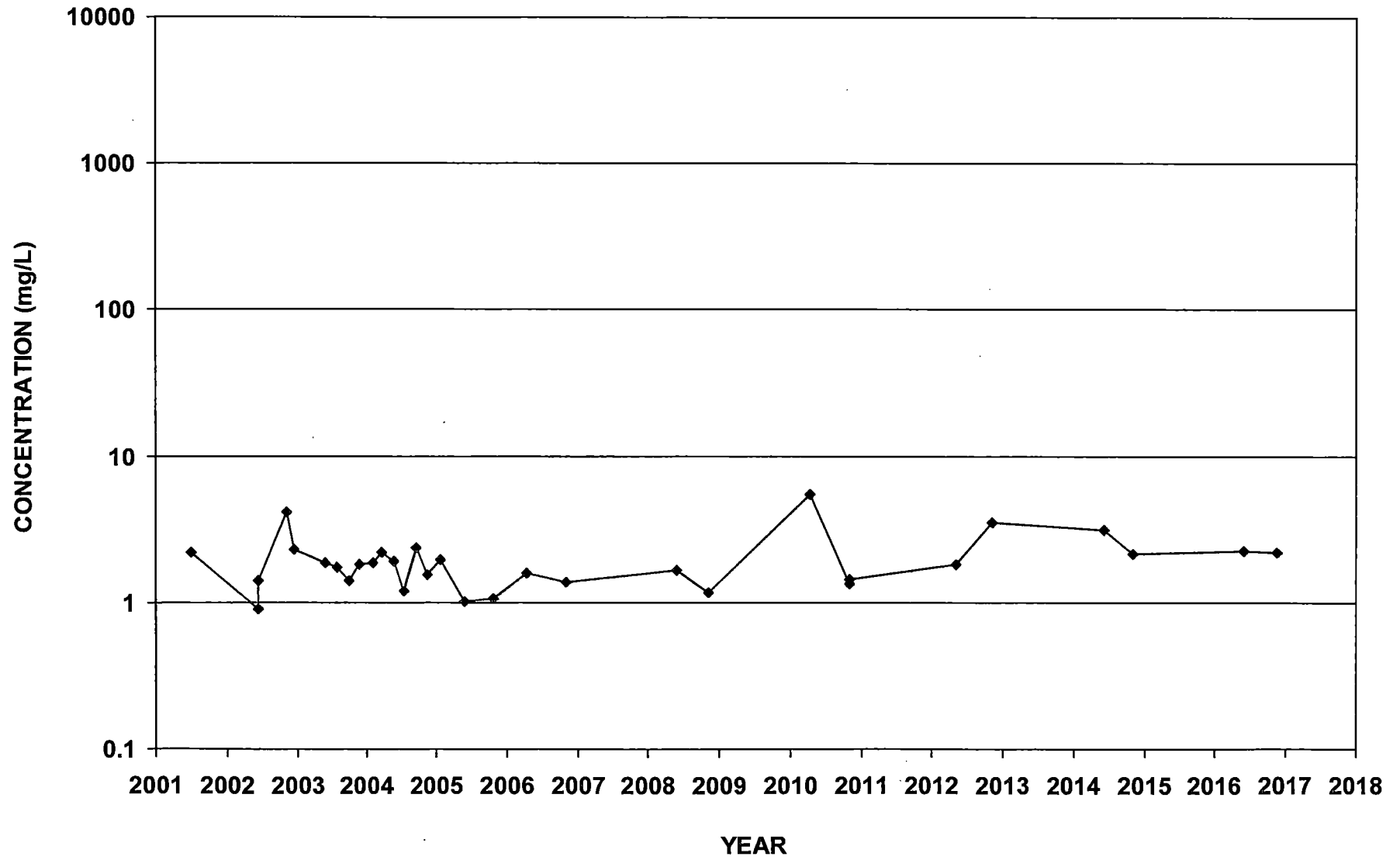
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Ammonia-N



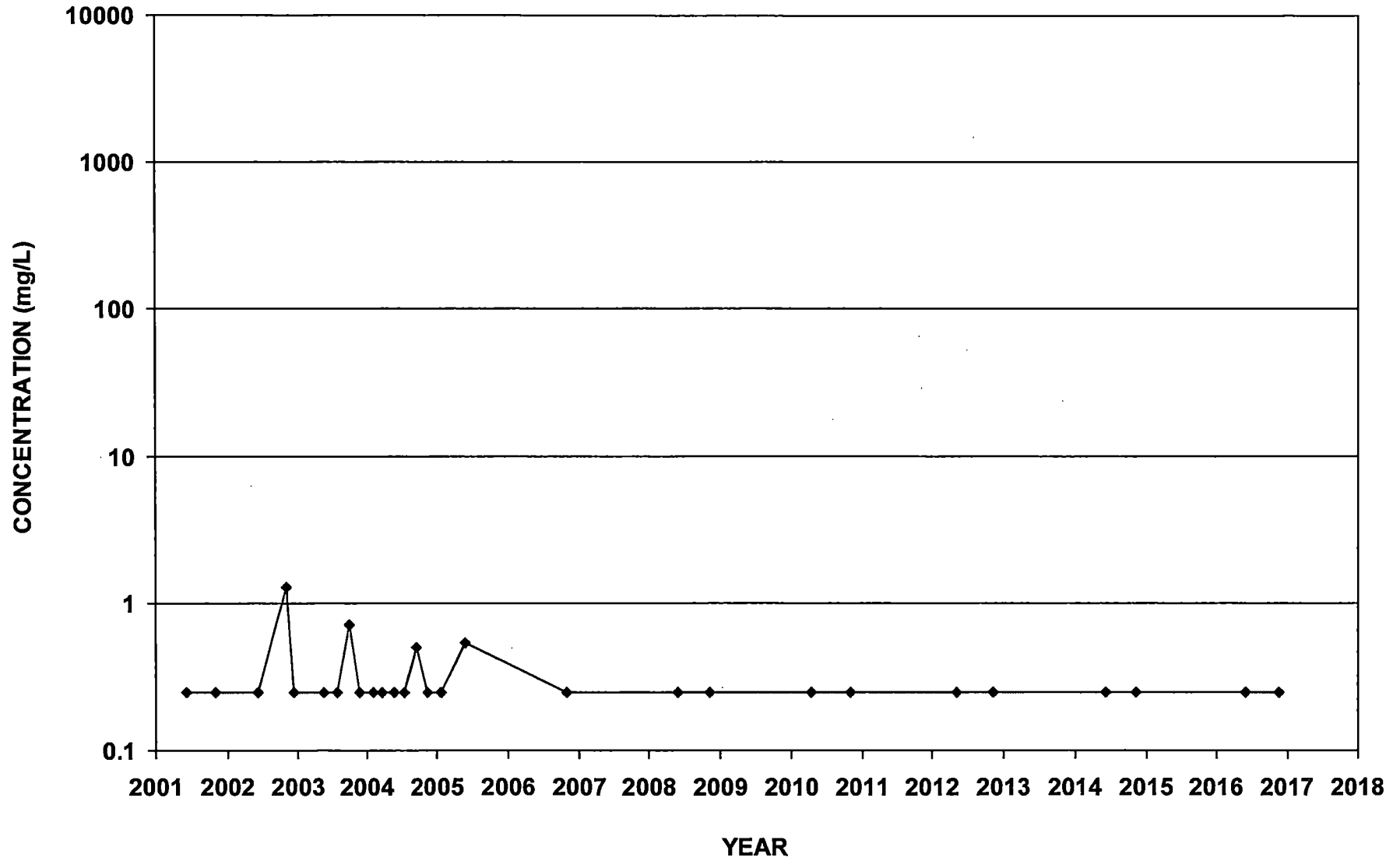
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Ammonia-N



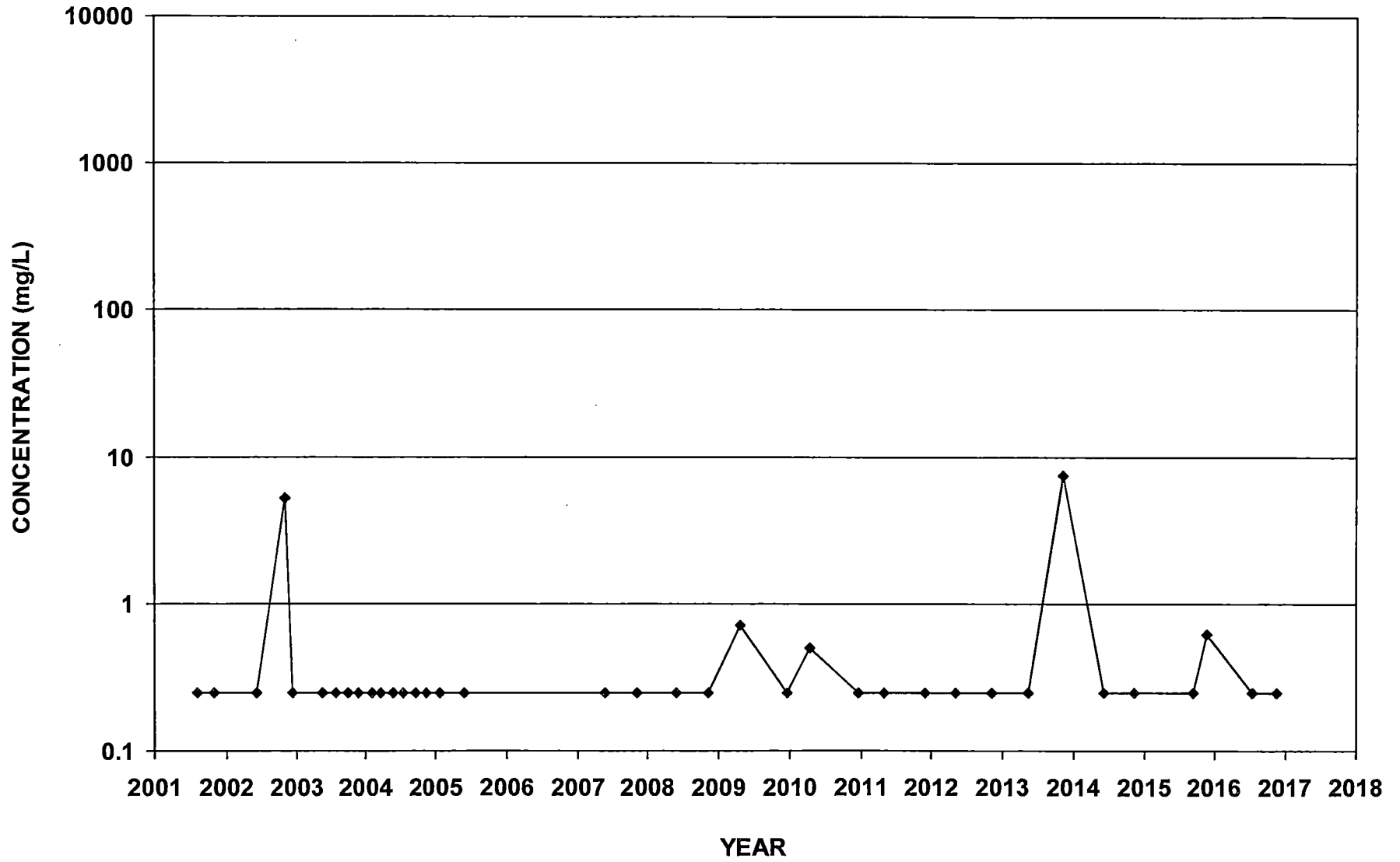
ECMW-12
Ammonia-N



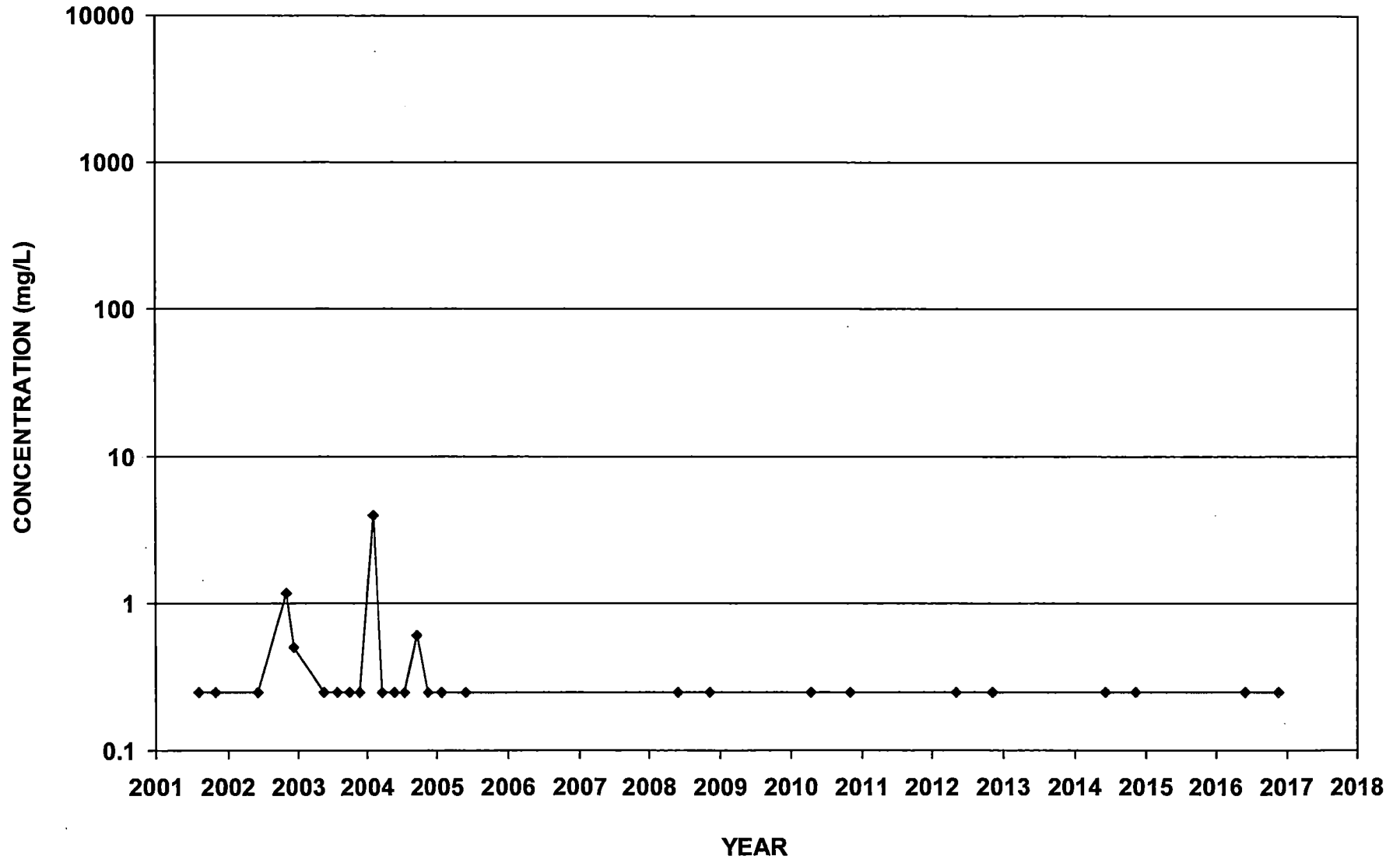
ECMW-13
Ammonia-N



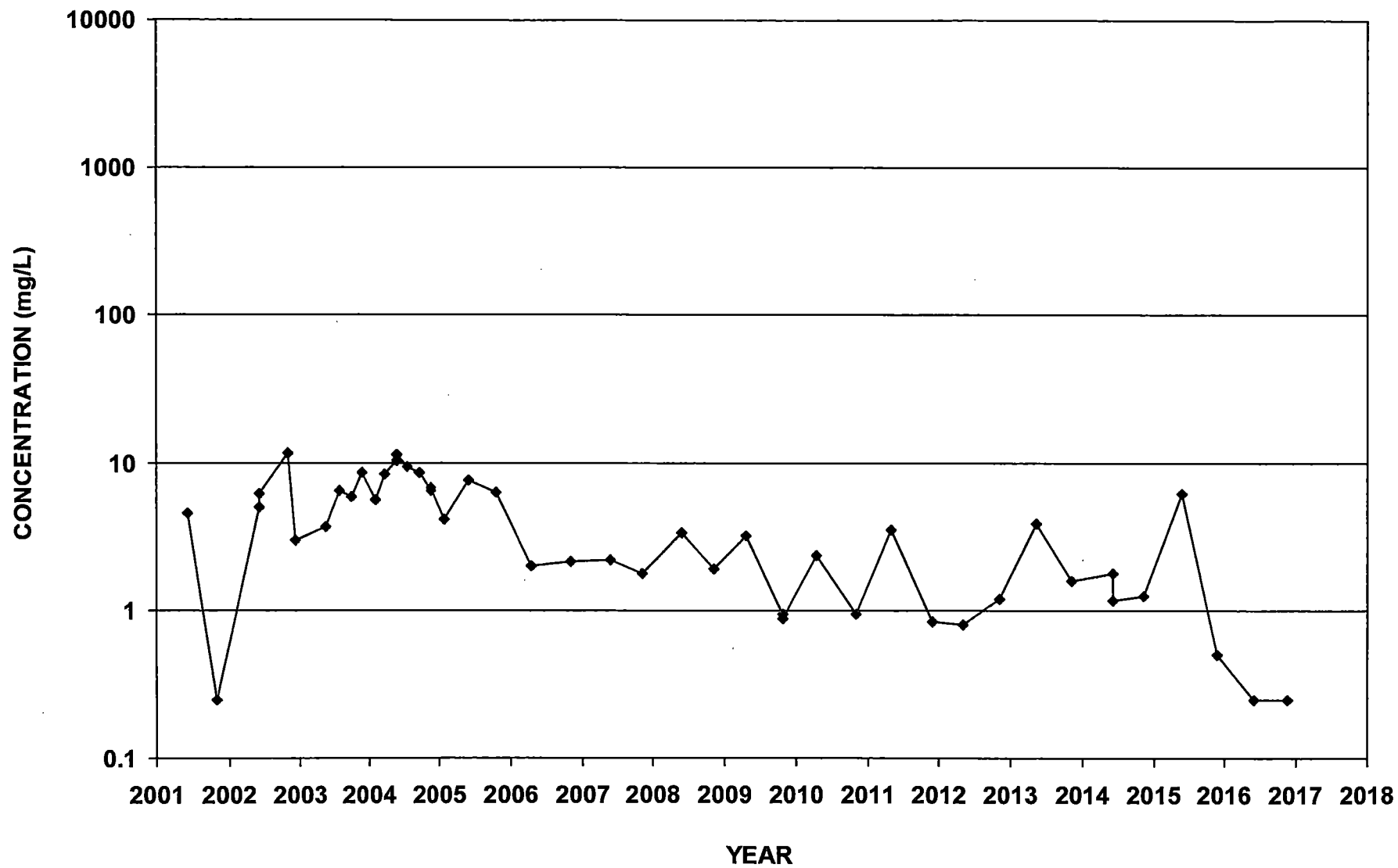
ECMW-14
Ammonia-N



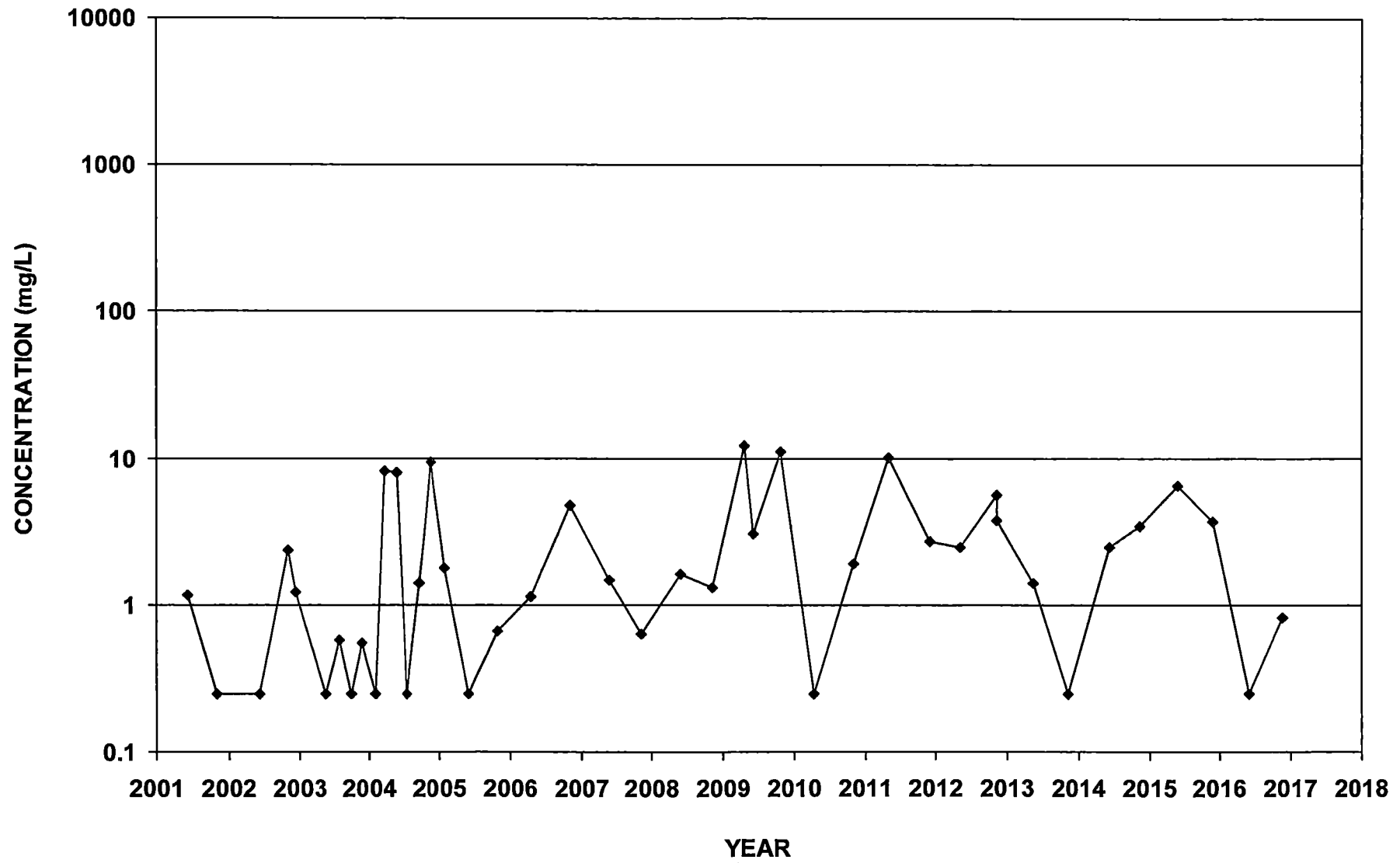
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Ammonia-N



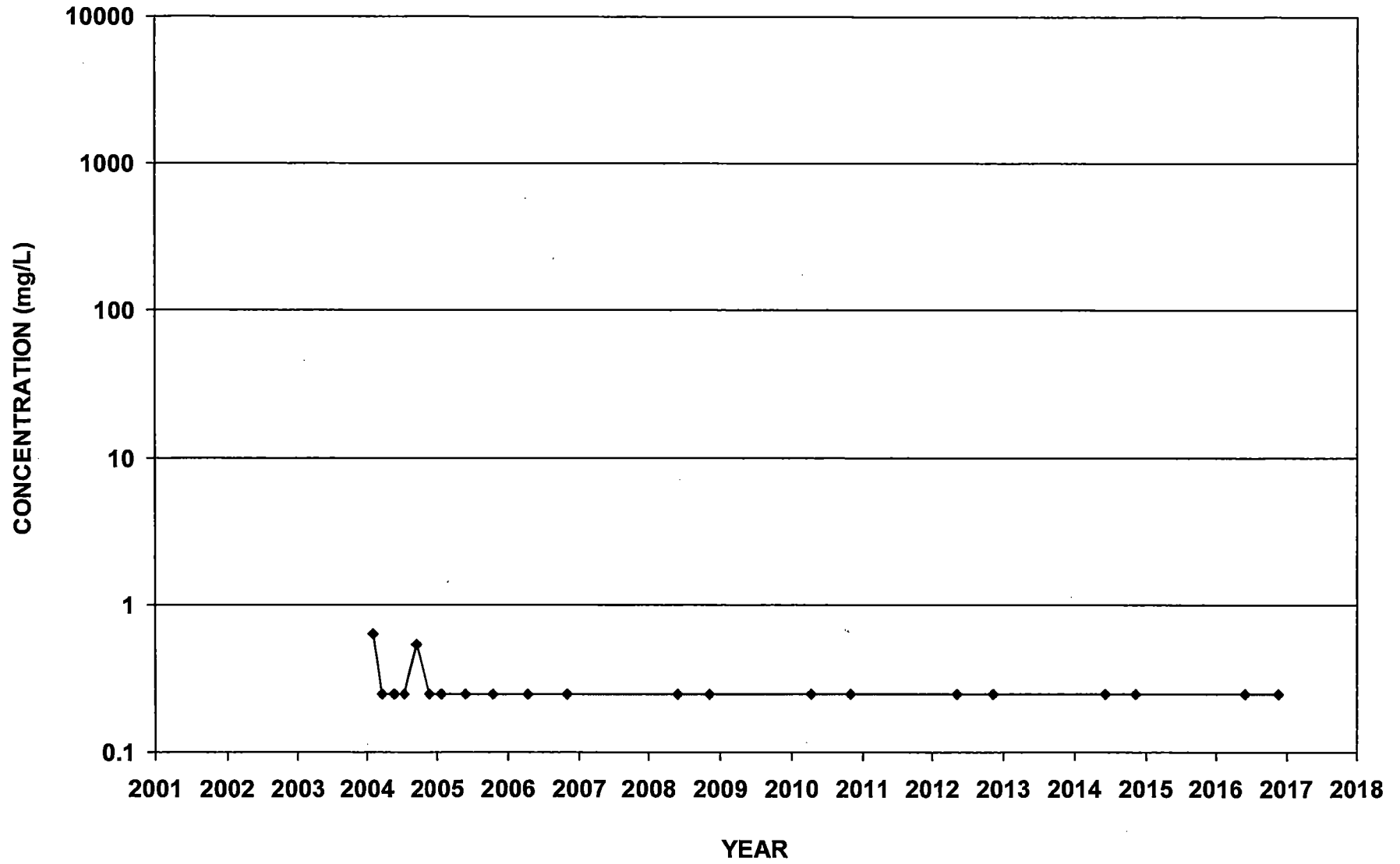
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Ammonia-N



