ENVIRONMENTAL
MANAGEMENT SERVICES, INC.

March 28, 2013

Linda Hanson, P.G.
Water Division
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

Dear Ms. Hanson:

On behalf of El Dorado Chemical Company, Environmental Management Services, Inc., has prepared the attached 2012 Annual Ground Water Report. This report is being submitted in accordance with CAO LIS Number 06-0153.

Should you have any questions concerning this report please contact me at (225) 751-5386.

Sincerely,

Lauren M. Marcella, P.G.
Project Geologist
Environmental Management Services, Inc.

12232 Industriplex Boulevard, Suite 27, Baton Rouge, LA 70809 • (225) 751-5386 • (225) 751-5387 (fax)

2012 ANNUAL GROUND WATER REPORT

Prepared For:

El Dorado Chemical Company

Prepared By:

ENVIRONMENTAL MANAGEMENT SERVICES, INC.

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

March 28, 2013

2012 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

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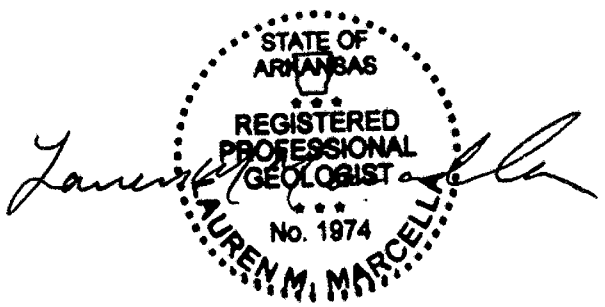
The report contained herein has been prepared by Environmental Management Services, Inc. (EMS) under the direct supervision of the environmental professional(s) indicated below. To the best of our knowledge all appropriate standards of care and practices were utilized to collect and report the data contained 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:



Date: March 28, 2013

Lauren M. Marcella, P.G.
Project Geologist
AR Professional Geologist No. 1974

2012 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 2012. Field sampling techniques, ground water flow and ground water quality are discussed. A site map is provided as Figure 1.

2.0 SITE GEOLOGY

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

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

3.0 GROUND WATER MONITORING

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

3.1 MONITORING PARAMETERS

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

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

- ***Lead and chromium:*** These parameters were removed from the monitoring program during 2005; in 2007 ADEQ requested these parameters be sampled semiannually every two years to verify concentrations remain at the previously documented background levels.

- ***Background Wells***: In 2004, data were used to establish the background levels of ammonia, nitrate, lead and chromium in the three upgradient wells ECMW-1, ECMW-2 and ECMW-3. These four parameters were dropped from the annual sampling list but are sampled semiannually every two years to verify concentrations remain at the previously documented background levels.

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

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

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

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

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

- ***Vanadium***: Vanadium was added to the list of parameters in 2004. ADEQ recommended that vanadium remain on the list in order to obtain enough data for statistical comparison.

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

Collection began for several new parameters for the evaluation of in situ remediation from all wells during the October 2005 sampling event. Field testing was conducted to collect measurements for dissolved oxygen, and redox. In addition, samples were shipped to the laboratory and analyzed for alkalinity, nitrite, dissolved manganese, dissolved iron, total phosphorus and Total Organic Carbon. In a letter to ADEQ dated June 3, 2011, EDCC requested additional changes to the monitoring program which included removal of these parameters from the list of constituents. The request was approved August 9, 2011 and was effective for the second half of 2011 sampling event.

3.2 FIELD SAMPLING

Ground water sampling events were conducted in May and November of 2012. 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 2012 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 2012 sampling events (see Appendix A) to demonstrate when aquifer parameters have stabilized sufficiently prior to sampling. Meters used to measure field data were calibrated each day during sampling. Ground water indicator parameter data (final readings only) are summarized on Table 3. Purge water was containerized for proper disposal.

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

Field quality assurance/quality control samples collected consisted of four (4) blind duplicates.

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 2012 for the following constituents:

PARAMETER	ANALYTICAL METHODS
Ammonia-N	4500-NH3 D
Nitrate-N	EPA 300.0/9056A
Sulfate	EPA 300.0/9056A
Chromium (total and dissolved)	EPA 200.7
Lead (total and dissolved)	EPA 200.7
pH, Temperature, Specific Conductance	Field

4.0 SAMPLING RESULTS

The following sections present ground water flow and analytical data collected in 2012.

4.1 GROUND WATER FLOW

Ground water elevations from May and November 2012 were used to construct the potentiometric maps included as Figures 2 and 3. The average ground water elevation was approximately two feet higher in May than in November. The general ground water flow direction is from northwest to southeast for both sampling events and is consistent with previous measurements.

4.2 GROUND WATER QUALITY

4.2.1 Field Parameters

Indicator parameter data collected during well purging are summarized on Table 3. In 2012, pH values ranged from 3.97 standard units in ECMW-8 to 6.74 s.u. in ECMW-20, with an average of 5.80 s.u. The average of pH readings for 2012 (5.80 s.u.) is higher than in 2011 (4.82 s.u.). The average of the pH measurements taken during the second half of 2012 (6.37 s.u.) was higher than the first half 2012 pH data (5.23 s.u.). Specific conductance values ranged from 51.8 (ECMW-1) to 9,700 (ECMW-8) micro-Siemens/cm (µS/cm) in 2012 and were consistent between both 2012 sampling events. The average of specific conductance readings for 2012 is lower than in 2011.

4.2.2 Analytical Results

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

Ammonia

During the year 2012, ammonia concentrations ranged from below the detection limit (0.5 mg/L) to 655 mg/L (ECMW-6). As with previous years, results from ECMW-6, ECMW-7 and

ECMW-8 exhibited the highest concentrations. 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 2012 are provided in Appendix B. Wells ECMW-6, ECMW-11 and ECMW-17 show an increasing trend. Well ECMW-16 shows a decreasing trend. Wells ECMW-7 and ECMW-8 show an overall decreasing trend, but with recent increases in concentration. Ammonia concentration trends in all other wells are fairly constant.

Nitrate

For the year 2012, nitrate concentrations ranged from below the detection limit (0.5 mg/L) to 2520 mg/L (ECMW-6). ECMW-6, ECMW-7 and ECMW-8 exhibited the highest concentrations throughout the year. As shown on Figures 6 and 7, the highest nitrate concentrations are located north of the Production Area.

Trends graphs for nitrate are provided in Appendix B. Nitrate concentrations in ECMW-5 and ECMW-6 show an increasing trend. Wells ECMW-4, ECMW-7, ECMW-10, ECMW-14, ECMW-15, ECMW-16 and ECMW-17 show decreasing trends. Well ECMW-8, while showing an overall decreasing trend, recently has shown increasing concentrations. Nitrate concentration trends in the remaining wells are fairly constant.

Sulfate

For the year 2012, sulfate concentrations ranged from 2.17 mg/L in ECMW-18 to 890 mg/L in ECMW-4. ECMW-4, ECMW-7, ECMW-8, ECMW-9 and ECMW-13 exhibited the highest concentrations throughout the year.

Chromium

The monitoring program requires results for total and dissolved chromium for all wells in even numbered years. In the first half of 2012, the laboratory initially analyzed for dissolved chromium only. When the error was discovered, the laboratory was asked to analyze for total chromium which required the samples to be preserved with acid. Because the preservation did

not occur within two weeks of sample collection; the first half 2012 chromium results are qualified as "estimated". Samples collected for total and dissolved chromium were properly preserved and analyzed in the second half of 2012.

The total and dissolved analyses showed chromium was non-detect in the first half and a duplicate sample of ECMW-17 showed a detection of 0.0174 mg/L in the second half. The concentration detected is below the EPA's Maximum Contaminant Level of 0.1 mg/L.

Lead

As with the chromium, the laboratory initially analyzed for dissolved lead only in the first half of 2012. Samples analyzed for total lead were also preserved outside of the holding time; therefore, the first half 2012 lead results are qualified as "estimated". Samples collected for total and dissolved lead were properly preserved and analyzed in the second half of 2012.

The total and dissolved analyses showed lead was detected at concentrations ranging from 0.015 to 0.032 mg/L, in Wells ECMW-3, ECMW-6 and ECMW-8. The concentrations detected are slightly above the EPA's Maximum Contaminant Level of 0.015 mg/L. However, these wells are in the middle of the property (two are near the recovery wells) and concentrations do not pose any risk to human health or the environment.

5.0 GROUND WATER REMEDIATION

Fluids from recovery wells ECRW #1 and ECRW #2 were pumped back to the facility DSN Acid Plant for recovery. On May 15, 2012 there was an explosion at the DSN Plant. EDCC decided not to repair this plant and it is no longer in operation. At this time the DSN plant is currently being demolished. Because of the heavy machinery traffic (due to the demolition) in this area EDCC is unable to gain access to the lines coming from the two recovery wells. EDCC is in the process of evaluating other uses for recovered water. Well ECRW #1 did not operate during 2012. ECRW #2 operated from January 1 through May 15, 2012. Approximately 65,232 gallons of water were recovered from this well in 2012, with an average recovery rate of 0.3 gallons per minute.

TABLES

TABLE 1
MONITORING WELL CONSTRUCTION DETAILS
2012 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

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

Notes:

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

TABLE 2
GROUNDWATER ELEVATION DATA
2012 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

Monitor Well	Top of Casing Elevation (ft above Mean Sea Level)	Measurement Date			
		5/1/2012		11/5-6/2012	
		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	11.24	202.04	15.90	197.38
ECMW-2	196.25	0.00	196.25	2.78	193.47
ECMW-3	192.11	10.10	182.01	12.82	179.29
ECMW-4	194.84	8.70	186.14	9.10	185.74
ECMW-5	182.69	3.96	178.73	3.80	178.89
ECMW-6	191.87	4.96	186.91	4.40	187.47
ECMW-7	195.88	7.52	188.36	7.16	188.72
ECMW-8	197.34	7.26	190.08	7.10	190.24
ECMW-9	198.39	10.06	188.33	12.04	186.35
ECMW-10	205.75	11.96	193.79	14.42	191.33
ECMW-11	201.65	10.10	191.55	12.00	189.65
ECMW-12	184.97	5.60	179.37	6.70	178.27
ECMW-13	177.26	6.54	170.72	7.58	169.68
ECMW-14	178.48	6.18	172.30	10.90	167.58
ECMW-15	180.84	4.58	176.26	6.04	174.80
ECMW-16	180.14	4.54	175.60	6.04	174.10
ECMW-17	185.40	27.80	157.60	30.30	155.10
ECMW-18	155.46	6.04	149.42	7.60	147.86
ECMW-19	150.41	1.70	148.71	4.26	146.15
ECMW-20	192.77	29.68	163.09	31.90	160.87
ECMW-21	176.29	18.60	157.69	20.12	156.17
ECMW-22	173.55	6.18	167.37	9.50	164.05

TABLE 3
GROUNDWATER INDICATOR PARAMETER DATA
2012 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

WELL	TEMPERATURE (C)		pH (s.u.)		CONDUCTIVITY (uS)	
	Date		Date		Date	
	5/1/2012	11/5-6/2012	5/1/2012	11/5-6/2012	5/1/2012	11/5-6/2012
ECMW-1	17.8	18.7	5.48	6.43	55.8	51.8
ECMW-2	18.0	19.3	5.76	6.57	238	272
ECMW-3	18.8	18.6	6.28	6.74	136.8	228
ECMW-4	19.6	20.3	4.12	6.17	1918	1940
ECMW-5	19.1	21.5	5.13	6.43	304	336
ECMW-6	19.5	20.6	4.28	6.20	5600	7320
ECMW-7	19.7	20.2	4.82	6.31	7260	9120
ECMW-8	19.4	18.8	3.97	5.99	8130	9700
ECMW-9	20.0	19.7	5.71	6.50	991	1132
ECMW-10	20.4	21.1	4.39	6.13	510	511
ECMW-11	19.3	21.8	4.73	5.92	534	641
ECMW-12	20.3	21.2	6.02	6.49	339	418
ECMW-13	18.4	19.7	5.23	6.25	686	796
ECMW-14	19.4	21.6	5.20	6.25	434	410
ECMW-15	19.9	21.8	4.88	6.22	68.2	73.3
ECMW-16	19.3	22.7	4.66	6.09	141.3	143.4
ECMW-17	19.5	18.0	4.75	6.21	176.1	180.7
ECMW-18	17.2	19.1	5.89	6.61	80.6	81.6
ECMW-19	18.1	17.5	5.98	6.68	76.3	82.8
ECMW-20	19	18.3	5.96	6.74	425	150.8
ECMW-21	18.9	18.5	5.68	6.48	55.3	59.6
ECMW-22	19	18.2	6.10	6.73	115.2	122.6

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	--	--

"--" - 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	--	--

"--" - 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	--	--

"--" - 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	--	--

"--" - 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	--	--

"--" - Parameter not analyzed
E3 - Incorrect preservation, results qualified as "estimated".

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

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
3/13/1996	7.70	--	51.1	24	--	0.0026	< 0.002	< 0.005	< 0.005	--	--
8/8/2001	4.30	0.5	298	18.3	2100	< 0.04	--	< 0.02	--	--	--
10/30/2001	4.30	< 0.5	326	15.7	2700	< 0.04	--	< 0.02	--	--	--
6/3/2002	6.10	< 0.5	459	12.1	290	< 0.02	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	5.00	0.51	661	8.13	3840	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	4.60	< 0.5	580	7.15	3360	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	--	< 0.5	588	6.45	3280	< 0.015	< 0.015	< 0.02	< 0.02	--	--
5/21/2003	4.30	0.5	608	17.0	4020	< 0.015	< 0.015	< 0.02	< 0.02	--	--
7/24/2003	7.41	1.09	681	15.0	4600	< 0.015	< 0.015	< 0.02	< 0.02	--	--
9/24/2003	4.28	4.88	857	9.35	5100	< 0.015	< 0.015	< 0.02	< 0.02	--	--
11/19/2003	4.53	5.72	865	10.7	4700	< 0.015	< 0.015	< 0.02	< 0.02	--	--
11/19/2003	--	5.60	866	9.21	4900	< 0.015	< 0.015	< 0.02	< 0.02	--	--
1/28/2004	4.36	12.3	835	17.2	5300	<0.015	<0.015	<0.02	<0.02	--	--
3/16/2004	4.40	13	826	17.2	5106	<0.015	<0.015	<0.02	<0.02	--	--
5/19/2004	5.04	21.4	915	13.4	5800	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	4.74	17.9	995	11.7	6100	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	--	17.5	868	11.7	6200	<0.015	<0.015	<0.02	<0.02	--	--
9/14/2004	5.51	20	1130	3.84	6300	<0.015	<0.015	<0.02	<0.02	<0.02	--
11/16/2004	4.59	37.6	1140	4.4	7100	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/25/2005	5.36	43.1	1130	3.14	6600	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
5/24/2005	4.57	68.2	1410	5.19	6700	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
10/18/2005	4.43	110	1350	--	--	--	--	--	--	<0.02	<0.02
4/11/2006	4.45	154	1680	--	--	--	--	--	--	<0.02	<0.02
11/1/2006	3.94	170	2390	--	--	--	--	--	--	<0.02	--
5/23/2007	6.46	63.3	3550	44.9	--	--	--	--	--	<0.02	--
11/6/2007	5.15	35.7	941	54.1	--	--	--	--	--	<0.02	--

"--" - Parameter not analyzed
E3 - Incorrect preservation, results qualified as "estimated".

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

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
5/21/2008	4.50	59.1	1130	23.7	--	<0.015	--	<0.02	--	<0.02	--
5/21/2008	--	72.5	256	28.3	--	<0.015	--	<0.02	--	<0.02	--
11/5/2008	3.89	103	1060	26.1	--	<0.015	--	<0.02	--	<0.02	--
4/21/2009	4.47	135	1070	148	--	--	--	--	--	<0.02	--
10/20/2009	4.16	181	1330	24.7	--	--	--	--	--	--	--
4/13/2010	4.04	92.8	1660	29.2	--	<0.015	--	<0.02	--	--	--
4/13/2010	--	566	1640	25.7	--	0.023	--	<0.02	--	--	--
7/22/2010	--	246	1940	42.3	--	<0.015	--	<0.02	--	--	--
11/2/2010	5.71	311	1460	29.6	--	<0.015	--	0.011	--	--	--
4/27/2011	4.30	371	1680	46.8	--	--	--	--	--	--	--
6/16/2011	4.01	393	1620	207	--	--	--	--	--	--	--
11/30/2011	3.88	445	1970	60.5	--	--	--	--	--	--	--
11/30/2011	--	455	2060	63.8	--	--	--	--	--	--	--
5/3/2012	4.28	344	1850	456	--	0.0312 E3	0.032	<0.01	<0.02	--	--
5/3/2012	--	407	1740	36.5	--	0.0298 E3	0.028	<0.01 E3	<0.02	--	--
11/7/2012	6.20	620	2520	112	--	0.0185	0.017	<0.01	<0.02	--	--
11/7/2012	--	655	2430	113	--	0.0211	0.016	<0.01	<0.02	--	--

"--" - 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	--	--

"--" - Parameter not analyzed
E3 - Incorrect preservation, results qualified as "estimated".

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

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
3/13/1996	7.90	--	1010	68.3	--	0.0234	0.0238	< 0.005	< 0.005	--	--
10/30/2001	3.90	0.94	1030	81.1	5000	< 0.04	--	< 0.02	--	--	--
6/3/2002	5.40	551	1070	77.8	4246	< 0.02	< 0.02	< 0.02	< 0.02	--	--
6/3/2002	--	551	1200	70.4	4378	0.031	< 0.02	< 0.02	< 0.02	--	--
10/30/2002	4.40	406	1330	151	4560	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	4.00	220	1080	46.2	5120	< 0.015	< 0.015	< 0.02	< 0.02	--	--
12/10/2002	--	261	1030	47.6	5140	< 0.015	< 0.015	< 0.02	< 0.02	--	--
5/21/2003	3.99	214	1250	209	4200	0.019	0.019	< 0.02	< 0.02	--	--
5/21/2003	--	167	1270	162	4010	0.019	0.019	< 0.02	< 0.02	--	--
7/24/2003	6.04	179	472	904	3700	< 0.015	< 0.015	< 0.02	< 0.02	--	--
7/24/2003	--	177	478	913	3700	< 0.015	< 0.015	< 0.02	< 0.02	--	--
9/23/2003	3.93	157.5	524	870	3400	< 0.015	< 0.015	< 0.02	< 0.02	--	--
9/23/2003	--	153	539	899	3400	< 0.015	< 0.015	< 0.02	< 0.02	--	--
11/19/2003	4.99	206	464	738	3200	< 0.015	< 0.015	< 0.02	< 0.02	--	--
1/28/2004	4.29	45.7	142	854	1800	<0.015	<0.015	<0.02	<0.02	--	--
3/16/2004	4.18	88	203	805	2221	<0.015	<0.015	<0.02	<0.02	--	--
5/19/2004	4.07	120	298	789	2500	<0.015	<0.015	<0.02	<0.02	--	--
7/13/2004	4.48	120	354	767	2600	<0.015	<0.015	<0.02	<0.02	--	--
9/14/2004	3.99	107	392	743	2400	<0.015	<0.015	<0.02	<0.02	<0.02	--
11/16/2004	4.01	82.1	304	808	2800	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
1/25/2005	4.09	48.9	126	1200	2700	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
5/24/2005	6.12	79.6	225	1220	2700	<0.015	<0.015	<0.02	<0.02	<0.02	<0.02
10/18/2005	4.03	84.8	246	--	--	--	--	--	--	<0.02	<0.02
4/11/2006	3.78	53.5	194	--	--	--	--	--	--	<0.02	<0.02
11/1/2006	3.44	74.5	224	--	--	--	--	--	--	<0.02	--
5/23/2007	4.11	122	<0.5	971	--	--	--	--	--	<0.02	--
11/6/2007	3.70	96.2	340	816	--	--	--	--	--	<0.02	--

"--" - Parameter not analyzed
E3 - Incorrect preservation, results qualified as "estimated".

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

Sample Date	pH	Ammonia-N	Nitrate-N	Sulfate	Total Dissolved Solids	Lead (Total)	Lead (Dissolved)	Chromium (Total)	Chromium (Dissolved)	Vanadium (Total)	Vanadium (Dissolved)
	s.u.	mg/L									
5/21/2008	3.42	56.8	171	1000	--	<0.015	--	<0.02	--	<0.02	--
11/5/2008	3.61	70	181	719	--	<0.015	--	<0.02	--	<0.02	--
4/21/2009	4.88	53.6	108	839	--	--	--	--	--	<0.02	--
10/20/2009	3.79	45.8	116	937	--	--	--	--	--	--	--
4/13/2010	4.56	62.1	52.2	737	--	<0.015	--	<0.02	--	--	--
11/2/2010	6.35	63.4	163	860	--	<0.015	--	<0.01	--	--	--
4/27/2011	3.85	1980	3310	106	--	--	--	--	--	--	--
6/29/2011	4.10	175	350	--	--	--	--	--	--	--	--
6/29/2011	--	168	352	--	--	--	--	--	--	--	--
11/30/2011	3.44	120	401	727	--	--	--	--	--	--	--
11/30/2011	--	101	361	637	--	--	--	--	--	--	--
5/3/2012	3.97	122	296	754	--	0.0159 E3	0.015	<0.01	<0.02	--	--
5/3/2012	--	111	287	762	--	<0.015 E3	<0.015	<0.01 E3	<0.02	--	--
11/7/2012	5.99	193	429	814	--	0.0166	<0.015	<0.01	<0.02	--	--

"--" - 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	--	--

"--" - 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	--	--

"--" - 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	--	--

"--" - 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	--	--

"--" - 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	--	--

"--" - 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	--	--

"--" - 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	--	--

"--" - 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	--	--

"--" - 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	--	--

"--" - 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	--	--

"--" - 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	--	--

"--" - Parameter not analyzed
E3 - Incorrect preservation, results qualified as "estimated".

TABLE 24
ECM 1 ANALYTICAL SUMMARY
EL RADO 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	--	--

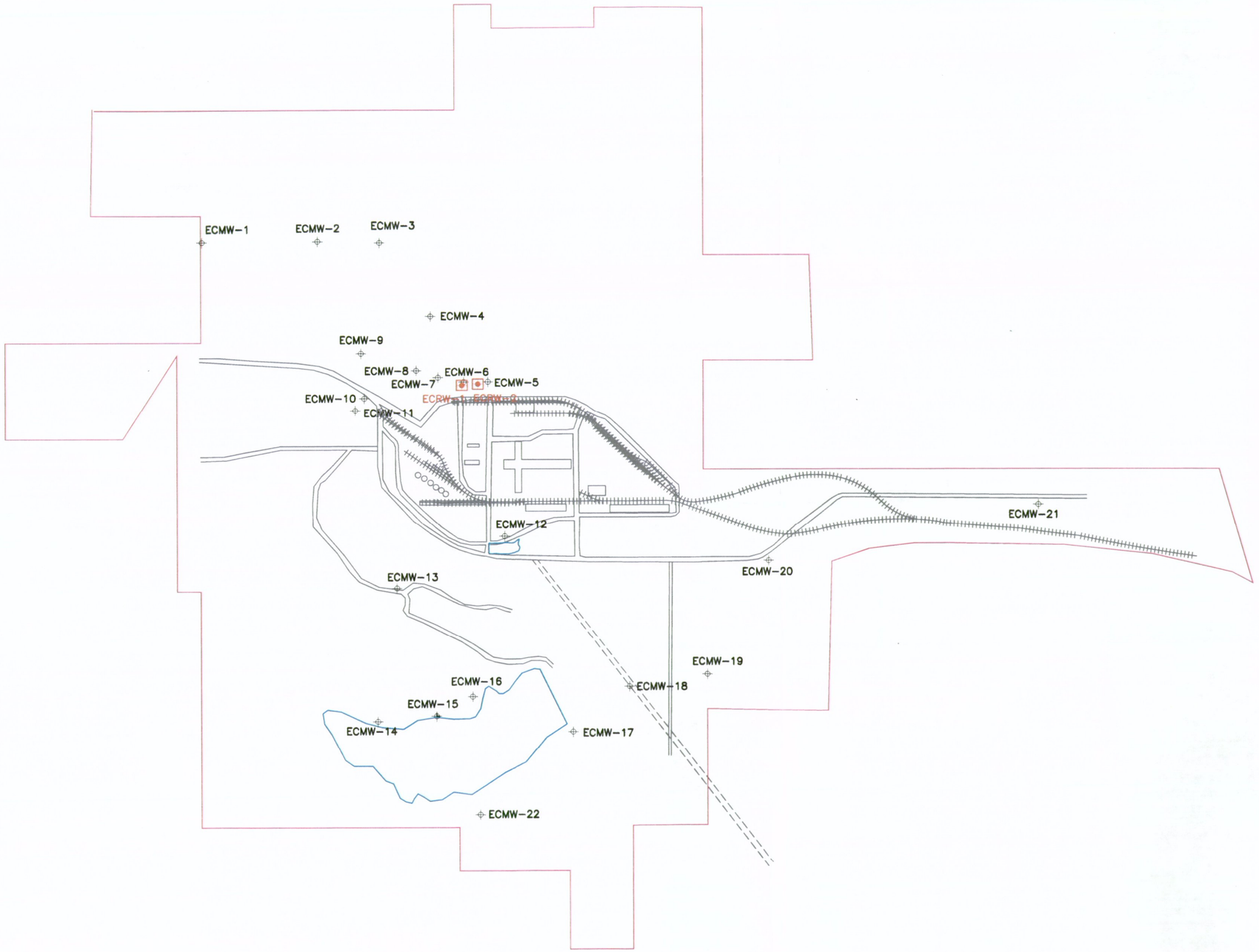
"--" - Parameter not analyzed
E3 - Incorrect preservation, results qualified as "estimated".

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	--	--

"--" - Parameter not analyzed
E3 - Incorrect preservation, results qualified as "estimated".