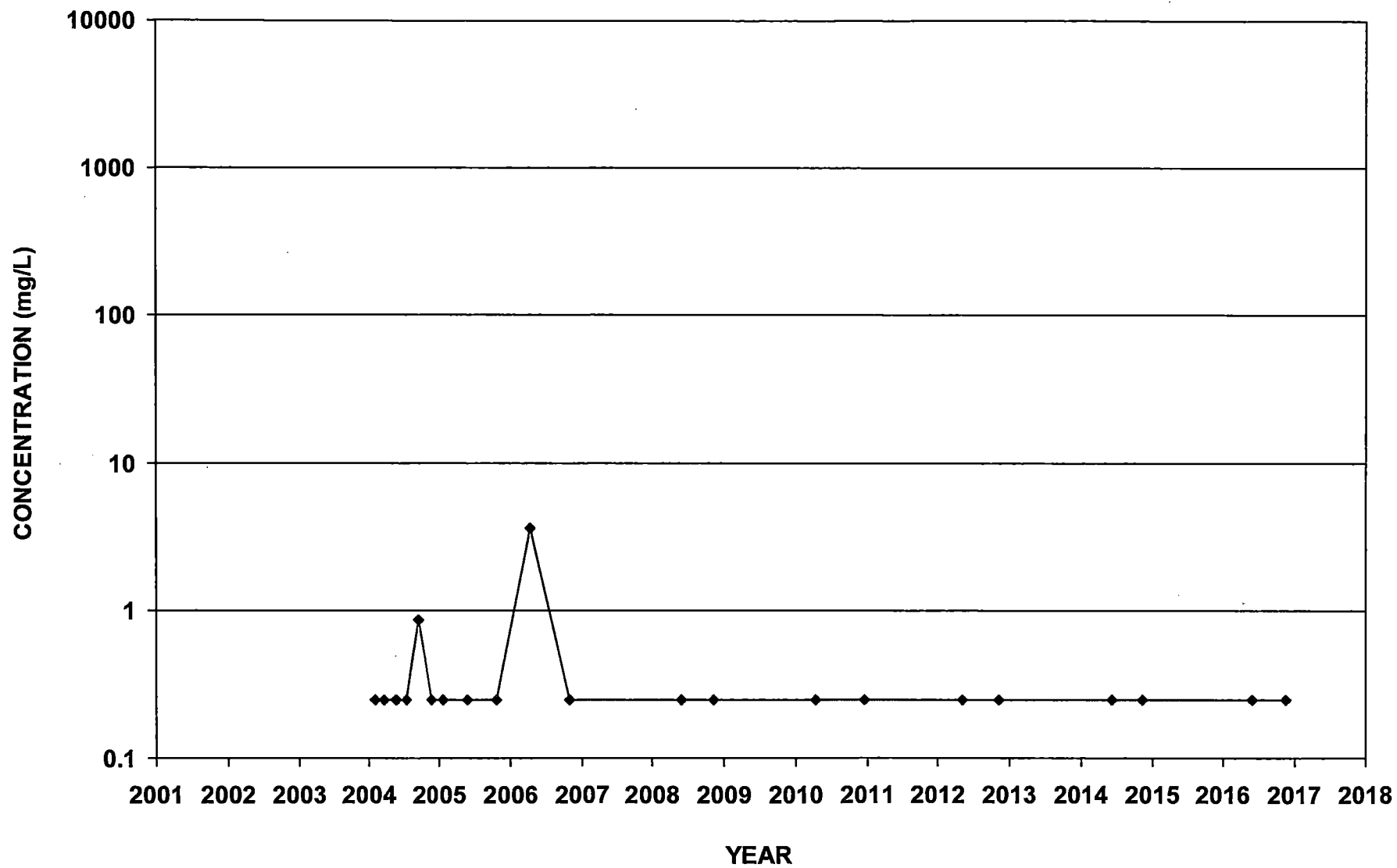
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Ammonia-N



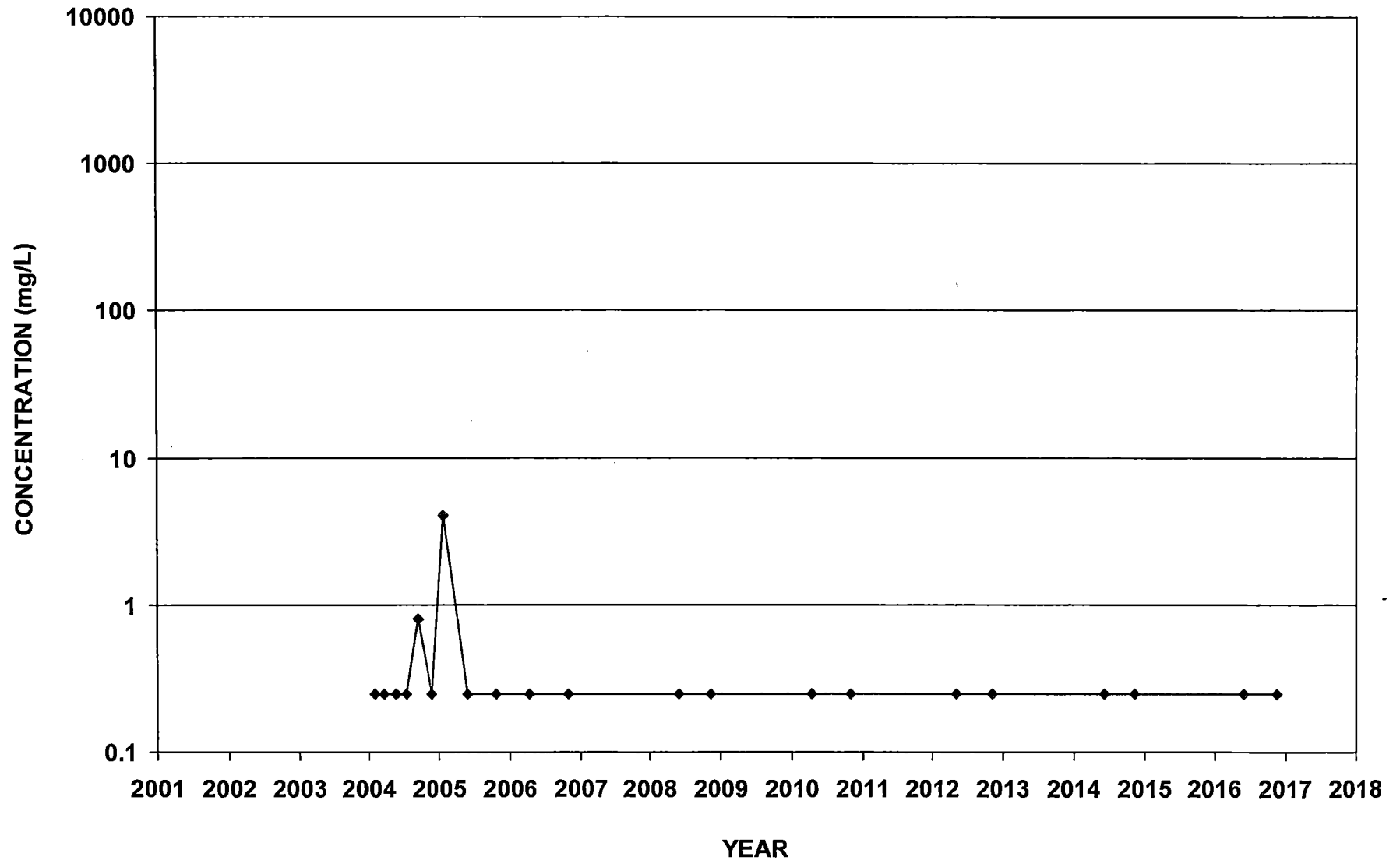
ECMW-19
Ammonia-N



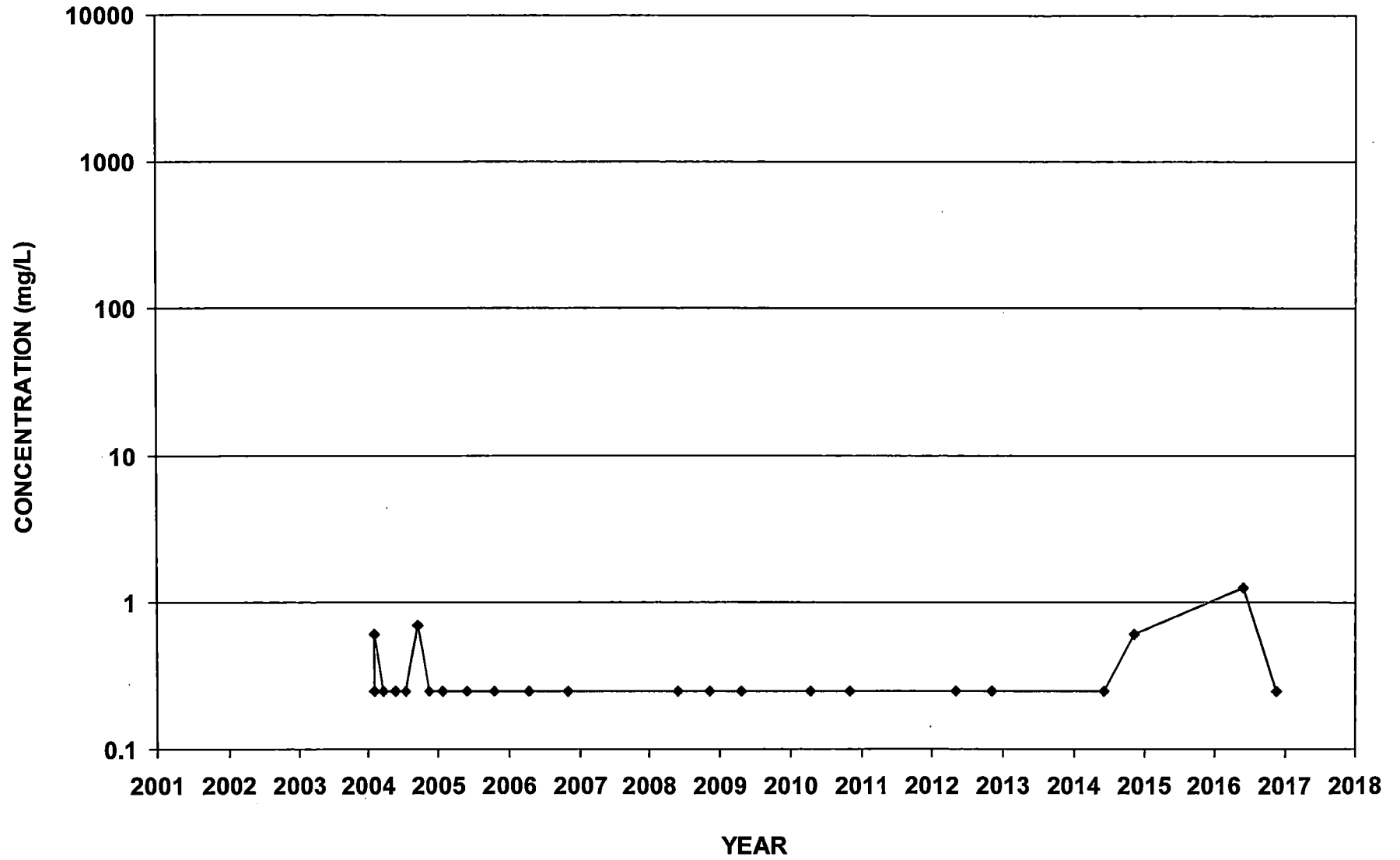
ECMW-20
Ammonia-N



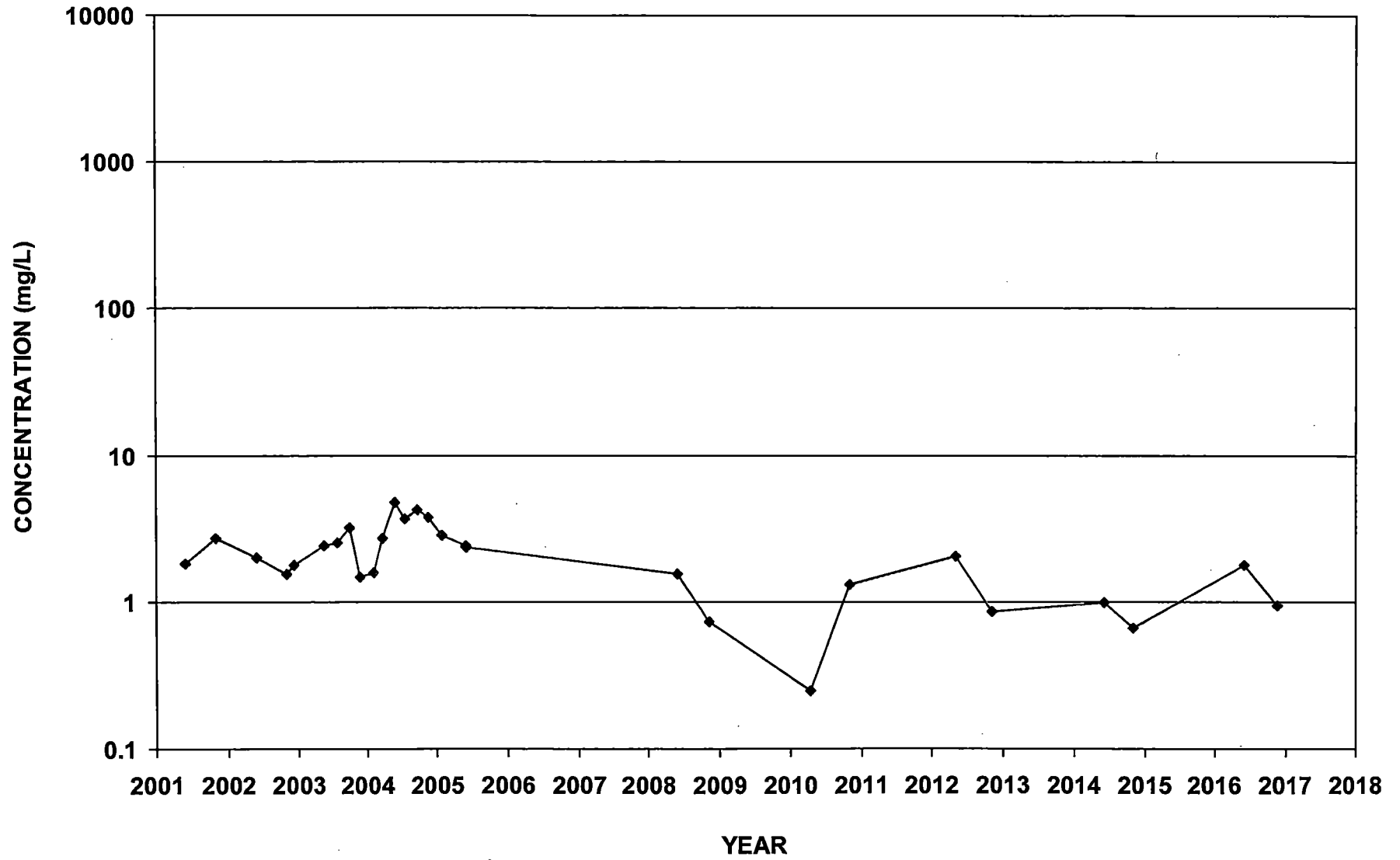
ECMW-21
Ammonia-N



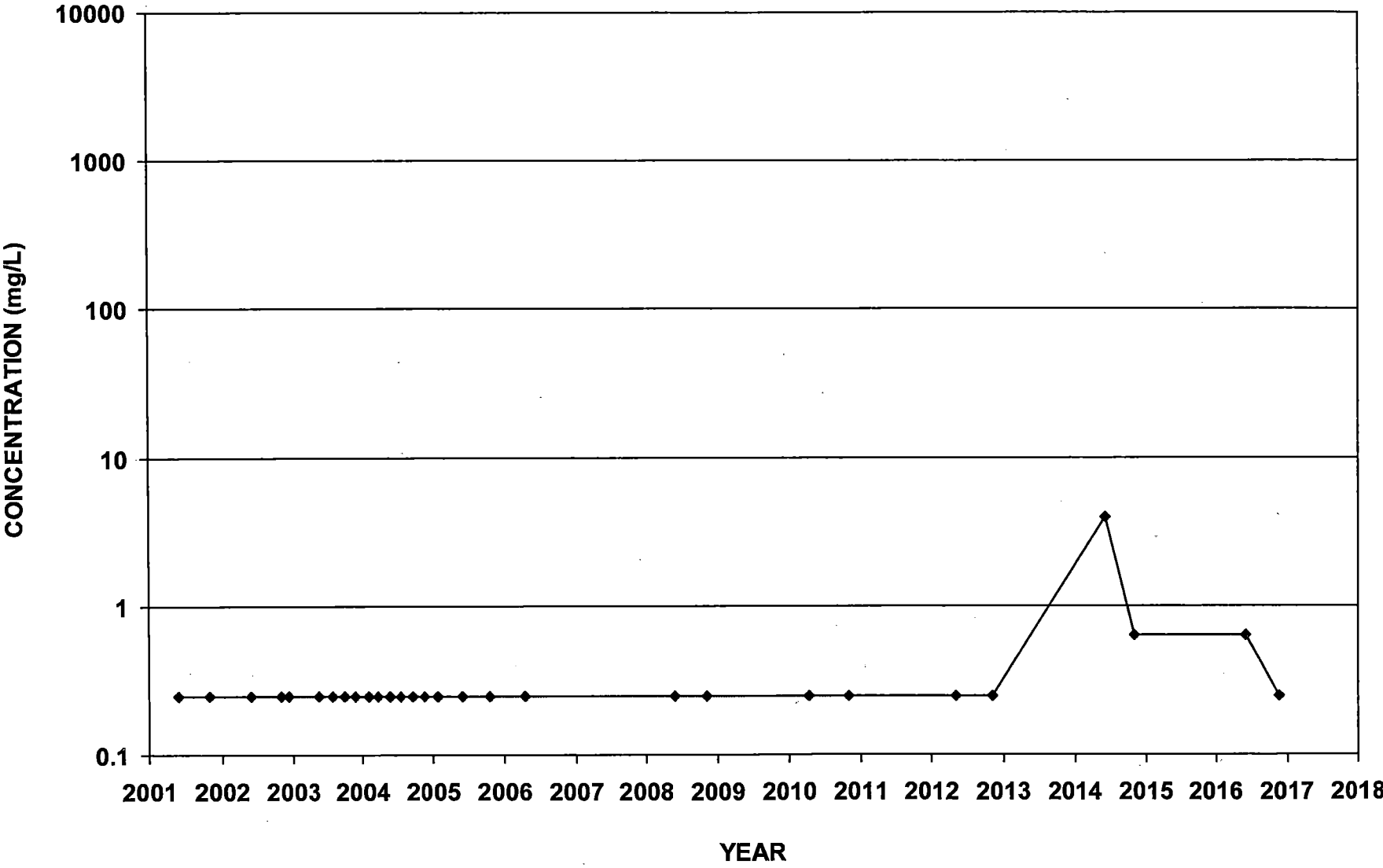
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Ammonia-N



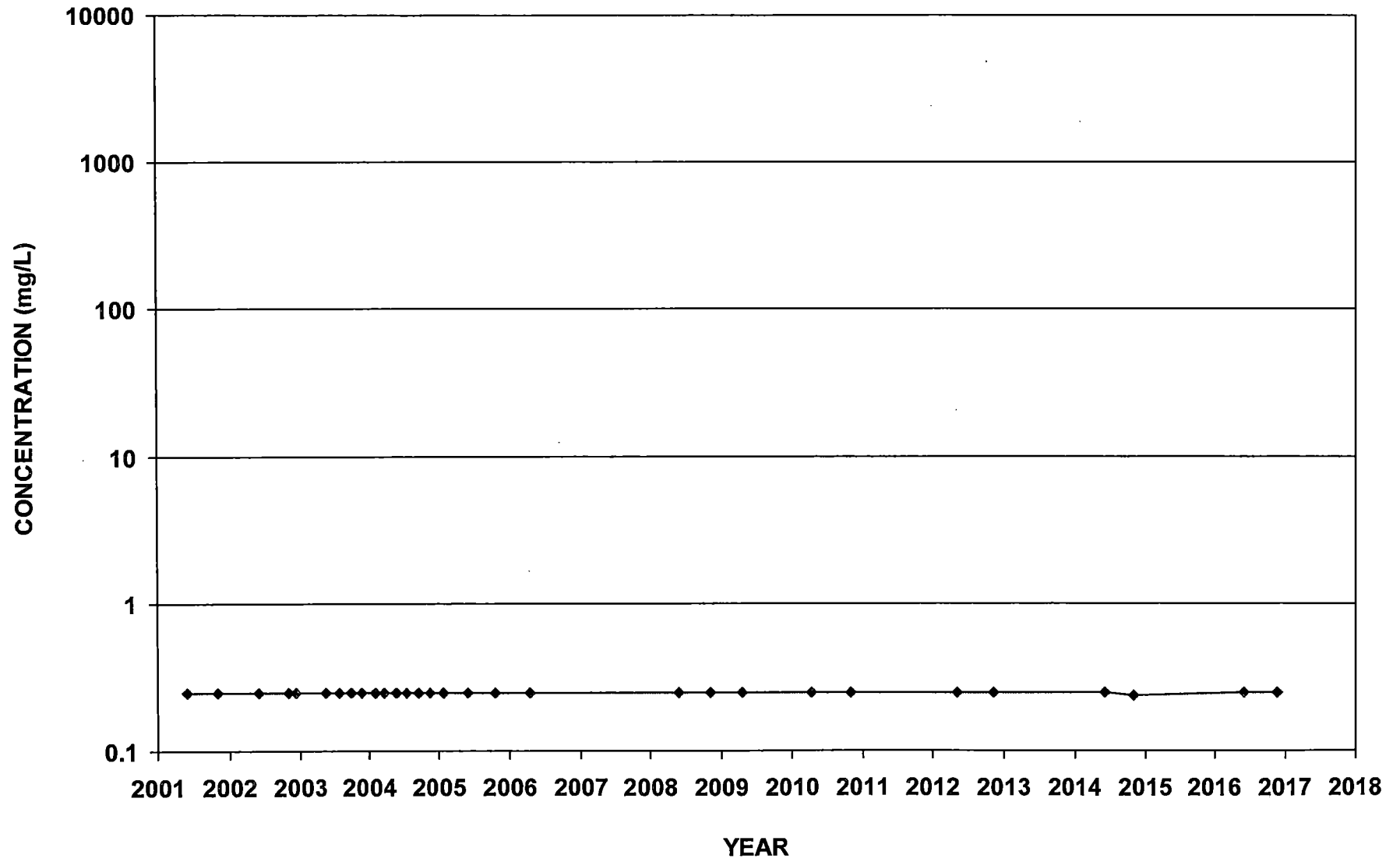
ECMW-1
Nitrate-N



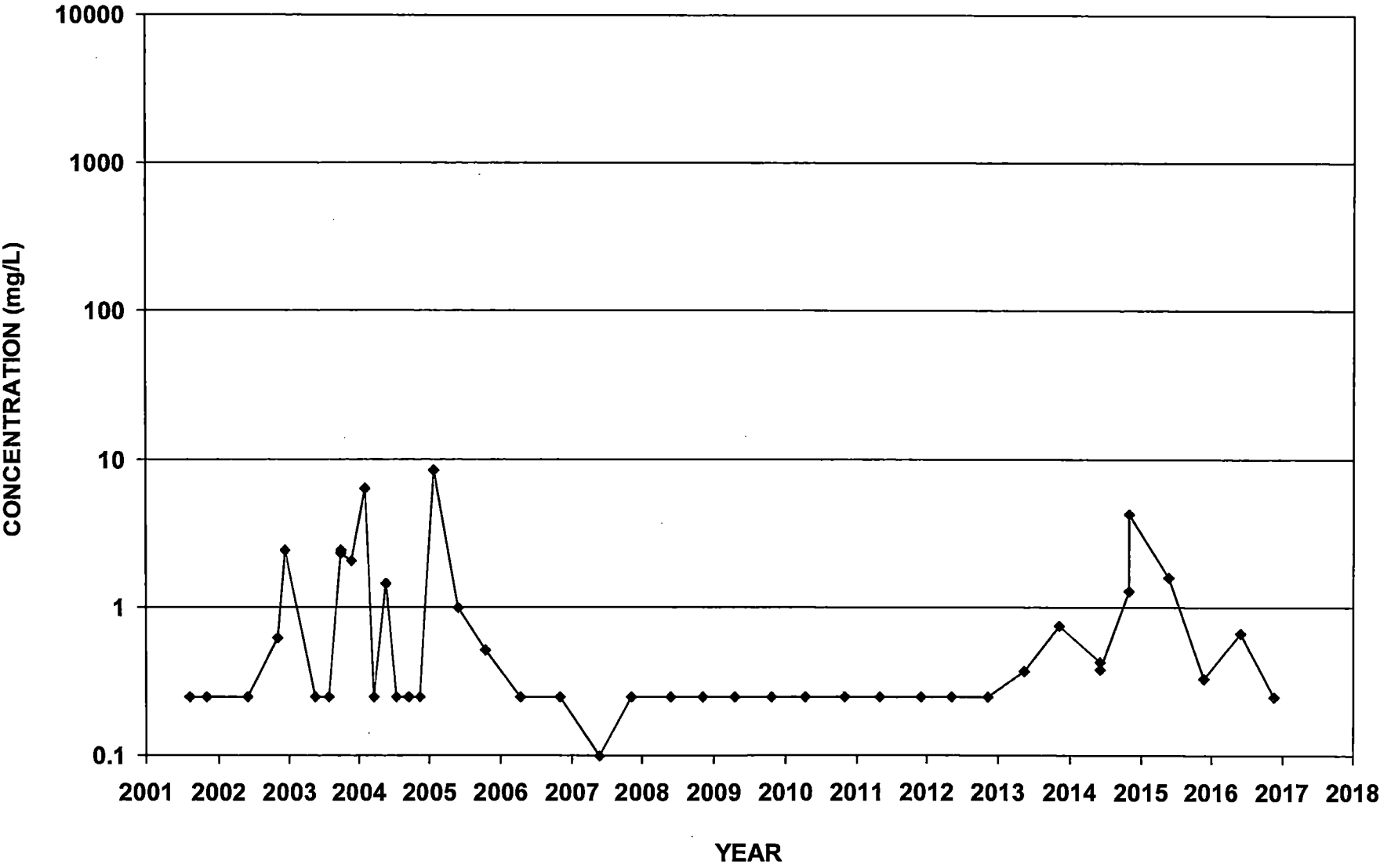
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Nitrate-N



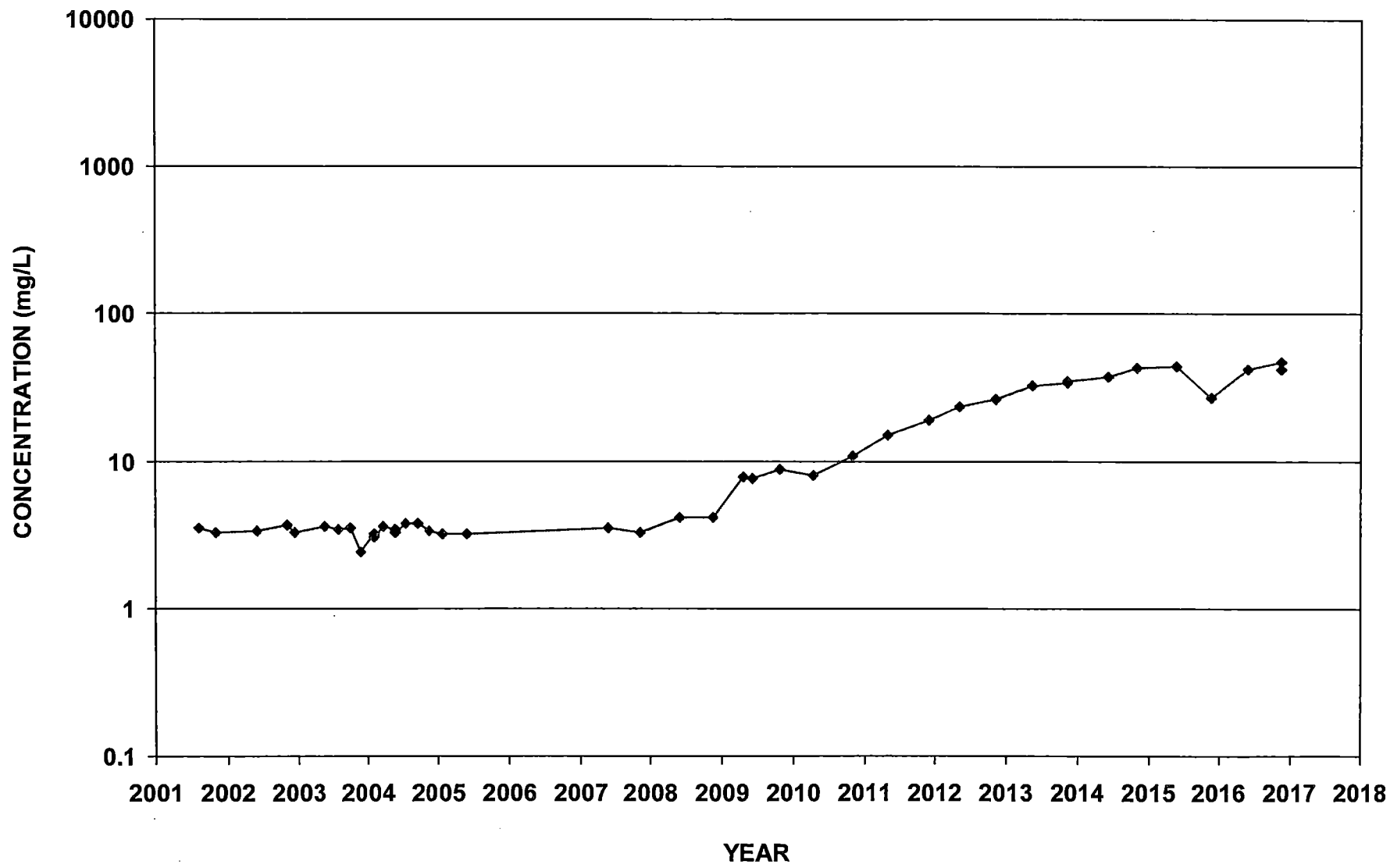
ECMW-3
Nitrate-N



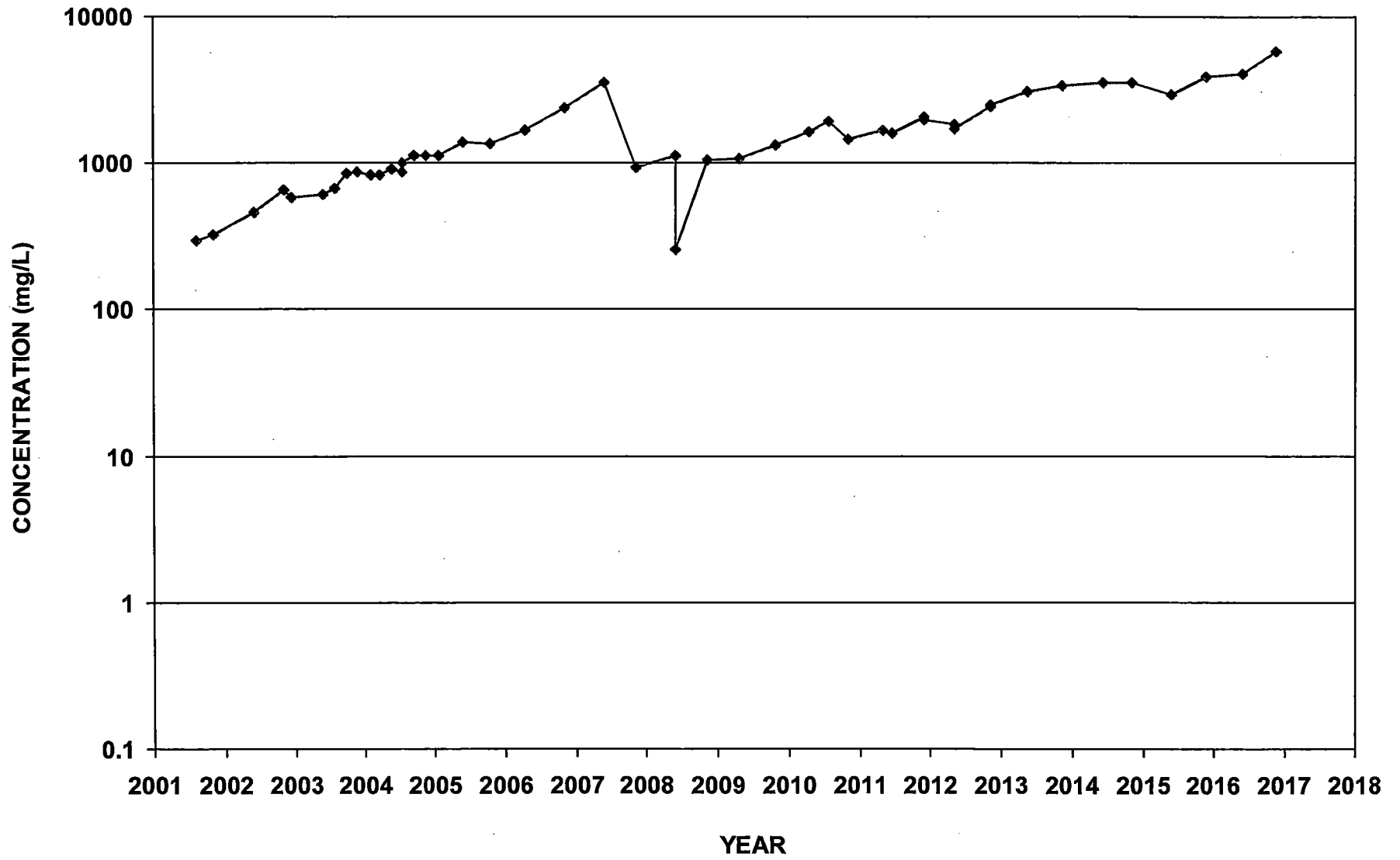
ECMW-4
Nitrate-N



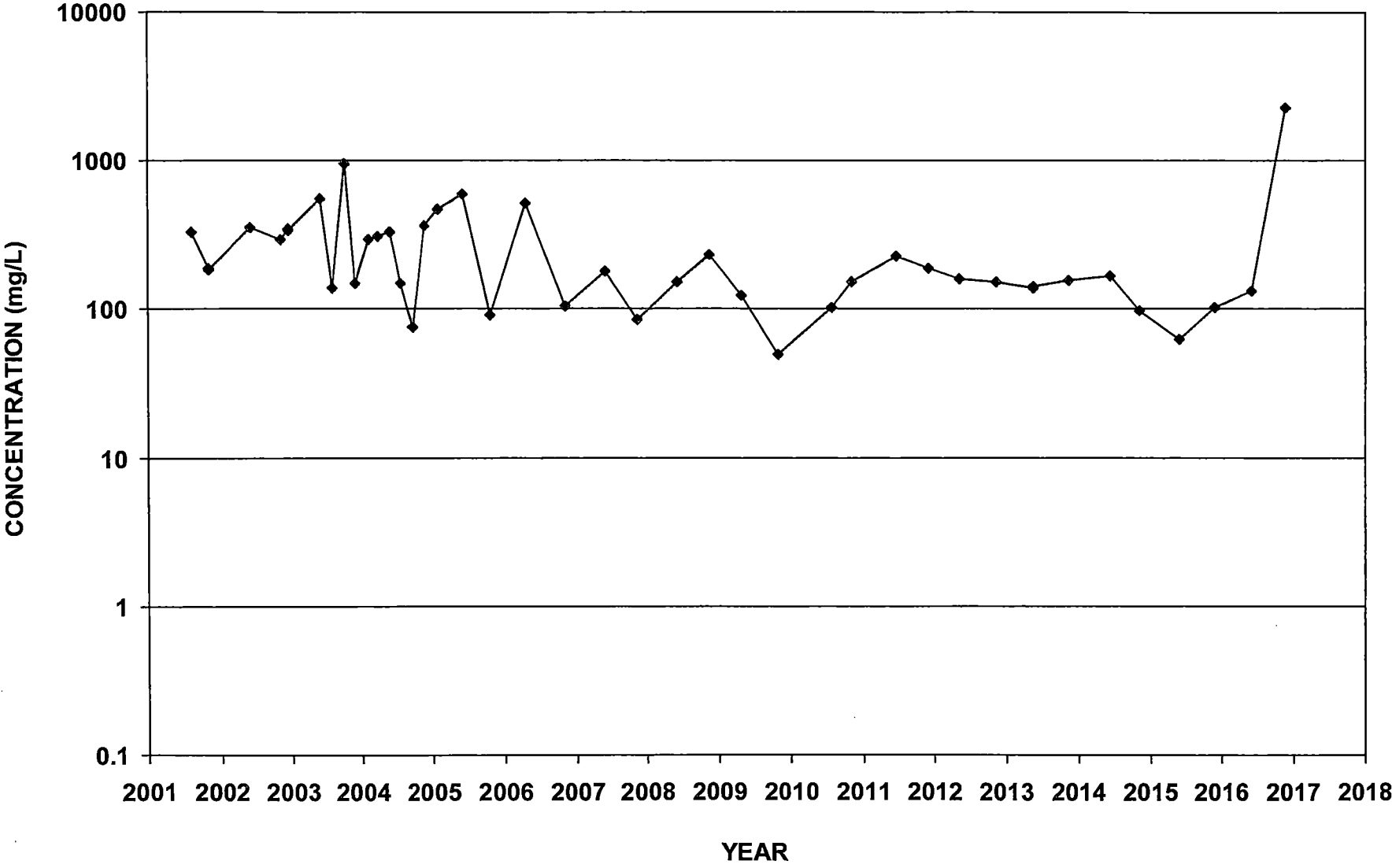
ECMW-5
Nitrate-N



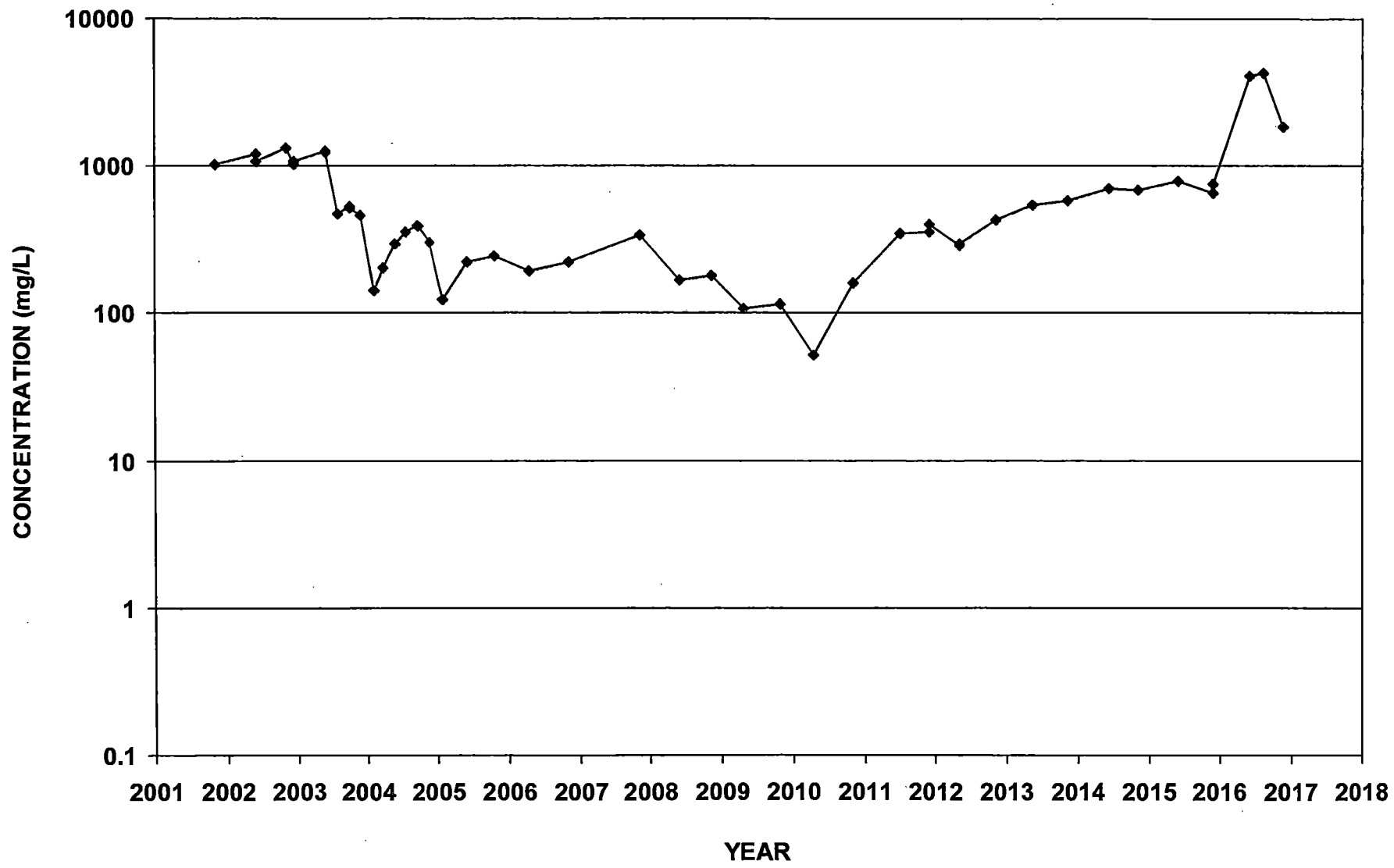
ECMW-6
Nitrate-N



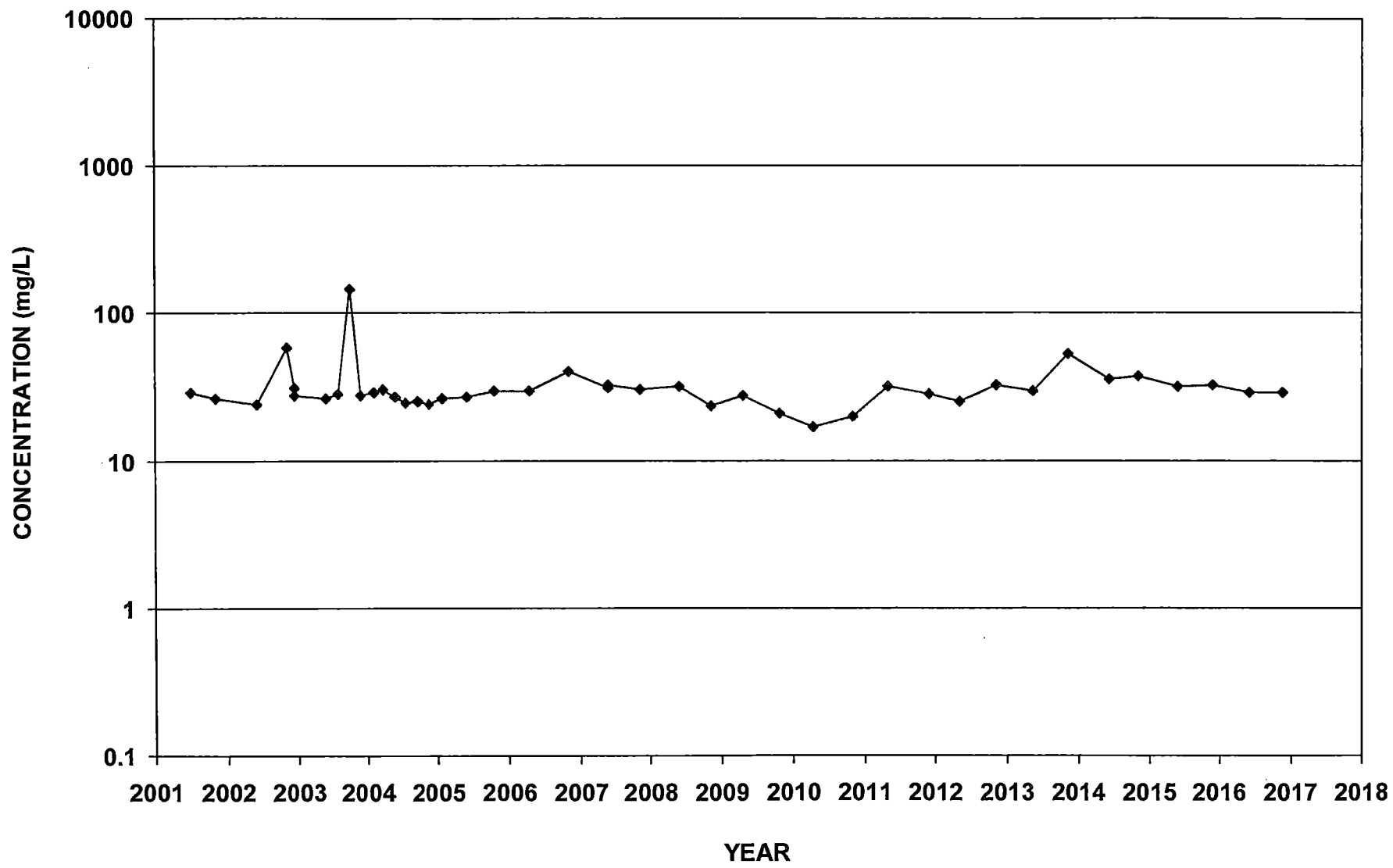
ECMW-7
Nitrate-N



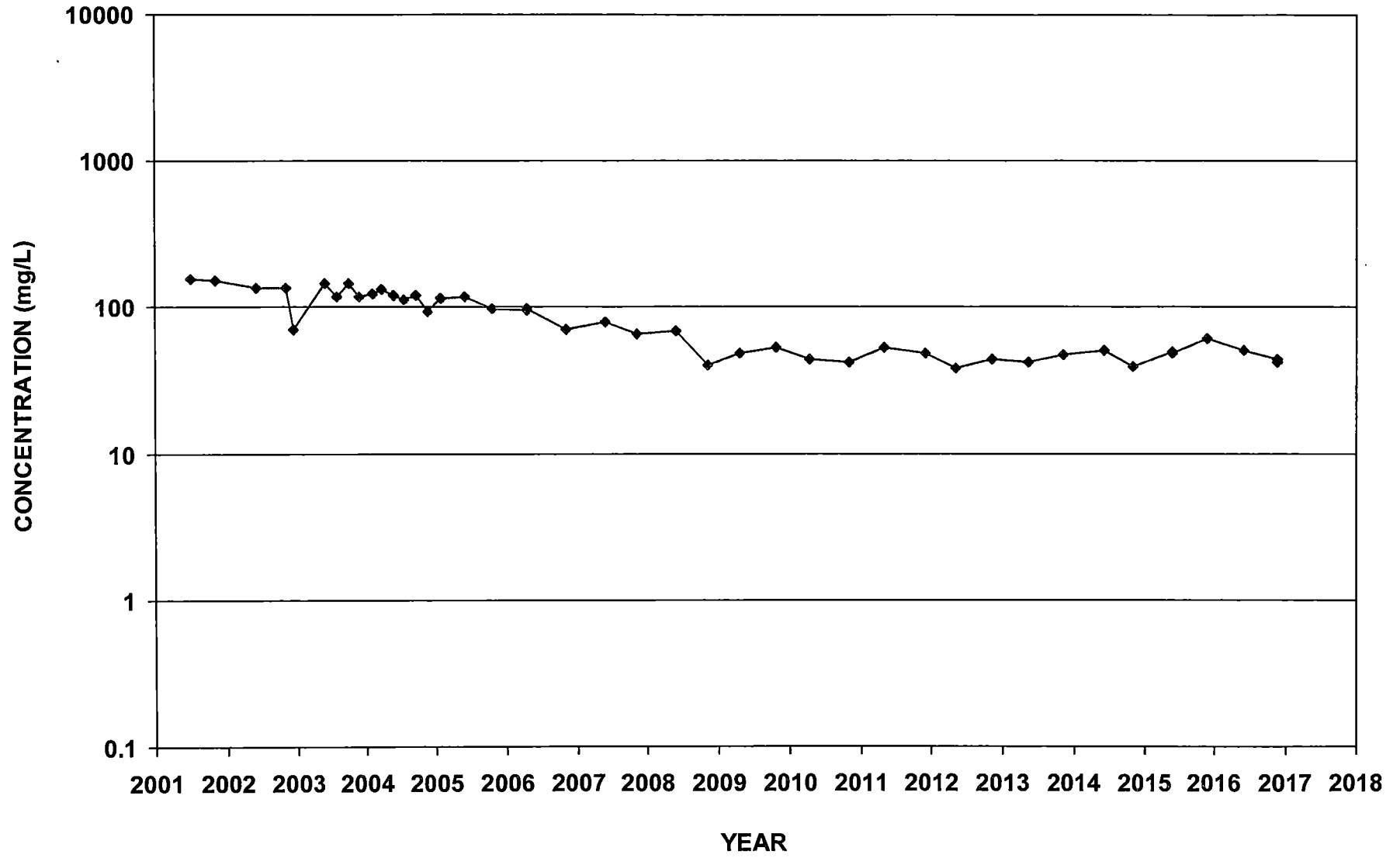
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Nitrate-N