FIGURES



LEGEND

- MONITOR WELLS
- RECOVERY WELLS
- PROPERTY BOUNDARY

N

0 600 1200
SCALE IN FEET

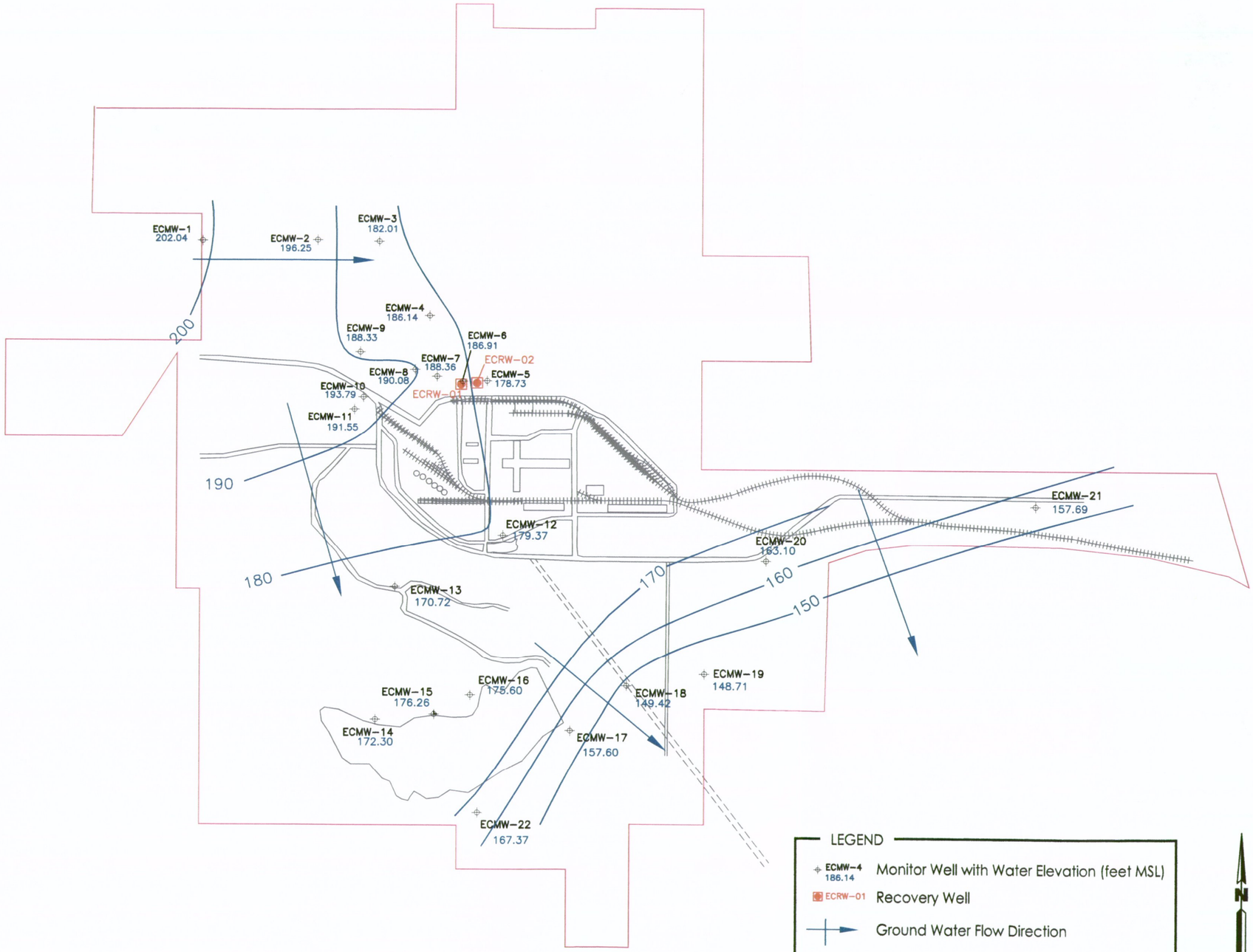
EL DORADO

SITE MAP
2012 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

DATE: 03/21/2013	APPROVED: BY: 3/28 DATE: SK	DRAWN BY: LMM
SCALE: see above		CAD NO. 02EC0100

ENVIRONMENTAL MANAGEMENT SERVICES, INC.

FIGURE 1



LEGEND

- ECMW-4 186.14 — Monitor Well with Water Elevation (feet MSL)
- ECRW-01 — Recovery Well
- Ground Water Flow Direction

MEASUREMENTS TAKEN MAY 1, 2012

N

0 600 1200
SCALE IN FEET

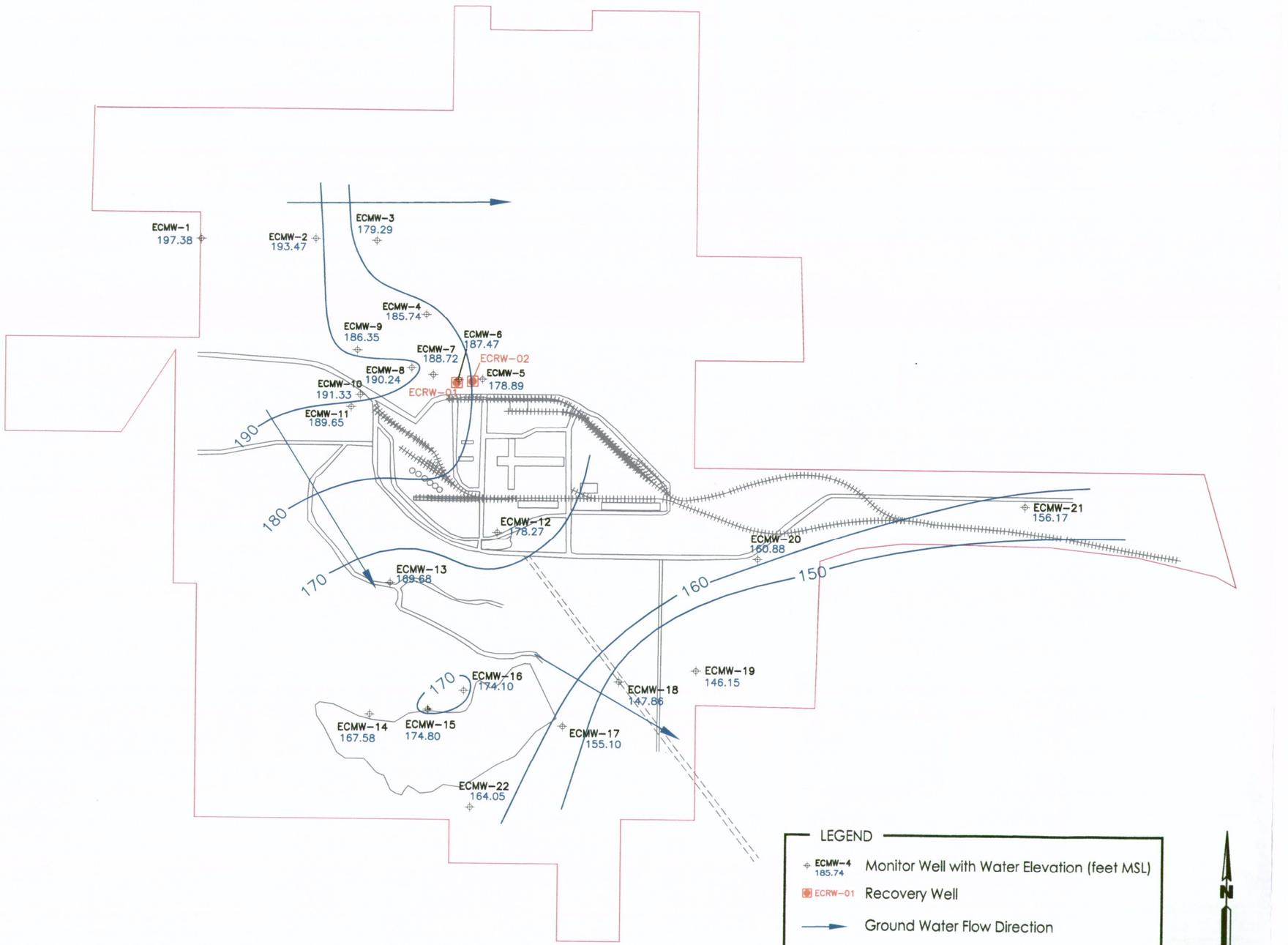
EL DORADO

MAY 2012 GROUND WATER ELEVATION MAP

2012 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

DATE: 11/21/2012	APPROVED: BY: 3/28 DATE: SR	DRAWN BY: LMM	
SCALE: as shown		CAD NO. 02EC0100	FIGURE 2

ENVIRONMENTAL MANAGEMENT SERVICES, INC.



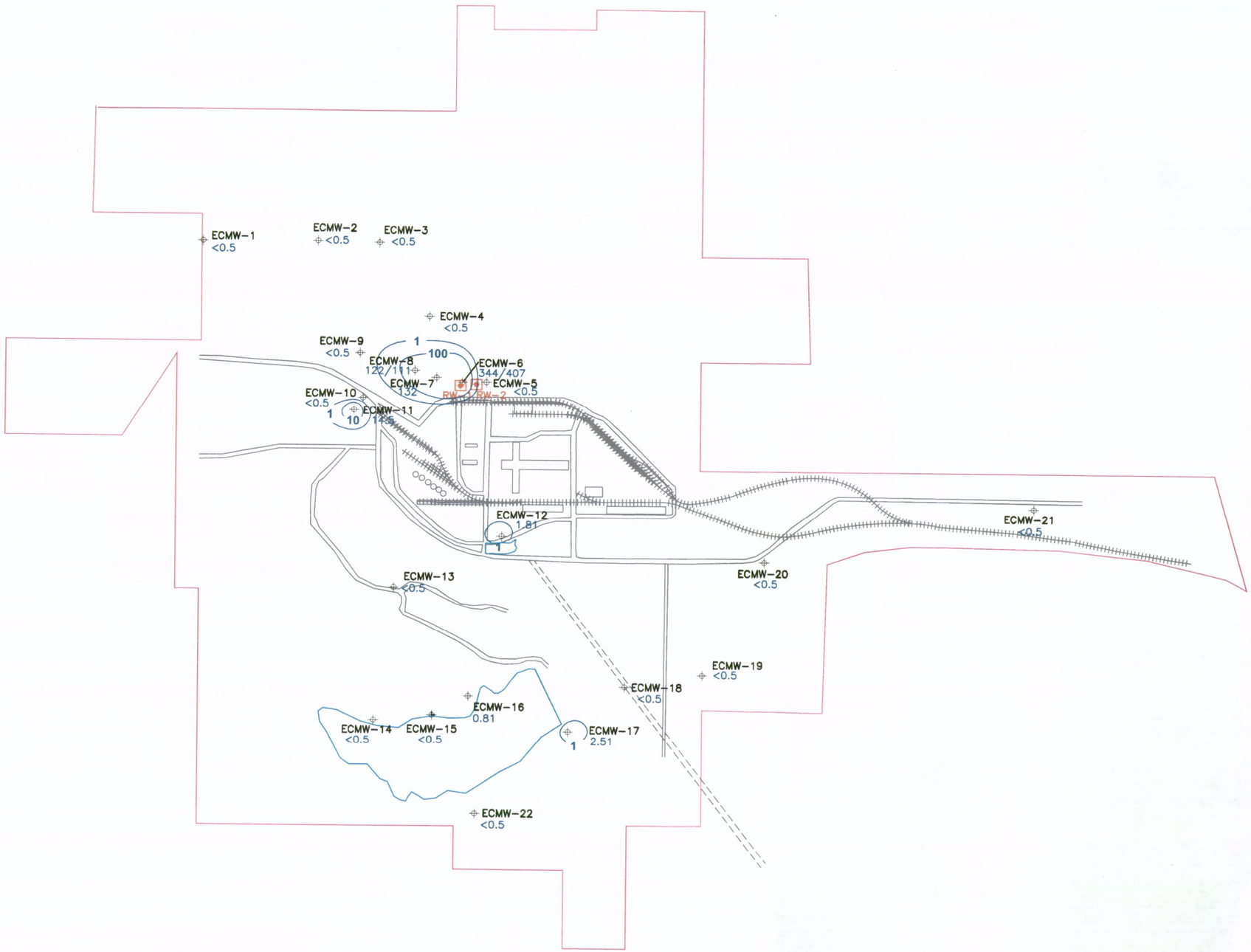
EL DORADO

NOVEMBER 2012 GROUND WATER ELEVATION MAP

2012 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

DATE: 11/21/2012	APPROVED: BY: 3/28 DATE: 5/2	DRAWN BY: LMM	
SCALE: as shown		CAD NO. 02EC0100	FIGURE 3

ENVIRONMENTAL MANAGEMENT SERVICES, INC.



LEGEND

- PROPERTY BOUNDARY
- ECMW-5 <0.5 MONITOR WELL WITH AMMONIA CONCENTRATION (mg/L)
- RECOVERY WELLS
- MAY 2012 AMMONIA ISOCONCENTRATION CONTOURS (mg/L)

N

0 600 1200
SCALE IN FEET

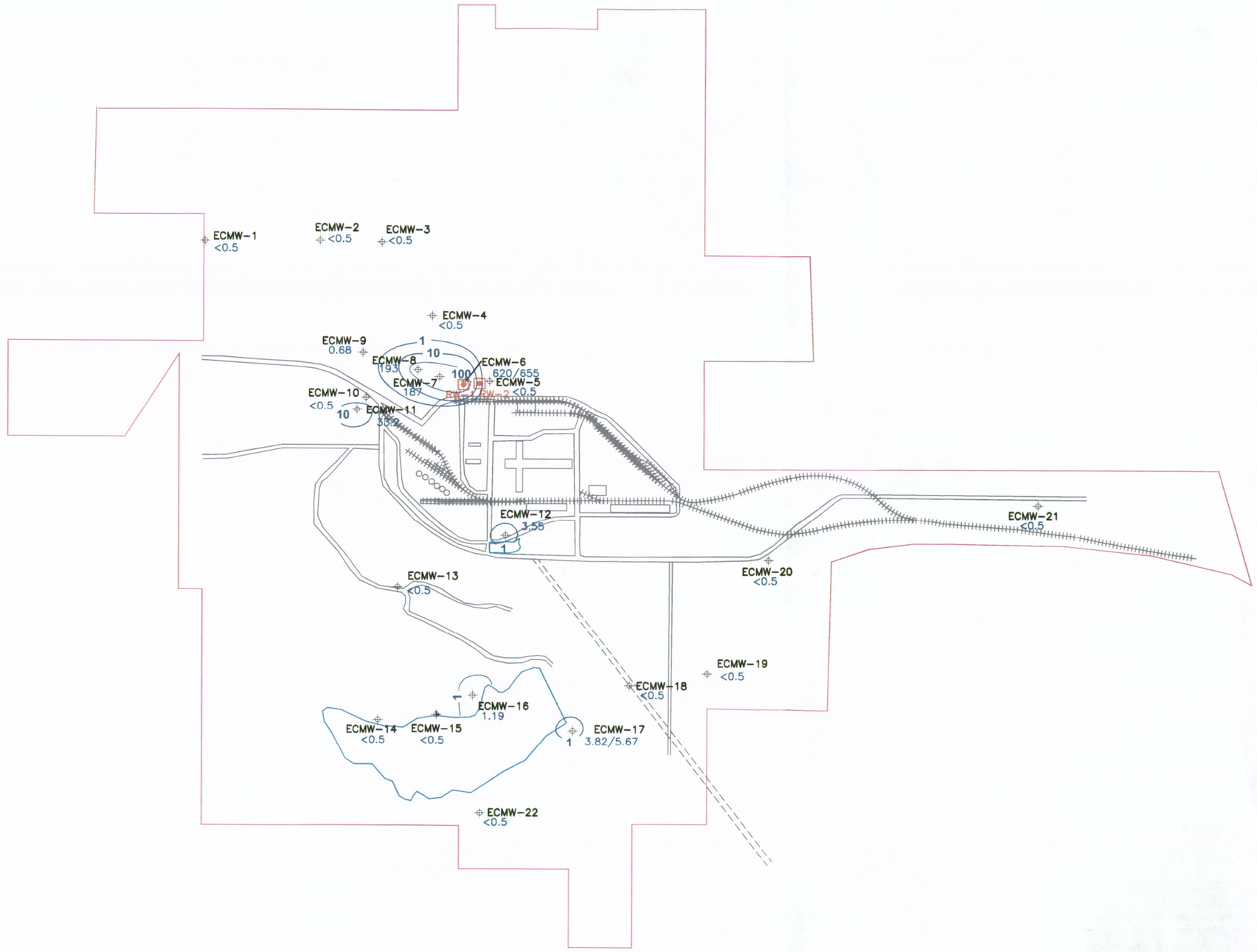
EL DORADO

MAY 2012 AMMONIA ISOCONCENTRATION MAP
2012 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

DATE: 05/29/2012	APPROVED: BY: 3/28 DATE: 5/2	DRAWN BY: LMM
SCALE: see above		CAD NO. 02EC0100

ENVIRONMENTAL MANAGEMENT SERVICES, INC.

FIGURE 4



LEGEND

- PROPERTY BOUNDARY
- ECMW-5 <0.5 MONITOR WELL WITH AMMONIA CONCENTRATION (mg/L)
- RECOVERY WELLS
- NOVEMBER 2012 AMMONIA ISOCONCENTRATION CONTOURS (mg/L)

N

0 600 1200
SCALE IN FEET

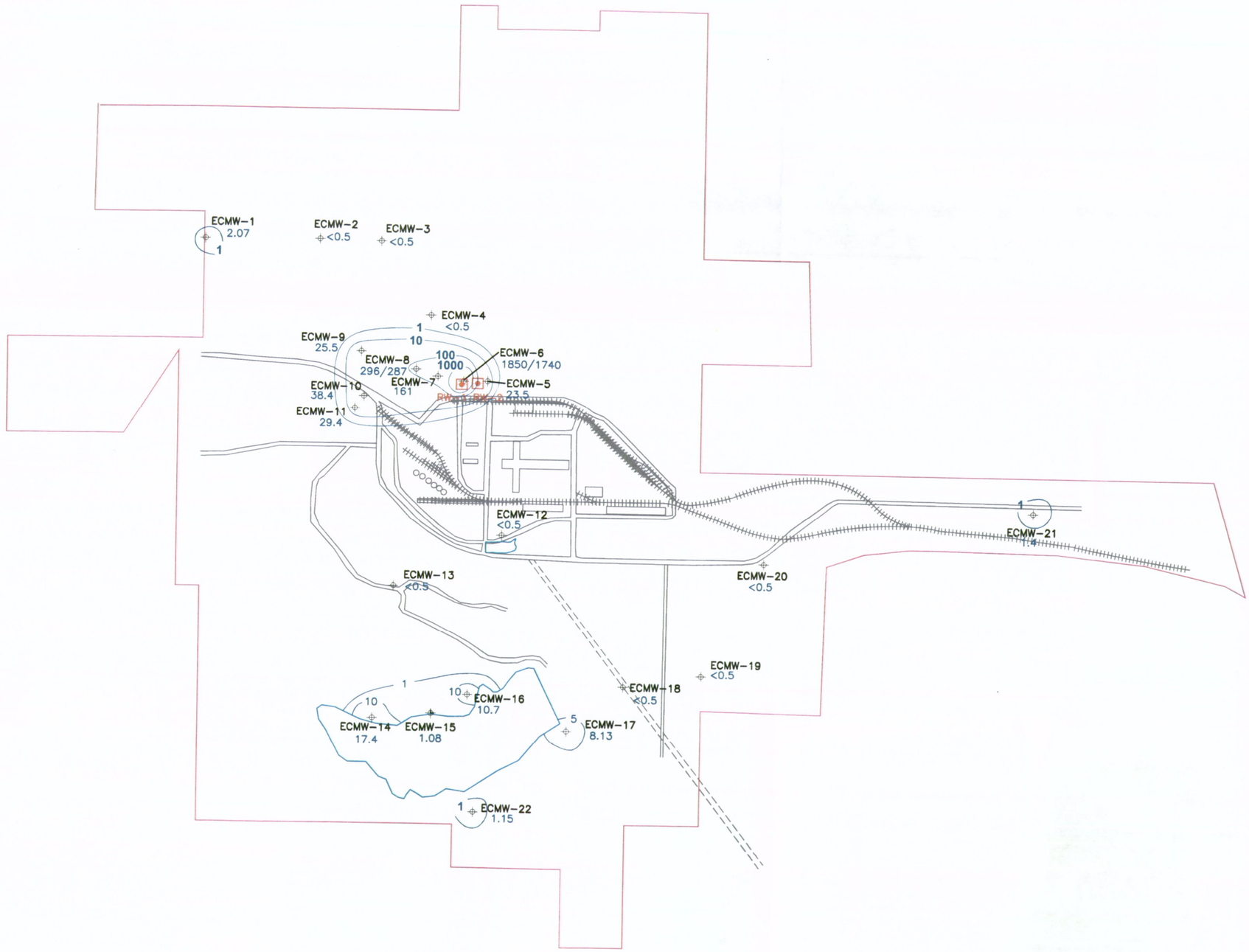
EL DORADO

NOVEMBER 2012 AMMONIA ISOCONCENTRATION MAP
2012 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

DATE: 11/19/2012	APPROVED: BY: 3/28 DATE: 3/2	DRAWN BY: LMM
SCALE: see above		CAD NO. 02EC0100

ENVIRONMENTAL MANAGEMENT SERVICES, INC.

FIGURE 5



LEGEND

- PROPERTY BOUNDARY
- ECMW-1 <0.5 MONITOR WELL WITH NITRATE CONCENTRATION (mg/L)
- RECOVERY WELLS
- MAY 2012 NITRATE ISOCONCENTRATION CONTOURS (mg/L)

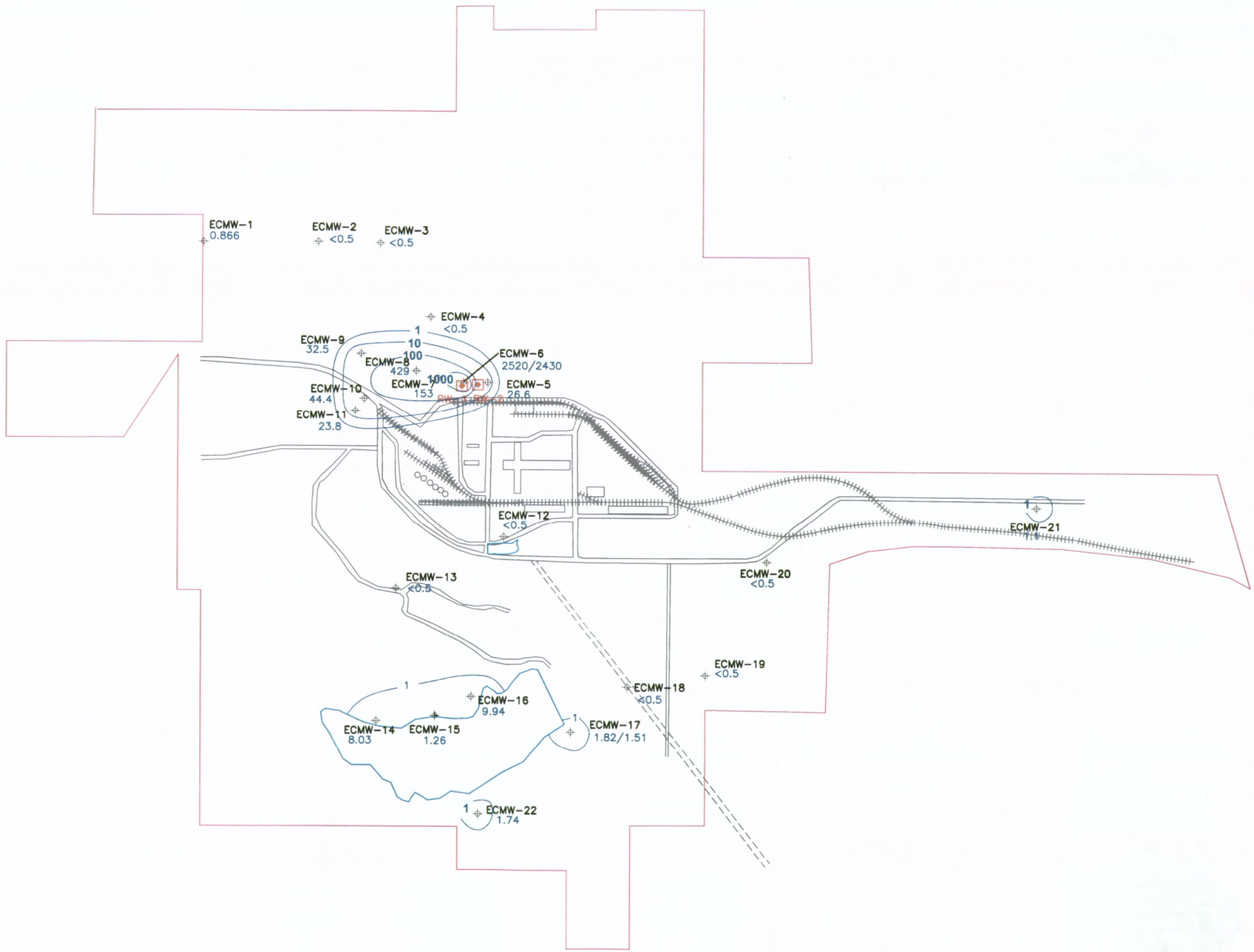
N

0 600 1200
SCALE IN FEET

EL DORADO

MAY 2012 NITRATE ISOCONCENTRATION MAP
2012 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

DATE: 05/29/2012	APPROVED: BY: 3/28 DATE: 5/2	DRAWN BY: LMM	
SCALE: see above		CAD NO. 02EC0100	
ENVIRONMENTAL MANAGEMENT SERVICES, INC.			FIGURE 6



LEGEND

- PROPERTY BOUNDARY
- ECMW-1 0.866 MONITOR WELL WITH NITRATE CONCENTRATION (mg/L)
- RECOVERY WELLS
- NOVEMBER 2012 NITRATE ISOCONCENTRATION CONTOURS (mg/L)

N

0 600 1200
SCALE IN FEET

EL DORADO

NOVEMBER 2012 NITRATE ISOCONCENTRATION MAP
2012 ANNUAL GROUND WATER REPORT
EL DORADO CHEMICAL COMPANY
EL DORADO, ARKANSAS

DATE: 11/19/2012	APPROVED: BY: 3/28 DATE: 5/2	DRAWN BY: LMM	
SCALE: see above		CAD NO. 02EC0100	
ENVIRONMENTAL MANAGEMENT SERVICES, INC.			FIGURE 7

APPENDIX A

SAMPLING FORMS AND LABORATORY ANALYTICAL REPORTS

Arkansas Analytical Inc.

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

10 May 2012

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

RE: Groundwater Sample(s)

SDG Number: 1205030

Enclosed are the results of analyses for samples received by the laboratory on 02-May-12 16:15. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✔
Containers Correct	✔
COC/Labels Agree	✔
Preservation Confirmed	✔
Received On Ice	✔
Temperature on Receipt	8.0°C

Sincerely,

Norma James
President

10 May 2012

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

Date Received: 02-May-12 16:15

ANALYTICAL RESULTS

Lab Number: 1205030-01
Sample Name: ECMW-21
Date/Time Collected: 5/2/12 7:00
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**3.94**		5/3/12 8:59	A205049	300.0/9056A
Nitrate as N	mg/L	**1.40**		5/3/12 8:59	A205049	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 14:32	A205107	200.7
Lead	mg/L	< 0.015		5/9/12 14:32	A205107	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		5/8/12 9:00	A205123	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1205030-02
Sample Name: ECMW-20
Date/Time Collected: 5/2/12 7:15
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**7.82**		5/3/12 9:24	A205049	300.0/9056A
Nitrate as N	mg/L	< 0.500		5/3/12 9:24	A205049	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 14:44	A205107	200.7
Lead	mg/L	< 0.015		5/9/12 14:44	A205107	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		5/8/12 9:00	A205123	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1205030-03
Sample Name: ECMW-19
Date/Time Collected: 5/2/12 7:25
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**2.31**		5/3/12 9:50	A205049	300.0/9056A
Nitrate as N	mg/L	< 0.500		5/3/12 9:50	A205049	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 14:47	A205107	200.7
Lead	mg/L	< 0.015		5/9/12 14:47	A205107	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		5/8/12 9:00	A205123	4500-NH3D

10 May 2012

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

Date Received: 02-May-12 16:15

ANALYTICAL RESULTS

Lab Number: 1205030-04
Sample Name: ECMW-18
Date/Time Collected: 5/2/12 7:36
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**2.17**		5/3/12 10:16	A205049	300.0/9056A
Nitrate as N	mg/L	< 0.500		5/3/12 10:16	A205049	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 14:51	A205107	200.7
Lead	mg/L	< 0.015		5/9/12 14:51	A205107	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		5/8/12 9:00	A205123	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1205030-05
Sample Name: ECMW-13
Date/Time Collected: 5/2/12 8:10
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**505**		5/3/12 19:12	A205049	300.0/9056A
Nitrate as N	mg/L	< 0.500		5/3/12 10:41	A205049	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 14:55	A205107	200.7
Lead	mg/L	< 0.015		5/9/12 14:55	A205107	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		5/8/12 9:00	A205123	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1205030-06
Sample Name: ECMW-14
Date/Time Collected: 5/2/12 8:18
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**139**		5/3/12 19:38	A205049	300.0/9056A
Nitrate as N	mg/L	**17.4**		5/3/12 11:07	A205049	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 15:15	A205107	200.7
Lead	mg/L	< 0.015		5/9/12 15:15	A205107	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		5/8/12 9:00	A205123	4500-NH3D

10 May 2012

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

Date Received: 02-May-12 16:15

ANALYTICAL RESULTS

Lab Number: 1205030-07
Sample Name: ECMW-15
Date/Time Collected: 5/2/12 8:26
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**13.9**		5/3/12 11:32	A205049	300.0/9056A
Nitrate as N	mg/L	**1.08**		5/3/12 11:32	A205049	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 15:18	A205107	200.7
Lead	mg/L	< 0.015		5/9/12 15:18	A205107	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		5/8/12 9:00	A205123	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1205030-08
Sample Name: ECMW-16
Date/Time Collected: 5/2/12 8:35
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**15.4**		5/3/12 11:58	A205049	300.0/9056A
Nitrate as N	mg/L	**10.7**		5/3/12 11:58	A205049	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 15:22	A205107	200.7
Lead	mg/L	< 0.015		5/9/12 15:22	A205107	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	**0.81**		5/8/12 9:00	A205123	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1205030-09
Sample Name: ECMW-17
Date/Time Collected: 5/2/12 8:45
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**20.9**		5/3/12 20:03	A205049	300.0/9056A
Nitrate as N	mg/L	**8.13**		5/3/12 12:23	A205049	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 15:26	A205107	200.7
Lead	mg/L	< 0.015		5/9/12 15:26	A205107	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	**2.51**		5/8/12 9:00	A205123	4500-NH3D

10 May 2012

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

Date Received: 02-May-12 16:15

ANALYTICAL RESULTS

Lab Number: 1205030-10
Sample Name: ECMW-22
Date/Time Collected: 5/2/12 8:54
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**4.99**		5/3/12 12:49	A205049	300.0/9056A
Nitrate as N	mg/L	**1.15**		5/3/12 12:49	A205049	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 15:30	A205107	200.7
Lead	mg/L	< 0.015		5/9/12 15:30	A205107	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		5/8/12 9:00	A205123	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1205030-11
Sample Name: ECMW-1
Date/Time Collected: 5/2/12 9:18
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**3.35**		5/3/12 14:06	A205049	300.0/9056A
Nitrate as N	mg/L	**2.07**		5/3/12 14:06	A205049	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 15:34	A205107	200.7
Lead	mg/L	< 0.015		5/9/12 15:34	A205107	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		5/8/12 9:00	A205123	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1205030-12
Sample Name: ECMW-2
Date/Time Collected: 5/2/12 9:29
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**18.7**		5/3/12 14:31	A205049	300.0/9056A
Nitrate as N	mg/L	< 0.500		5/3/12 14:31	A205049	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 15:38	A205107	200.7
Lead	mg/L	< 0.015		5/9/12 15:38	A205107	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		5/8/12 9:00	A205123	4500-NH3D

10 May 2012

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

Date Received: 02-May-12 16:15

QUALITY CONTROL RESULTS

Anions -- Batch: A205049 (Water)
Prepared: 02-May-12 17:00 By: MG -- Analyzed: 02-May-12 18:52 By: Mel

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Nitrate as N	<0.500 mg/L	94.4% / NA	99.0% / 100%		0.809%	
Sulfate as SO4	<0.500 mg/L	104% / NA	109% / 110%		0.315%	

Dissolved Metals -- Batch: A205107 (Water)
Prepared: 07-May-12 11:00 By: TC -- Analyzed: 09-May-12 14:40 By: TC

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Chromium	<0.020 mg/L	97.2% / NA	96.8% / 101%		4.38%	
Lead	<0.015 mg/L	98.9% / NA	97.6% / 102%		4.67%	

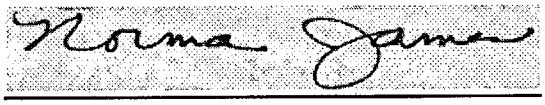
Wet Chemistry -- Batch: A205123 (Water)
Prepared: 08-May-12 09:00 By: SB -- Analyzed: 08-May-12 09:00 By: SB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Ammonia as N	<0.50 mg/L	99.0% / NA	107% / 96.9%		9.73%	D

QUALIFIER(S)

*D: RPD Value Does Not Meet Laboratory Acceptance Criteria

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

Reviewed by: 

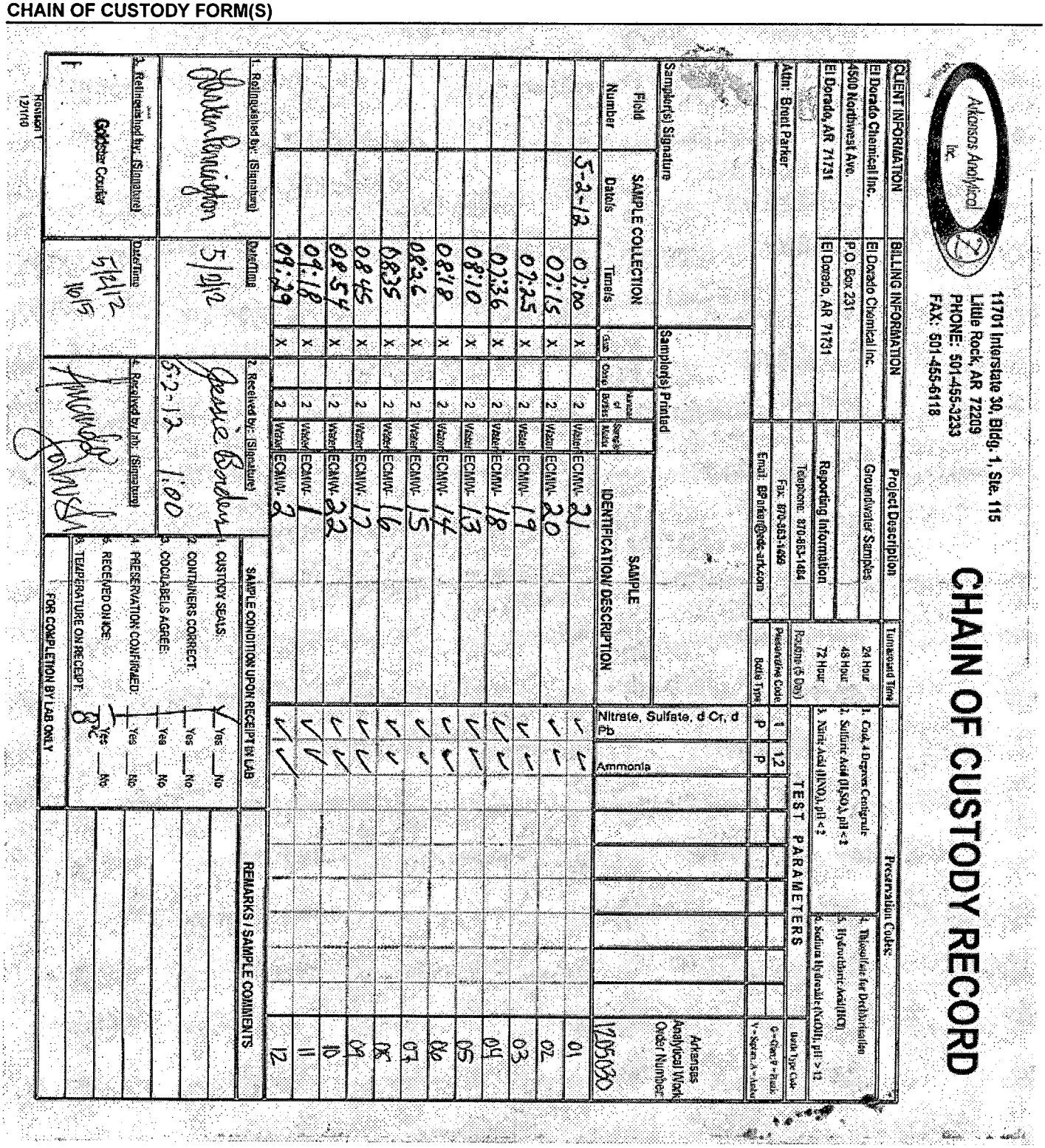
Norma James
President

10 May 2012

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

Date Received: 02-May-12 16:15

CHAIN OF CUSTODY FORM(S)



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

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION: El Dorado Chemical Inc.; 4500 Northwest Ave.; El Dorado, AR 71731
Attn: Brent Parker
BILLING INFORMATION: El Dorado Chemical Inc.; P.O. Box 231; El Dorado, AR 71731
Project Description: Groundwater Samples
Reporting Information
Telephone: 870-863-1484
Fax: 870-863-1499
Email: BParker@eldc-ark.com
Turnaround Time: 24 Hour; 48 Hour; 72 Hour; Routine (5 Day)
Preservation Codes: 1. Cool + Degrees Centigrade; 2. Sulfuric Acid (H_2SO_4), pH <2; 3. Nitric Acid (HNO_3), pH <2; 4. Thiosulfate for Dechlorination; 5. Hydrochloric Acid (HCl); 6. Sodium Hydroxide (NaOH), pH >12
Sampler(s) Signature
Sampler(s) Printed
Arkansas Analytical Work Order Number: 1205030

Field Sample Number	SAMPLE COLLECTION Date/s	Time/s	Grab	Composite	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION	Sample Type	Preservative Code	TEST PARAMETERS: Nitrate, Sulfate, d Cr, d Pb	TEST PARAMETERS: Ammonia	Matrix Type Code (G=Grab, P = Plastic, V = Septum, A = Vials)	
	5-2-12	07:00	X		2	Water	ECMW-21	P	12	✓	✓	P	01
		07:15	X		2	Water	ECMW-20			✓	✓		02
		07:25	X		2	Water	ECMW-19			✓	✓		03
		07:36	X		2	Water	ECMW-18			✓	✓		04
		08:10	X		2	Water	ECMW-13			✓	✓		05
		08:18	X		2	Water	ECMW-14			✓	✓		06
		08:26	X		2	Water	ECMW-15			✓	✓		07
		08:35	X		2	Water	ECMW-16			✓	✓		08
		08:45	X		2	Water	ECMW-12			✓	✓		09
		08:54	X		2	Water	ECMW-22			✓	✓		10
		09:18	X		2	Water	ECMW-1			✓	✓		11
		09:29	X		2	Water	ECMW-2			✓	✓		12

1. Relinquished by: (Signature) — Date/Time: 5/2/12 1615
2. Received by: (Signature) Jessie Bordus — Date/Time: 5-2-12 1:00
3. Relinquished by: (Signature) Courier — Date/Time: 5/2/12 1615
4. Received by Lab: (Signature) — Date/Time: 5/2/12 1615

SAMPLE CONDITION UPON RECEIPT BY LAB
1. CUSTODY SEALS: Yes ✓ No
2. CONTAINERS CORRECT: Yes ✓ No
3. COC/LABELS AGREE: Yes ✓ No
4. PRESERVATION CONFIRMED: Yes ✓ No
5. RECEIVED ON ICE: Yes ✓ No
6. TEMPERATURE ON RECEIPT: 8°C

REMARKS / SAMPLE COMMENTS

FOR COMPLETION BY LAB ONLY

Rev/Date: 1 12/1/10

REVISED REPORT

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

01 June 2012

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

RE: Groundwater Sample(s)

SDG Number: 1205030

Enclosed are the results of analyses for samples received by the laboratory on 02-May-12 16:15. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✔
Containers Correct	✔
COC/Labels Agree	✔
Preservation Confirmed	✔
Received On Ice	✔
Temperature on Receipt	8.0°C

Sincerely,

Norma James
President

01 June 2012

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

Date Received: 02-May-12 16:15

REVISED REPORT

CASE NARRATIVE

Sample Delivery Group - 1205030

Qualified Analytical Results are Discussed Below:

Total Metals:
Incorrect Preservation: At a later time client requested Total Chromium and Total Lead, which require acidic preservation, to be added to samples 1205030-01 through 1205030-12. The samples were preserved in the laboratory, but not within two weeks of collection as specified by method 200.7. Total Chromium and Lead results for samples 1205030-01 through 1205030-12 were qualified as "estimated" (E3).

01 June 2012

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

Date Received: 02-May-12 16:15

REVISED REPORT

ANALYTICAL RESULTS

Lab Number: 1205030-01
Sample Name: ECMW-21
Date/Time Collected: 5/2/12 7:00
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 17:30	A205381	200.7
Lead	mg/L	< 0.0150	E3	5/30/12 17:30	A205381	200.7

ANALYTICAL RESULTS

Lab Number: 1205030-02
Sample Name: ECMW-20
Date/Time Collected: 5/2/12 7:15
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 17:18	A205381	200.7
Lead	mg/L	< 0.0150	E3	5/30/12 17:18	A205381	200.7

ANALYTICAL RESULTS

Lab Number: 1205030-03
Sample Name: ECMW-19
Date/Time Collected: 5/2/12 7:25
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 17:33	A205381	200.7
Lead	mg/L	< 0.0150	E3	5/30/12 17:33	A205381	200.7

ANALYTICAL RESULTS

Lab Number: 1205030-04
Sample Name: ECMW-18
Date/Time Collected: 5/2/12 7:36
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 17:37	A205381	200.7
Lead	mg/L	< 0.0150	E3	5/30/12 17:37	A205381	200.7

01 June 2012

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

Date Received: 02-May-12 16:15

REVISED REPORT

ANALYTICAL RESULTS

Lab Number: 1205030-05
Sample Name: ECMW-13
Date/Time Collected: 5/2/12 8:10
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 17:41	A205381	200.7
Lead	mg/L	< 0.0150	E3	5/30/12 17:41	A205381	200.7

ANALYTICAL RESULTS

Lab Number: 1205030-06
Sample Name: ECMW-14
Date/Time Collected: 5/2/12 8:18
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 18:01	A205381	200.7
Lead	mg/L	< 0.0150	E3	5/30/12 18:01	A205381	200.7

ANALYTICAL RESULTS

Lab Number: 1205030-07
Sample Name: ECMW-15
Date/Time Collected: 5/2/12 8:26
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 18:05	A205381	200.7
Lead	mg/L	< 0.0150	E3	5/30/12 18:05	A205381	200.7

ANALYTICAL RESULTS

Lab Number: 1205030-08
Sample Name: ECMW-16
Date/Time Collected: 5/2/12 8:35
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 18:08	A205381	200.7
Lead	mg/L	< 0.0150	E3	5/30/12 18:08	A205381	200.7

01 June 2012

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

Date Received: 02-May-12 16:15

REVISED REPORT

ANALYTICAL RESULTS

Lab Number: 1205030-09
Sample Name: ECMW-17
Date/Time Collected: 5/2/12 8:45
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 18:12	A205381	200.7
Lead	mg/L	< 0.0150	E3	5/30/12 18:12	A205381	200.7

ANALYTICAL RESULTS

Lab Number: 1205030-10
Sample Name: ECMW-22
Date/Time Collected: 5/2/12 8:54
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 18:16	A205381	200.7
Lead	mg/L	< 0.0150	E3	5/30/12 18:16	A205381	200.7

ANALYTICAL RESULTS

Lab Number: 1205030-11
Sample Name: ECMW-1
Date/Time Collected: 5/2/12 9:18
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 18:20	A205381	200.7
Lead	mg/L	< 0.0150	E3	5/30/12 18:20	A205381	200.7

ANALYTICAL RESULTS

Lab Number: 1205030-12
Sample Name: ECMW-2
Date/Time Collected: 5/2/12 9:29
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 18:24	A205381	200.7
Lead	mg/L	< 0.0150	E3	5/30/12 18:24	A205381	200.7

01 June 2012

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

Date Received: 02-May-12 16:15

REVISED REPORT

QUALITY CONTROL RESULTS

Total Metals -- Batch: A205381 (Water)

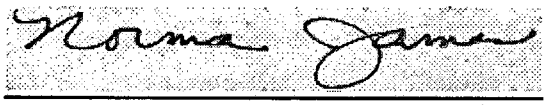
Prepared: 30-May-12 13:25 By: TC -- Analyzed: 30-May-12 17:26 By: TC

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Chromium	<0.0100 mg/L	98.0% / NA	96.4% / 94.5%		2.03%	
Lead	<0.0150 mg/L	100% / NA	96.4% / 94.8%		1.63%	

QUALIFIER(S)

*E3: Estimated Result Due to Incorrect Sample Preservation or Container

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

Reviewed by: 

Norma James
President

01 June 2012

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

Date Received: 02-May-12 16:15

REVISED REPORT

CHAIN OF CUSTODY FORM(S)

Arkansas Analytical Inc.

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

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION	BILLING INFORMATION	Project Description	Turnaround Time
El Dorado Chemical Inc.	El Dorado Chemical Inc.	Groundwater Samples	24 Hour
4500 Northwest Ave.	P.O. Box 231		48 Hour
El Dorado, AR 71731	El Dorado, AR 71731	Reporting Information	72 Hour
		Telephone: 870-863-1484	Routine (5 Day)
Attn: Brent Parker		Fax: 870-863-1489	Preservative Code
		Email: BParker@edc-ark.com	Bottle Type

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

Bottle Type Code: G = Glass, P = Plastic; V = Vial, A = Amber

TEST PARAMETERS: Nitrate, Sulfate, d Cr, d Pb (Preservative Code 1, Bottle Type P); Ammonia (Preservative Code 1,2, Bottle Type P); T.Cr, T.Pb

Sampler(s) Signature:

Sampler(s) Printed:

Arkansas Analytical Work Order Number: 1205030

Field Number	Date/s	Time/s	Grab	Comp	Number of Bottles	Sample Matrix	Sample Identification/Description	Nitrate, Sulfate, d Cr, d Pb	Ammonia	T.Cr, T.Pb	Work Order
	5-2-12	07:00	X		2	Water	ECMW-21	✓	✓	X	01
		07:15	X		2	Water	ECMW-20	✓	✓		02
		07:25	X		2	Water	ECMW-19	✓	✓		03
		07:36	X		2	Water	ECMW-18	✓	✓		04
		08:10	X		2	Water	ECMW-13	✓	✓		05
		08:18	X		2	Water	ECMW-14	✓	✓		06
		08:26	X		2	Water	ECMW-15	✓	✓		07
		08:35	X		2	Water	ECMW-16	✓	✓		08
		08:45	X		2	Water	ECMW-17	✓	✓		09
		08:54	X		2	Water	ECMW-22	✓	✓		10
		09:18	X		2	Water	ECMW-1	✓	✓		11
		09:29	X		2	Water	ECMW-2	✓	✓		12

1. Relinquished by: (Signature)	Date/Time	2. Received by: (Signature)
Lauren Pennington	5/2/12	Jessie Borders 5-2-12 1:00
3. Relinquished by: (Signature)	**Date/Time**	**4. Received by lab: (Signature)**
Goldstar Courier	5/2/12 1615	Amanda Johnston

SAMPLE CONDITION UPON RECEIPT IN LAB
1. CUSTODY SEALS: ✓ Yes ___ No
2. CONTAINERS CORRECT: ✓ Yes ___ No
3. COC/LABELS AGREE: ✓ Yes ___ No
4. PRESERVATION CONFIRMED: ✓ Yes ___ No
5. RECEIVED ON ICE: ✓ Yes ___ No
6. TEMPERATURE ON RECEIPT: 8°C

FOR COMPLETION BY LAB ONLY

REMARKS / SAMPLE COMMENTS
add T.Cr + T.Pb to all samples per Laurie Marcella w/Env. Mngmnt Svcs - due to improper sample preservation data will be qualified 5/29/12 - (S)

Revision 1
12/1/10

Arkansas Analytical Inc.