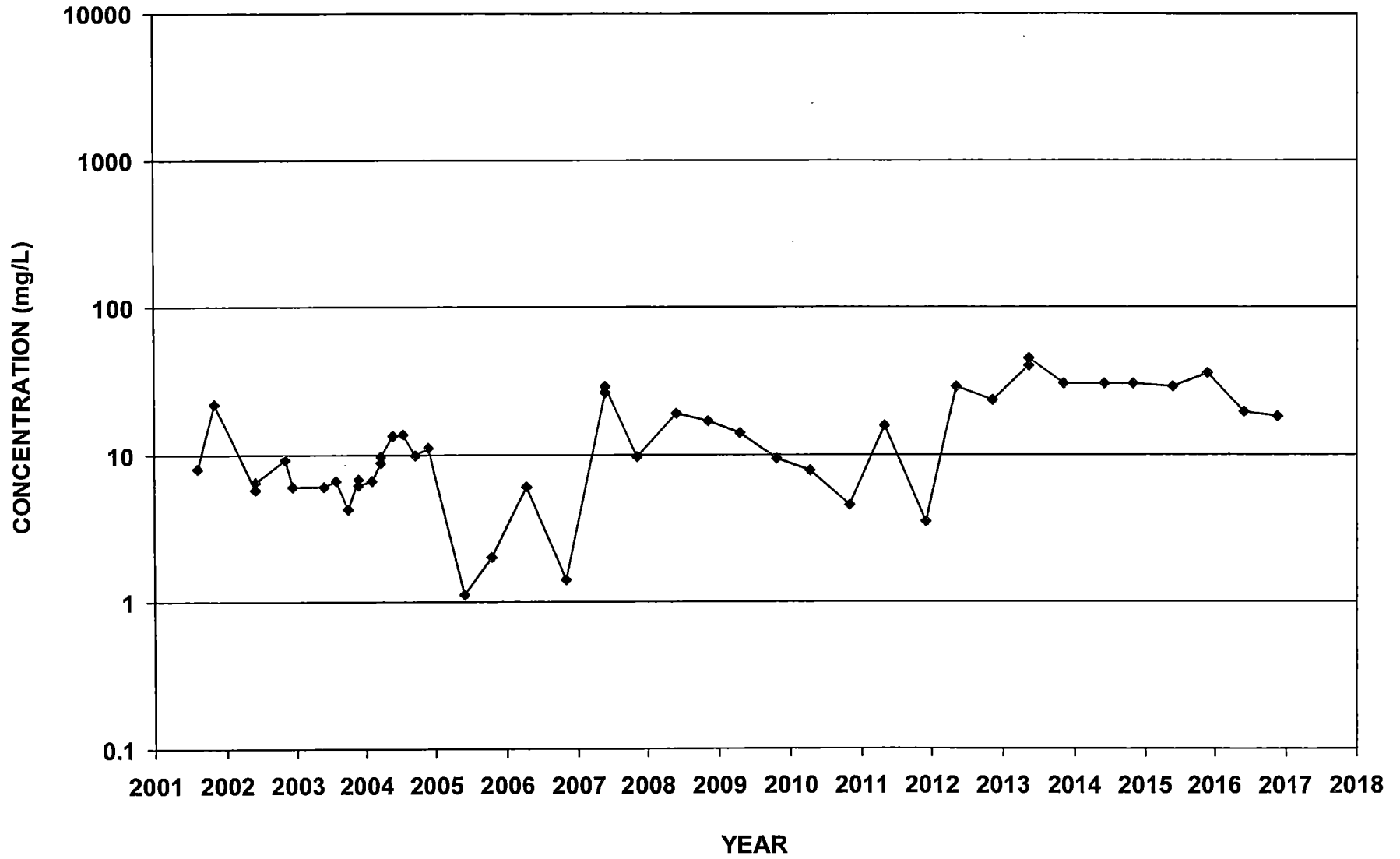
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Nitrate-N