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

10 May 2012

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

RE: Groundwater Sample(s)

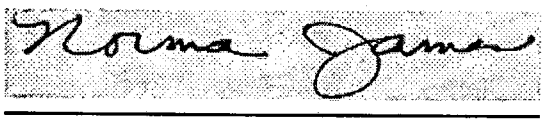
SDG Number: 1205044

Enclosed are the results of analyses for samples received by the laboratory on 03-May-12 15:01. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

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

Sincerely,



Norma James
President

10 May 2012

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

Date Received: 03-May-12 15:01

ANALYTICAL RESULTS

Lab Number: 1205044-01
Sample Name: ECMW-3
Date/Time Collected: 5/3/12 7:45
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**8.87**		5/4/12 8:57	A205092	300.0/9056A
Nitrate as N	mg/L	< 0.500		5/4/12 8:57	A205092	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 15:49	A205108	200.7
Lead	mg/L	< 0.015		5/9/12 15:49	A205108	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		5/8/12 9:00	A205123	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1205044-02
Sample Name: ECMW-4
Date/Time Collected: 5/3/12 7:55
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**865**		5/7/12 20:00	A205092	300.0/9056A
Nitrate as N	mg/L	< 0.500		5/4/12 9:22	A205092	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 16:36	A205108	200.7
Lead	mg/L	< 0.015		5/9/12 16:36	A205108	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		5/8/12 9:00	A205123	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1205044-03
Sample Name: ECMW-5
Date/Time Collected: 5/3/12 8:10
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**59.6**		5/4/12 16:14	A205092	300.0/9056A
Nitrate as N	mg/L	**23.5**		5/4/12 16:14	A205092	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 16:40	A205108	200.7
Lead	mg/L	< 0.015		5/9/12 16:40	A205108	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		5/9/12 10:39	A205134	4500-NH3D

10 May 2012

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

Date Received: 03-May-12 15:01

ANALYTICAL RESULTS

Lab Number: 1205044-04
Sample Name: ECMW-6
Date/Time Collected: 5/3/12 8:20
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**456**		5/4/12 15:49	A205092	300.0/9056A
Nitrate as N	mg/L	**1850**		5/4/12 15:49	A205092	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 16:44	A205108	200.7
Lead	mg/L	**0.032**		5/9/12 16:44	A205108	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	**344**		5/9/12 10:39	A205134	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1205044-05
Sample Name: ECMW-7
Date/Time Collected: 5/3/12 8:29
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**761**		5/4/12 16:40	A205092	300.0/9056A
Nitrate as N	mg/L	**161**		5/4/12 16:40	A205092	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 16:48	A205108	200.7
Lead	mg/L	< 0.015		5/9/12 16:48	A205108	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	**132**		5/9/12 10:39	A205134	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1205044-06
Sample Name: ECMW-8
Date/Time Collected: 5/3/12 8:45
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**754**		5/4/12 17:05	A205092	300.0/9056A
Nitrate as N	mg/L	**296**		5/4/12 17:05	A205092	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 16:52	A205108	200.7
Lead	mg/L	**0.015**		5/9/12 16:52	A205108	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	**122**		5/9/12 10:39	A205134	4500-NH3D

10 May 2012

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

Date Received: 03-May-12 15:01

ANALYTICAL RESULTS

Lab Number: 1205044-07
Sample Name: ECMW-9
Date/Time Collected: 5/3/12 9:00
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**520**		5/7/12 12:19	A205092	300.0/9056A
Nitrate as N	mg/L	**25.5**		5/4/12 17:31	A205092	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 16:56	A205108	200.7
Lead	mg/L	< 0.015		5/9/12 16:56	A205108	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		5/9/12 10:39	A205134	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1205044-08
Sample Name: ECMW-10
Date/Time Collected: 5/3/12 9:20
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**158**		5/4/12 17:56	A205092	300.0/9056A
Nitrate as N	mg/L	**38.4**		5/4/12 17:56	A205092	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 16:59	A205108	200.7
Lead	mg/L	< 0.015		5/9/12 16:59	A205108	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		5/9/12 10:39	A205134	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1205044-09
Sample Name: ECMW-11
Date/Time Collected: 5/3/12 9:32
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**95.6**		5/4/12 19:13	A205092	300.0/9056A
Nitrate as N	mg/L	**29.4**		5/4/12 19:13	A205092	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 17:03	A205108	200.7
Lead	mg/L	< 0.015		5/9/12 17:03	A205108	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	**14.5**		5/9/12 10:39	A205134	4500-NH3D

10 May 2012

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

Date Received: 03-May-12 15:01

ANALYTICAL RESULTS

Lab Number: 1205044-10
Sample Name: ECMW-12
Date/Time Collected: 5/3/12 9:45
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**17.0**		5/4/12 12:47	A205092	300.0/9056A
Nitrate as N	mg/L	< 0.500		5/4/12 12:47	A205092	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 17:23	A205108	200.7
Lead	mg/L	< 0.015		5/9/12 17:23	A205108	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	**1.81**		5/9/12 10:39	A205134	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1205044-11
Sample Name: ECMW-26
Date/Time Collected: 5/3/12 9:58
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**36.5**		5/7/12 19:34	A205092	300.0/9056A
Nitrate as N	mg/L	**1740**		5/4/12 22:12	A205092	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 17:27	A205108	200.7
Lead	mg/L	**0.028**		5/9/12 17:27	A205108	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	**407**		5/9/12 10:39	A205134	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1205044-12
Sample Name: ECMW-28
Date/Time Collected: 5/3/12 10:16
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**762**		5/4/12 22:37	A205092	300.0/9056A
Nitrate as N	mg/L	**287**		5/4/12 22:37	A205092	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		5/9/12 17:30	A205108	200.7
Lead	mg/L	< 0.015		5/9/12 17:30	A205108	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	**111**		5/9/12 10:39	A205134	4500-NH3D

10 May 2012

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

Date Received: 03-May-12 15:01

QUALITY CONTROL RESULTS

Anions -- Batch: A205092 (Water)
Prepared: 04-May-12 13:45 By: MG -- Analyzed: 04-May-12 20:55 By: MG

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Nitrate as N	<0.500 mg/L	93.4% / NA	101% / 103%		0.996%	
Sulfate as SO4	<0.500 mg/L	106% / NA	106% / 105%		0.458%	

Dissolved Metals -- Batch: A205108 (Water)
Prepared: 07-May-12 11:00 By: TC -- Analyzed: 09-May-12 16:32 By: TC

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Chromium	<0.020 mg/L	89.5% / NA	97.5% / 99.6%		2.15%	
Lead	<0.015 mg/L	90.1% / NA	97.0% / 99.1%		2.15%	

Wet Chemistry -- Batch: A205123 (Water)
Prepared: 08-May-12 09:00 By: SB -- Analyzed: 08-May-12 09:00 By: SB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Ammonia as N	<0.50 mg/L	99.0% / NA	107% / 96.9%		9.73%	D

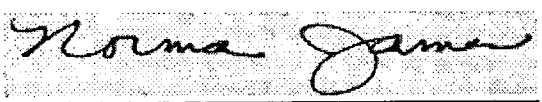
Wet Chemistry -- Batch: A205134 (Water)
Prepared: 09-May-12 10:39 By: SB -- Analyzed: 09-May-12 10:39 By: SB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Ammonia as N	<0.50 mg/L	97.6% / NA	97.3% / 98.1%		0.800%	

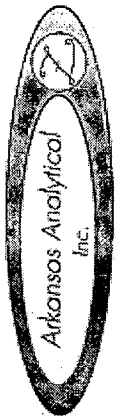
QUALIFIER(S)

*D: RPD Value Does Not Meet Laboratory Acceptance Criteria

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

Reviewed by: 

Norma James
President



10 May 2012

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

Date Received: 03-May-12 15:01

CHAIN OF CUSTODY FORM(S)

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

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION	BILLING INFORMATION	Project Description	Turnaround Time
El Dorado Chemical Inc.	El Dorado Chemical Inc.	Groundwater Samples	24 Hour
4500 Northwest Ave.	P.O. Box 231		48 Hour
El Dorado, AR 71731	El Dorado, AR 71731	Reporting Information	72 Hour
		Telephone: 870-863-1484	Routine (5 Day)
Attn: Brent Parker		Fax: 870-863-1499	Preservative Code:
		Email: BParker@edc-ark.com	Bottle Type

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

Sampler(s) Signature: Joe Thorpe
Sampler(s) Printed: Joe Thorpe

Field Number	SAMPLE COLLECTION Date/s	Time/s	Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION	Nitrate, Sulfate, d Cr, d Pb	Ammonia	TEST PARAMETERS	Bottle Type Code	Arkansas Analytical Work Order Number: 1205044-
	5-3-12	07:45	X		2	Water	ECMW-3	✓	✓			01
		07:55	X		2	Water	ECMW-4	✓	✓			02
		08:10	X		2	Water	ECMW-5	✓	✓			03
		08:20	X		2	Water	ECMW-6	✓	✓			04
		08:29	X		2	Water	ECMW-7	✓	✓			05
		08:45	X		2	Water	ECMW-8	✓	✓			06
		09:00	X		2	Water	ECMW-9	✓	✓			07
		09:20	X		2	Water	ECMW-10	✓	✓			08
		09:32	X		2	Water	ECMW-11	✓	✓			09
		09:45	X		2	Water	ECMW-12	✓	✓			10
		09:58	X		2	Water	ECMW-26	✓	✓			11
		10:16	X		2	Water	ECMW-28	✓	✓			12

1. Relinquished by: (Signature)	Date/Time	2. Received by: (Signature)
Joe Thorpe	5-3-12	Brent Parker
3. Relinquished by: (Signature)	Date/Time	4. Received by: (Signature)
Brent Parker	5/3/12 - 11:40	Jessica Borders

SAMPLE CONDITION UPON RECEIPT IN LAB		
1. CUSTODY SEALS:	✓ Yes	No
2. CONTAINERS CORRECT:	Yes	No
3. COC/LABELS AGREE:	Yes	No
4. PRESERVATION CONFIRMED:	Yes	No
5. RECEIVED ON ICE:	Yes	No
6. TEMPERATURE ON RECEIPT:	4°C	
FOR COMPLETION BY LAB ONLY		

REMARKS / SAMPLE COMMENTS
delivered via Goldstar -
received in lab:
Sidney James -
5/3/12. 1501

Revision 1
12/1/10

REVISED REPORT

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

01 June 2012

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

RE: Groundwater Sample(s)

SDG Number: 1205044

Enclosed are the results of analyses for samples received by the laboratory on 03-May-12 15:01. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

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

Sincerely,

Norma James
President

01 June 2012

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

Date Received: 03-May-12 15:01

REVISED REPORT

CASE NARRATIVE

Sample Delivery Group - 1205044

Qualified Analytical Results are Discussed Below:

Total Metals:
Incorrect Preservation: At a later time client requested Total Chromium and Total Lead, which require acidic preservation, to be added to samples 1205044-01 thru 1205044-12. The samples were preserved in the laboratory, but not within two weeks of collection as specified by method 200.7. Total Chromium and Lead results for samples 1205044-01 through 1205044-12 were qualified as "estimated" (E3).

01 June 2012

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

Date Received: 03-May-12 15:01

REVISED REPORT

ANALYTICAL RESULTS

Lab Number: 1205044-01
Sample Name: ECMW-3
Date/Time Collected: 5/3/12 7:45
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 19:00	A205382	200.7

ANALYTICAL RESULTS

Lab Number: 1205044-01RE1
Sample Name: ECMW-3
Date/Time Collected: 5/3/12 7:45
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Lead	mg/L	< 0.0150	E3	5/30/12 19:03	A205382	200.7

ANALYTICAL RESULTS

Lab Number: 1205044-02
Sample Name: ECMW-4
Date/Time Collected: 5/3/12 7:55
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 19:07	A205382	200.7
Lead	mg/L	< 0.0150	E3	5/30/12 19:07	A205382	200.7

ANALYTICAL RESULTS

Lab Number: 1205044-03
Sample Name: ECMW-5
Date/Time Collected: 5/3/12 8:10
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 19:11	A205382	200.7
Lead	mg/L	< 0.0150	E3	5/30/12 19:11	A205382	200.7

01 June 2012

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

Date Received: 03-May-12 15:01

REVISED REPORT

ANALYTICAL RESULTS

Lab Number: 1205044-04
Sample Name: ECMW-6
Date/Time Collected: 5/3/12 8:20
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 19:15	A205382	200.7
Lead	mg/L	**0.0312**	E3	5/30/12 19:15	A205382	200.7

ANALYTICAL RESULTS

Lab Number: 1205044-05
Sample Name: ECMW-7
Date/Time Collected: 5/3/12 8:29
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 19:19	A205382	200.7
Lead	mg/L	< 0.0150	E3	5/30/12 19:19	A205382	200.7

ANALYTICAL RESULTS

Lab Number: 1205044-06
Sample Name: ECMW-8
Date/Time Collected: 5/3/12 8:45
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 19:22	A205382	200.7
Lead	mg/L	**0.0159**	E3	5/30/12 19:22	A205382	200.7

ANALYTICAL RESULTS

Lab Number: 1205044-07
Sample Name: ECMW-9
Date/Time Collected: 5/3/12 9:00
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 19:26	A205382	200.7
Lead	mg/L	< 0.0150	E3	5/30/12 19:26	A205382	200.7

01 June 2012

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

Date Received: 03-May-12 15:01

REVISED REPORT

ANALYTICAL RESULTS

Lab Number: 1205044-08
Sample Name: ECMW-10
Date/Time Collected: 5/3/12 9:20
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 19:30	A205382	200.7
Lead	mg/L	< 0.0150	E3	5/30/12 19:30	A205382	200.7

ANALYTICAL RESULTS

Lab Number: 1205044-09
Sample Name: ECMW-11
Date/Time Collected: 5/3/12 9:32
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 19:50	A205382	200.7
Lead	mg/L	< 0.0150	E3	5/30/12 19:50	A205382	200.7

ANALYTICAL RESULTS

Lab Number: 1205044-10
Sample Name: ECMW-12
Date/Time Collected: 5/3/12 9:45
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 19:54	A205382	200.7
Lead	mg/L	< 0.0150	E3	5/30/12 19:54	A205382	200.7

ANALYTICAL RESULTS

Lab Number: 1205044-11
Sample Name: ECMW-26
Date/Time Collected: 5/3/12 9:58
Sample Matrix: Water

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 18:36	A205382	200.7
Lead	mg/L	**0.0298**	E3	5/30/12 18:36	A205382	200.7

01 June 2012

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

Date Received: 03-May-12 15:01

REVISED REPORT

ANALYTICAL RESULTS

Lab Number:	**1205044-12**
Sample Name:	**ECMW-28**
Date/Time Collected:	**5/3/12 10:16**
Sample Matrix:	**Water**

Total Metals	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Chromium	mg/L	< 0.0100	E3	5/30/12 19:58	A205382	200.7
Lead	mg/L	< 0.0150	E3	5/30/12 19:58	A205382	200.7

QUALITY CONTROL RESULTS

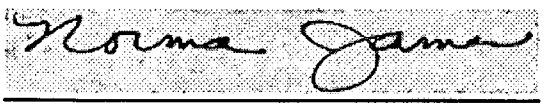
Total Metals -- Batch: A205382 (Water)
Prepared: 30-May-12 13:25 By: TC -- Analyzed: 30-May-12 18:59 By: TC

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Chromium	<0.0100 mg/L	99.5% / NA	90.7% / 90.6%		0.0994%	
Lead	<0.0150 mg/L	101% / NA	85.4% / 85.6%		0.207%	

QUALIFIER(S)

*E3: Estimated Result Due to Incorrect Sample Preservation or Container

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

Reviewed by: 

Norma James
President

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

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION	BILLING INFORMATION	Project Description	Turnaround Time	Preservation Codes:
El Dorado Chemical Inc.	El Dorado Chemical Inc.	Groundwater Samples	24 Hour	1. Cool, 4 Degrees Centigrade; 4. Thiosulfate for Dechlorination
4500 Northwest Ave.	P.O. Box 231		48 Hour	2. Sulfuric Acid (H_2SO_4), pH < 2; 5. Hydrochloric Acid (HCl)
El Dorado, AR 71731	El Dorado, AR 71731	Reporting Information	72 Hour	3. Nitric Acid (HNO_3), pH < 2; 6. Sodium Hydroxide (NaOH), pH > 12
		Telephone: 870-863-1434	Routine (5 Day)	TEST PARAMETERS
Attn: Brent Parker		Fax: 870-863-1439	Preservative Code:	1 / 1,2
		Email: BParker@edc-ark.com	Bottle Type	P / P

Sampler(s) Signature: Joe Thorpe — Sampler(s) Printed: Joe Thorpe

Field Number	SAMPLE COLLECTION Date/s	Time/s	Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION	Nitrate, Sulfate, & Cr. 6 (1)	Ammonia (2)	Arkansas Analytical Work Order Number: 1205044-
	5-3-12	07:45	X		2	Water	ECMW-3	✓	✓	01
		0755	X		2	Water	ECMW-4	✓	✓	02
		08:10	X		2	Water	ECMW-5	✓	✓	03
		08:20	X		2	Water	ECMW-6	✓	✓	04
		08:29	X		2	Water	ECMW-7	✓	✓	05
		08:45	X		2	Water	ECMW-8	✓	✓	06
		09:00	X		2	Water	ECMW-9	✓	✓	07
		09:20	X		2	Water	ECMW-10	✓	✓	08
		09:32	X		2	Water	ECMW-11	✓	✓	09
		09:45	X		2	Water	ECMW-12	✓	✓	10
		09:58	X		2	Water	ECMW-26	✓	✓	11
		10:16	X		2	Water	ECMW-28	✓	✓	12

1. Relinquished by: (Signature)	Date/Time	2. Received by: (Signature)	SAMPLE CONDITION UPON RECEIPT IN LAB	REMARKS / SAMPLE COMMENTS
Joe Thorpe	5-3-12	Brent Parker	1. CUSTODY SEALS: ✓ Yes ___ No	delivered via Goldstar -
			2. CONTAINERS CORRECT: ___ Yes ___ No	received in lab:
			3. COC/LABELS AGREE: ___ Yes ___ No	Sydney Jarvis -
3. Relinquished by: (Signature)	Date/Time	4. Received by lab: (Signature)	4. PRESERVATION CONFIRMED: ___ Yes ___ No	5/3/12. 1501
Brent Parker	5/3/12 - 11:40	Jessica Borders	5. RECEIVED ON ICE: ___ Yes ___ No	add T.Cr + T.Pb to all
			6. TEMPERATURE ON RECEIPT: 4°C	samples per Laurie,
			FOR COMPLETION BY LAB ONLY	Marella w/PMS - due to incorrect sample preservation data will be qualified - 5/3/12 (E)

Revision 1
12/1/10

REVISED REPORT

Date Received: 03-May-12 15:01

CHAIN OF CUSTODY FORM(S)

01 June 2012

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

Arkansas Analytical Inc.

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

14 November 2012

Larken Pennington
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731

RE: Groundwater Sample(s)

SDG Number: 1211069

Enclosed are the results of analyses for samples received by the laboratory on 06-Nov-12 17:10. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

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

Sincerely,

Norma James
President

14 November 2012

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

Date Received: 06-Nov-12 17:10

CASE NARRATIVE

Sample Delivery Group – 1211069

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

Anions Analysis:

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Failure: Nitrate failed to recover within acceptance criteria in the MS/MSD sample. The recoveries were qualified by "%D1" in the quality control section of the final report. Nitrate was qualified as "estimated" in the parent sample which was NOT a member of this sample delivery group.

14 November 2012

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

Date Received: 06-Nov-12 17:10

ANALYTICAL RESULTS

Lab Number: 1211069-01
Sample Name: ECMW-21
Date/Time Collected: 11/6/12 7:30
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**6.28**		11/7/12 11:05	A211068	300.0/9056A
Nitrate as N	mg/L	**1.10**		11/7/12 11:05	A211068	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 11:50	A211153	200.7
Lead	mg/L	< 0.015		11/12/12 11:50	A211153	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 18:02	A211112	200.7
Lead	mg/L	< 0.0150		11/8/12 18:02	A211112	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		11/14/12 11:35	A211159	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1211069-02
Sample Name: ECMW-20
Date/Time Collected: 11/6/12 7:45
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**9.31**		11/7/12 11:27	A211068	300.0/9056A
Nitrate as N	mg/L	< 0.500		11/7/12 11:27	A211068	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 12:19	A211153	200.7
Lead	mg/L	< 0.015		11/12/12 12:19	A211153	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 18:21	A211112	200.7
Lead	mg/L	< 0.0150		11/8/12 18:21	A211112	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		11/14/12 11:35	A211159	4500-NH3D

14 November 2012

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

Date Received: 06-Nov-12 17:10

ANALYTICAL RESULTS

Lab Number: 1211069-03
Sample Name: ECMW-19
Date/Time Collected: 11/6/12 8:00
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**2.88**		11/7/12 11:50	A211068	300.0/9056A
Nitrate as N	mg/L	< 0.500		11/7/12 11:50	A211068	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 12:23	A211153	200.7
Lead	mg/L	< 0.015		11/12/12 12:23	A211153	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 18:25	A211112	200.7
Lead	mg/L	< 0.0150		11/8/12 18:25	A211112	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		11/14/12 11:35	A211159	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1211069-04
Sample Name: ECMW-18
Date/Time Collected: 11/6/12 8:16
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**2.99**		11/7/12 12:12	A211068	300.0/9056A
Nitrate as N	mg/L	< 0.500		11/7/12 12:12	A211068	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 12:27	A211153	200.7
Lead	mg/L	< 0.015		11/12/12 12:27	A211153	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 18:29	A211112	200.7
Lead	mg/L	< 0.0150		11/8/12 18:29	A211112	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		11/14/12 11:35	A211159	4500-NH3D

14 November 2012

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

Date Received: 06-Nov-12 17:10

ANALYTICAL RESULTS

Lab Number: 1211069-05
Sample Name: ECMW-13
Date/Time Collected: 11/6/12 8:42
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**593**		11/8/12 21:00	A211068	300.0/9056A
Nitrate as N	mg/L	< 0.500		11/7/12 12:35	A211068	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 12:30	A211153	200.7
Lead	mg/L	< 0.015		11/12/12 12:30	A211153	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 18:33	A211112	200.7
Lead	mg/L	< 0.0150		11/8/12 18:33	A211112	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		11/14/12 11:35	A211159	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1211069-06
Sample Name: ECMW-14
Date/Time Collected: 11/6/12 9:00
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**140**		11/8/12 21:23	A211068	300.0/9056A
Nitrate as N	mg/L	**8.03**		11/7/12 12:58	A211068	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 12:34	A211153	200.7
Lead	mg/L	< 0.015		11/12/12 12:34	A211153	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 18:37	A211112	200.7
Lead	mg/L	< 0.0150		11/8/12 18:37	A211112	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		11/14/12 11:35	A211159	4500-NH3D

14 November 2012

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

Date Received: 06-Nov-12 17:10

ANALYTICAL RESULTS

Lab Number: 1211069-07
Sample Name: ECMW-15
Date/Time Collected: 11/6/12 9:14
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**13.0**		11/8/12 21:45	A211068	300.0/9056A
Nitrate as N	mg/L	**1.26**		11/7/12 13:20	A211068	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 12:38	A211153	200.7
Lead	mg/L	< 0.015		11/12/12 12:38	A211153	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 18:41	A211112	200.7
Lead	mg/L	< 0.0150		11/8/12 18:41	A211112	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		11/14/12 11:35	A211159	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1211069-08
Sample Name: ECMW-16
Date/Time Collected: 11/6/12 9:22
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**14.6**		11/8/12 22:08	A211068	300.0/9056A
Nitrate as N	mg/L	**9.94**		11/7/12 13:43	A211068	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 12:42	A211153	200.7
Lead	mg/L	< 0.015		11/12/12 12:42	A211153	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 18:45	A211112	200.7
Lead	mg/L	< 0.0150		11/8/12 18:45	A211112	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	**1.19**		11/14/12 11:35	A211159	4500-NH3D

14 November 2012

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

Date Received: 06-Nov-12 17:10

ANALYTICAL RESULTS

Lab Number: 1211069-09
Sample Name: ECMW-17
Date/Time Collected: 11/6/12 9:45
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**39.2**		11/8/12 23:16	A211068	300.0/9056A
Nitrate as N	mg/L	**1.82**		11/7/12 14:05	A211068	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 12:46	A211153	200.7
Lead	mg/L	< 0.015		11/12/12 12:46	A211153	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 18:49	A211112	200.7
Lead	mg/L	< 0.0150		11/8/12 18:49	A211112	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	**3.82**		11/14/12 11:35	A211159	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1211069-10
Sample Name: ECMW-22
Date/Time Collected: 11/6/12 9:34
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**7.01**		11/7/12 14:28	A211068	300.0/9056A
Nitrate as N	mg/L	**1.74**		11/7/12 14:28	A211068	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 12:50	A211153	200.7
Lead	mg/L	< 0.015		11/12/12 12:50	A211153	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 18:53	A211112	200.7
Lead	mg/L	< 0.0150		11/8/12 18:53	A211112	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		11/14/12 11:35	A211159	4500-NH3D

14 November 2012

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

Date Received: 06-Nov-12 17:10

ANALYTICAL RESULTS

Lab Number:	**1211069-11**
Sample Name:	**ECMW-23**
Date/Time Collected:	**11/6/12 9:55**
Sample Matrix:	**Water**

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**37.3**		11/9/12 11:59	A211106	300.0/9056A
Nitrate as N	mg/L	**1.51**		11/7/12 15:35	A211106	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 12:54	A211153	200.7
Lead	mg/L	< 0.015		11/12/12 12:54	A211153	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	**0.0174**		11/8/12 18:57	A211112	200.7
Lead	mg/L	< 0.0150		11/8/12 18:57	A211112	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	**5.67**		11/14/12 11:35	A211159	4500-NH3D

14 November 2012

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

Date Received: 06-Nov-12 17:10

QUALITY CONTROL RESULTS

Anions -- Batch: A211068 (Water)
Prepared: 06-Nov-12 14:53 By: MG -- Analyzed: 06-Nov-12 19:42 By: MG

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Nitrate as N	<0.500 mg/L	101% / NA	105% / 105%		0.0258%	
Sulfate as SO4	<0.500 mg/L	102% / NA	106% / 107%		0.229%	

Anions -- Batch: A211106 (Water)
Prepared: 07-Nov-12 16:54 By: MG -- Analyzed: 08-Nov-12 14:13 By: Melis

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Nitrate as N	<0.500 mg/L	107% / NA	112% / 112%		0.0980%	%D1
Sulfate as SO4	<0.500 mg/L	103% / NA	106% / 108%		0.795%	

Total Metals -- Batch: A211112 (Water)
Prepared: 08-Nov-12 10:00 By: TC -- Analyzed: 08-Nov-12 17:43 By: TC

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Chromium	<0.0100 mg/L	103% / NA	102% / 101%		0.709%	
Lead	<0.0150 mg/L	106% / NA	102% / 101%		1.04%	

Dissolved Metals -- Batch: A211153 (Water)
Prepared: 12-Nov-12 11:22 By: MH -- Analyzed: 12-Nov-12 11:59 By: MH

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Chromium	<0.020 mg/L	101% / NA	90.8% / 90.0%		0.814%	
Lead	<0.015 mg/L	103% / NA	92.1% / 91.4%		0.800%	

Wet Chemistry -- Batch: A211159 (Water)
Prepared: 13-Nov-12 07:56 By: KP -- Analyzed: 14-Nov-12 11:35 By: KP

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Ammonia as N	<0.50 mg/L	108% / NA	118% / 116%		1.21%	

QUALIFIER(S)

*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria

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

Reviewed by: 

Norma James
President

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

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION	BILLING INFORMATION
El Dorado Chemical Inc.	El Dorado Chemical Inc.
4500 Northwest Ave.	P.O. Box 231
El Dorado, AR 71731	El Dorado, AR 71731
Attn: Larken Pennington	

Project Description: Groundwater Samples

Reporting Information
Telephone: 870-863-1484
Fax: 870-863-1499
Email: LPennington@edc-ark.com

Turnaround Time: 24 Hour / 48 Hour / 72 Hour / Routine (5 Day)

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

Sampler(s) Signature:

Sampler(s) Printed:

Field Number	SAMPLE COLLECTION Date/s	Time/s	Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION	TEST PARAMETERS: Nitrate, Sulfate, Cr, Pb	Ammonia	Cr, Pb	Arkansas Analytical Work Order Number: 12110 69-
							Bottle Type Code: G = Glass; P = Plastic; V = Septum; A = Amber	1 P	1,2 P		
	11/6/12	0730	X		3	Water	ECMW-21	X	X	X	01
	1	0745	X		3	Water	ECMW-20	X	X	X	02
	1	0800	X		3	Water	ECMW-19	X	X	X	03
	1	0816	X		3	Water	ECMW-18	X	X	X	04
	1	0842	X		3	Water	ECMW-13	X	X	X	05
	1	0900	X		3	Water	ECMW-14	X	X	X	06
	1	0914	X		3	Water	ECMW-15	X	X	X	07
	1	0922	X		3	Water	ECMW-16	X	X	X	08
	1	0945	X		3	Water	ECMW-17	X	X	X	09
	1	0934	X		3	Water	ECMW-22	X	X	X	10
		0955	X		3	Water	ECMW-23	X	X	X	11
			X		3	Water	ECMW-	X	X	X	

1. Relinquished by: (Signature)	Date/Time	2. Received by: (Signature)
Joe Thompson	11 6 12 10:10	Jessie Bades 11-6-12 1:40
3. Relinquished by: (Signature)	Date/Time	4. Received by lab: (Signature)
Larken Pennington	11/6/12	Sydney Clarke 11.6.12 1710

SAMPLE CONDITION UPON RECEIPT IN LAB

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

FOR COMPLETION BY LAB ONLY

REMARKS / SAMPLE COMMENTS
delivered via Goldstar

Revision 1
12/1/10

LABORATORY
REQUEST FOR ANALYSIS

Contact: Lauren Marcella Date: 10/25/2012 Phone: (225) 753-3631

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

Deliver Containers: To facility as usual

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

Phone: 501 455 3233 Fax: 501 455 6118

Parameter	Method	Matrix	Number of Samples
Total Chromium	200.7	Water	25
Total Lead	200.7	Water	25
Dissolved Chromium	200.7	Water	25
Dissolved Lead	200.7	Water	25
Sulfate as SO_4	300.0/9056A	Water	25
Nitrate as N	300.0/9056A	Water	25
Ammonia as N	4500-NH3D	Water	25

Arkansas Analytical Inc.

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

14 November 2012

Larken Pennington
El Dorado Chemical Inc.
4500 North West Ave.
El Dorado, AR 71731

RE: Groundwater Sample(s)

SDG Number: 1211083

Enclosed are the results of analyses for samples received by the laboratory on 07-Nov-12 15:30. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✔
Containers Correct	✔
COC/Labels Agree	✔
Preservation Confirmed	✔
Received On Ice	✔
Temperature on Receipt	14.0°C

Sincerely,

Norma James
President

14 November 2012

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

Date Received: 07-Nov-12 15:30

CASE NARRATIVE

Sample Delivery Group – 1211083

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

Anions Analysis:

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Failure: Nitrate failed to recover within acceptance criteria in the MS/MSD sample. The recoveries were qualified by "%D1" in the quality control section of the final report. Nitrate was qualified as "estimated" (E20) in the parent sample, 1211083-01 (ECMW-1).

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ANALYTICAL RESULTS

Lab Number: 1211083-01
Sample Name: ECMW-1
Date/Time Collected: 11/7/12 7:55
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**5.94**		11/8/12 9:23	A211106	300.0/9056A
Nitrate as N	mg/L	**0.866**	E20	11/8/12 9:23	A211106	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 16:31	A211154	200.7
Lead	mg/L	< 0.015		11/12/12 16:31	A211154	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 19:32	A211129	200.7
Lead	mg/L	< 0.0150		11/8/12 19:32	A211129	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		11/14/12 11:38	A211181	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1211083-02
Sample Name: ECMW-2
Date/Time Collected: 11/7/12 8:10
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**22.0**		11/8/12 23:38	A211106	300.0/9056A
Nitrate as N	mg/L	< 0.500		11/8/12 9:46	A211106	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 16:42	A211154	200.7
Lead	mg/L	< 0.015		11/12/12 16:42	A211154	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 19:43	A211129	200.7
Lead	mg/L	< 0.0150		11/8/12 19:43	A211129	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		11/14/12 11:38	A211181	4500-NH3D

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ANALYTICAL RESULTS

Lab Number: **1211083-03**
Sample Name: **ECMW-3**
Date/Time Collected: **11/7/12 8:16**
Sample Matrix: **Water**

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**13.4**		11/9/12 0:01	A211106	300.0/9056A
Nitrate as N	mg/L	< 0.500		11/8/12 10:09	A211106	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 16:46	A211154	200.7
Lead	mg/L	< 0.015		11/12/12 16:46	A211154	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 19:47	A211129	200.7
Lead	mg/L	**0.0169**		11/8/12 19:47	A211129	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		11/14/12 11:38	A211181	4500-NH3D

ANALYTICAL RESULTS

Lab Number: **1211083-04**
Sample Name: **ECMW-4**
Date/Time Collected: **11/7/12 8:23**
Sample Matrix: **Water**

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**890**		11/9/12 0:23	A211106	300.0/9056A
Nitrate as N	mg/L	< 0.500		11/8/12 10:31	A211106	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 16:50	A211154	200.7
Lead	mg/L	< 0.015		11/12/12 16:50	A211154	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 19:51	A211129	200.7
Lead	mg/L	< 0.0150		11/8/12 19:51	A211129	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		11/14/12 11:38	A211181	4500-NH3D

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ANALYTICAL RESULTS

Lab Number: 1211083-05
Sample Name: ECMW-5
Date/Time Collected: 11/7/12 8:34
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**74.6**		11/8/12 19:53	A211106	300.0/9056A
Nitrate as N	mg/L	**26.6**		11/8/12 19:53	A211106	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 16:54	A211154	200.7
Lead	mg/L	< 0.015		11/12/12 16:54	A211154	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 20:11	A211129	200.7
Lead	mg/L	< 0.0150		11/8/12 20:11	A211129	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		11/14/12 11:38	A211181	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1211083-06
Sample Name: ECMW-6
Date/Time Collected: 11/7/12 8:45
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**112**		11/8/12 20:16	A211106	300.0/9056A
Nitrate as N	mg/L	**2520**		11/8/12 20:16	A211106	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 16:58	A211154	200.7
Lead	mg/L	**0.017**		11/12/12 16:58	A211154	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 20:14	A211129	200.7
Lead	mg/L	**0.0185**		11/8/12 20:14	A211129	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	**620**		11/14/12 11:38	A211181	4500-NH3D

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ANALYTICAL RESULTS

Lab Number: 1211083-07
Sample Name: ECMW-7
Date/Time Collected: 11/7/12 9:15
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**692**		11/8/12 20:38	A211106	300.0/9056A
Nitrate as N	mg/L	**153**		11/8/12 20:38	A211106	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 17:18	A211154	200.7
Lead	mg/L	< 0.015		11/12/12 17:18	A211154	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 20:18	A211129	200.7
Lead	mg/L	< 0.0150		11/8/12 20:18	A211129	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	**187**		11/14/12 11:38	A211181	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1211083-08
Sample Name: ECMW-8
Date/Time Collected: 11/7/12 9:26
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**814**		11/8/12 14:58	A211127	300.0/9056A
Nitrate as N	mg/L	**429**		11/8/12 14:58	A211127	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 17:21	A211154	200.7
Lead	mg/L	< 0.015		11/12/12 17:21	A211154	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 20:22	A211129	200.7
Lead	mg/L	**0.0166**		11/8/12 20:22	A211129	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	**193**		11/14/12 11:38	A211181	4500-NH3D

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ANALYTICAL RESULTS

Lab Number: 1211083-09
Sample Name: ECMW-9
Date/Time Collected: 11/7/12 9:39
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**568**		11/9/12 10:51	A211127	300.0/9056A
Nitrate as N	mg/L	**32.5**		11/8/12 15:20	A211127	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 17:25	A211154	200.7
Lead	mg/L	< 0.015		11/12/12 17:25	A211154	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 20:26	A211129	200.7
Lead	mg/L	< 0.0150		11/8/12 20:26	A211129	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	**0.68**		11/14/12 11:38	A211181	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1211083-10
Sample Name: ECMW-10
Date/Time Collected: 11/7/12 9:52
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**152**		11/8/12 15:43	A211127	300.0/9056A
Nitrate as N	mg/L	**44.4**		11/8/12 15:43	A211127	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 17:29	A211154	200.7
Lead	mg/L	< 0.015		11/12/12 17:29	A211154	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 20:30	A211129	200.7
Lead	mg/L	< 0.0150		11/8/12 20:30	A211129	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	< 0.50		11/14/12 11:38	A211181	4500-NH3D

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Date Received: 07-Nov-12 15:30

ANALYTICAL RESULTS

Lab Number: 1211083-11
Sample Name: ECMW-11
Date/Time Collected: 11/7/12 10:12
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**161**		11/8/12 16:07	A211127	300.0/9056A
Nitrate as N	mg/L	**23.8**		11/8/12 16:07	A211127	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 17:33	A211154	200.7
Lead	mg/L	< 0.015		11/12/12 17:33	A211154	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 20:34	A211129	200.7
Lead	mg/L	< 0.0150		11/8/12 20:34	A211129	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	**33.2**		11/14/12 11:38	A211181	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1211083-12
Sample Name: ECMW-12
Date/Time Collected: 11/7/12 10:26
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**21.5**		11/9/12 11:14	A211127	300.0/9056A
Nitrate as N	mg/L	< 0.500		11/8/12 16:30	A211127	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 17:37	A211154	200.7
Lead	mg/L	< 0.015		11/12/12 17:37	A211154	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 20:38	A211129	200.7
Lead	mg/L	< 0.0150		11/8/12 20:38	A211129	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	**3.55**		11/14/12 11:38	A211181	4500-NH3D

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ANALYTICAL RESULTS

Lab Number: 1211083-13
Sample Name: ECMW-24
Date/Time Collected: 11/7/12 8:58
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**113**		11/9/12 1:08	A211127	300.0/9056A
Nitrate as N	mg/L	**2430**		11/9/12 1:08	A211127	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 17:41	A211154	200.7
Lead	mg/L	**0.016**		11/12/12 17:41	A211154	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 20:42	A211129	200.7
Lead	mg/L	**0.0211**		11/8/12 20:42	A211129	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	**655**		11/14/12 11:38	A211181	4500-NH3D

ANALYTICAL RESULTS

Lab Number: 1211083-14
Sample Name: ECMW-Field Blank
Date/Time Collected: 11/7/12 10:45
Sample Matrix: Water

Anions	Units	Result	Qualifier(s)	Date/Time Analyzed	Batch	Method
Sulfate as SO4	mg/L	**13.1**		11/9/12 11:36	A211127	300.0/9056A
Nitrate as N	mg/L	< 0.500		11/8/12 16:52	A211127	300.0/9056A
Dissolved Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.020		11/12/12 17:45	A211154	200.7
Lead	mg/L	< 0.015		11/12/12 17:45	A211154	200.7
Total Metals	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Chromium	mg/L	< 0.0100		11/8/12 20:46	A211129	200.7
Lead	mg/L	< 0.0150		11/8/12 20:46	A211129	200.7
Wet Chemistry	**Units**	**Result**	**Qualifier(s)**	**Date/Time Analyzed**	**Batch**	**Method**
Ammonia as N	mg/L	**0.63**		11/14/12 11:38	A211181	4500-NH3D

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QUALITY CONTROL RESULTS

Anions -- Batch: A211106 (Water)
Prepared: 07-Nov-12 16:54 By: MG -- Analyzed: 08-Nov-12 14:13 By: Melis

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Nitrate as N	<0.500 mg/L	107% / NA	112% / 112%		0.0980%	%D1
Sulfate as SO4	<0.500 mg/L	103% / NA	106% / 108%		0.795%	

Anions -- Batch: A211127 (Water)
Prepared: 08-Nov-12 13:06 By: MG -- Analyzed: 08-Nov-12 19:30 By: Melis

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Nitrate as N	<0.500 mg/L	110% / NA	108% / 109%		0.419%	
Sulfate as SO4	<0.500 mg/L	108% / NA	104% / 105%		0.593%	

Total Metals -- Batch: A211129 (Water)
Prepared: 08-Nov-12 13:15 By: TC -- Analyzed: 08-Nov-12 19:39 By: TC

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Chromium	<0.0100 mg/L	98.5% / NA	96.1% / 97.3%		1.22%	
Lead	<0.0150 mg/L	102% / NA	98.0% / 99.3%		1.38%	

Dissolved Metals -- Batch: A211154 (Water)
Prepared: 12-Nov-12 11:23 By: MH -- Analyzed: 13-Nov-12 10:36 By: MH

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Chromium	<0.020 mg/L	85.1% / NA	79.2% / 88.4%		11.0%	
Lead	<0.015 mg/L	88.1% / NA	81.8% / 78.4%		4.30%	

Wet Chemistry -- Batch: A211181 (Water)
Prepared: 14-Nov-12 09:02 By: KP -- Analyzed: 14-Nov-12 11:38 By: KP

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Ammonia as N	<0.50 mg/L	97.8% / NA	103% / 107%		3.19%	

QUALIFIER(S)

*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria
*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.

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

Reviewed by: Norma James

Norma James
President

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

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION	BILLING INFORMATION	Project Description	Turnaround Time
El Dorado Chemical Inc.	El Dorado Chemical Inc.	Groundwater Samples	24 Hour
4500 Northwest Ave.	P.O. Box 231		48 Hour
El Dorado, AR 71731	El Dorado, AR 71731	Reporting Information	72 Hour
		Telephone: 870-863-1484	Routine (5 Day)
Attn: Larken Pennington		Fax: 870-863-1499	Preservative Code:
		Email: LPennington@edc-ark.com	Bottle Type:

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

Sampler(s) Signature:

Sampler(s) Printed:

Field Number	SAMPLE COLLECTION Date/s	Time/s	Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION	TEST PARAMETERS: Nitrate, Sulfate, d Cr, d Pb	Ammonia	Cr, Pb	Arkansas Analytical Work Order Number: 1211083-
	11/7/12	07:55	X		3	Water	ECMW-1	X	X	X	01
		08:10	X		3	Water	ECMW-2	X	X	X	02
		0816	X		3	Water	ECMW-3	X	X	X	03
		0823	X		3	Water	ECMW-4	X	X	X	04
		08134	X		3	Water	ECMW-5	X	X	X	05
		08:45	X		3	Water	ECMW-6	X	X	X	06
		09:15	X		3	Water	ECMW-7	X	X	X	07
		09:26	X		3	Water	ECMW-8	X	X	X	08
		0939	X		3	Water	ECMW-9	X	X	X	09
		0952	X		3	Water	ECMW-10	X	X	X	10
		1012	X		3	Water	ECMW-11	X	X	X	11
		1026	X		3	Water	ECMW-12	X	X	X	12

1. Relinquished by: (Signature)	Date/Time	2. Received by: (Signature)
Jae Morgan	11-7-12 10:45	Jessie Anders 1:20
3. Relinquished by: (Signature)	Date/Time	4. Received by lab: (Signature)
Larken Pennington	11/7/12 1:20	Sydney James 11-7-12 1530

SAMPLE CONDITION UPON RECEIPT IN LAB

1. CUSTODY SEALS:	✓ Yes	___ No
2. CONTAINERS CORRECT:	___ Yes	___ No
3. COC/LABELS AGREE:	___ Yes	___ No
4. PRESERVATION CONFIRMED:	___ Yes	___ No
5. RECEIVED ON ICE:	___ Yes	___ No
6. TEMPERATURE ON RECEIPT:	14°C	

FOR COMPLETION BY LAB ONLY

REMARKS / SAMPLE COMMENTS

delivered via Goldstar

Revision 1
12/1/10

Arkansas Analytical Inc.
11701 Interstate
Little Rock, AR 72209
PHONE: 501-455-3233
FAX: 501-455-6118

CHAIN OF CUSTODY RECORD

CLIENT INFORMATION	BILLING INFORMATION
El Dorado Chemical Inc.	El Dorado Chemical Inc.
4500 Northwest Ave.	P.O. Box 231
El Dorado, AR 71731	El Dorado, AR 71731
Attn: Larken Pennington	

Project Description: Groundwater Samples

Reporting Information
Telephone: 870-863-1484
Fax: 870-863-1499
Email: LPennington@edc-ark.com

Turnaround Time: 24 Hour / 48 Hour / 72 Hour / Routine (5 Day)

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

Sampler(s) Signature:

Sampler(s) Printed:

Field Number	SAMPLE COLLECTION Date/s	Time/s	Grab	Comp	Number of Bottles	Sample Matrix	SAMPLE IDENTIFICATION/ DESCRIPTION	TEST PARAMETERS: Nitrate, Sulfate, d Cr, d Pb	Ammonia	Cr, Pb	Arkansas Analytical Work Order Number:
	11-7-12	08:58	X		3	Water	ECMW-24	X	X	X	12/1083-13
	11	1045	X		3	Water	ECMW-Field Blank	X	X	X	14
			X		3	Water	ECMW-	X	X	X	
			X		3	Water	ECMW-	X	X	X	
			X		3	Water	ECMW-	X	X	X	
			X		3	Water	ECMW-	X	X	X	
			X		3	Water	ECMW-	X	X	X	
			X		3	Water	ECMW-	X	X	X	
			X		3	Water	ECMW-	X	X	X	
			X		3	Water	ECMW-	X	X	X	
			X		3	Water	ECMW-	X	X	X	
			X		3	Water	ECMW-	X	X	X	

Bottle Type Code: G = Glass, P = Plastic, V = Septum, A = Amber

Bottle Type	P	P

1. Relinquished by: (Signature)	Date/Time	2. Received by: (Signature)
Joe Thompson	11-7-12 10:45	Jessie Bodus 1:20
3. Relinquished by: (Signature)	Date/Time	4. Received by lab: (Signature)
Larken Pennington	11/7/12 1:20	Sydney James 11-7-12 1530

SAMPLE CONDITION UPON RECEIPT IN LAB

1. CUSTODY SEALS:	✓ Yes	No
2. CONTAINERS CORRECT:	Yes	No
3. COC/LABELS AGREE:	Yes	No
4. PRESERVATION CONFIRMED:	Yes	No
5. RECEIVED ON ICE:	Yes	No
6. TEMPERATURE ON RECEIPT:	14°C	

FOR COMPLETION BY LAB ONLY

REMARKS / SAMPLE COMMENTS
delivered via Goldstar

Revision 1
12/1/10

LABORATORY
REQUEST FOR ANALYSIS

Contact: Lauren Marcella Date: 10/25/2012 Phone: (225) 753-3631

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

Deliver Containers: To facility as usual

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

Phone: 501 455 3233 Fax: 501 455 6118

Parameter	Method	Matrix	Number of Samples
Total Chromium	200.7	Water	25
Total Lead	200.7	Water	25
Dissolved Chromium	200.7	Water	25
Dissolved Lead	200.7	Water	25
Sulfate as SO_4	300.0/9056A	Water	25
Nitrate as N	300.0/9056A	Water	25
Ammonia as N	4500-NH3D	Water	25

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: EL DORADO CHEMICAL Facility: EL DORADO, AR Well No: MW 1
Colle: R. DURHAM Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	5-1-12	Method of Evacuation	ELEC PUMP
Top of casing to water level	11.24 ft	Gallons per well volume	
Top of casing to bottom	22.90 ft	Total gallons evacuated	
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time		Elevation of well water	
Top of casing to water level	5-2-12 09:18 ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss.	Oxygen [%]	Turbidity [NT
19.0	5.08	60.7 MS			
17.5	5.08	51.7 MS			
17.8	5.98	55.8			

GENERAL INFORMATION

Weather conditions at time of sampling: clear windy 90°
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: L. Durham Joe Thompson

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

FIGUR

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: El Dorado Chemical Facility: El Dorado, AR Well No. MW 2
Collector: R. Durham Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	5-1-12	Method of Evacuation	Elec. Pump
Top of casing to water level	Flowing ft	Gallons per well volume	
Top of casing to bottom	20.40 ft	Total gallons evacuated	
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time		Elevation of well water	
Top of casing to water level	5-2-12 09:29 ft	Method of Sampling	PVC Bailer

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss.	Oxygen [ ]	Turbidity [NT
18.4	5.45	198.2 mS			
17.5	5.57	246 mS			
18.0	5.76	-238 mS			

GENERAL INFORMATION

Weather conditions at time of sampling: clear M&90

Sample characteristics:

Containers and preservatives:

Comments and observations:

Recommendations:

Certification: R. Durham Joe Thompson

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

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: El Dorado Chemical Facility: El Dorado, AR Well No. MW 3
Collector: R. Durham Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	5-2-12 11:28	Method of Evacuation	Elec. Pump
Top of casing to water level	10.10 ft	Gallons per well volume	11.11 gal.
Top of casing to bottom	22.20 ft	Total gallons evacuated	33.34 gal.
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	5-3-12 07:45	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC Bailer

SAMPLE D

Temperature [°C]	pH	Conductivity [uS]	Diss.	Oxygen [%]	Turbidity [NT
19.3	6.13	132.9 uS			
18.6	6.32	132.8			
18.8	6.28	136.8			

GENERAL INFORMATION

Weather conditions at time of sampling: Pcloudy
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: R. Durham Joe Thompson

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

FIGUE

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. MW 4
Colle R. DURHAM Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	5-2-12 12:15	Method of Evacuation	ELEC. PUMP
Top of casing to water level	870 ft	Gallons per well volume	8.84 gal
Top of casing to bottom	2230 ft	Total gallons evacuated	26.52 gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	5-3-12 07:55	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [mg/l]	Turbidity [NT
18.8	4.06	1780		
19.6	4.12	1918		
	dry			

GENERAL INFORMATION

Weather conditions at time of sampling: p cloudy
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: K. Durham Joe Thompson

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

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. MW 5
Colle ... R. DURHAM Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	5-2-12 1238	Method of Evacuation	ELEC. PUMP
Top of casing to water level	3.96 ft	Gallons per well volume	9.12 gal
Top of casing to bottom	18.00 ft	Total gallons evacuated	27.35 gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	5-3-12 0840	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Diss. Oxygen[ ]	Turbidity[NT
19.7	5.06	334.45		
19.0	5.08	300		
19.1	5.13	304		

GENERAL INFORMATION

Weather conditions at time of sampling: P cloudy
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: L. Durham Joe Thompson

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

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site E. DORADO CHEMICAL Facility E. DORADO, AR Well No. MW6 & DUP
Colle R. DURHAM Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	5-2-12 13.30	Method of Evacuation	ELEC. PUMP
Top of casing to water level	4.96 ft	Gallons per well volume	11.27 gal
Top of casing to bottom	22.30 ft	Total gallons evacuated	33.81 gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	5-3-12 0820	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D

Temperature [°C]	pH	Conductivity [µS]	Dissolved Oxygen [%]	Turbidity [NT
19.6	4.20	5.30 ms		
19.5	4.26	5.49 ms		
19.5	4.28	5.60 ms		

GENERAL INFORMATION

Weather conditions at time of sampling: p cloudy
Sample characteristics:
Containers and preservatives:
Comments and observations: Dup is MW26 @ 09:58
Recommendations:

Certification: K. Durham Joe Thompson

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

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. MW7
Colle.. R. DURHAM Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	5-2-12	Method of Evacuation	ELEC. PUMP
Top of casing to water level	2.52 ft	Gallons per well volume	1050 gal
Top of casing to bottom	29.68 ft	Total gallons evacuated	3151 gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	5-3-12 0829	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [ ]	Turbidity [NT
20.1	4.78	7.07 MS		
20.2	4.80	7.27 MS		
19.7	4.82	7.26 MS		

GENERAL INFORMATION

Weather conditions at time of sampling P cloudy
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: R. Durham Joe Thompson

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

NH1

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. MW8 + DUP
Collector R. DURHAM Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	5-2-12	Method of Evacuation	ELEC. PUMP
Top of casing to water level	7.26 ft	Gallons per well volume	14.91 gal
Top of casing to bottom	30.20 ft	Total gallons evacuated	44.73 gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	5-3-12 0845	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature [°C]	pH	Conductivity [mS]	Diss. Oxygen [ ]	Turbidity [NT
19.8	3.92	7.57 ms		
19.4	3.91	7.97 ms		
19.4	3.97	8.13 ms		

GENERAL INFORMATION

Weather conditions at time of sampling: P cloudy
Sample characteristics:
Containers and preservatives:
Comments and observations: Dup MW 28 @ 10:16
Recommendations:

Certification: R. Durham Joe Thompson

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

LHT V11

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: EL DORADO CHEMICAL Facility: EL DORADO, AR Well No. MW 9
Collected By: R. DURHAM Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	5-2-12	Method of Evacuation	ELEC. PUMP
Top of casing to water level	10.06 ft	Gallons per well volume	13.15 gal
Top of casing to bottom	38.30 ft	Total gallons evacuated	39.45 gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	5-3-12 09:00	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Disso	Oxygen [ ]	Turbidity [NT
20.2	5.50	1034 µS			
19.6	5.68	974 µS			
20.0	571	991			

GENERAL INFORMATION

Weather conditions at time of sampling: P Cloudy
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: R. Durham Joe Thompson

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

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. MW 10
Collector R. DURHAM Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	5-2-12	Method of Evacuation	ELEC. PUMP
Top of casing to water level	11.96 ft	Gallons per well volume	7.04 gal
Top of casing to bottom	22.80 ft	Total gallons evacuated	21.15 gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	5-3-12 09:20	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D

Temperature[°C]	pH	Conductivity[uS]	Dissc	Oxygen[ ]	Turbidity[NT
20.5	4.58	478			
20.4	4.36	478			
20.4	4.39	510			

GENERAL INFORMATION

Weather conditions at time of sampling: p cloudy upper 80
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: R. Durham Joe Thompson

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

FIGUI

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

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

MONITORING WELL INFORMATION

Evacuation: Date/Time	5-2-12	Method of Evacuation	ELEC. PUMP
Top of casing to water level	10.10 ft	Gallons per well volume	6.56 gal
Top of casing to bottom	20.20 ft	Total gallons evacuated	19.69 gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	5-3-12 09:12	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss.	Oxygen [ ]	Turbidity [NT
20.4	4.55	4.25			
19.5	4.62	4.72			
19.3	4.33	1534			

GENERAL INFORMATION

Weather conditions at time of sampling: p cloudy upper 80
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: K. Durham Joe Thompson

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

FIGUI

11R22

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: EL DORADO CHEMICAL Facility: EL DORADO, AR Well No: MW 12
Collected: R. DURHAM, Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	5-2-12	Method of Evacuation	ELEC. PUMP
Top of casing to water level	5.60 ft	Gallons per well volume	9.49 gal
Top of casing to bottom	20.20 ft	Total gallons evacuated	28.47
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	5-3-12 09:45	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D

Temperature [°C]	pH	Conductivity [uS]	Dissolved Oxygen [mg/l]	Turbidity [NT
20.8	5.80	387		
20.5	5.85	362		
20.3	6.02	339		

GENERAL INFORMATION

Weather conditions at time of sampling: p cloudy upper 80
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: K. Durham Joe Thompson

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

FIGUI

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: EL DORADO CHEMICAL Facility: EL DORADO, AR Well No. RW-13

Collected By: R. DURHAM Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	5/1/12 1021	Method of Evacuation	ELEC. PUMP
Top of casing to water level	6.54 ft	Gallons per well volume	
Top of casing to bottom	19.6 ft	Total gallons evacuated	
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	5-2-12 0810	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [mg/l]	Turbidity [NT
18.5	4.88	688 µS		
18.8	5.29	726 µS		
18.4	5.23	686 µS		

GENERAL INFORMATION

Weather conditions at time of sampling: C/Cov

Sample characteristics:

Containers and preservatives:

Comments and observations:

Recommendations:

Certification: K. Durham Joe Thompson

12 Gal

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

FIGUI

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site El Dorado Chemical Facility El Dorado, AR Well No MW-14
Colle R. Durham Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	5-1-12 1056	Method of Evacuation	Elec. Pump
Top of casing to water level	6.18 ft	Gallons per well volume	
Top of casing to bottom	18.50 ft	Total gallons evacuated	
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	5-2-12 08:18	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC Bailer

SAMPLE D

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [ ]	Turbidity [NT
19.9	5.50	393 µs		
20.0	5.48	431 µs		
19.4	5.20	434 µs		

GENERAL INFORMATION

Weather conditions at time of sampling: clear
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: R. Durham Joe Thompson

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

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: El Dorado Chemical Facility: El Dorado, AR Well No: MW15

Collected By: R. Durham Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	5-1-12	Method of Evacuation	Elec. Pump
Top of casing to water level	4.58 ft	Gallons per well volume	
Top of casing to bottom	17.90 ft	Total gallons evacuated	
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	5-2-12 0826	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC Bailer

SAMPLE D

Temperature [°C]	pH	Conductivity [uS]	Diss.	Oxygen [ ]	Turbidity [NT
20.0	5.10	75.2 KF			
20.8	4.90	69.1 KF			
19.9	4.88	68.2 KF			

GENERAL INFORMATION

Weather conditions at time of sampling: clear

Sample characteristics:

Containers and preservatives:

Comments and observations:

Recommendations:

Certification: R. Durham Joe Thompson 12-5-1

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

FIGUR

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: El Dorado Chemical Facility: El Dorado, AR Well No: MW-16
Collector: R. Durham Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	5-1-12 11:30	Method of Evacuation	Elec. Pump
Top of casing to water level	4.54 ft	Gallons per well volume	
Top of casing to bottom	19.50 ft	Total gallons evacuated	
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	5-2-12 08:35	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC Bailer

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [ ]	Turbidity [NT
19.6	5.06	1293 uS		
~~20~~ 19.5	4.56	128.8 uS		
19.3	4.66	141.3 uS		

GENERAL INFORMATION

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

Certification: K. Durham Joe Thompson

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

FIGUI

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: El Dorado Chemical Facility: El Dorado, AR Well No: MW 17
Colle: R. Durham Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	5-1-12 1220	Method of Evacuation	Elec. Pump
Top of casing to water level	27.80 ft	Gallons per well volume	
Top of casing to bottom	35.20 ft	Total gallons evacuated	
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time		Elevation of well water	
Top of casing to water level:	5-2-12 08:45	Method of Sampling	PVC Bailer

SAMPLE D

Temperature[°C]	pH	Conductivity[uS]	Diss.	Oxygen[ ]	Turbidity[NT
19.8	4.52	163.8			
19.5	4.62	171.7			
19.5	4.75	176.1			

GENERAL INFORMATION

Weather conditions at time of sampling: clear windy
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: K. Durham Joe Thompson

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

FIGUR

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: El Dorado Chemical Facility: El Dorado, AR Well No: MW18
Collector: R. Durham Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	5/1/12 9:48	Method of Evacuation	Elec. Pump
Top of casing to water level	6.04 ft	Gallons per well volume	
Top of casing to bottom	ft	Total gallons evacuated	
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	5-2-12 07:36	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC Bailer

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss.	Oxygen [ ]	Turbidity [NT
17.5	5.90	119.0 uS			
17.8	5.89	84.8 uS			
17.2	5.89	80.6 uS			

GENERAL INFORMATION

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

Certification: K. Durham Joe Thompson

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

18 of 1

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: EL DORADO CHEMICAL Facility: EL DORADO, AR Well No: MW19
Collected: R. DURHAM, Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	5/1/12 8:45	Method of Evacuation	ELEC. PUMP
Top of casing to water level	1.70 ft	Gallons per well volume	
Top of casing to bottom	ft	Total gallons evacuated	
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	5-2-12 07:35	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss.	Oxygen [ ]	Turbidity [NT
19.1	6.22	85.4 uS			
18.1	6.02	78.9 uS			
18.1	5.98	76.3 uS			

GENERAL INFORMATION

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

2"

Certification: R. Durham Joe Thompson

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

FIGUI

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. MW20
Coile R. DURHAM Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	5-1-12 8:12	Method of Evacuation	ELEC. PUMP
Top of casing to water level	29.68 ft	Gallons per well volume	
Top of casing to bottom	54.20 ft	Total gallons evacuated	
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	5-2-12 07:15	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Diss. Oxygen[mg/l]	Turbidity[NT
18.8	5.74	859.45		
18.7	5.91	479.45		
19.0	5.96	425.45		

GENERAL INFORMATION

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

Certification: K. Durham Joe Thompson

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

FIGUI

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well MW21
Colle R. DURHAM Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	5-1-12 7:10	Method of Evacuation	ELEC. PUMP
Top of casing to water level	18.60 ft	Gallons per well volume	
Top of casing to bottom	34.6 ft	Total gallons evacuated	
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	5/2/10 07:00	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [%]	Turbidity [NT
18.7	5.68	101.1 µs		
18.4	652	98.9 µs		
18.9	568	55.3 µs		

GENERAL INFORMATION

Weather conditions at time of sampling: clear
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification:
R. Durham

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

FIGUI

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No MW22
Colle R. DURHAM Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	5-1-12 13:02	Method of Evacuation	ELEC. PUMP
Top of casing to water level	6.18 ft	Gallons per well volume	
Top of casing to bottom	79.68 ft	Total gallons evacuated	
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time		Elevation of well water	
Top of casing to water level	5-2-12 08:57	Method of Sampling	PVC BAILER

SAMPLE D

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [mg/l]	Turbidity [NT
19.5	5.96	115.5 uS		
19.3	6.11	111.9 uS		
19.0	6.10	115.2 uS		

GENERAL INFORMATION

Weather conditions at time of sampling: clear windy
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: R. Durham Joe Thompson

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

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GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site E. DORADO CHEMICAL Facility E. DORADO, AR Well No. MW 1
Collected R. DURHAM Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	11 6 12 1045	Method of Evacuation	ELEC. PUMP
Top of casing to water level	15.90 ft	Gallons per well volume	4.22 Gal
Top of casing to bottom	22.40 ft	Total gallons evacuated	12.67 Gal
Water level after evacuation	11-7-12 ft	Elevation, Top of casing	
Sampling: Date/Time	11-7-12 0855	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss.	Oxygen [%]	Turbidity [NT
18.8	6.48	77.7			
18.7	6.43	51.8			

GENERAL INFORMATION

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

Certification: Joe Thompson

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

FIGUR

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site El Dorado Chemical Facility El Dorado, AR Well No. MW 2
Colle R. Durham Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	4-6-12 1108	Method of Evacuation	Elec. Pump
Top of casing to water level	2.78 ft	Gallons per well volume	11.40
Top of casing to bottom	20.32 ft	Total gallons evacuated	34.20 Gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	11-7-12 0810	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC Bailer

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [%]	Turbidity [NT
17.9	6.64	268		
19.3	6.57	272		
	dry			

GENERAL INFORMATION

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

Certification: R. Durham Joe Thompson

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

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility: E. DORADO, AR Well No. MW 3
Collector R. DURHAM Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	11-6-12 11:52	Method of Evacuation	ELEC PUMP
Top of casing to water level	12.82 ft	Gallons per well volume	9.37 gal
Top of casing to bottom	27.24 ft	Total gallons evacuated	28.11
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	11-7-12 0816	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [%]	Turbidity [NT
20.1	6.69	326		
18.6	6.74	228		
	dry			

GENERAL INFORMATION

Weather conditions at time of sampling: P Cloudy
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: R. Durham Joe Thompson

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

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: EL DORADO CHEMICAL Facility: EL DORADO, AR Well No: MW 4
Collected: R. DURHAM, Jac Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	11612 1226	Method of Evacuation	ELEC. PUMP
Top of casing to water level	9.10 ft	Gallons per well volume	8.64 Gal
Top of casing to bottom	22.40 ft	Total gallons evacuated	25.93 Gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	11742 0823	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D

Temperature [°C]	pH	Conductivity [uS]	Diss.	Oxygen [ ]	Turbidity [NT
20.3	6.17	1940			
	dry				

GENERAL INFORMATION

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

Certification: R. Durham Jac Thompson

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

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. MW5
Collector R. DURHAM Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	11-6-12 B06	Method of Evacuation	ELEC. PUMP
Top of casing to water level	3.80 ft	Gallons per well volume	9.17 Gal
Top of casing to bottom	17.92 ft	Total gallons evacuated	27.53 Gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	11 7 12 0834	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [ ]	Turbidity [NT
21.6	6.44	387		
21.5	6.43	336		
Dry				

GENERAL INFORMATION

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

Certification: R. Durham Joe Thompson

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

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. MW 6
Collr R. DURHAM Joe Thompson

MONITORING WELL INFORMATION

Evacuation Date/Time	11-6-12 1332	Method of Evacuation	ELEC. PUMP
Top of casing to water level	4.40 ft	Gallons per well volume	11.59 gal
Top of casing to bottom	22.24 ft	Total gallons evacuated	34.78 gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	11-7-12 0845	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [mg/l]	Turbidity [NT
21.0	6.05	6.96 ms		
20.8	6.15	7.12 ms		
20.6	6.20	7.32 ms		

GENERAL INFORMATION

Weather conditions at time of sampling: clear windy
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations: Dup is MW 24 08:58

Certification: K. Durham Joe Thompson

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

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site El Dorado Chemical Facility El Dorado, AR Well No. MW-7
Collector R. Durham Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	11-6-12 14:08	Method of Evacuation	Elec. Pump
Top of casing to water level	2.16 ft	Gallons per well volume	11.01
Top of casing to bottom	24.10 ft	Total gallons evacuated	33.03 Gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	11-7-12 0915	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC Bailer

SAMPLE D

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [mg/l]	Turbidity [NT
20.9	6.49	9.07 m/s		
20.6	6.34	9.30 m/s		
20.2	6.31	9.12 m/s		

GENERAL INFORMATION

Weather conditions at time of sampling: clear windy
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certified: R. Durham Joe Thompson

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

FIGUI

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site El Dorado Chemical Facility El Dorado, AR Well No. MW-8
Colle R. Durham Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	11-6-12 14:44	Method of Evacuation	Elec. Pump
Top of casing to water level	7.10 ft	Gallons per well volume	14.97 Gal
Top of casing to bottom	30.14 ft	Total gallons evacuated	44.92 Gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	11-7-12 0926	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [ ]	Turbidity [NT
18.4	6.02	8.84 m/s		
19.0	6.00	9.45 m/s		
18.8	5.99	9.70 m/s		

GENERAL INFORMATION

Weather conditions at time of sampling: clear windy
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: R. Durham Joe Thompson

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

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. MW 9
Colle R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	11 6 12 1529	Method of Evacuation	ELEC. PUMP
Top of casing to water level	12.04 ft	Gallons per well volume	11.86 gal
Top of casing to bottom	30.30 ft	Total gallons evacuated	3560 gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	11 9 12 0934	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLED

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [%]	Turbidity [NT
19.3	6.55	1180		
20.0	6.51	1133		
19.7	6.50	1132		

GENERAL INFORMATION

Weather conditions at time of sampling: clear light wind
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: L. Linda Lee Thompson

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

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III

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: El Dorado Chemical Facility: El Dorado, AR Well No. MW 10
Colle R. Durham Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	11-6-12 1610	Method of Evacuation	Elec. Pump
Top of casing to water level	14.42 ft	Gallons per well volume	11.36 Gal
Top of casing to bottom	31.90 ft	Total gallons evacuated	34.08 Gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	11-7-12 09:52	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC Bailer

SAMPLE D

Temperature [°C]	pH	Conductivity [µS]	Diss. Oxygen [ ]	Turbidity [NT
21.1	6.13	511		
	dry			

GENERAL INFORMATION

Weather conditions at time of sampling: clear light wind
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: R. Durham Joe Thompson

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

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site El Dorado Chemical Facility El Dorado, AR Well No MW11
Coile R. Durham Joe Thompson

MONITORING WELL INFORMATION

Evacuation Date/Time	11-6-12 1428	Method of Evacuation	Elec. Pump
Top of casing to water level	12.00 ft	Gallons per well volume	5.26 Gal
Top of casing to bottom	20.10 ft	Total gallons evacuated	15.79 Gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	11-7-12 10:12	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC Bailer

SAMPLE D.

Temperature[°C]	pH	Conductivity[uS]	Diss.	Oxygen[ ]	Turbidity[NT
21.9	5.96	452			
22.0	5.76	565			
21.8	5.92	641			

GENERAL INFORMATION

Weather conditions at time of sampling Clear light wind
Sample characteristics
Containers and preservatives
Comments and observations
Recommendations

Certification R. Durham Joe Thompson

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

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site El Dorado Chemical Facility El Dorado, AR Well No. MW 12
Collector R. Durham Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	11-6-12 1505	Method of Evacuation	Elec Pump
Top of casing to water level	6.70 ft	Gallons per well volume	8.71 Gal
Top of casing to bottom	20.10 ft	Total gallons evacuated	26.13 Gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	11-7-12 1030	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [ ]	Turbidity [NT
21.3	6.55	362		
21.0	6.47	367		
21.2	6.49	418		

GENERAL INFORMATION

Weather conditions at time of sampling: clear light wind
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: R. Durham Joe Thompson

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

FIGUI

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site E. DORADO CHEMICAL Facility E. DORADO, AR Well No. MW 13
Colle R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	11 6 12 3:03 PM	Method of Evacuation	ELEC. PUMP
Top of casing to water level	7.58 ft	Gallons per well volume	8.13
Top of casing to bottom	20.10 ft	Total gallons evacuated	24.41
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	11 6 12 0842	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [ ]	Turbidity [NT]
19.9	6.07	653		
19.7	6.25	796		
	dry			

GENERAL INFORMATION

Weather conditions at time of sampling: Cloudy
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: Rebecca Joe Thompson

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

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site E. DORADO CHEMICAL Facility EL DORADO, AR Well No. MW 14
Collector R. DURHAM, JOE THOMPSON

MONITORING WELL INFORMATION

Evacuation: Date/Time	11/06/12 3:27 PM		Method of Evacuation	ELEC. PUMP	
Top of casing to water level	10.90	ft	Gallons per well volume	4.94 gal	
Top of casing to bottom	18.50	ft	Total gallons evacuated	14.82 gal	
Water level after evacuation		ft	Elevation, Top of casing		
Sampling: Date/Time	11/06/12 0900		Elevation of well water		
Top of casing to water level		ft	Method of Sampling	PVC BAILER	

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [mg/l]	Turbidity [NT
21.5	6.31	436		
21.8	6.19	450		
21.6	6.25	410		

GENERAL INFORMATION

Weather conditions at time of sampling: P. Cloudy
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: R. Durham Joe Thompson

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

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site El Dorado Chemical Facility El Dorado, AR Well No. MW 15
Collector R. Durham Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	11/06/12 3:58 PM	Method of Evacuation	Elec. Pump
Top of casing to water level	6.04 ft	Gallons per well volume	7.28 gal
Top of casing to bottom	1220 ft	Total gallons evacuated	21.84 gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	11 6 12 0914	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC Bailer

SAMPLED

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [ ]	Turbidity [NT
21.8	6.16	79.3		
21.8	6.22	73.3		
	dry			

GENERAL INFORMATION

Weather conditions at time of sampling: P Cloudy
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: R. Durham Joe Thompson

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

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site El Dorado Chemical Facility El Dorado, AR Well No. MW 16
Colle... R. Durham... Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	11/06/12 4:25		Method of Evacuation	Elec. Pump	
Top of casing to water level	6.04	ft	Gallons per well volume	8.71 Gal	
Top of casing to bottom	19.44	ft	Total gallons evacuated	26.13 Gal	
Water level after evacuation		ft	Elevation, Top of casing		
Sampling: Date/Time	11/08/12 0922		Elevation of well water		
Top of casing to water level	1	ft	Method of Sampling	PVC Bailer	

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [ ]	Turbidity [NT
21.3	6.12	132.1		
22.6	6.12	141.5		
22.7	6.09	143.4		

GENERAL INFORMATION

Weather conditions at time of sampling: Clear

Sample characteristics:

Containers and preservatives:

Comments and observations:

Recommendations:

Certification: L. Durham Joe Thompson

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

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site El Dorado Chemical Facility El Dorado, AR Well No. MW 17
Collector R. Durham Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	11/06/12	Method of Evacuation	Elec. Pump
Top of casing to water level	30.30 ft	Gallons per well volume	3.12
Top of casing to bottom	35.10 ft	Total gallons evacuated	9.36 Gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	11/07/12 0945	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC Bailer

SAMPLE D

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [ ]	Turbidity [NT
17.9	6.25	159.5		
18.3	6.19	169.7		
18.0	6.21	180.7		

GENERAL INFORMATION

Weather conditions at time of sampling: Clear
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations: Dup is MW23 Dup Was made on MW 17

Certification: R. Durham Joe Thompson

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

FIGUI

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility: EL DORADO, AR Well No. MW-18
Colle R. DURHAM Joe Thompson

MONITORING WELL INFORMATION

Evacuation: Date/Time	11-06-12 2:25 PM	Method of Evacuation	ELEC. PUMP
Top of casing to water level	7.60 ft	Gallons per well volume	6.30 gal
Top of casing to bottom	17.30 ft	Total gallons evacuated	18.91 gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	11 6 12 0816	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [%]	Turbidity [NT
18.9	6.63	92.0		
19.3	6.57	80.8		
19.1	6.61	81.6		

GENERAL INFORMATION

Weather conditions at time of sampling: light mist
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: Linda Joe Thompson

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

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

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

MONITORING WELL INFORMATION

Evacuation: Date/Time	11/05/12 1:41 PM	Method of Evacuation	ELEC. PUMP
Top of casing to water level	4.26 ft	Gallons per well volume	8.25 Gal
Top of casing to bottom	59.00 ft	Total gallons evacuated	26.27 Gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	11/6/12 08:00	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [%]	Turbidity [NT
17.7	6.68	1053		
17.6	6.69	854		
17.5	6.68	82.8		

GENERAL INFORMATION

Weather conditions at time of sampling: Cloudy mid 60
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: R. Durham Joe Dungan

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

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site EL DORADO CHEMICAL Facility EL DORADO, AR Well No. MW 20
Colle R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	11/05/12	Method of Evacuation	ELEC. PUMP
Top of casing to water level	31.90 ft	Gallons per well volume	339 gal
Top of casing to bottom	53.10 ft	Total gallons evacuated	1019 gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	11 6 12 0745	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D.

Temperature [°C]	pH	Conductivity [uS]	Diss.	Oxygen [ ]	Turbidity [NT
12.7	6.74	108.1			
18.3		150.8			
	dry				

GENERAL INFORMATION

Weather conditions at time of sampling: cloudy
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: R. Durham Jose Hernandez

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

FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site: El Dorado Chemical Facility: El Dorado, AR Well No. 21
Collector: R. Durham

MONITORING WELL INFORMATION

Evacuation Date/Time	11 5 12	Method of Evacuation	Elec. Pump
Top of casing to water level	20.12 ft	Gallons per well volume	0.41 gal
Top of casing to bottom	30.10 ft	Total gallons evacuated	1.23 gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling Date/Time	11 6 12 07:30	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC Bailer

SAMPLED

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [mg/l]	Turbidity [NT]
18.7	6.57	73.0		
18.4	6.47	56.7		
18.5	6.48	59.6		

GENERAL INFORMATION

Weather conditions at time of sampling: Cloudy

Sample characteristics:

Containers and preservatives:

Comments and observations:

Recommendations: Calibration with 7.00 & 10.00 Ph
Conductivity with 1413 & 10,000

Certification: R. Durham Joe Morgan

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

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FIGU

GROUNDWATER SAMPLING DATA FORM
El Dorado Chemical Company

FIELD LOG

Site E. DORADO CHEMICAL Facility E. DORADO, AR Well No. MW 22
Colle R. DURHAM

MONITORING WELL INFORMATION

Evacuation: Date/Time	11/08/12 508	Method of Evacuation	ELEC. PUMP
Top of casing to water level	9.50 ft	Gallons per well volume	11.15 gal
Top of casing to bottom	19.22 ft	Total gallons evacuated	33.46 gal
Water level after evacuation	ft	Elevation, Top of casing	
Sampling: Date/Time	11/08/12 0934	Elevation of well water	
Top of casing to water level	ft	Method of Sampling	PVC BAILER

SAMPLE D

Temperature [°C]	pH	Conductivity [uS]	Diss. Oxygen [ ]	Turbidity [NT
17.6	6.81	123.8		
18.1	6.73	122.0		
18.2	6.73	122.6		

GENERAL INFORMATION

Weather conditions at time of sampling: clear
Sample characteristics:
Containers and preservatives:
Comments and observations:
Recommendations:

Certification: R. Durham Joe Thompson

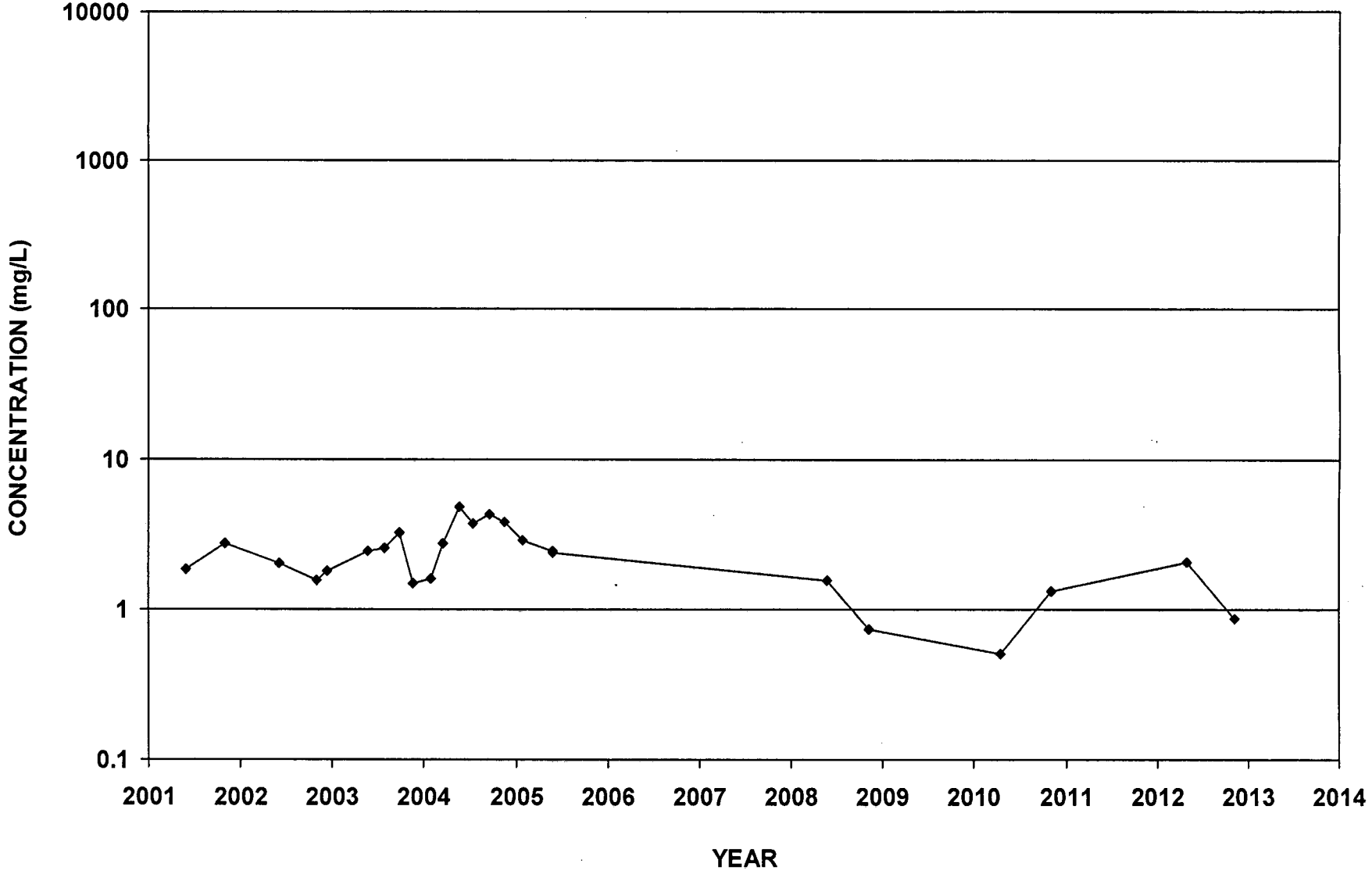
Well Casing Volumes [gal/ft]			
1 1/4"=0.077	2"=0.16	3"=0.37	4"=0.65
1 1/2"=0.10	2 1/2"=0.24	3 1/2"=0.50	6"=1.46