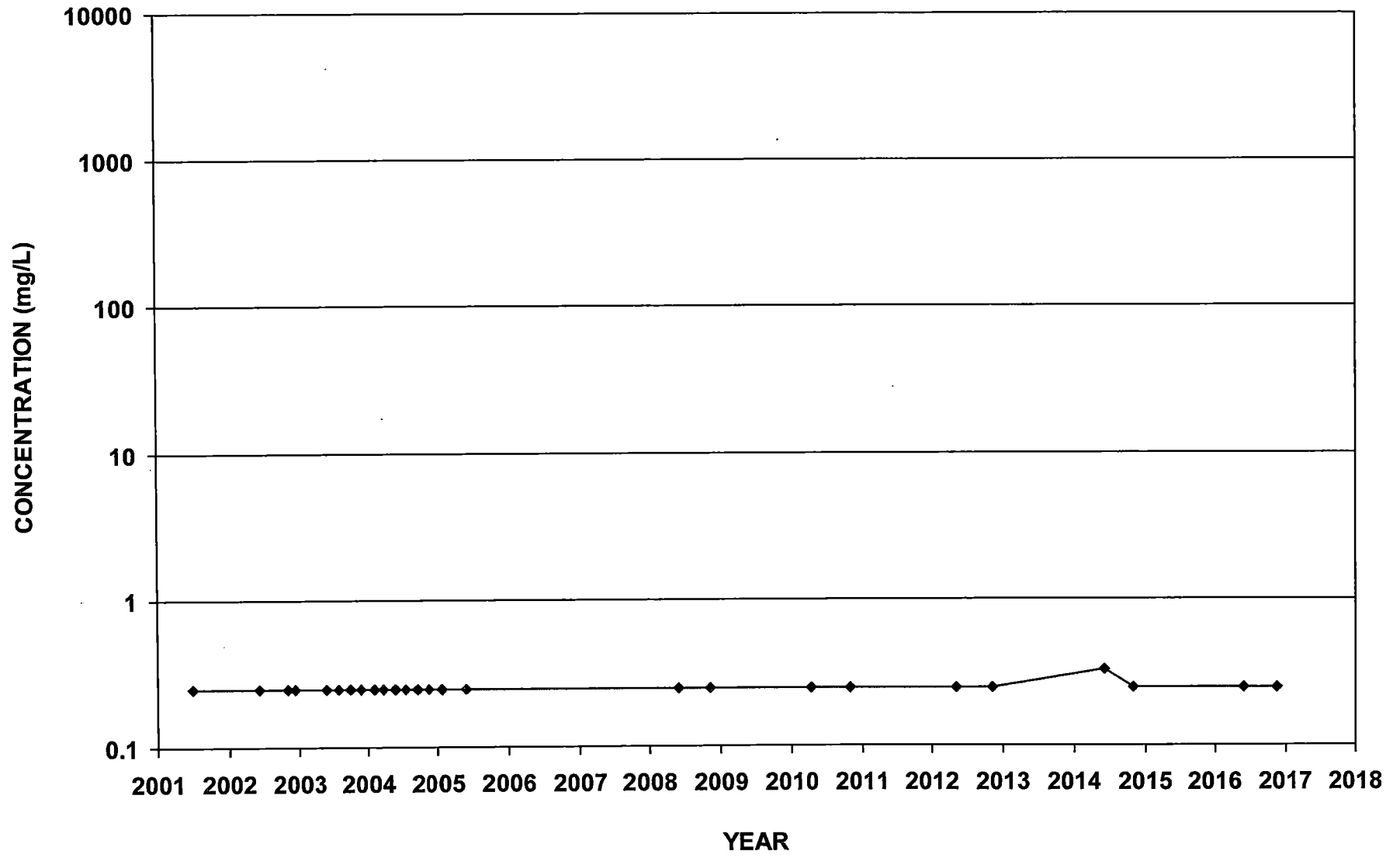
ECMW-10
Nitrate-N



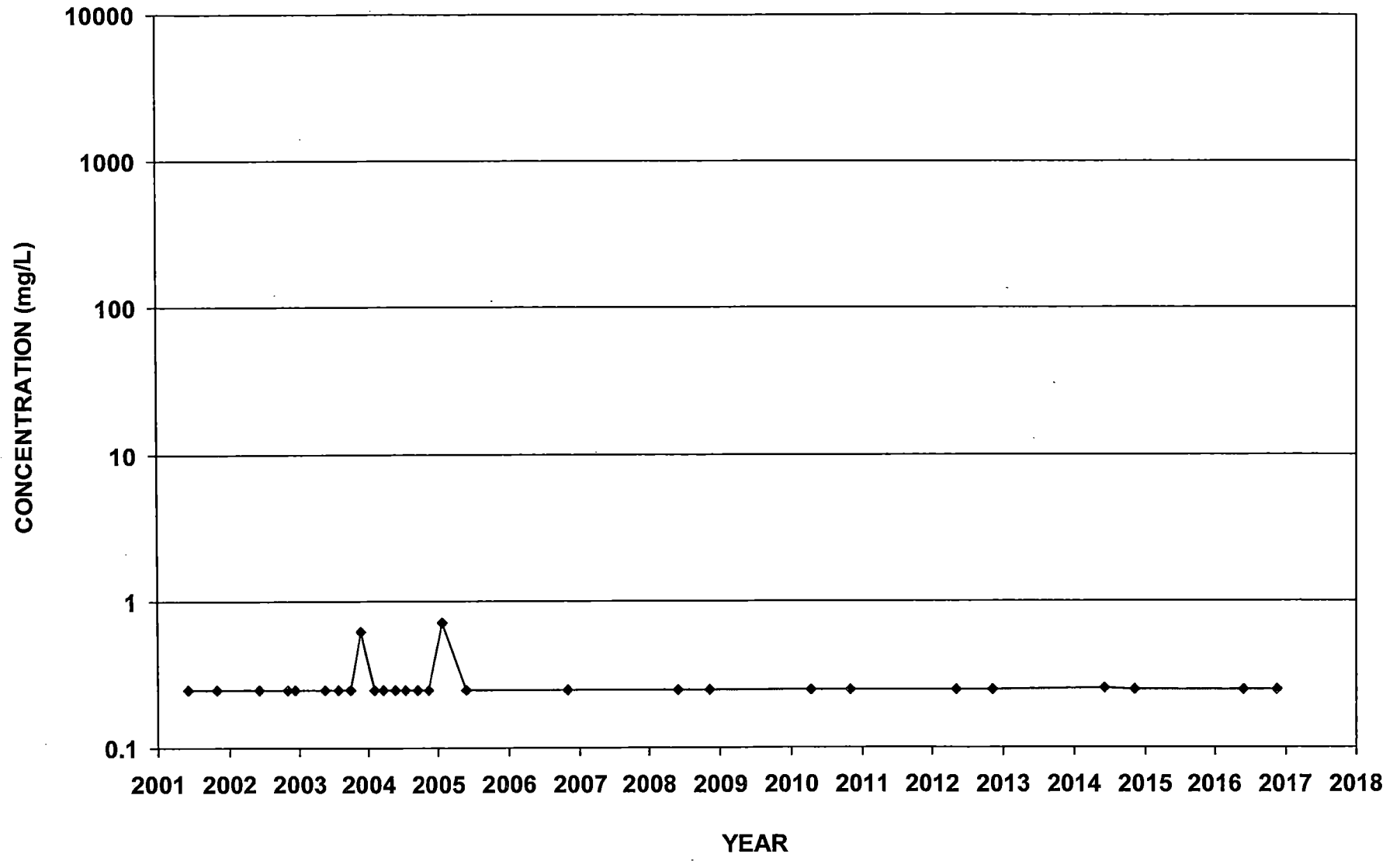
ECMW-11
Nitrate-N



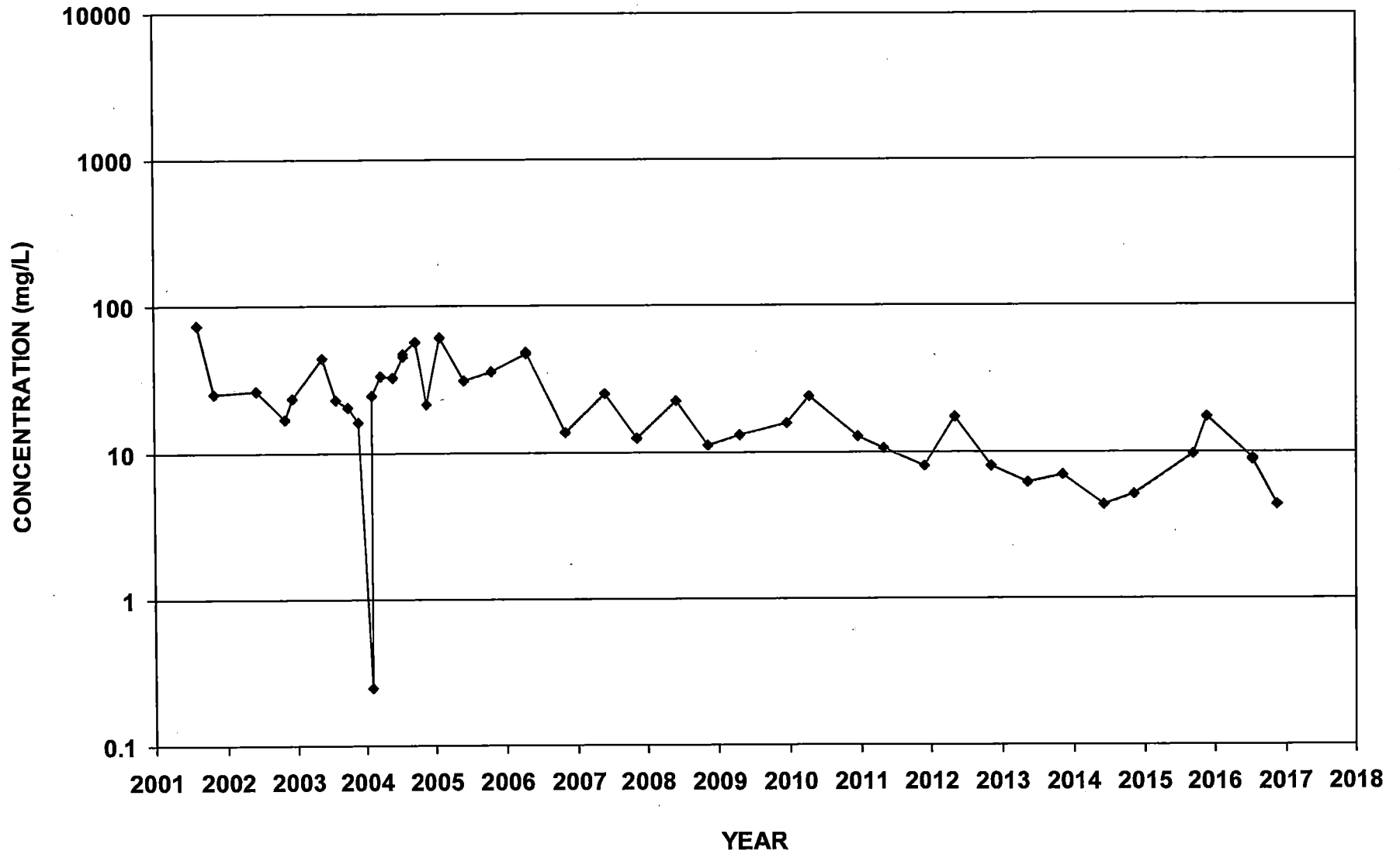
ECMW-12
Nitrate-N



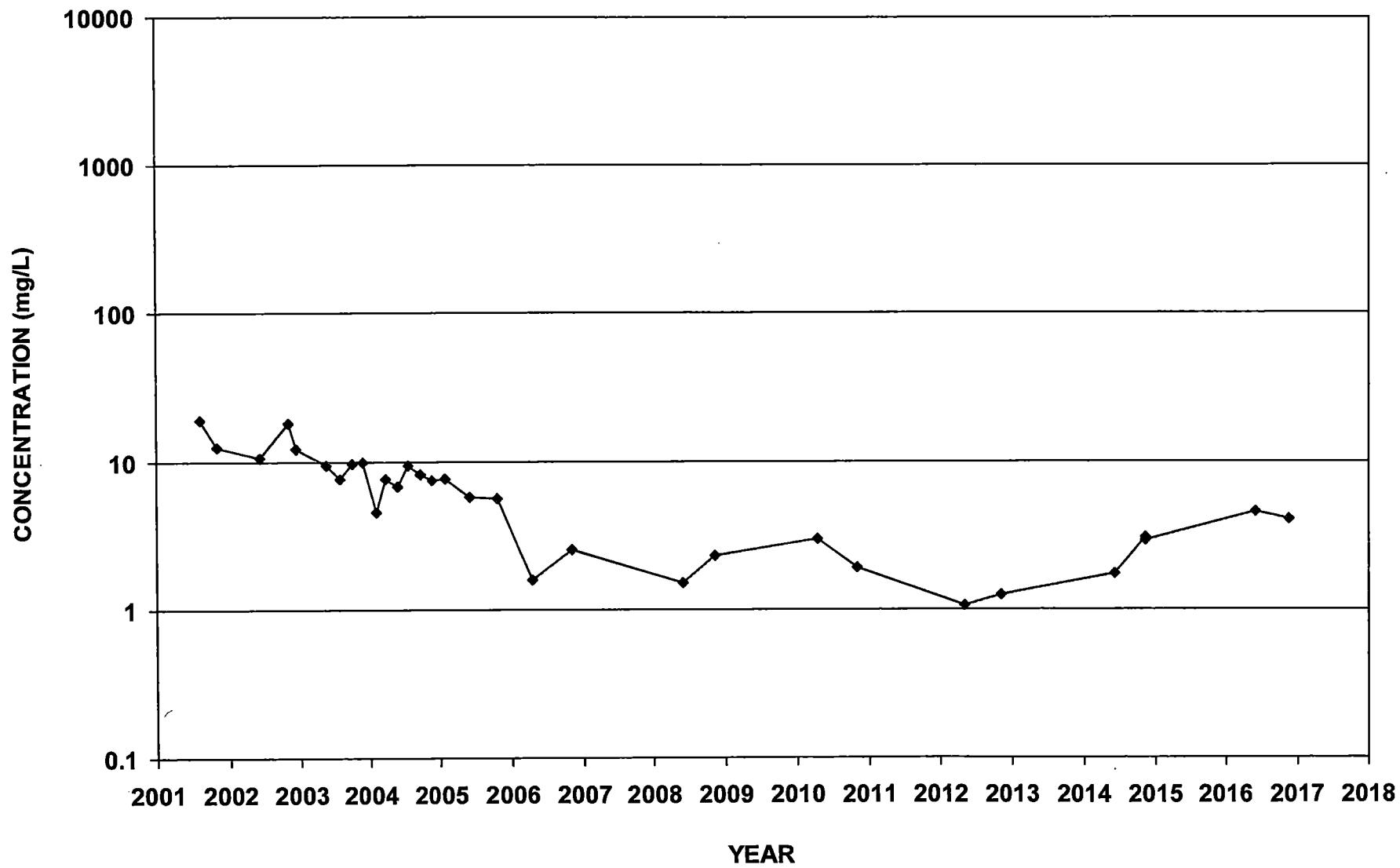
ECMW-13
Nitrate-N



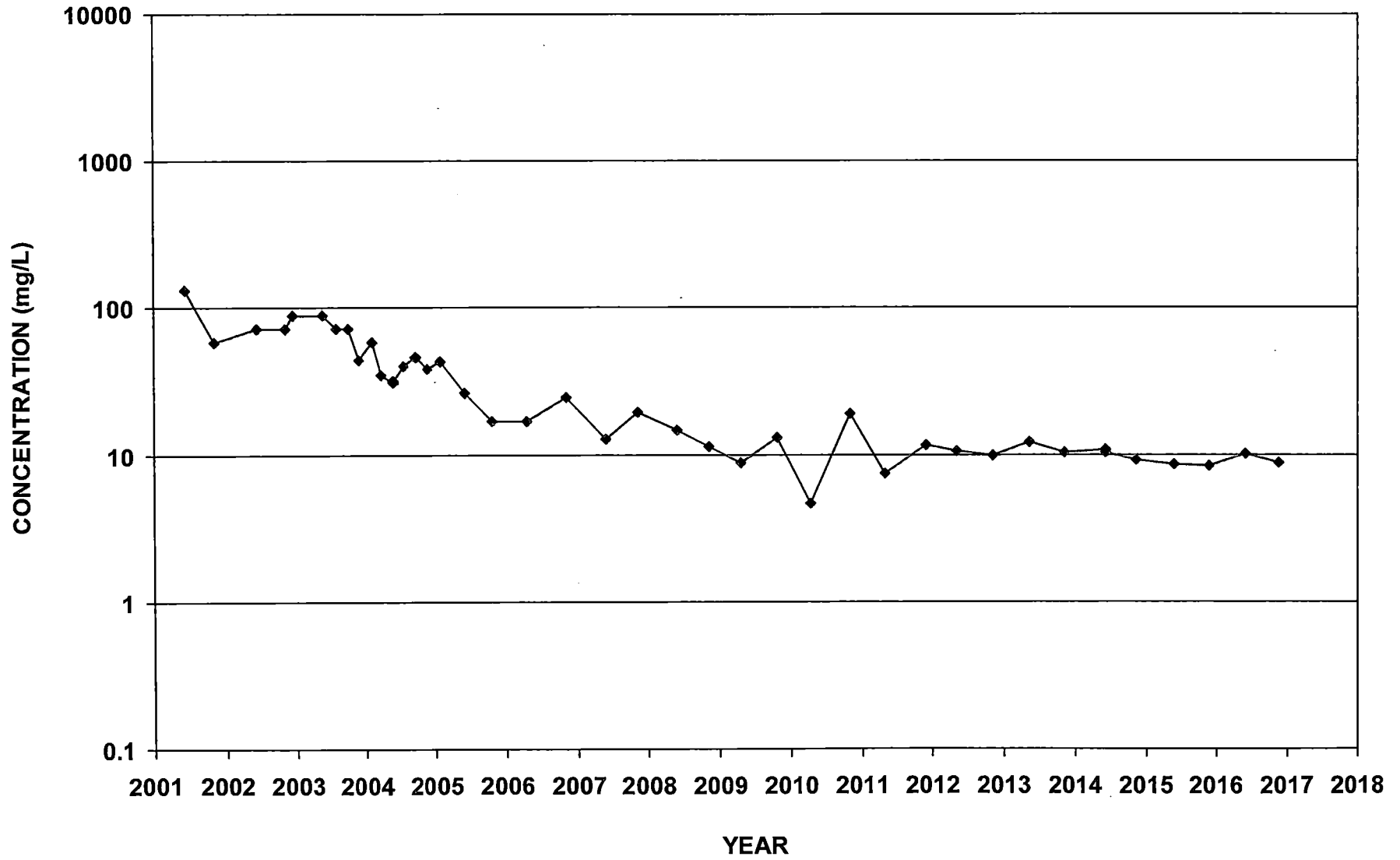
ECMW-14
Nitrate-N



ECMW-15
Nitrate-N

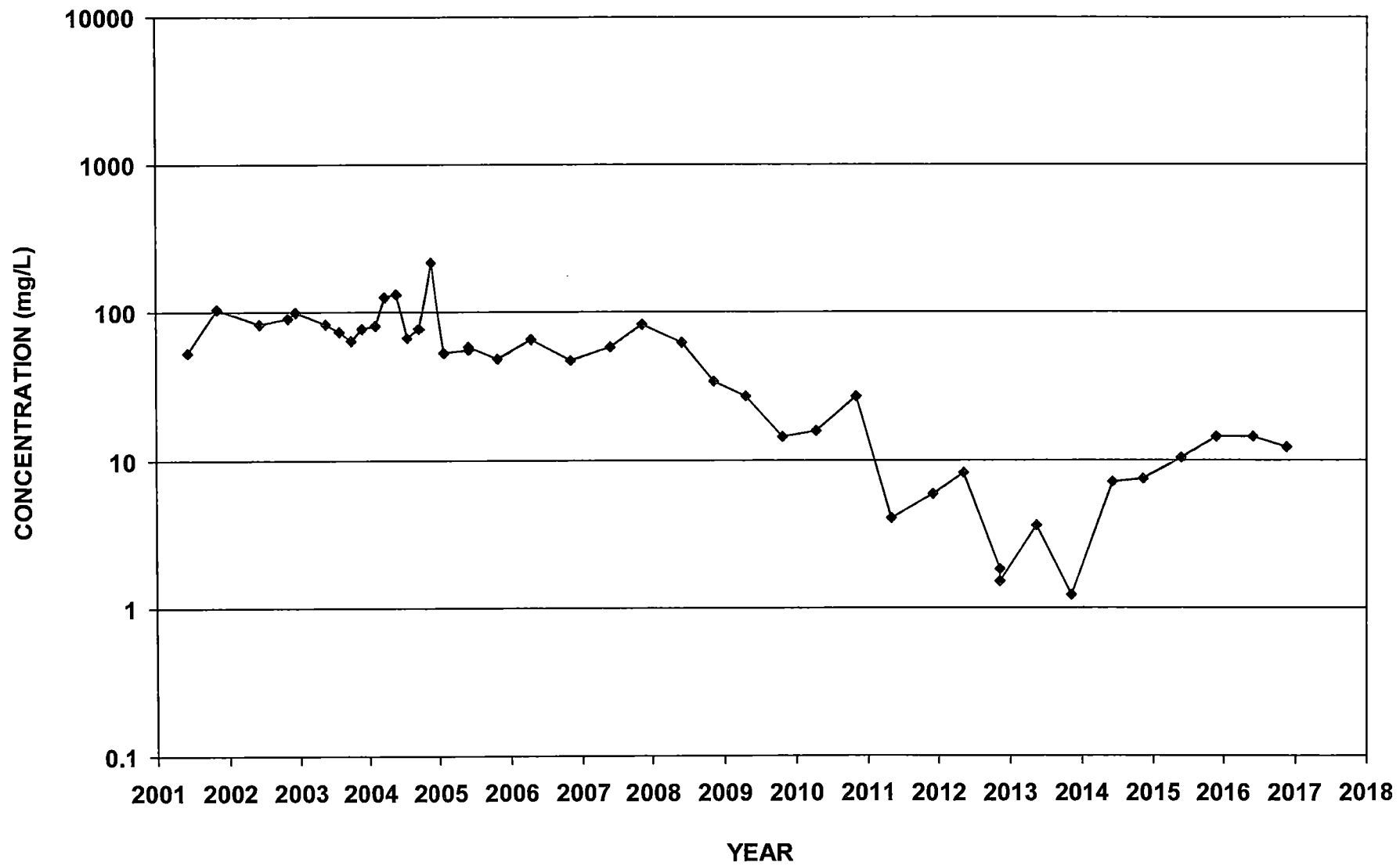


ECMW-16
Nitrate-N

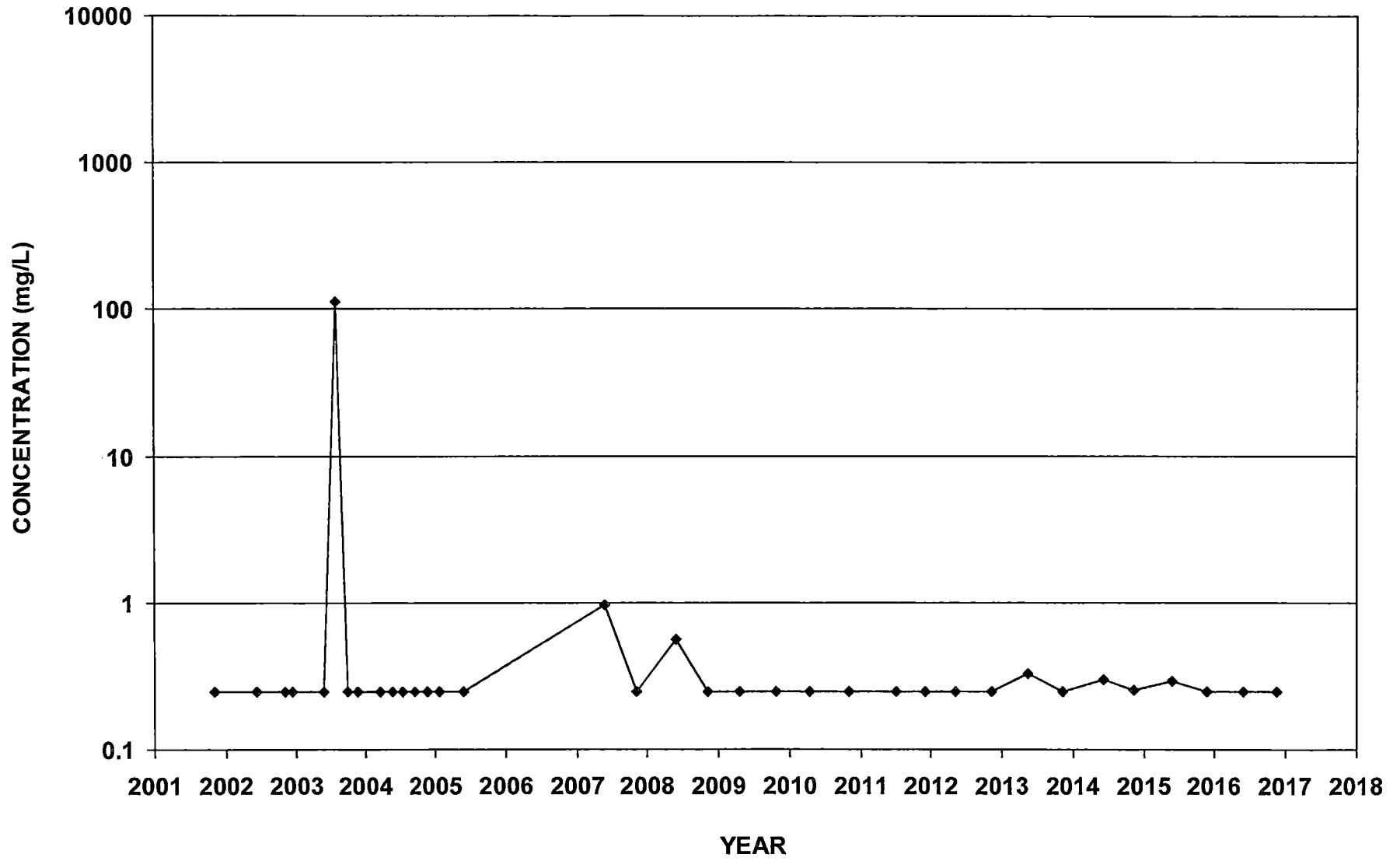


ECMW-17

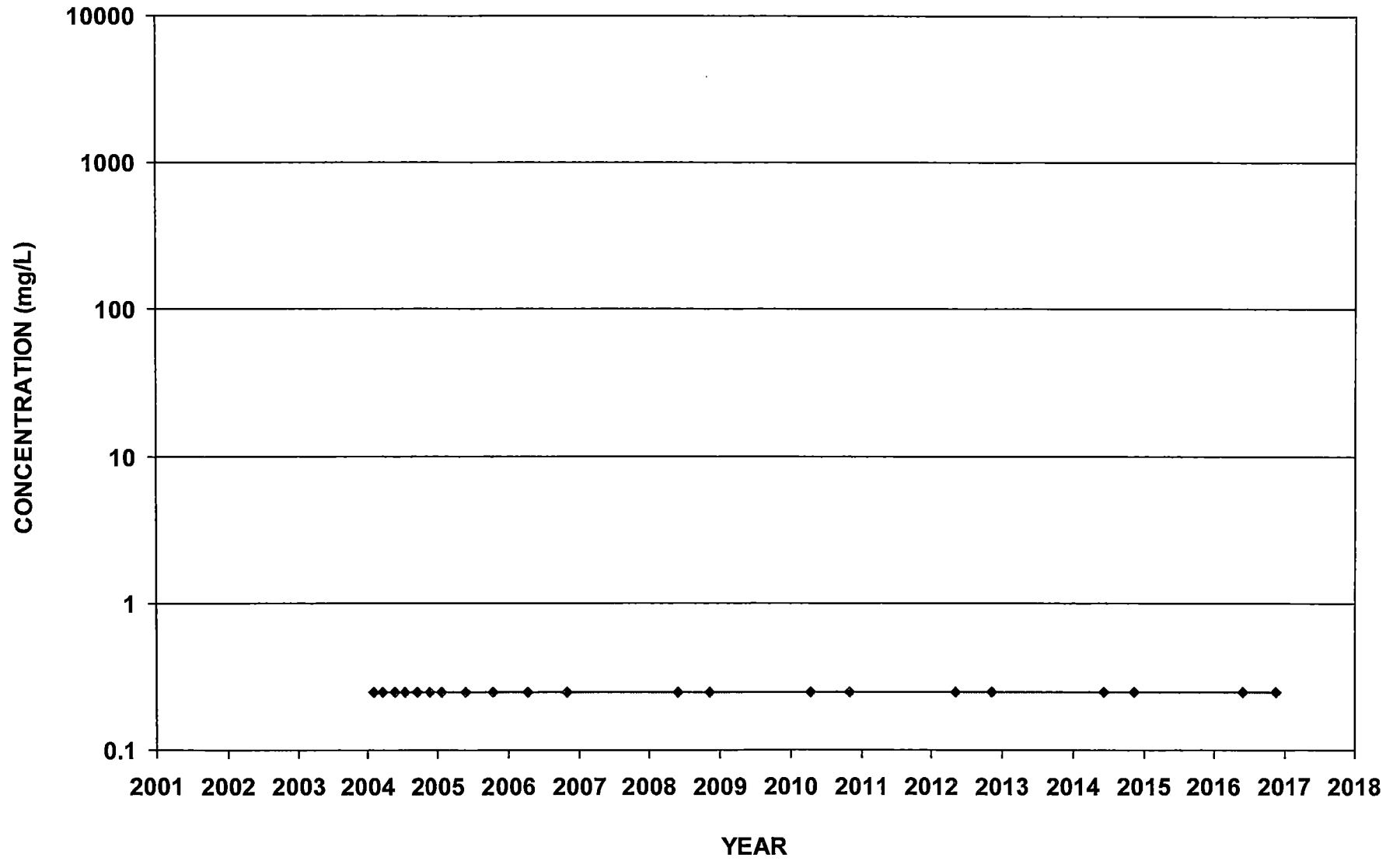
Nitrate-N



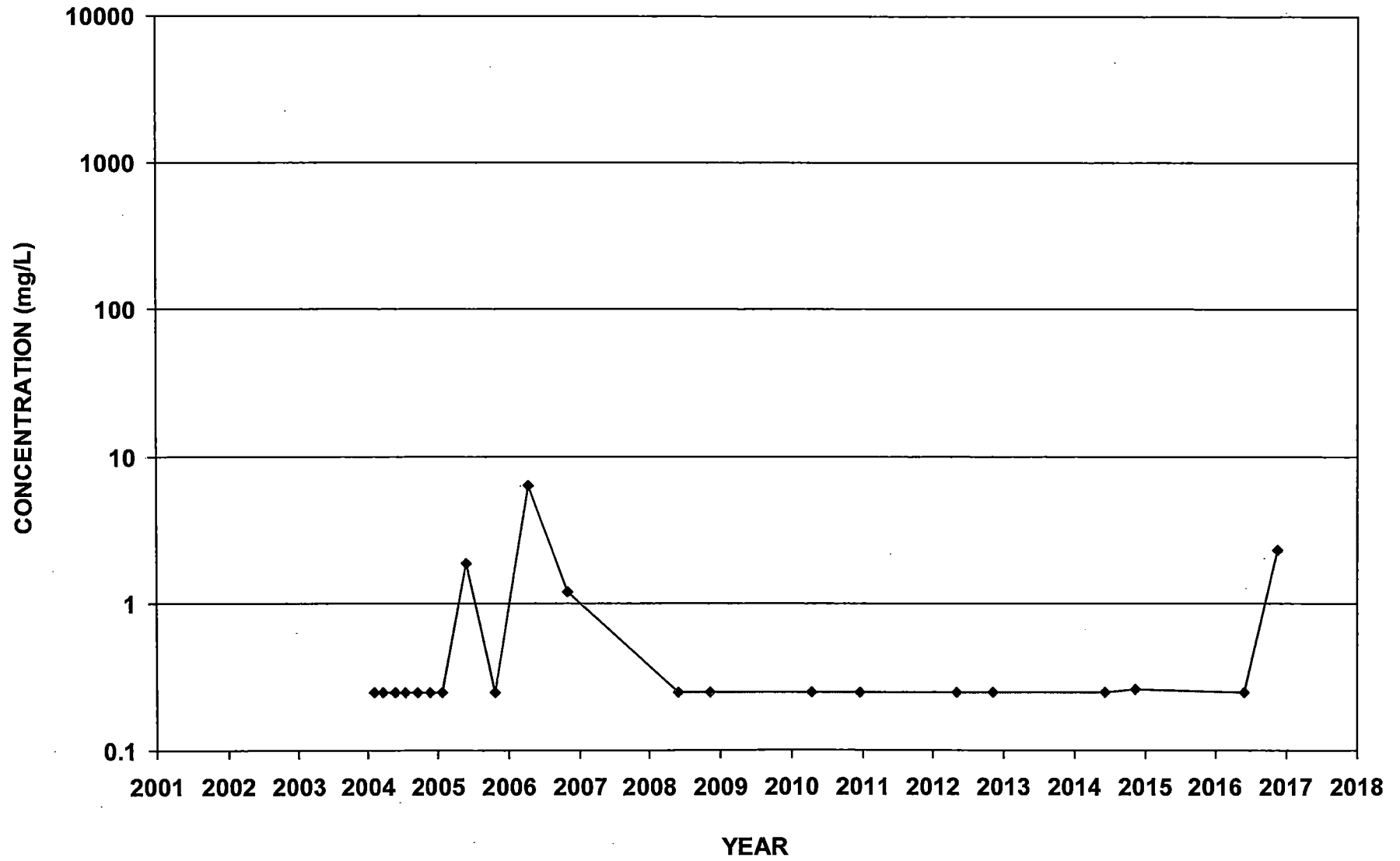
ECMW-18
Nitrate-N



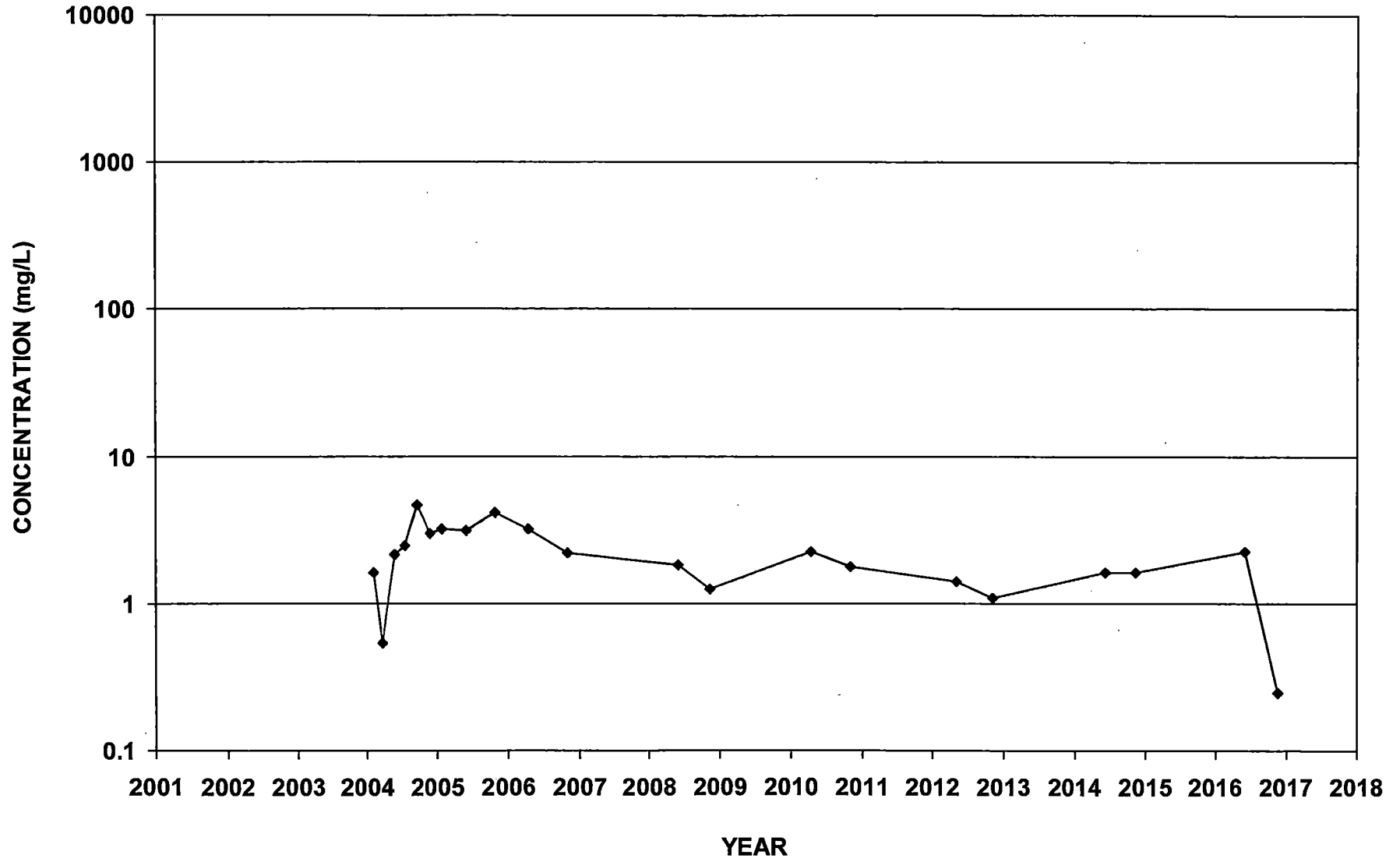
ECMW-19
Nitrate-N



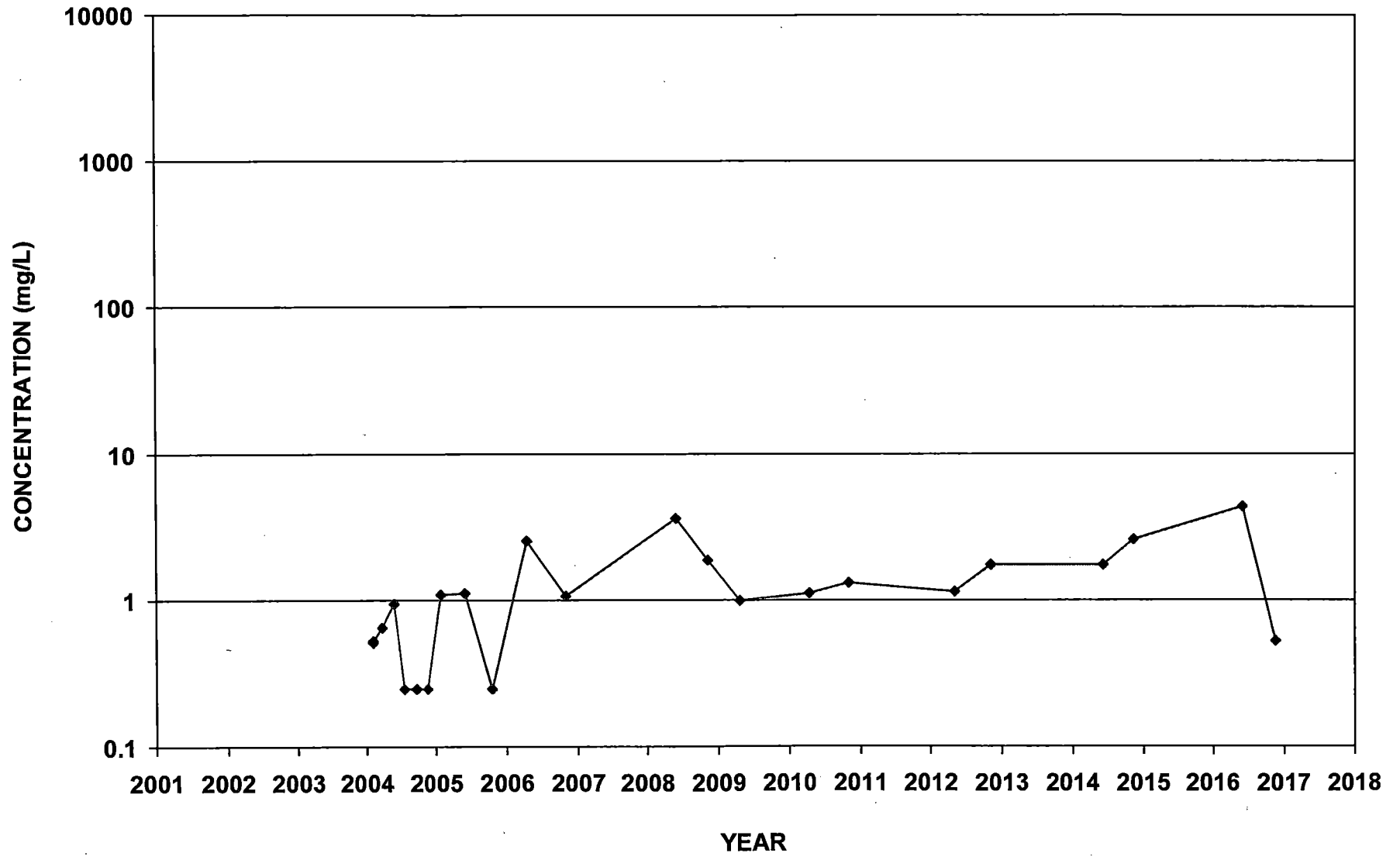
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Nitrate-N



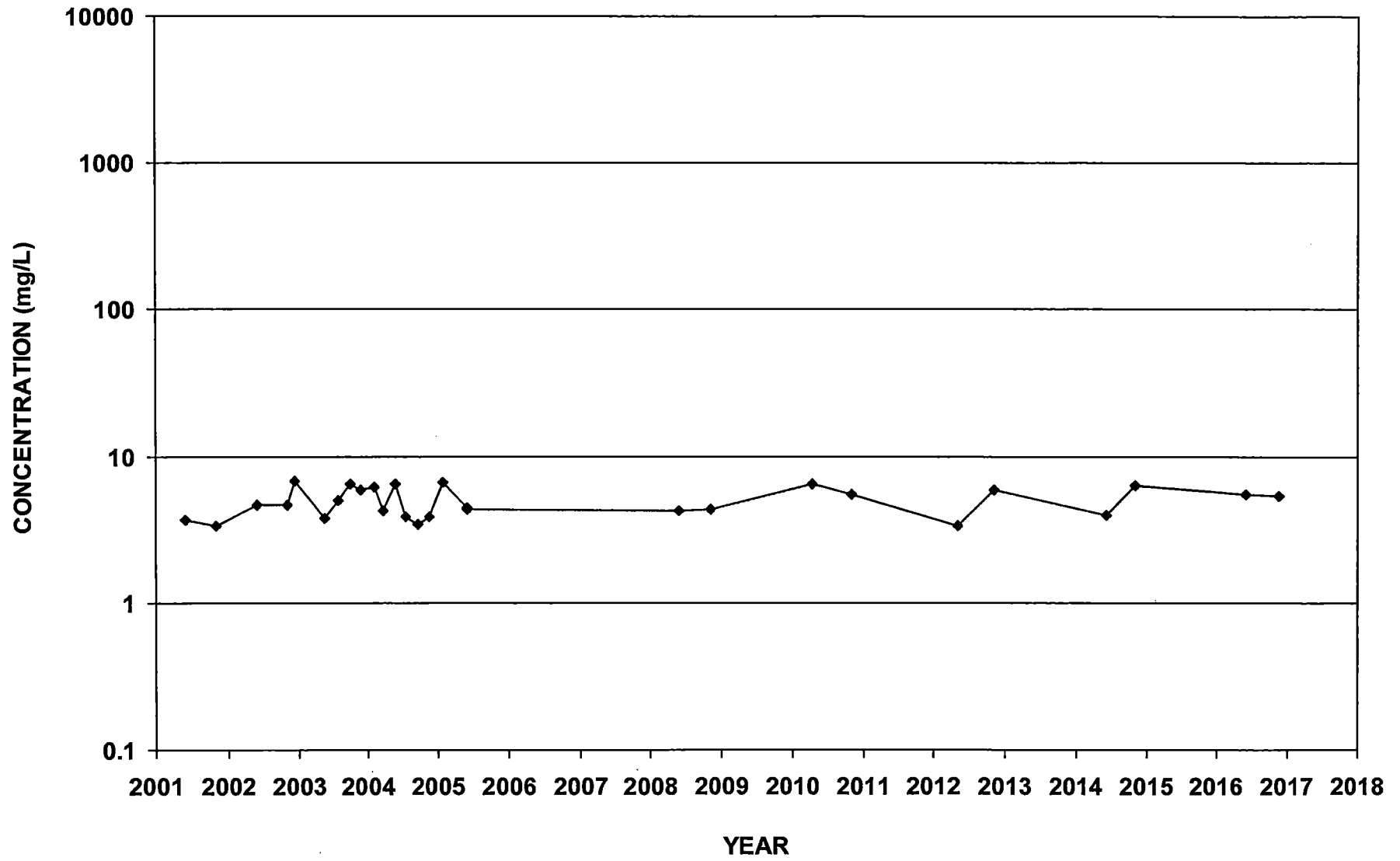
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Nitrate-N