FIGU

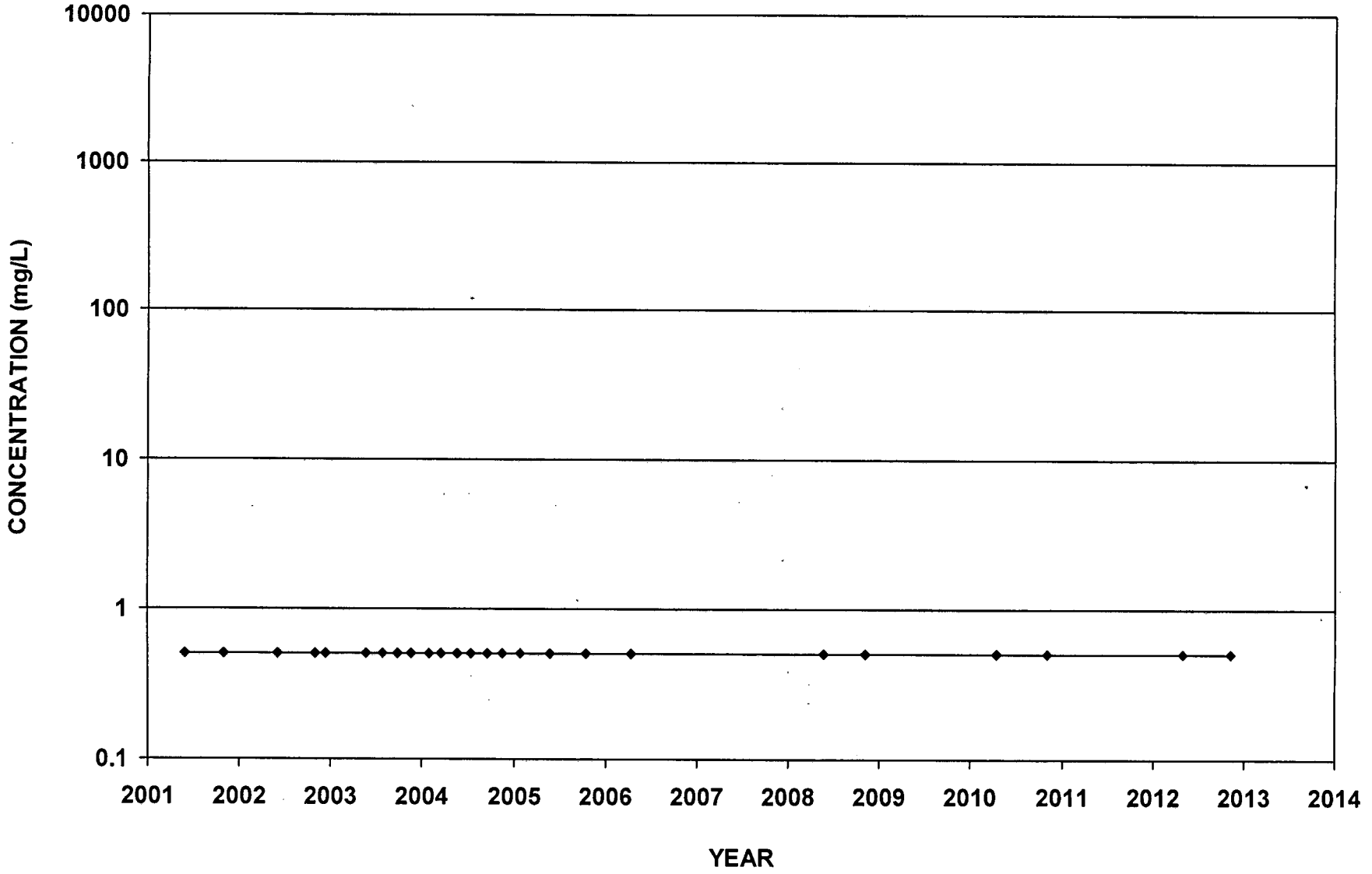
APPENDIX B

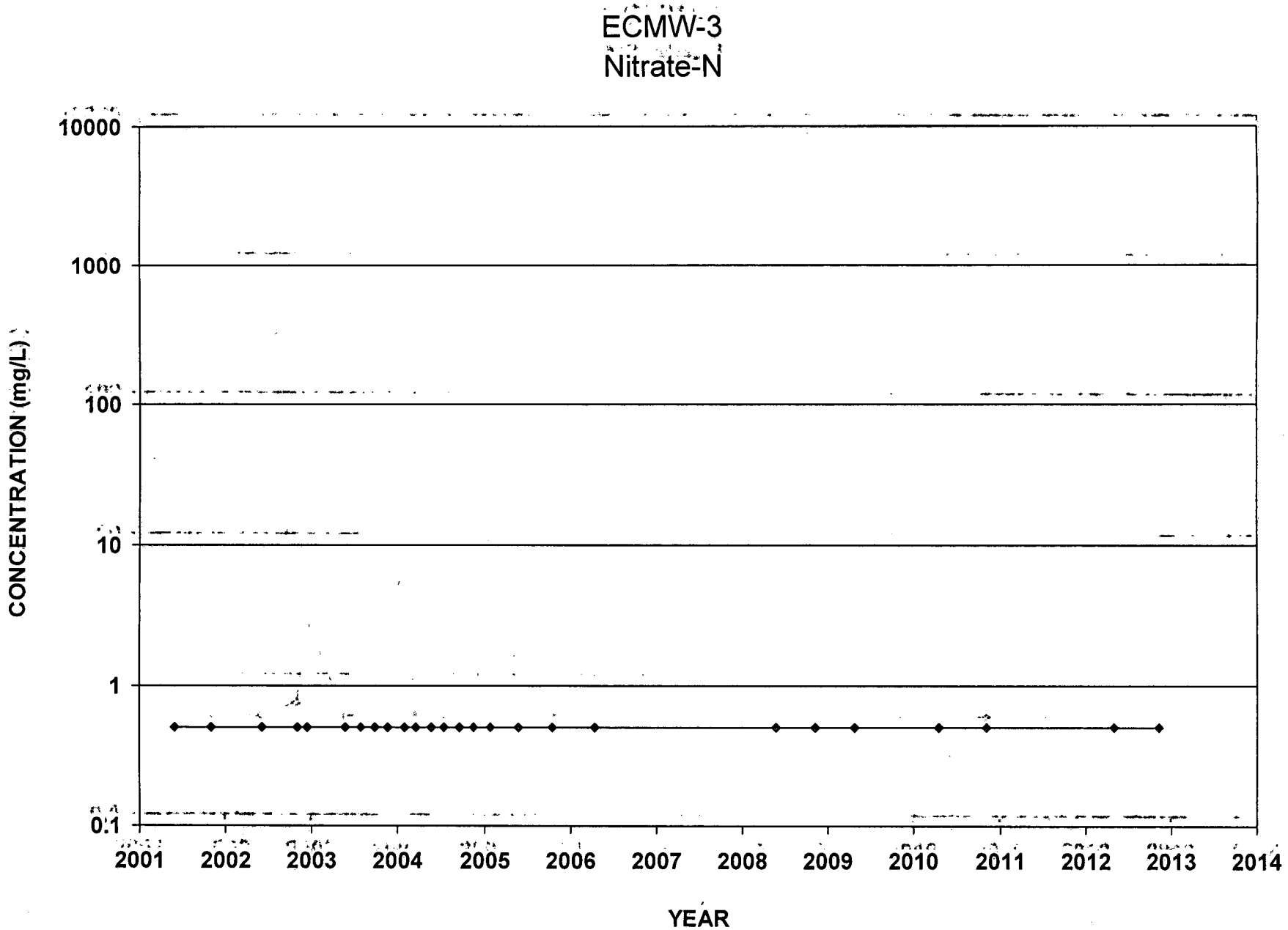
TREND GRAPHS

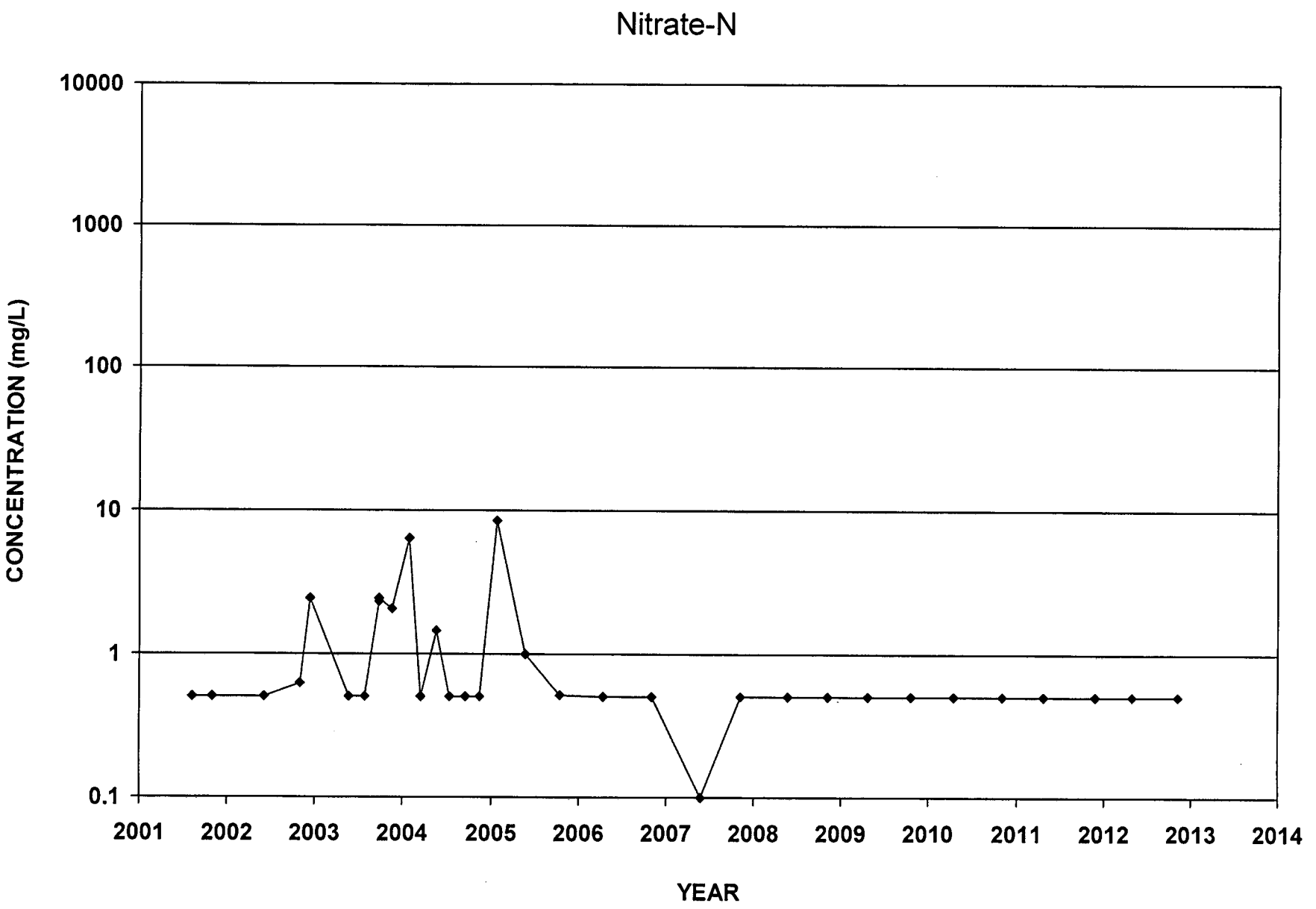
ECMW-1
Nitrate-N



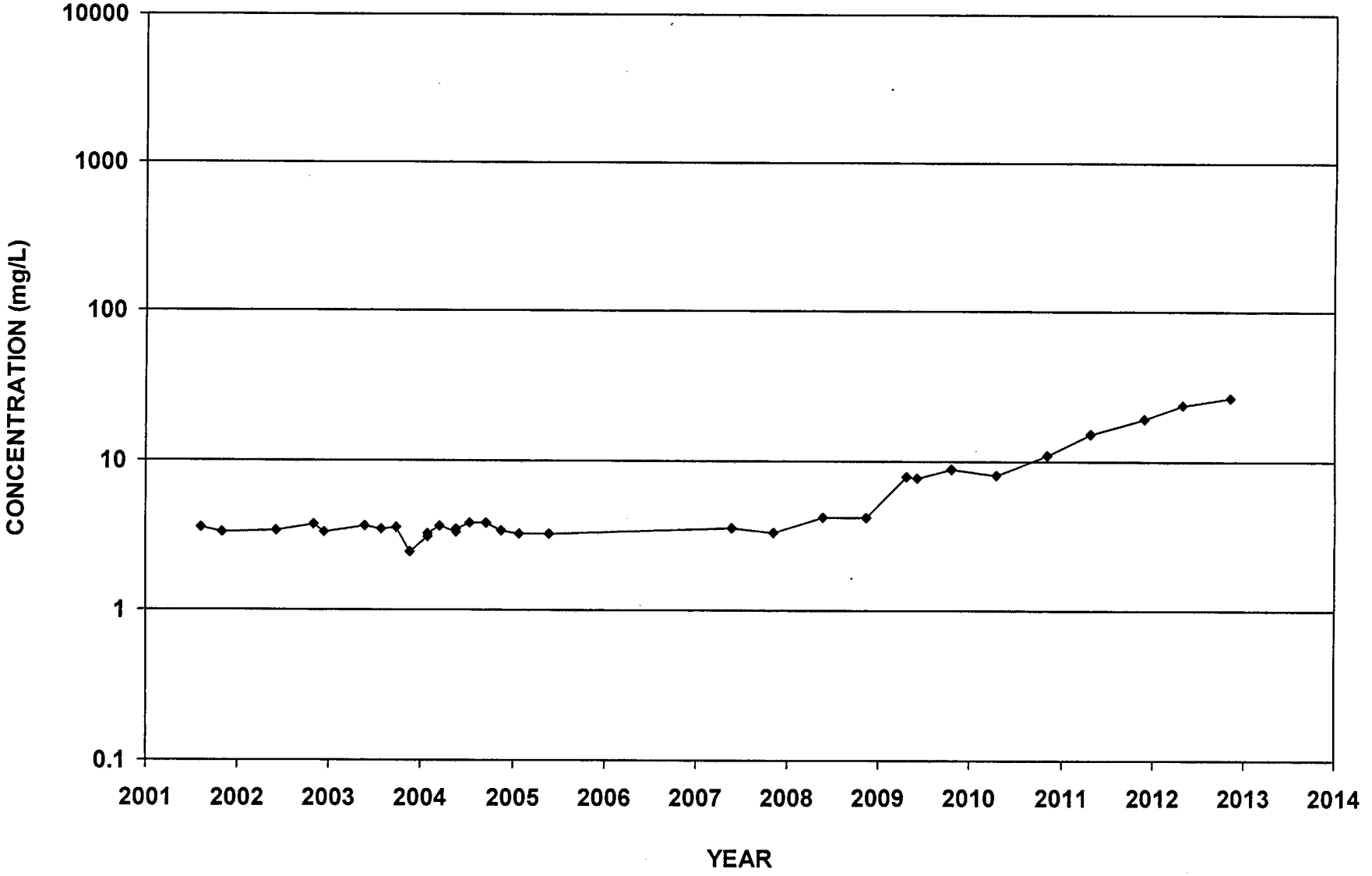
ECMW-2
Nitrate-N

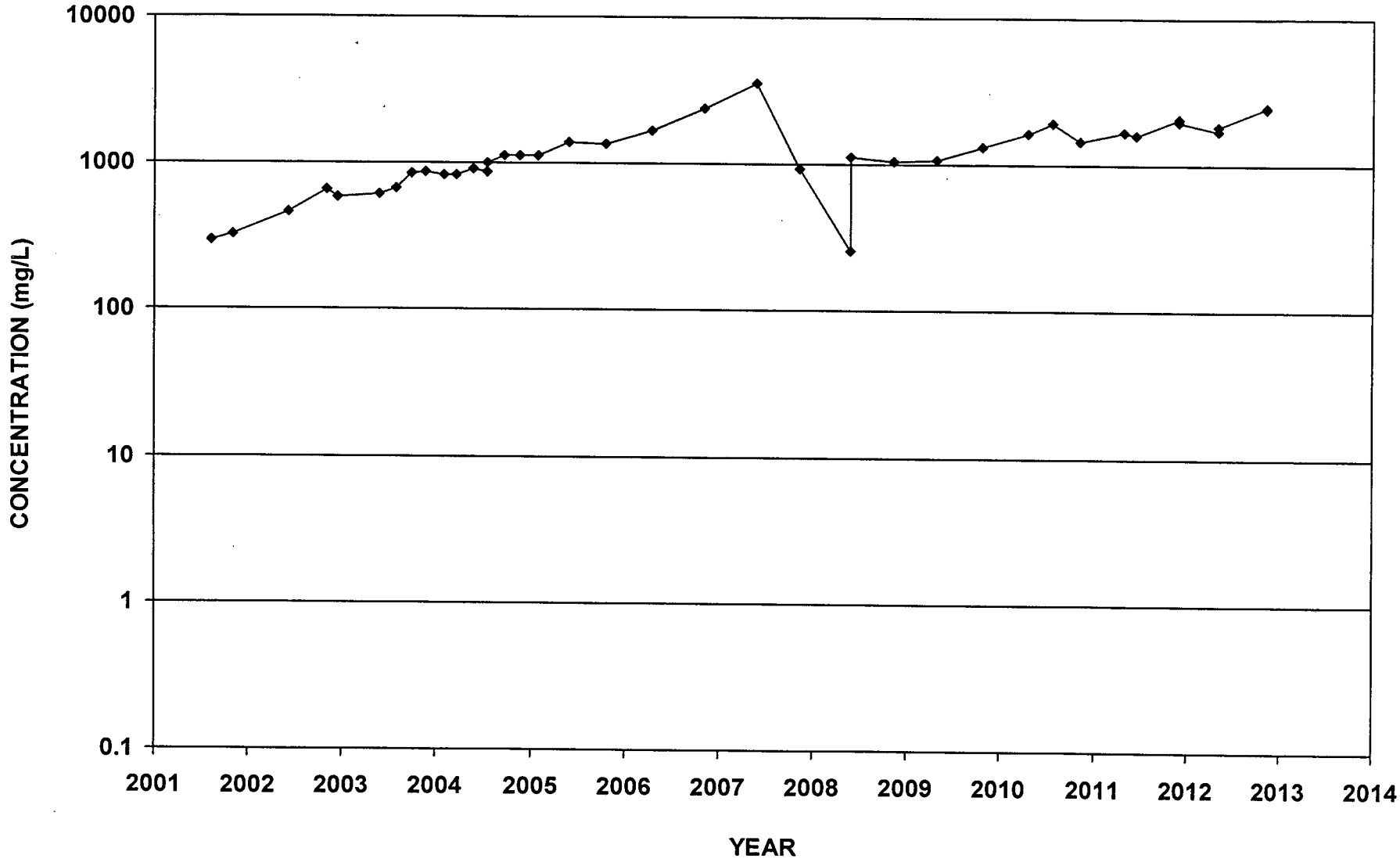



ECMW-3
Nitrate-N
CONCENTRATION (mg/L)
10000
1000
100
10
1
0.1
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
YEAR

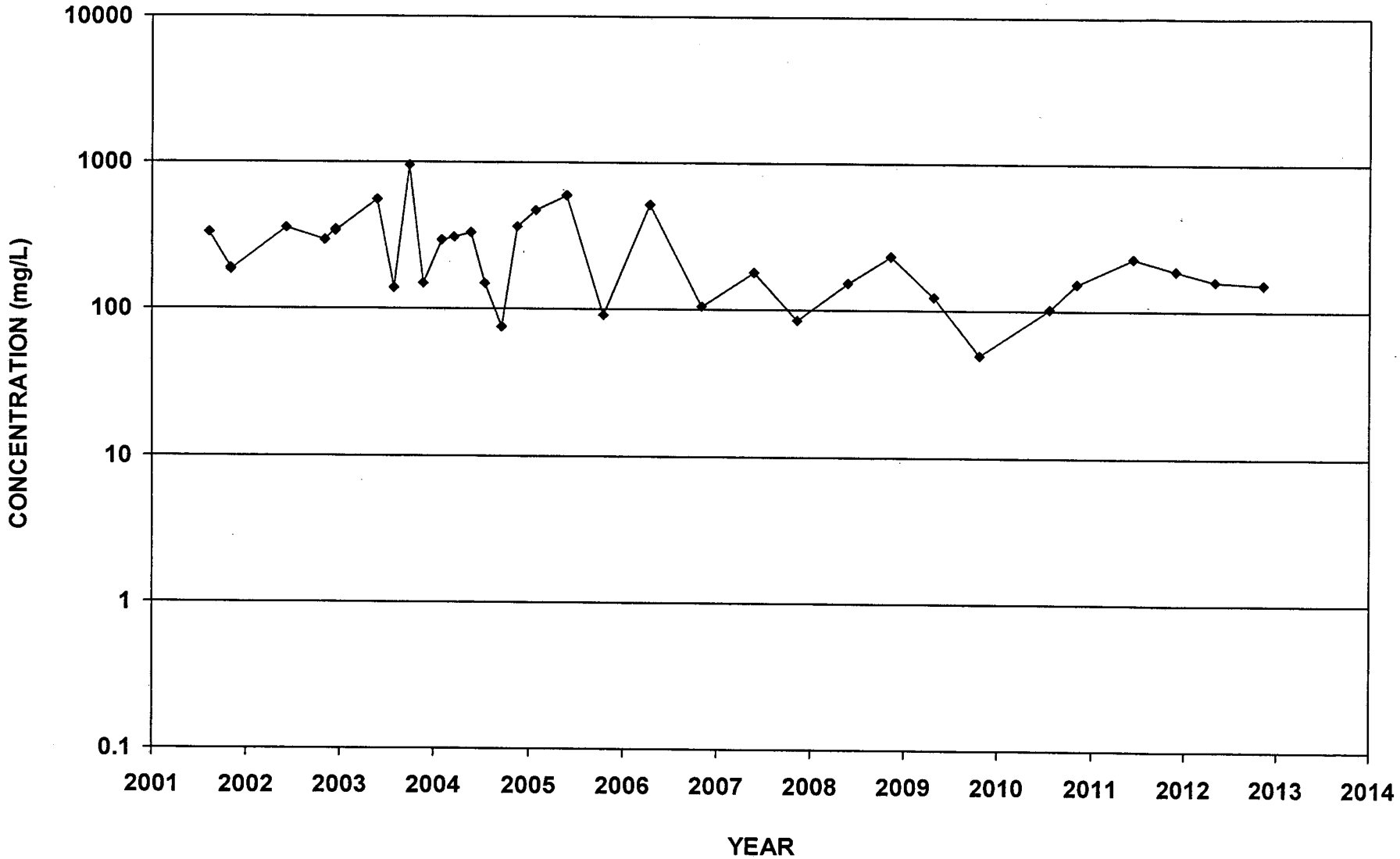

ECMW-4
Nitrate-N
10000
1000
100
10
1
0.1
CONCENTRATION (mg/L)
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
YEAR

ECMW-5
Nitrate-N

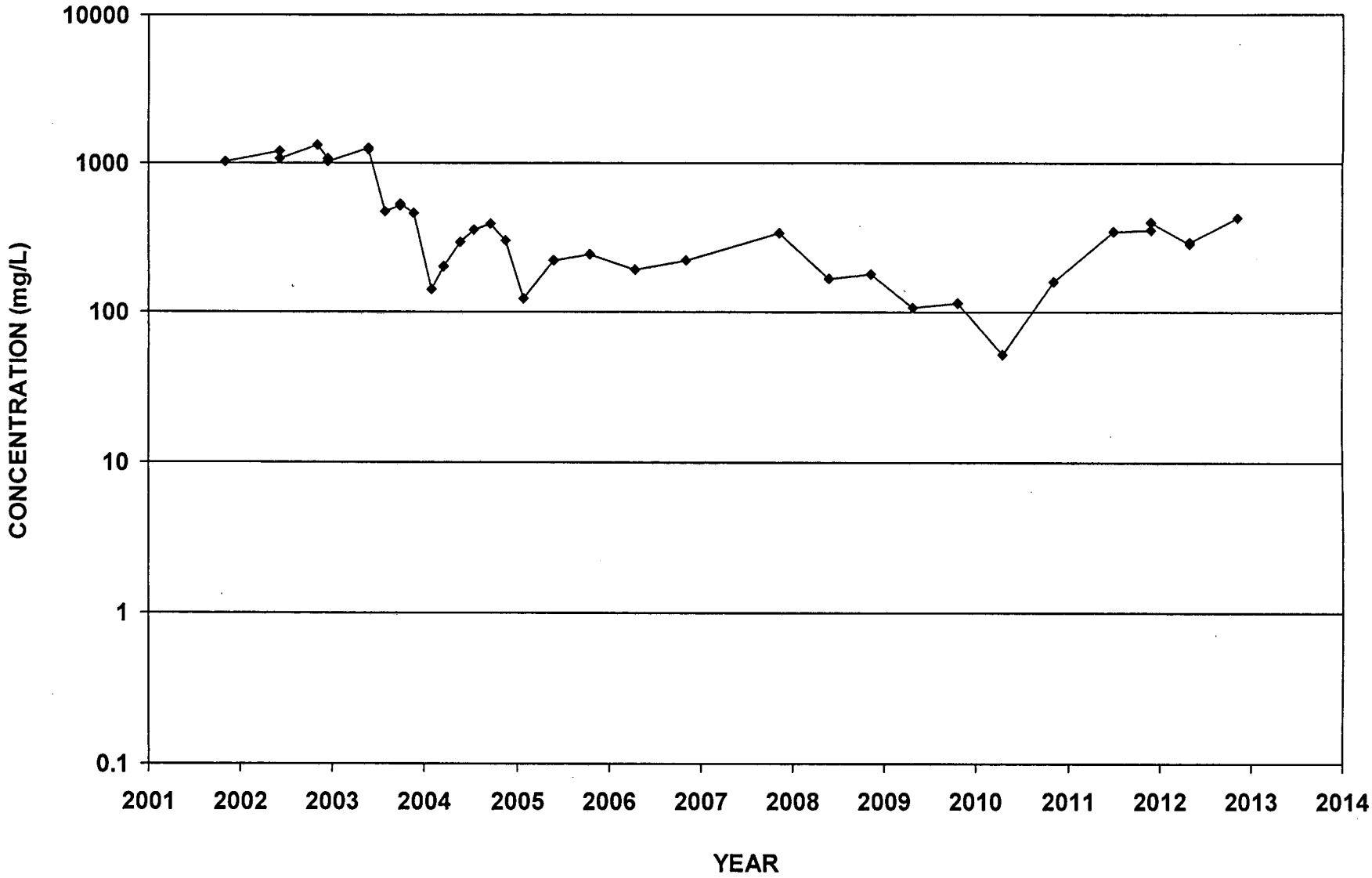



ECMW-6
Nitrate-N
10000
1000
100
10
1
0.1
CONCENTRATION (mg/L)
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
YEAR