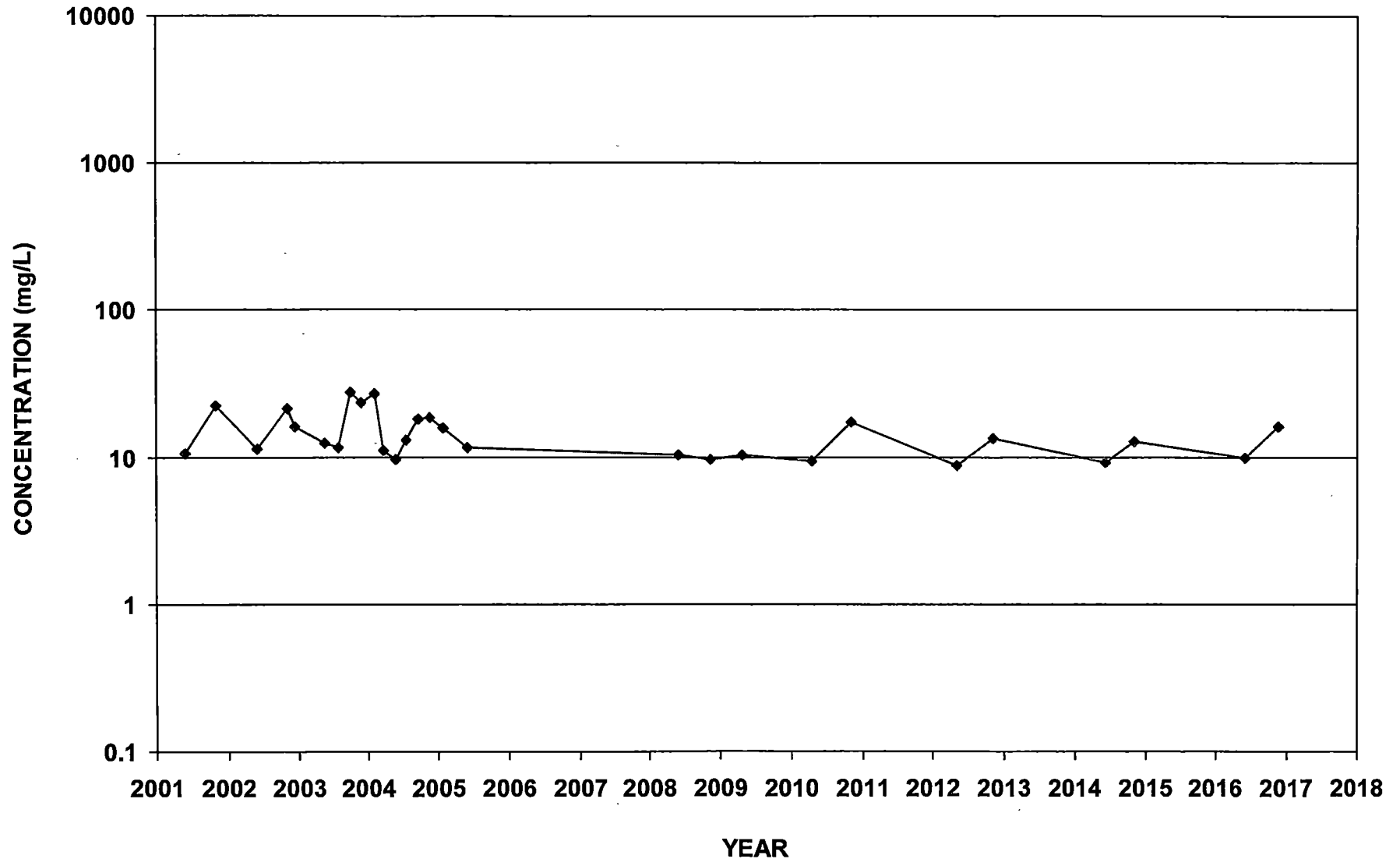
ECMW-22
Nitrate-N



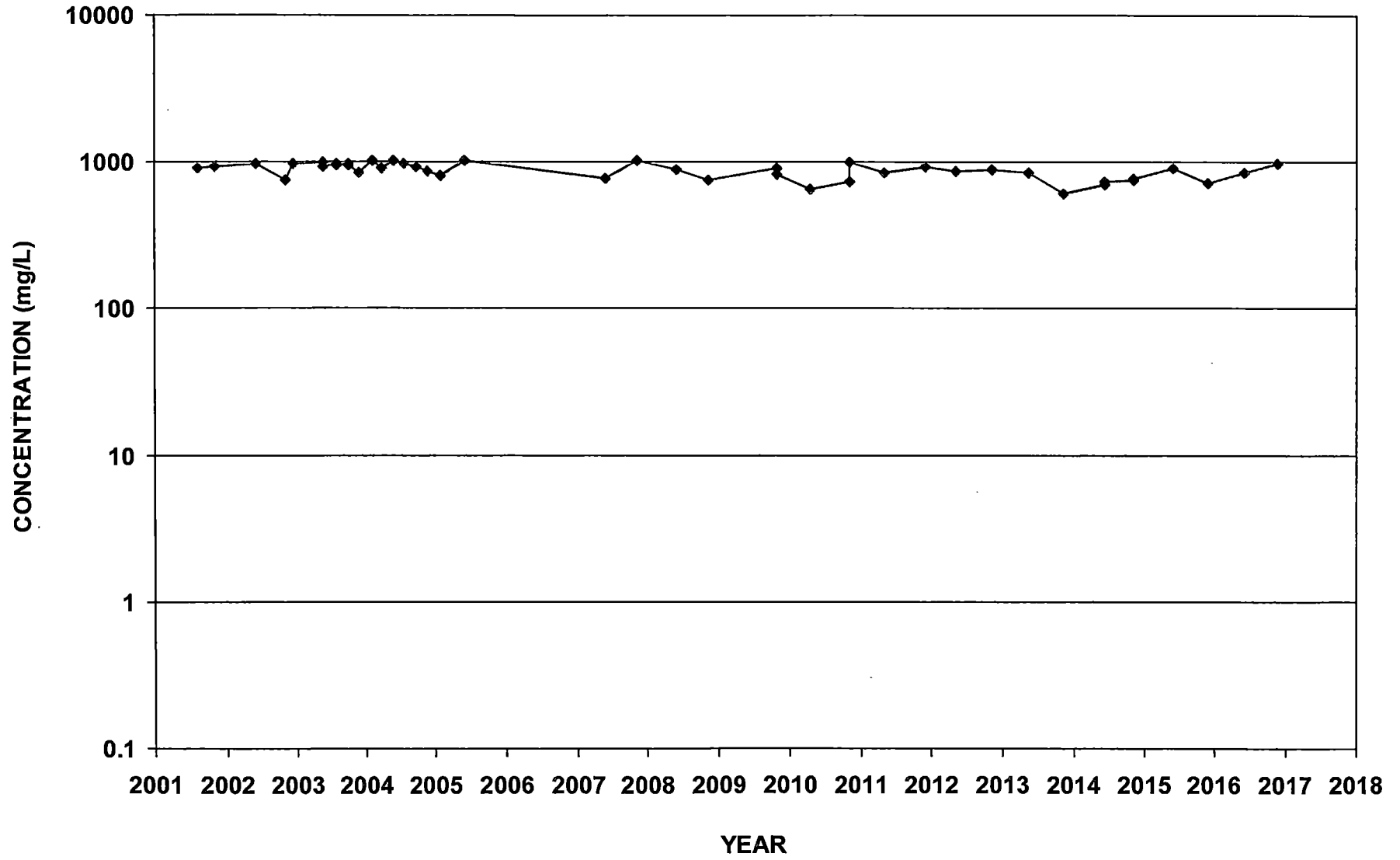
ECMW-1
Sulfate as SO4



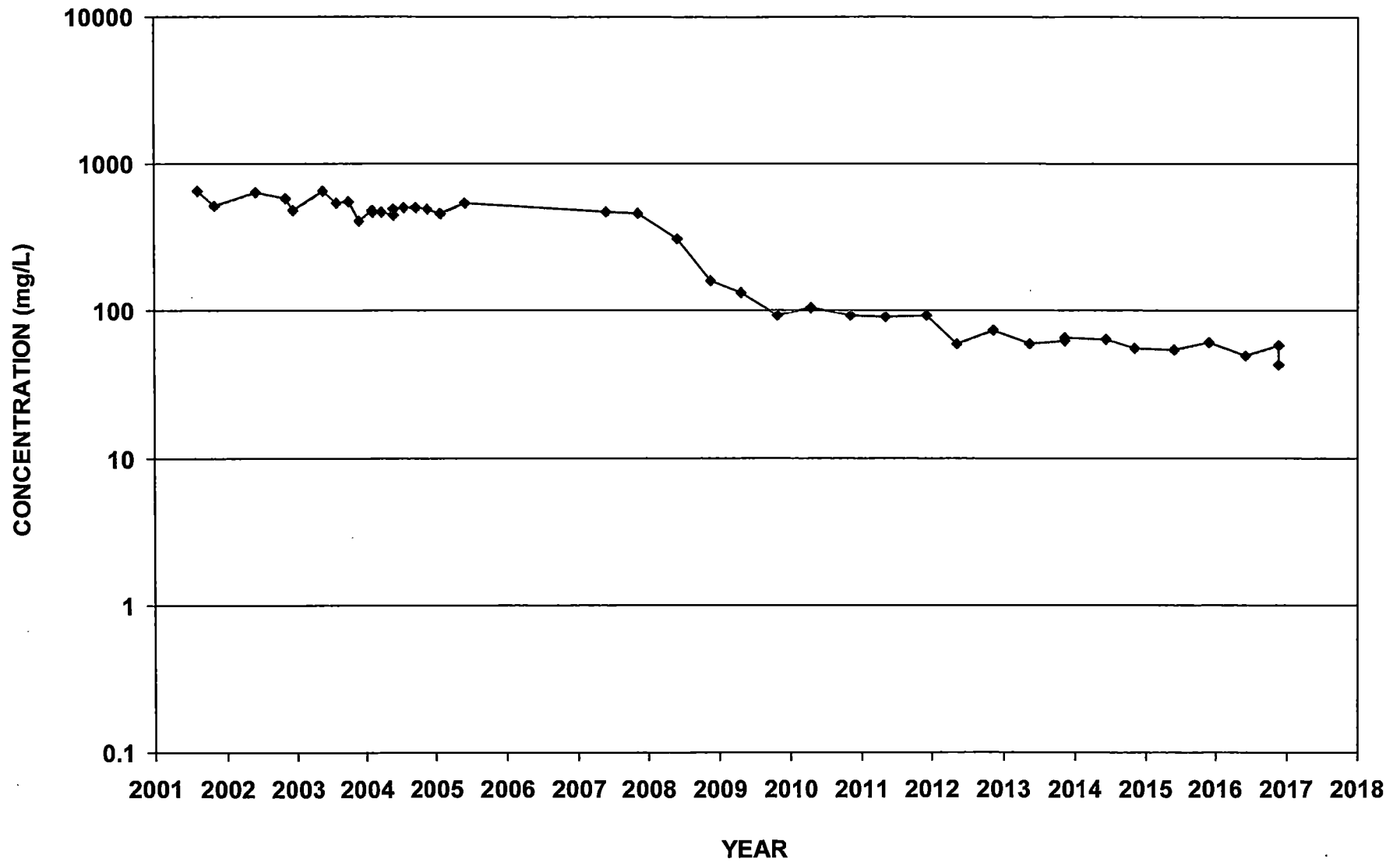
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Sulfate as SO4



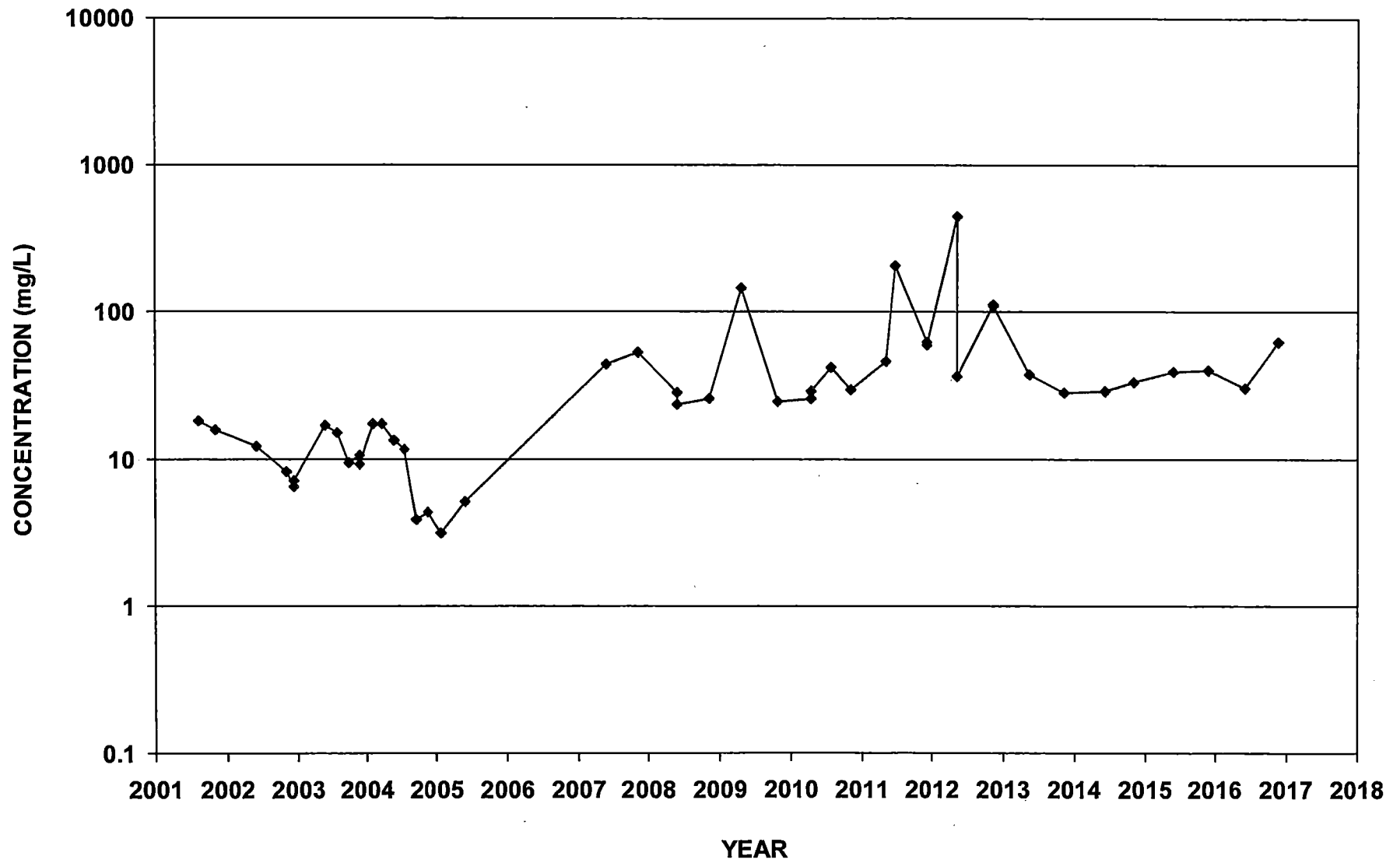
ECMW-4
Sulfate as SO₄



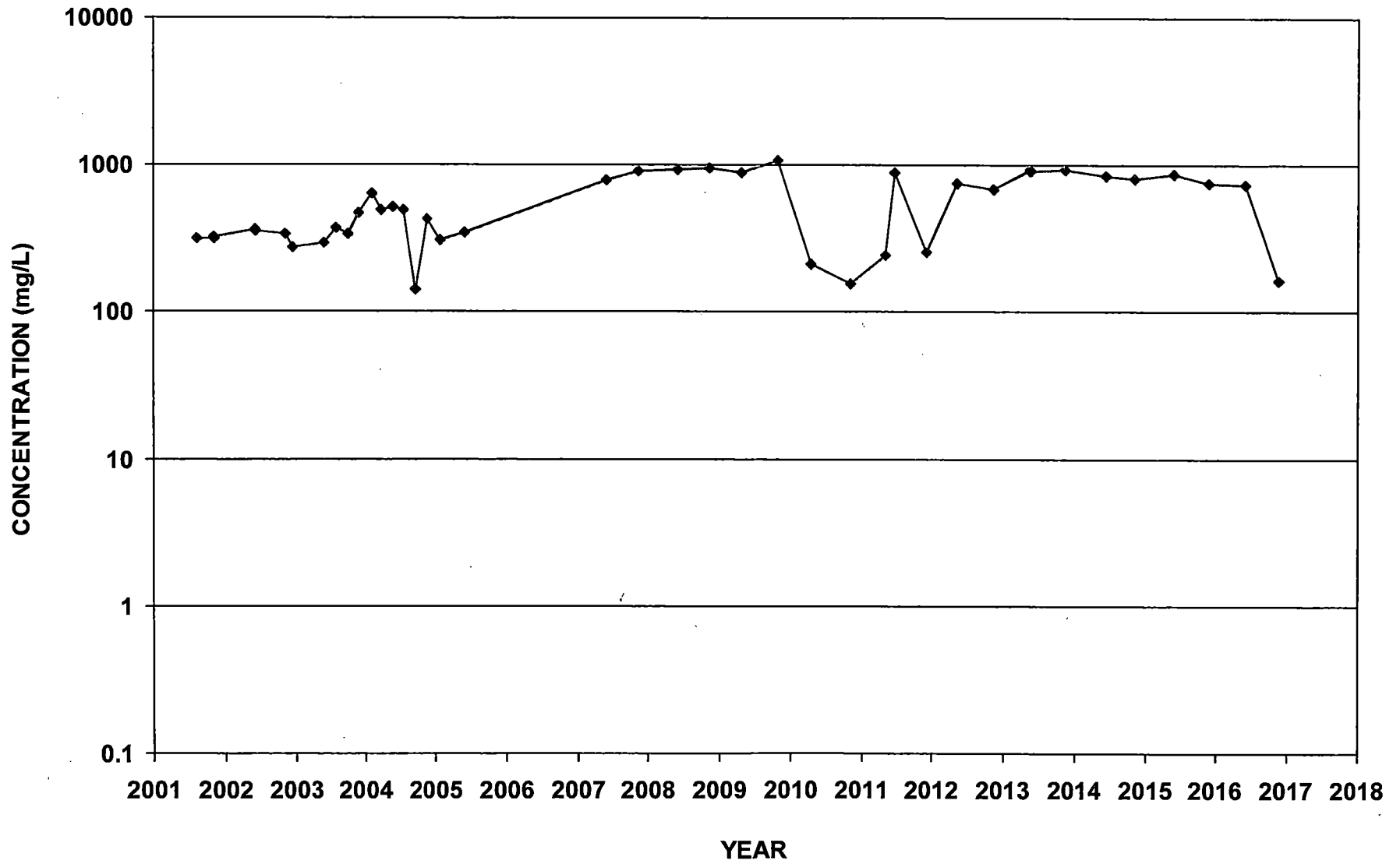
ECMW-5
Sulfate as SO₄



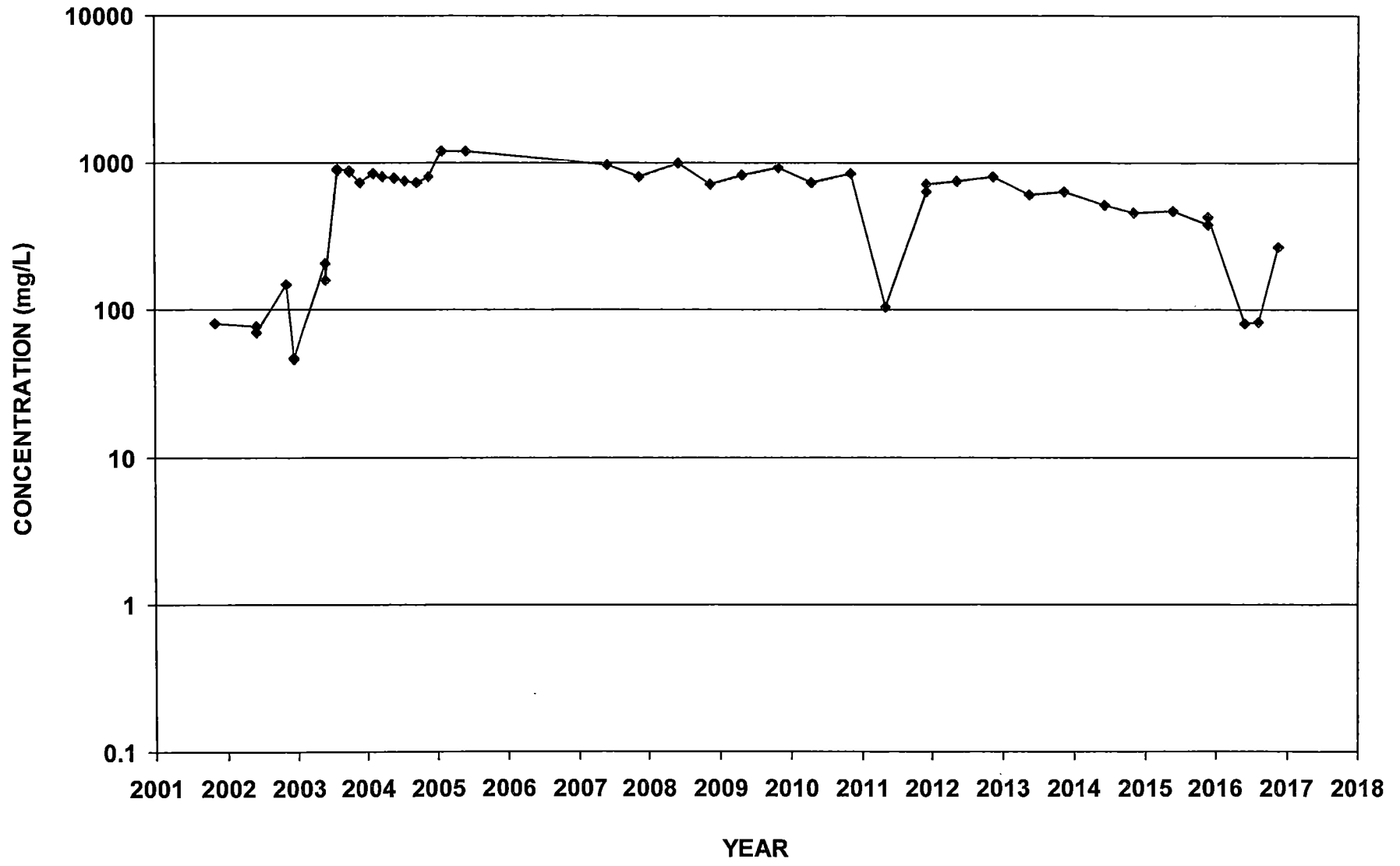
ECMW-6
Sulfate as SO4



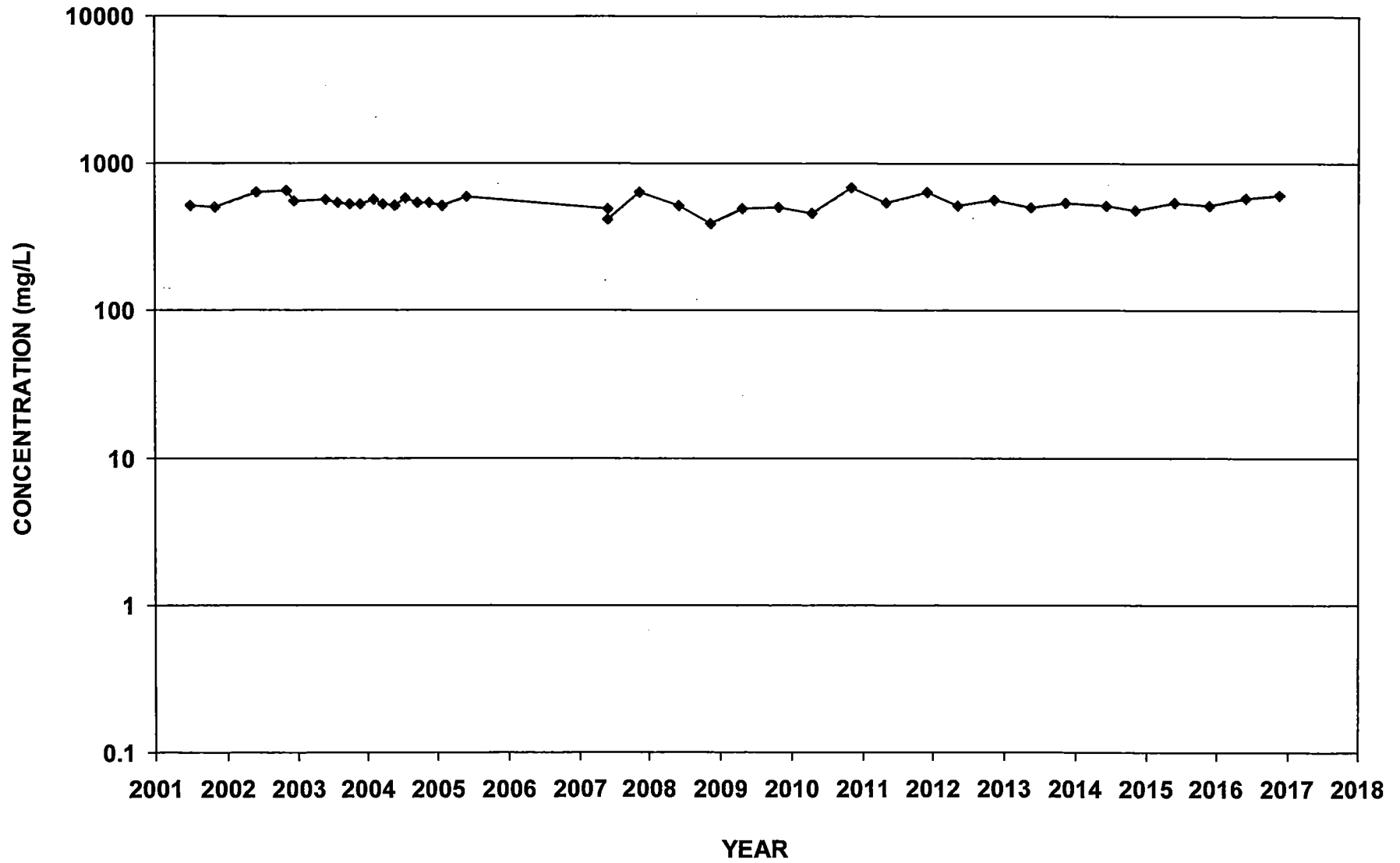
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Sulfate as SO₄



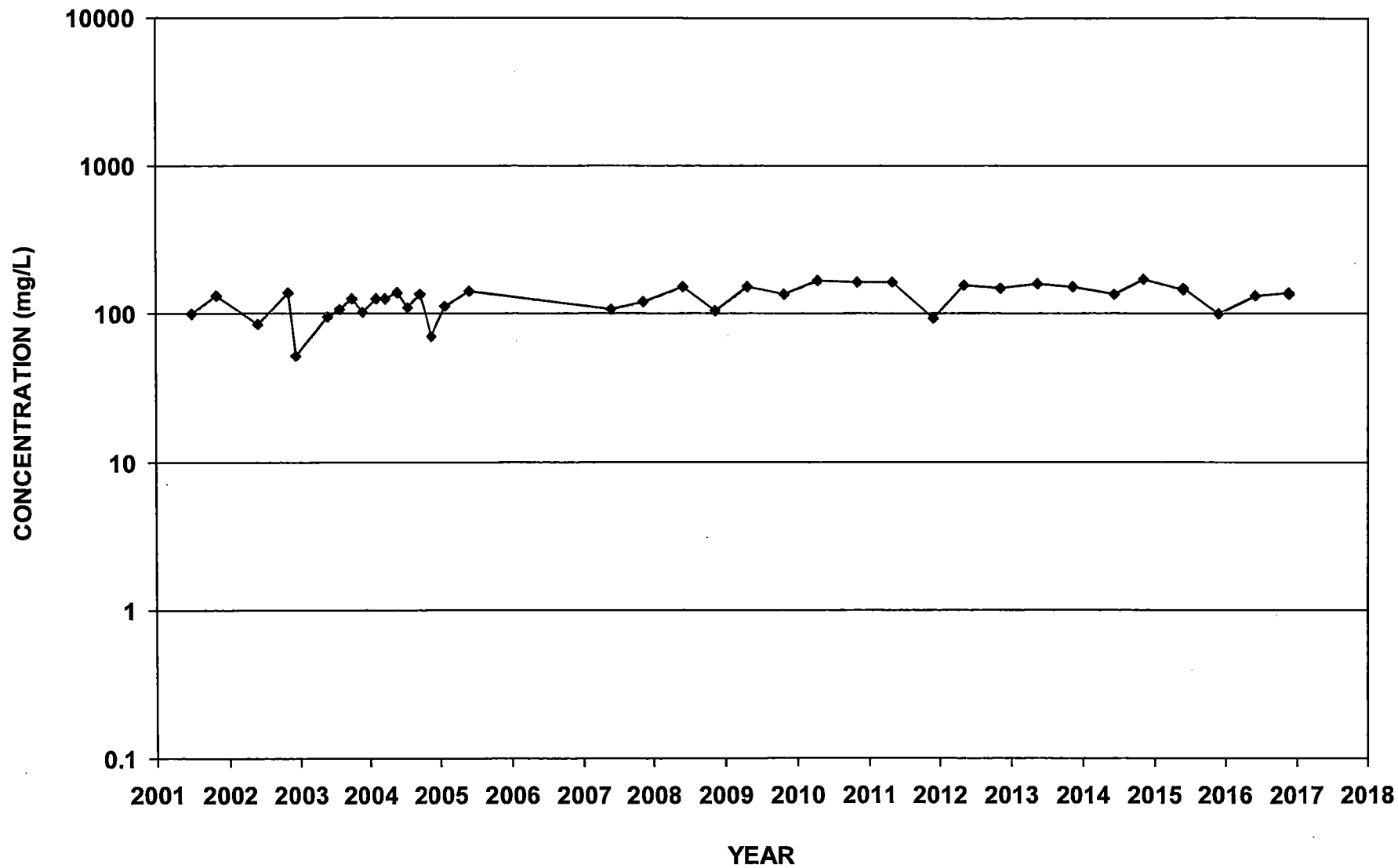
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Sulfate as SO₄



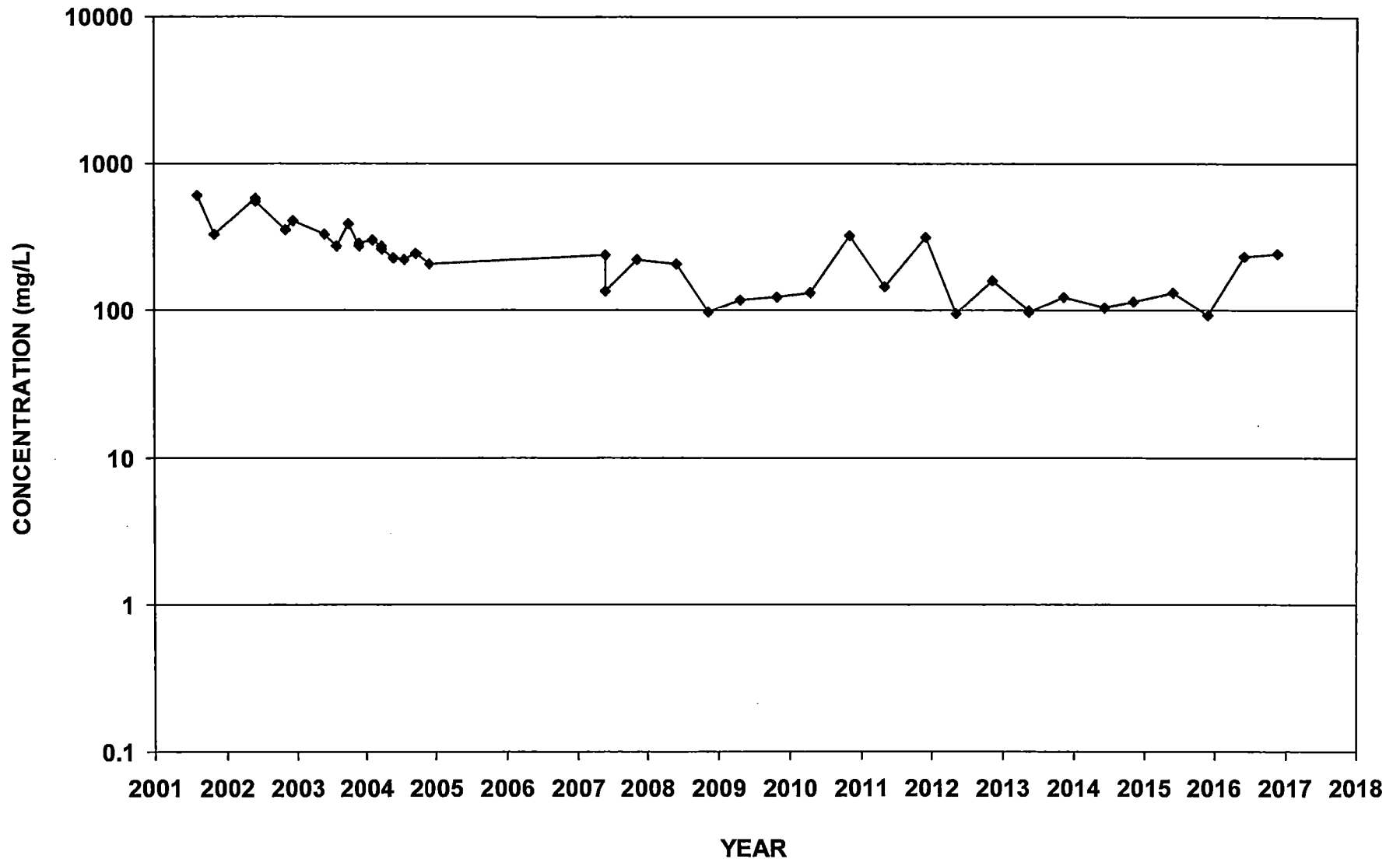
ECMW-9
Sulfate as SO₄



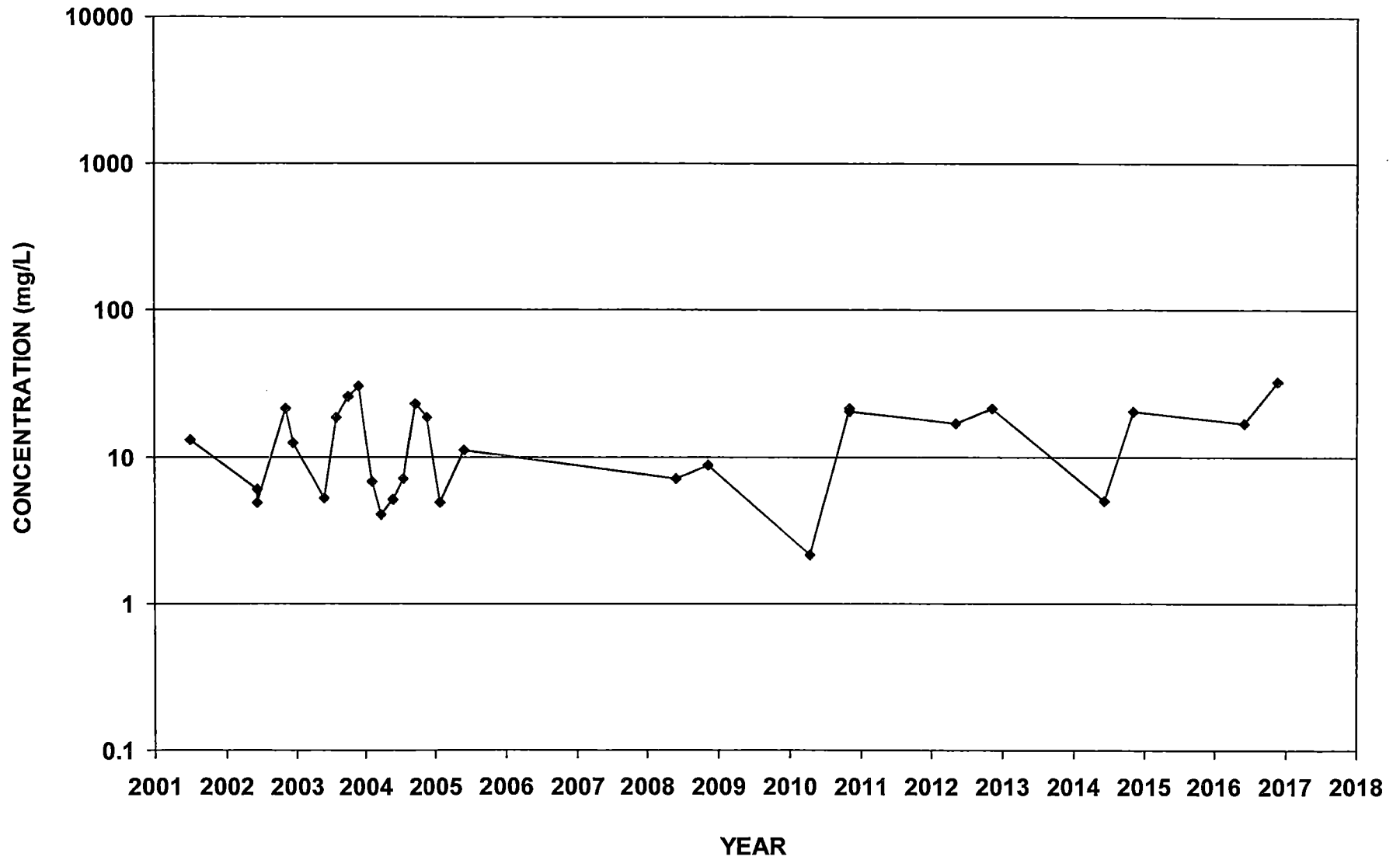
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Sulfate as SO₄



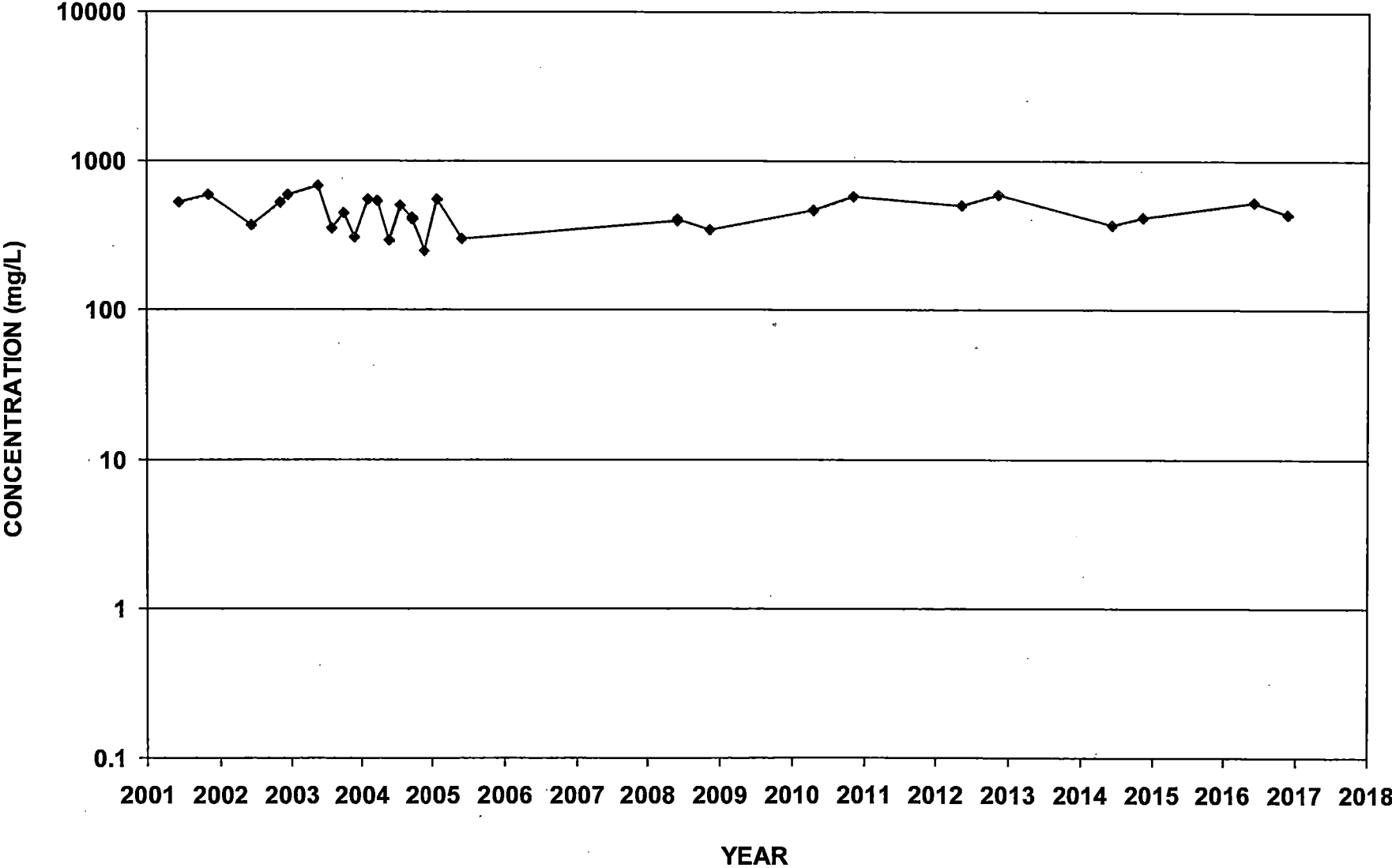
ECMW-11
Sulfate as SO4



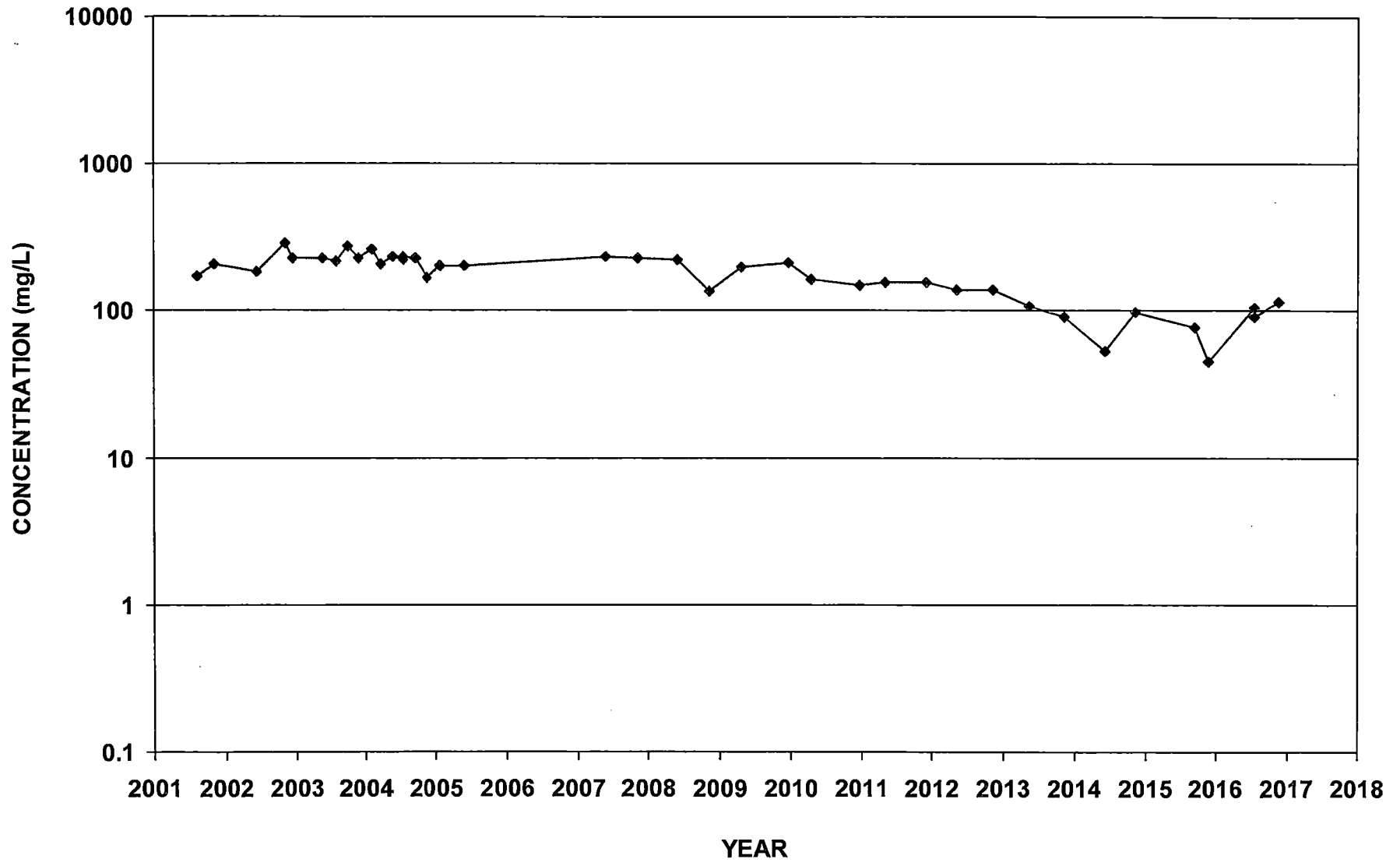
ECMW-12
Sulfate as SO4



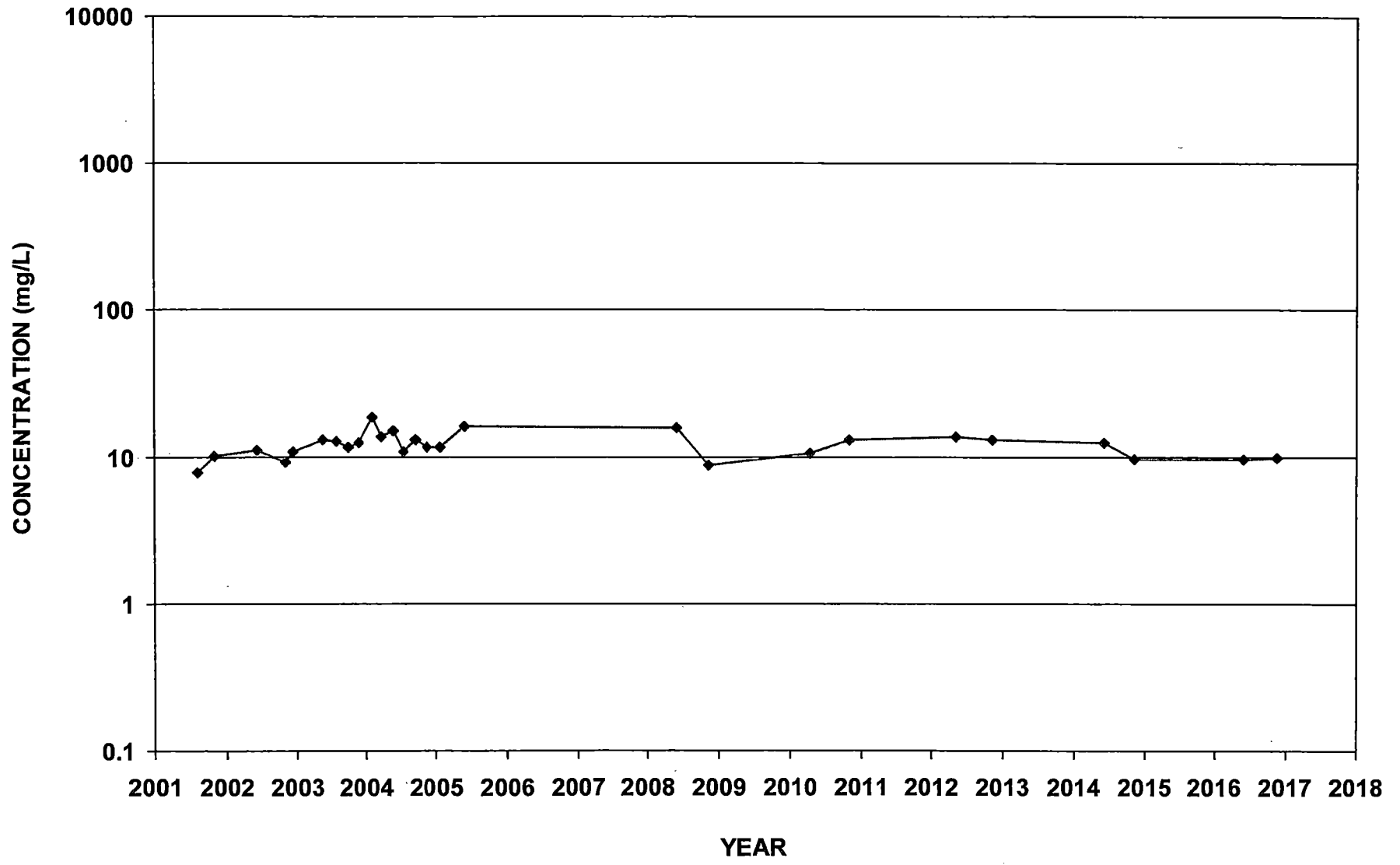
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Sulfate as SO4



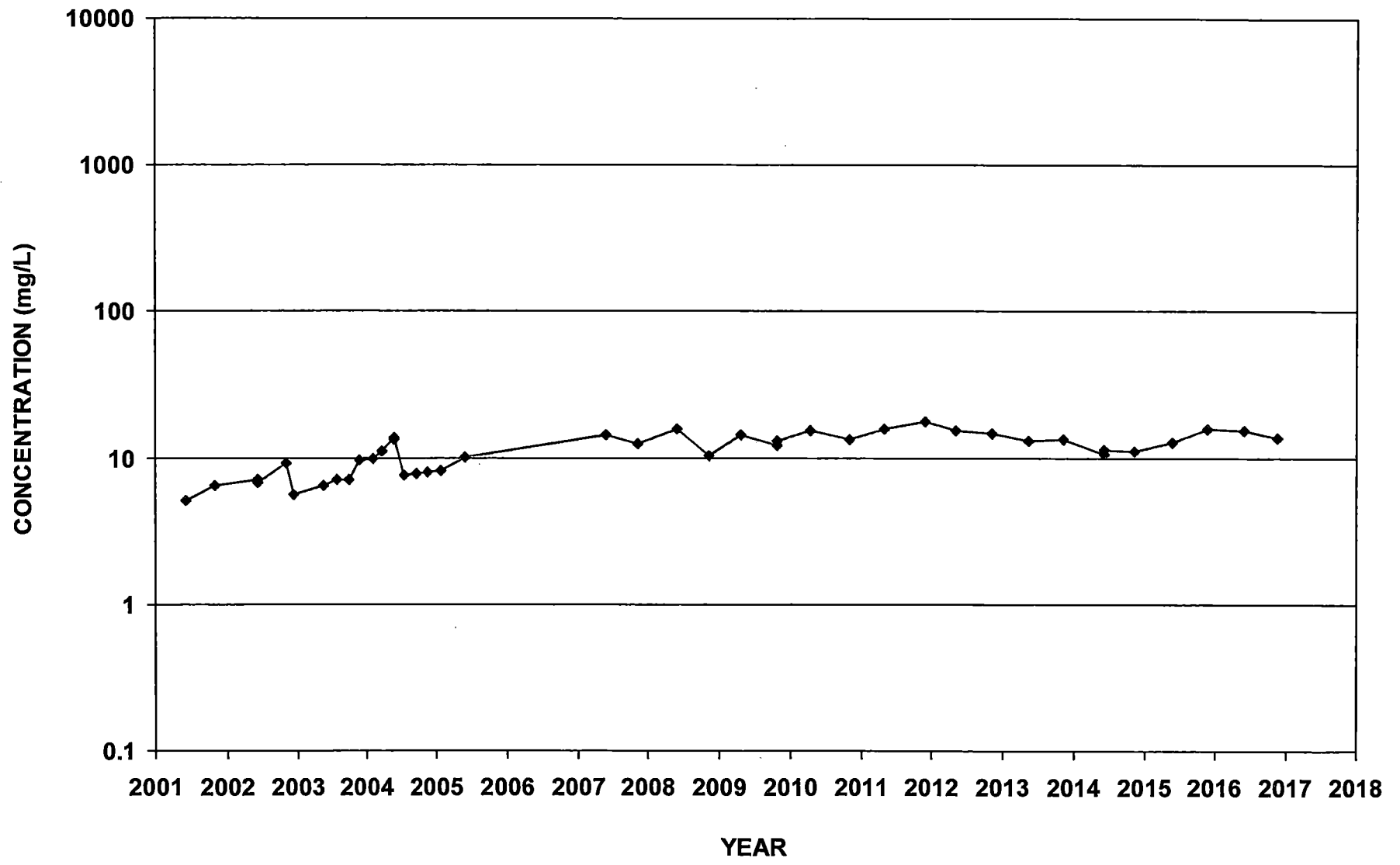
ECMW-14
Sulfate as SO4



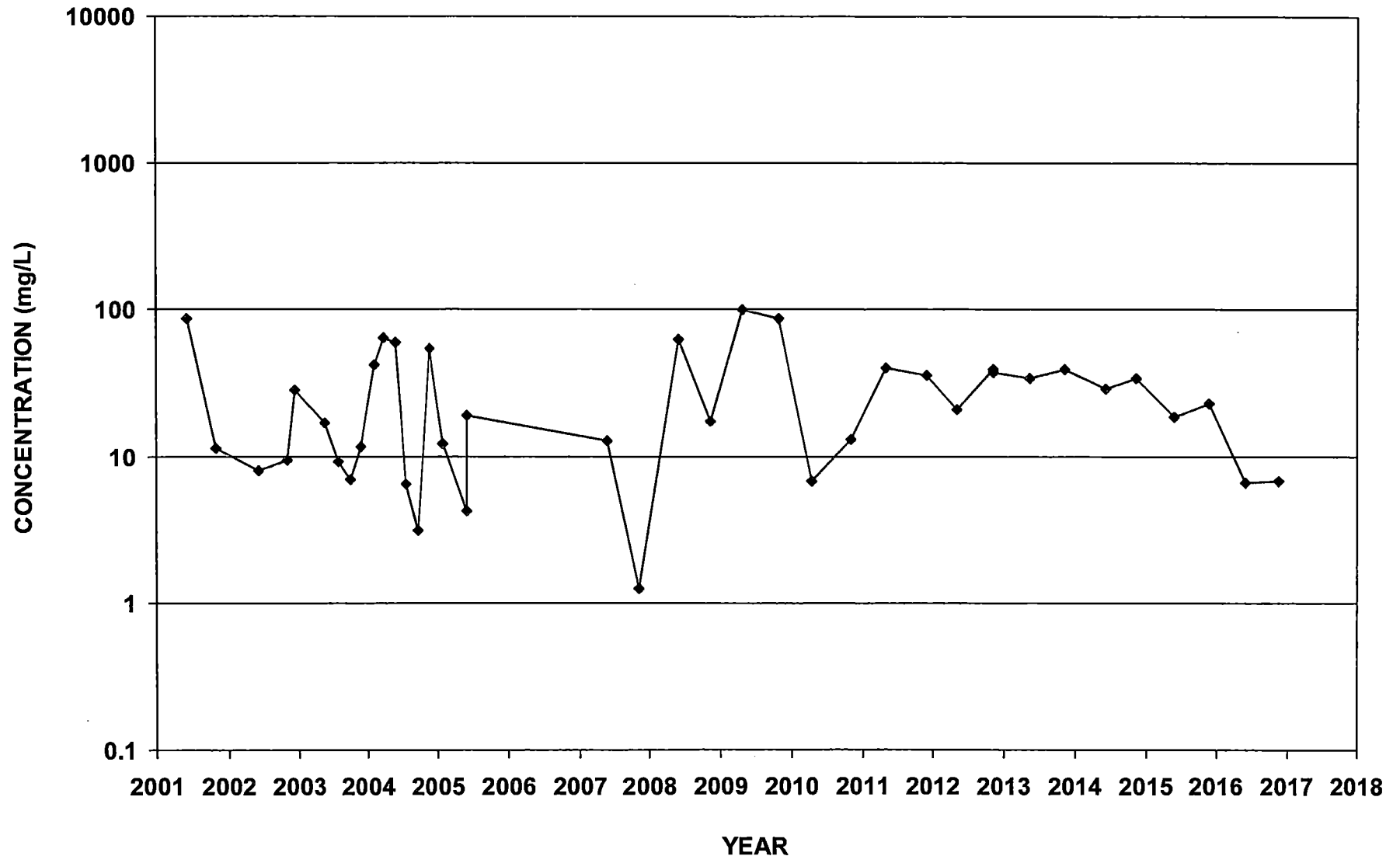
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Sulfate as SO4



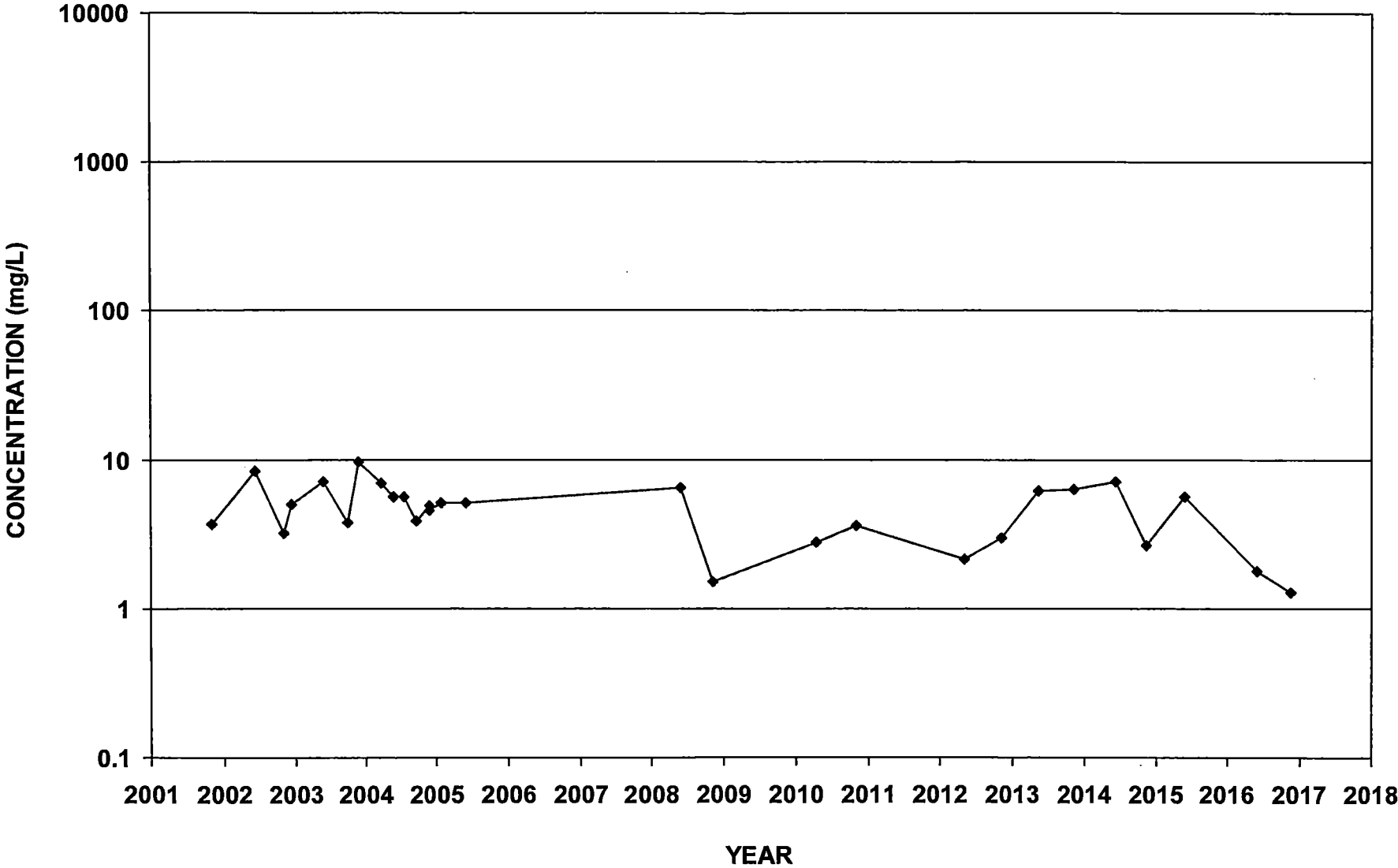
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Sulfate as SO4



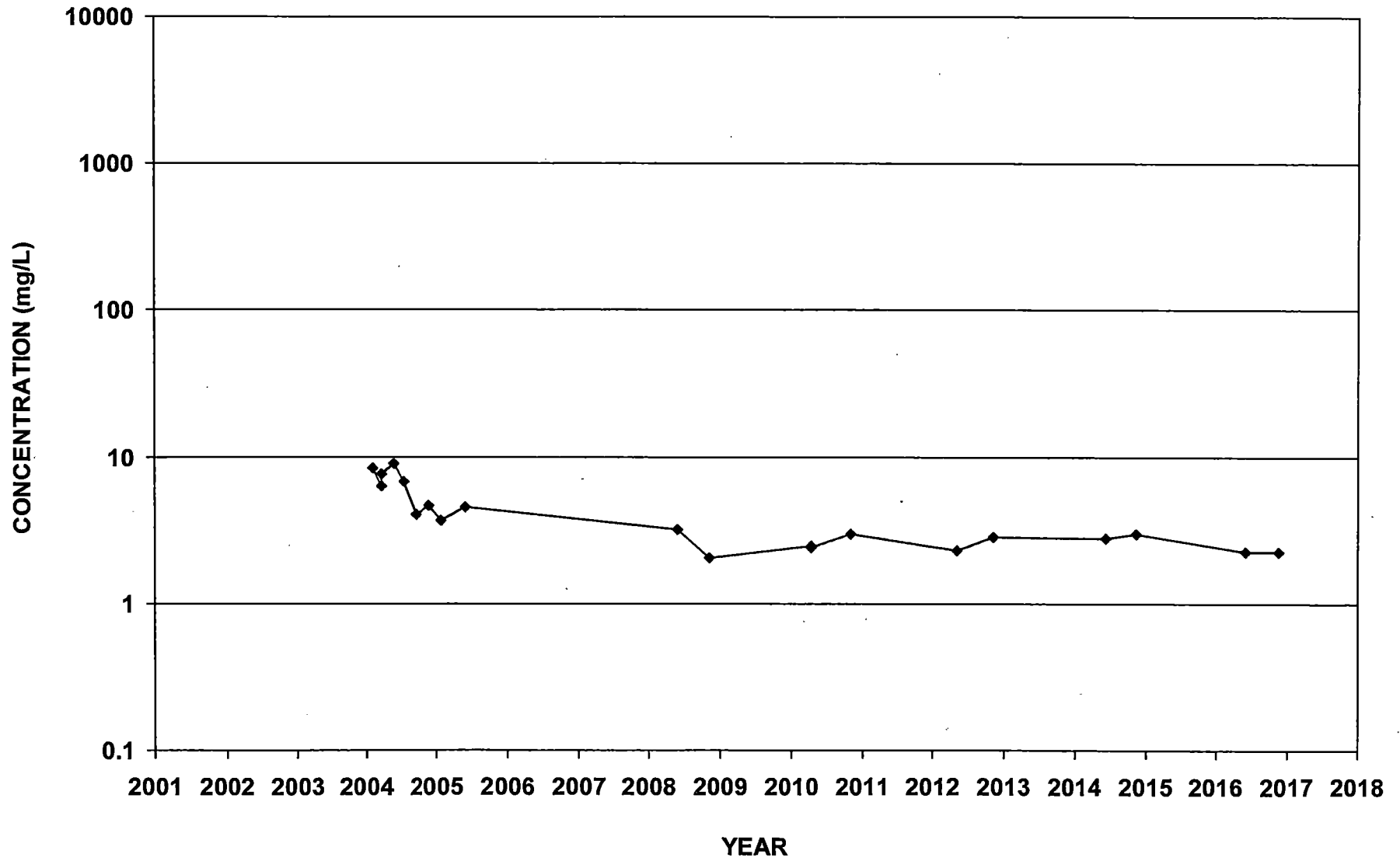
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Sulfate as SO₄



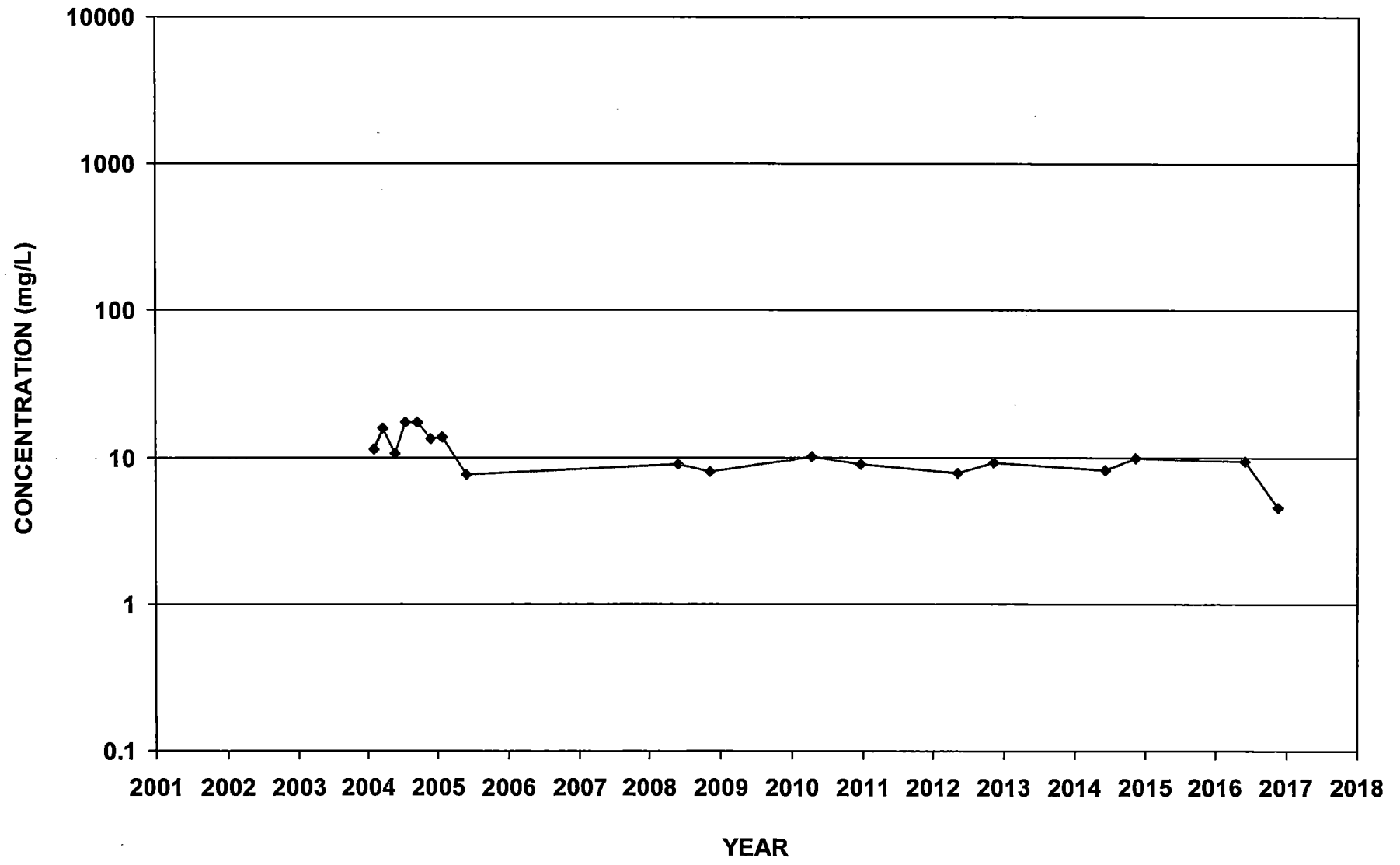
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Sulfate as SO4



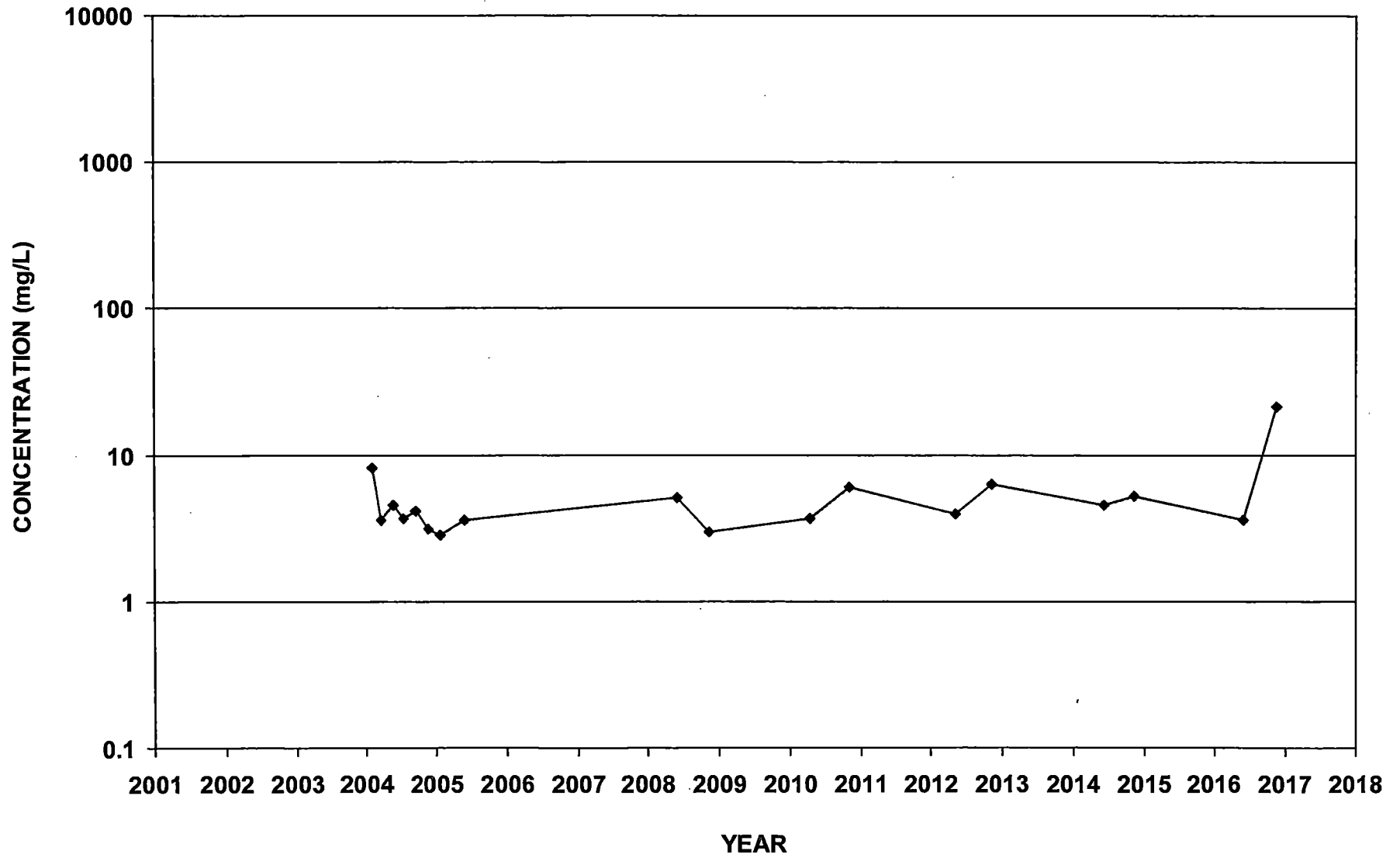
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Sulfate as SO₄



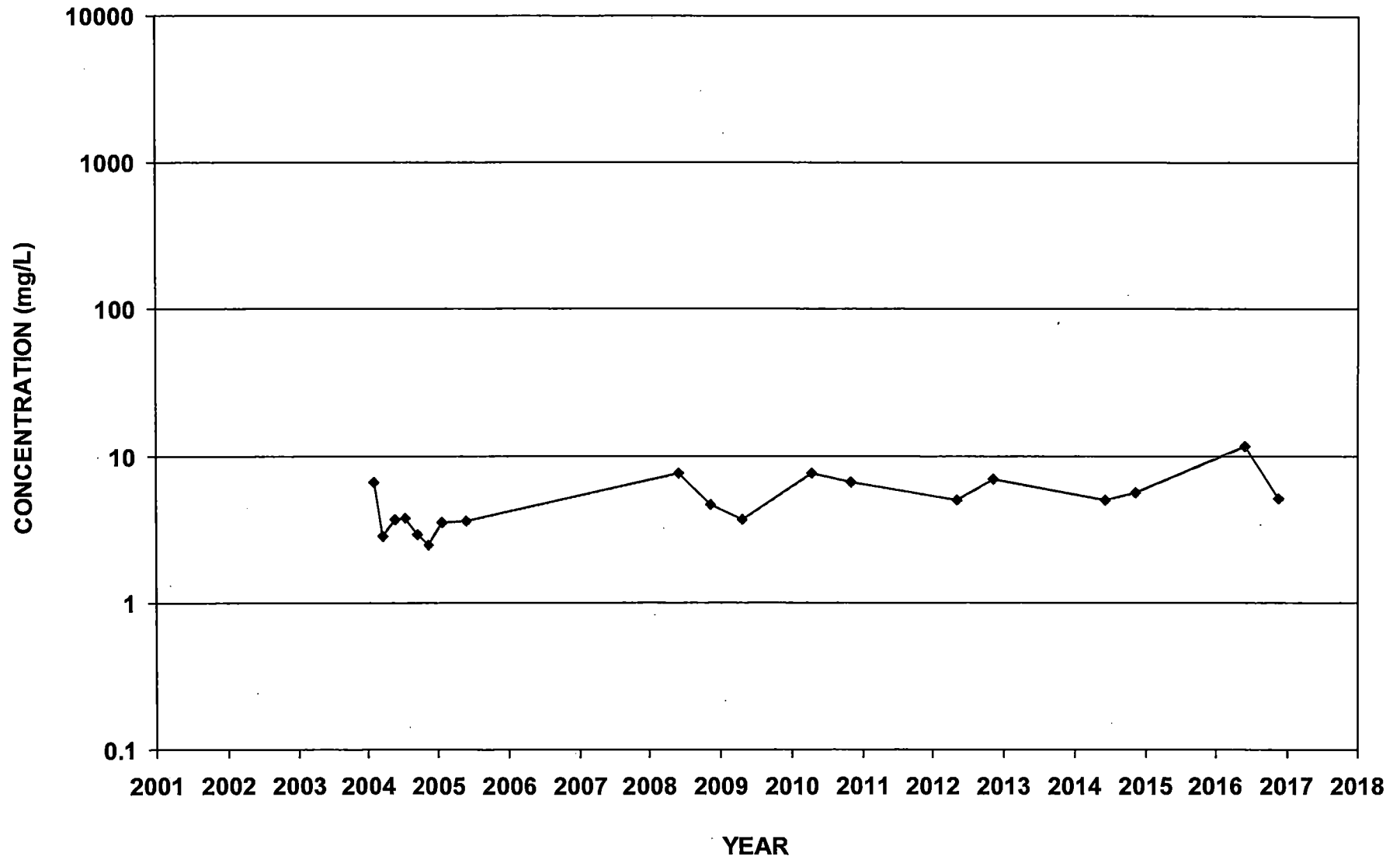
ECMW-20
Sulfate as SO₄



ECMW-21
Sulfate as SO4



ECMW-22
Sulfate as SO₄



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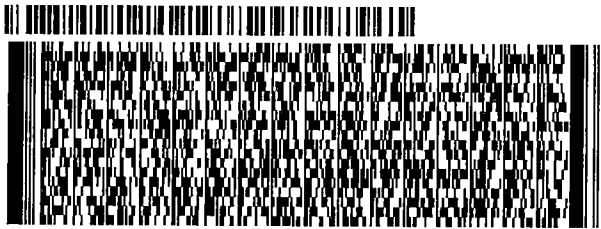
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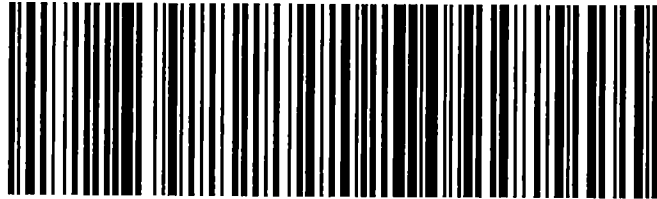
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