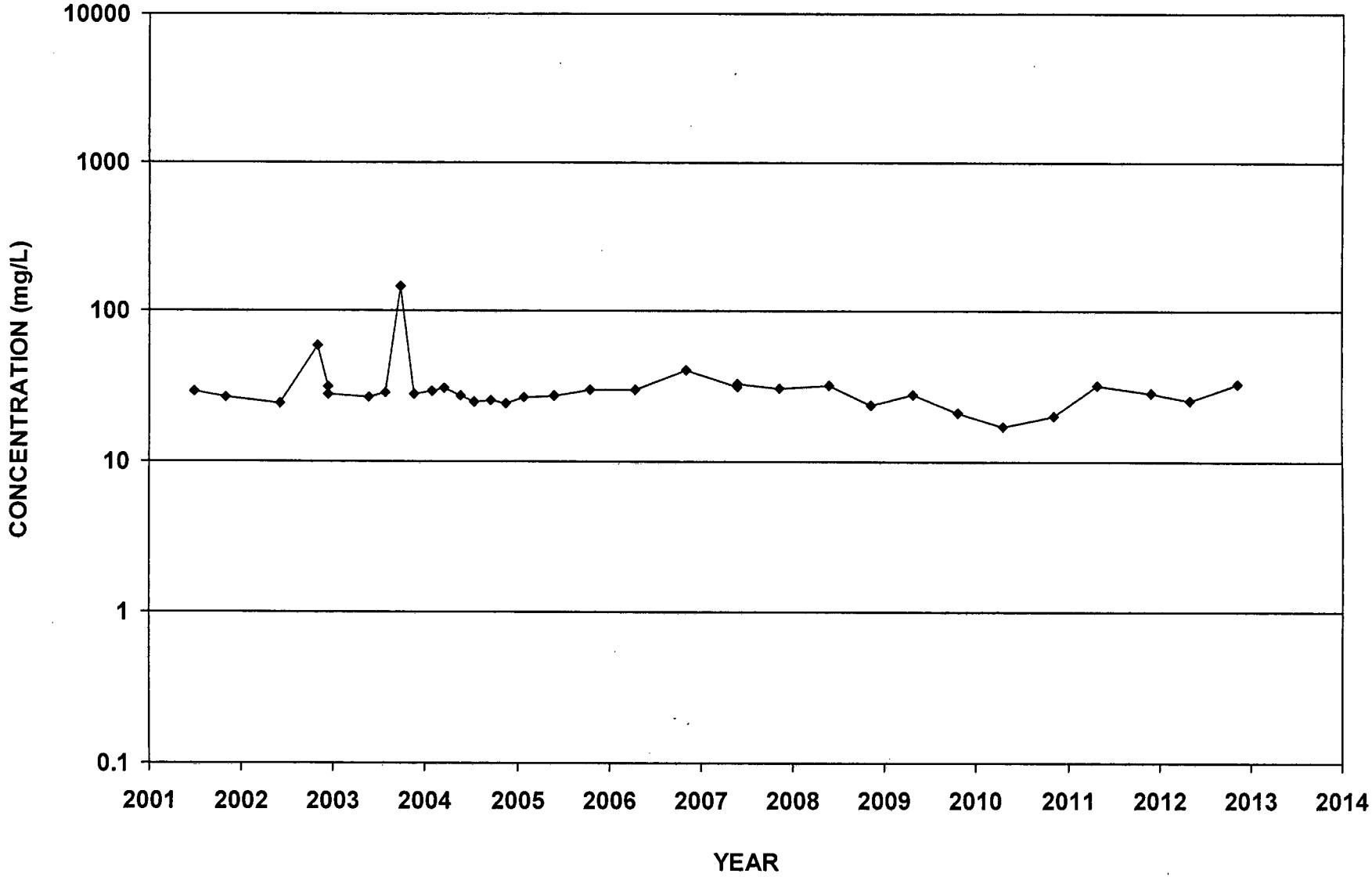
ECMW-7
Nitrate-N



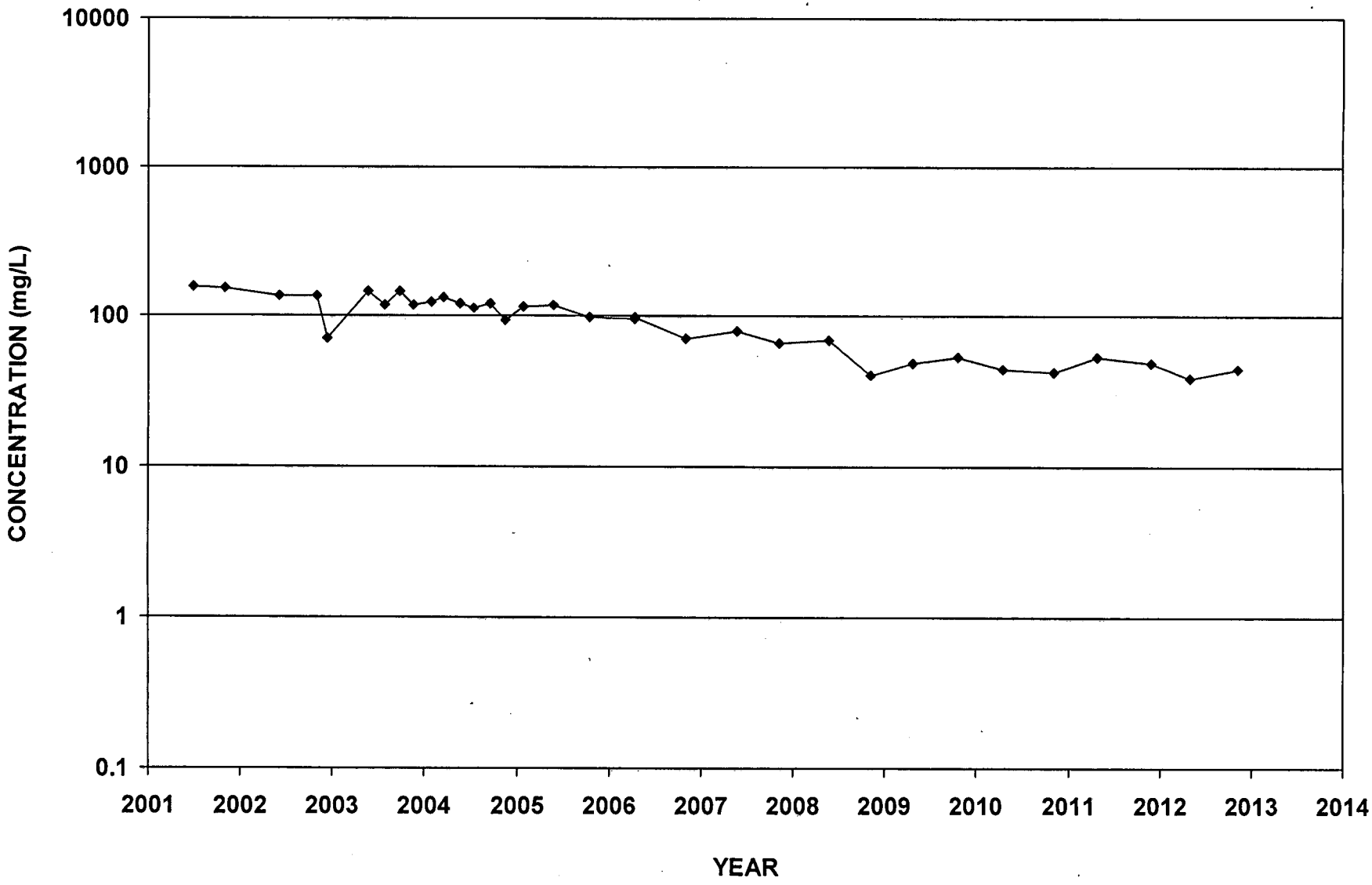
ECMW-8
Nitrate-N



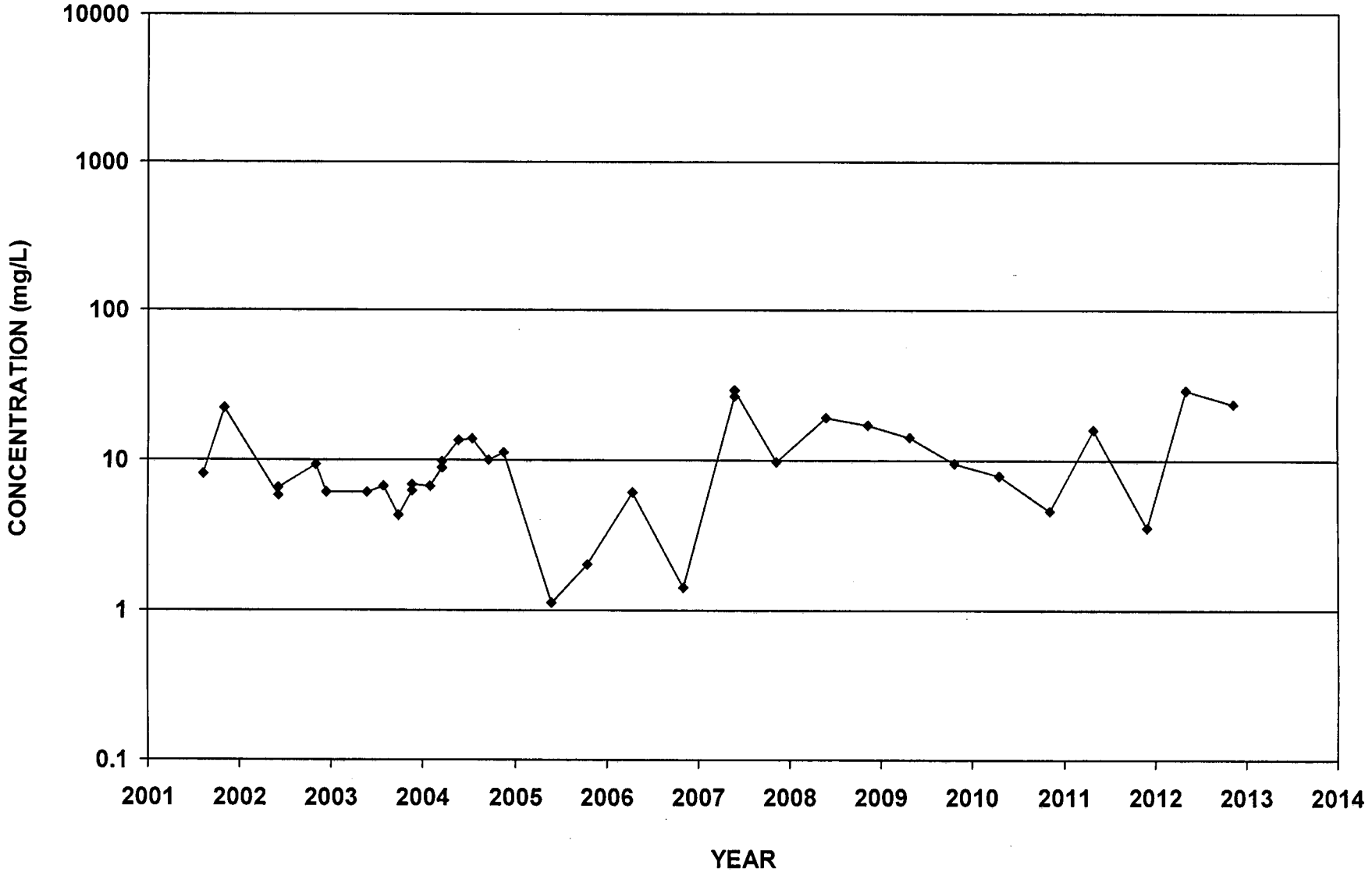
ECMW-9
Nitrate-N



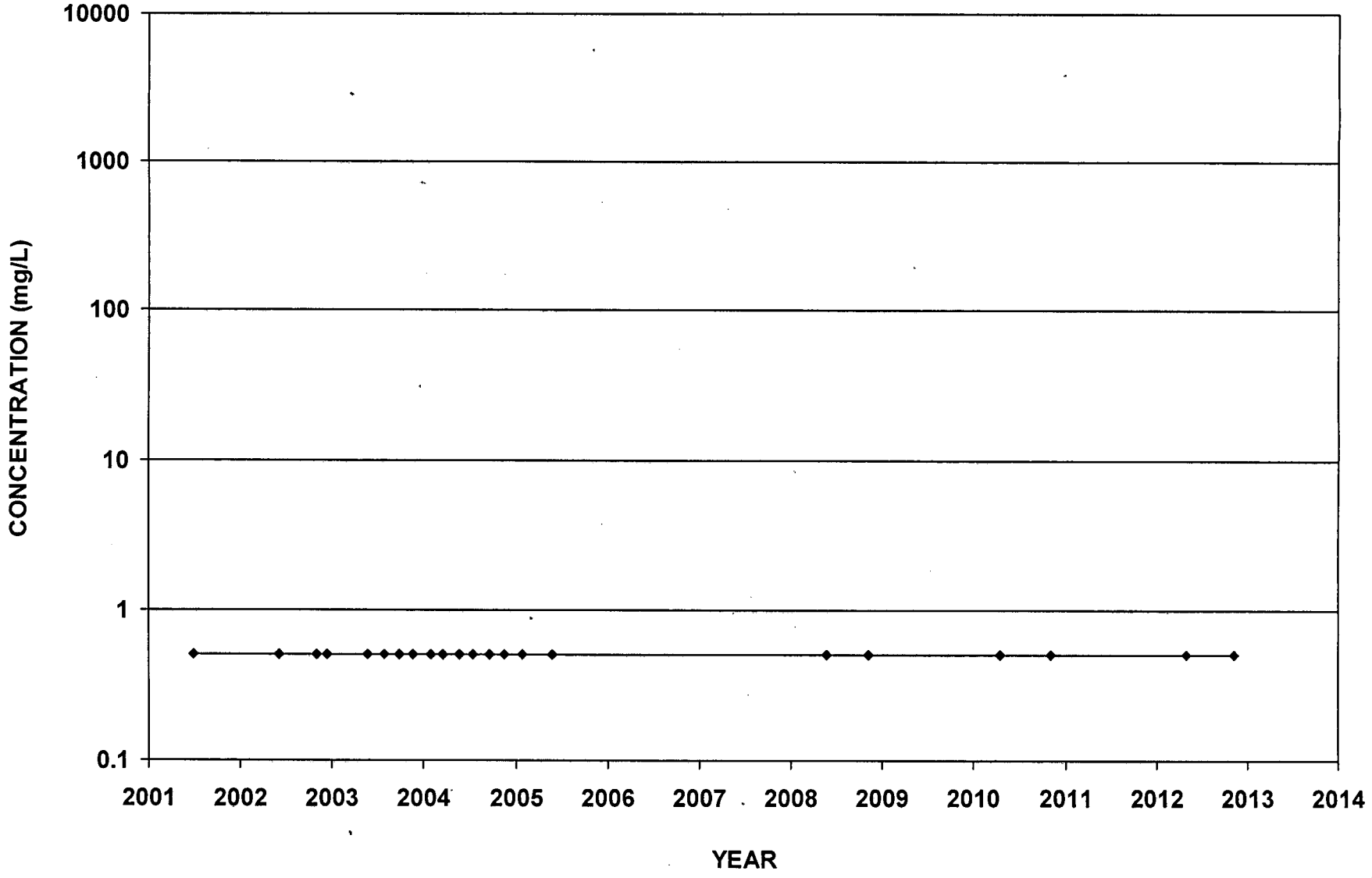
ECMW-10
Nitrate-N



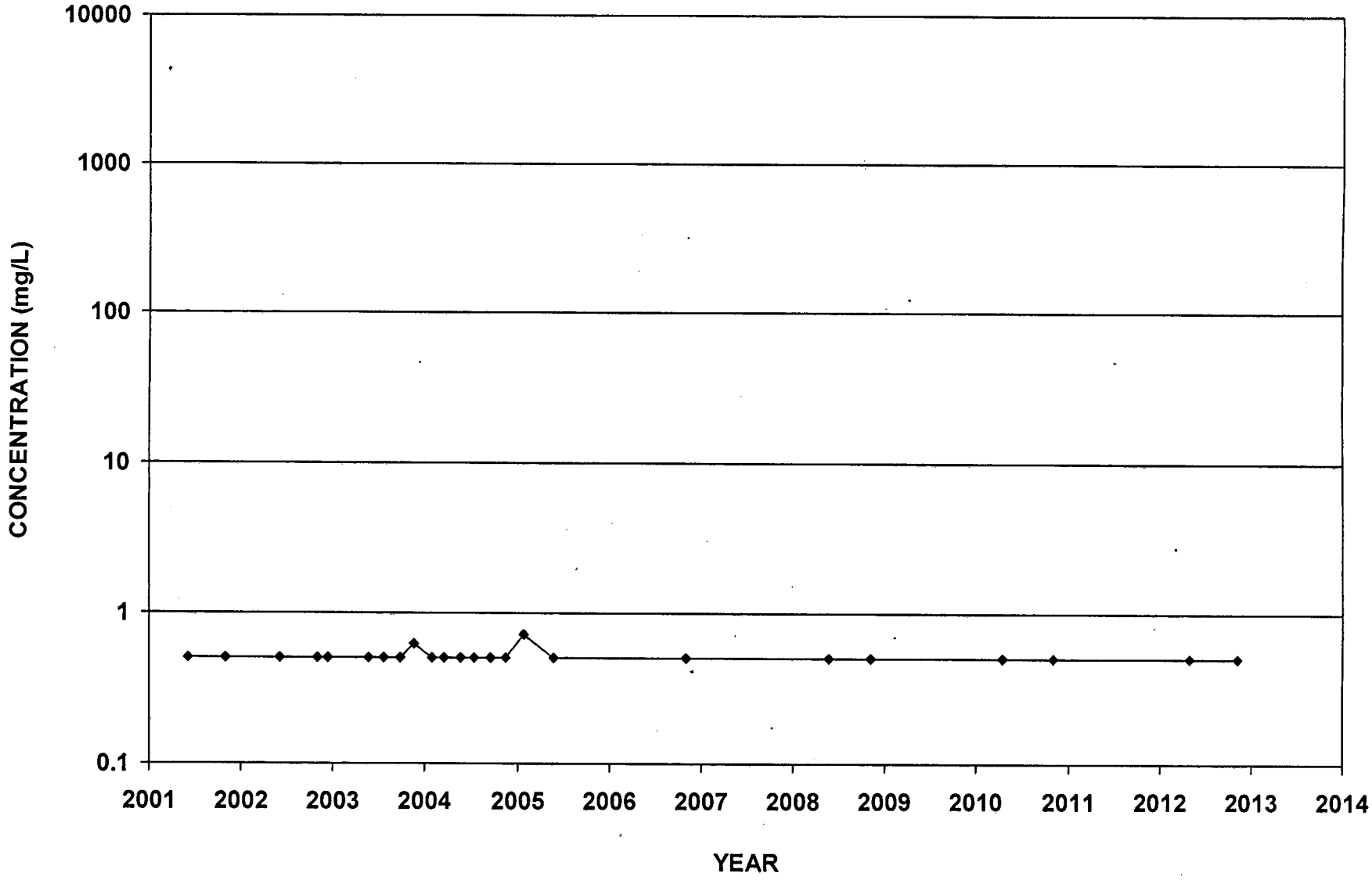
ECMW-11
Nitrate-N



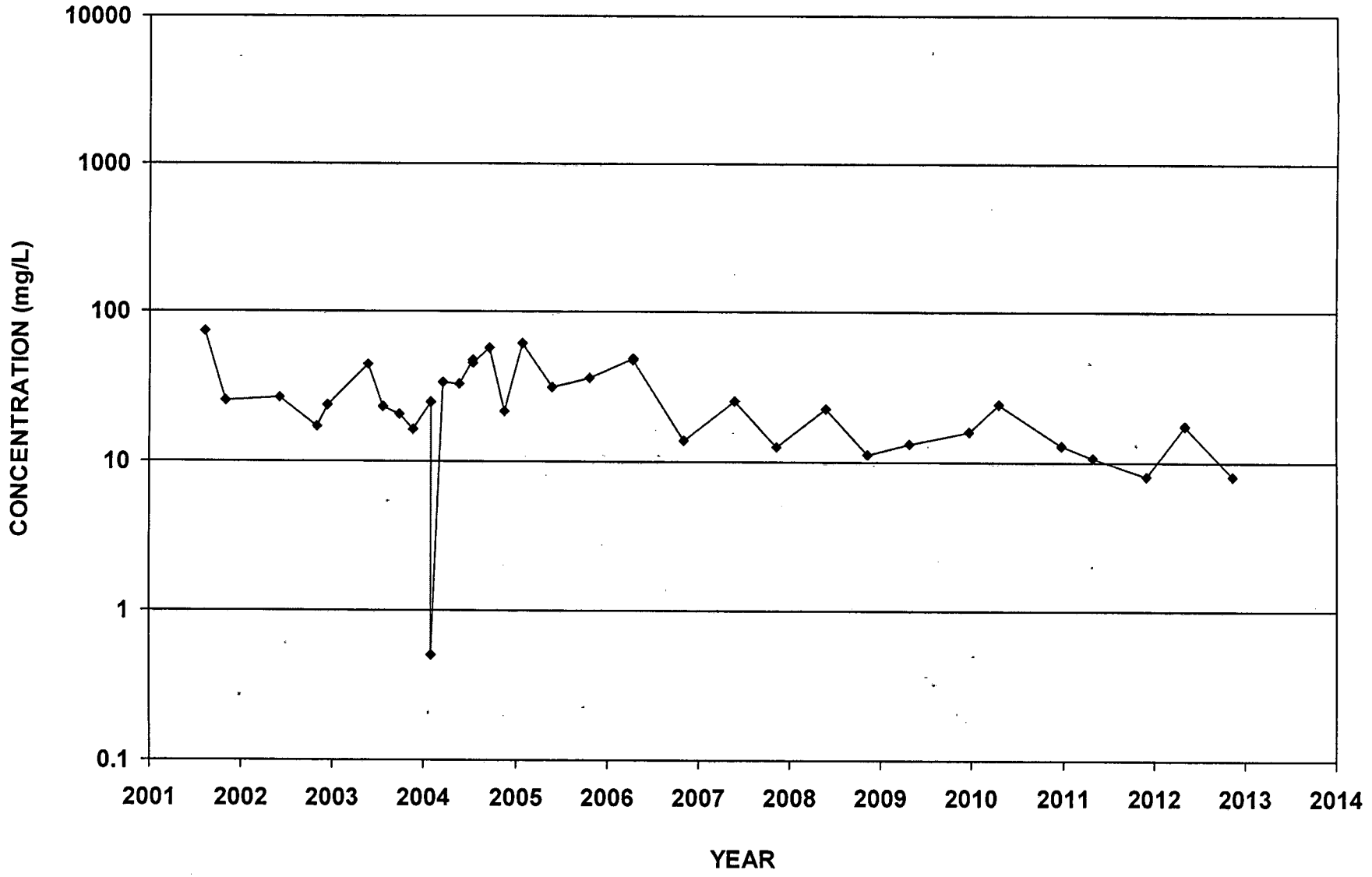
ECMW-12
Nitrate-N



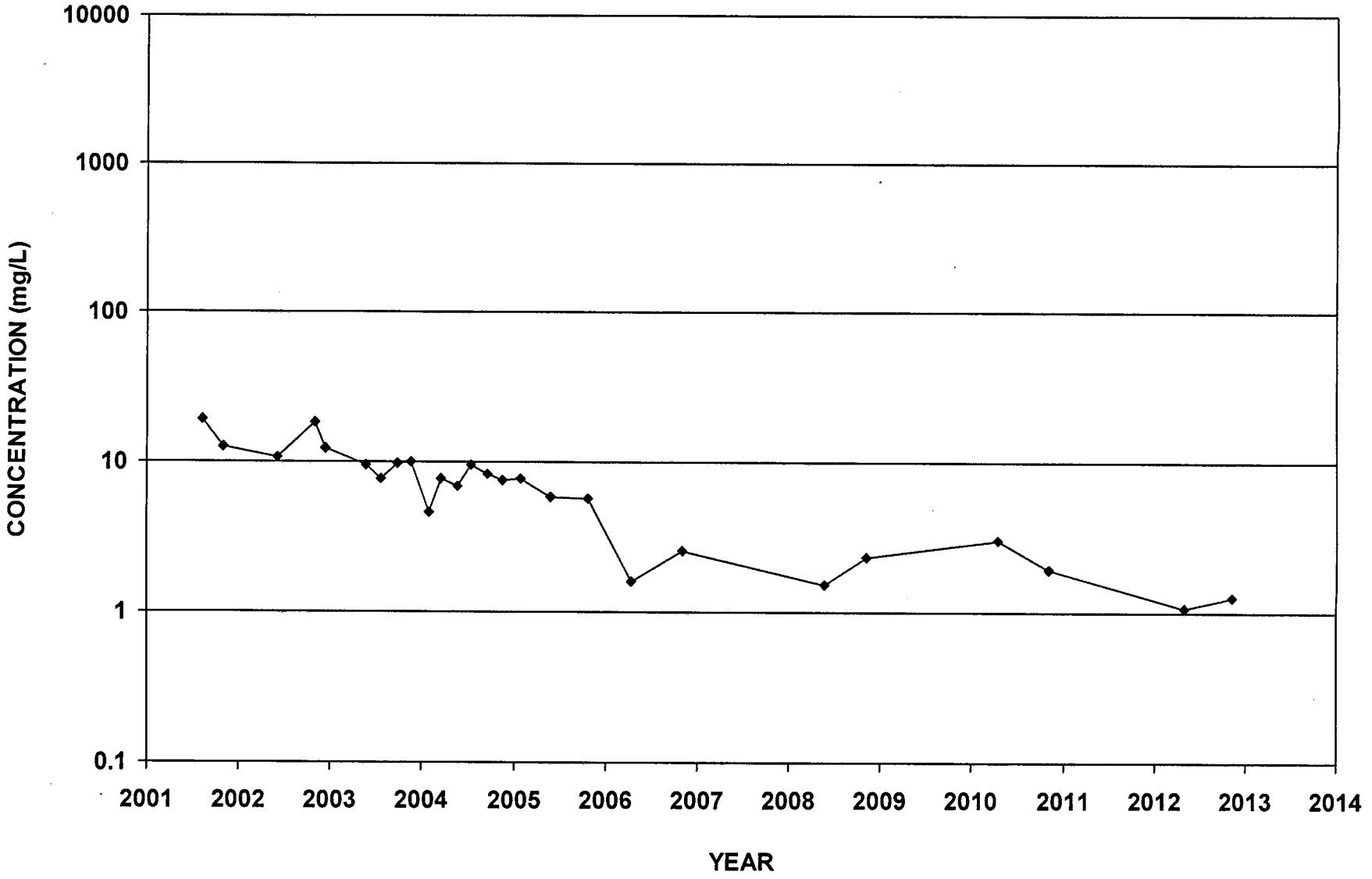
ECMW-13
Nitrate-N



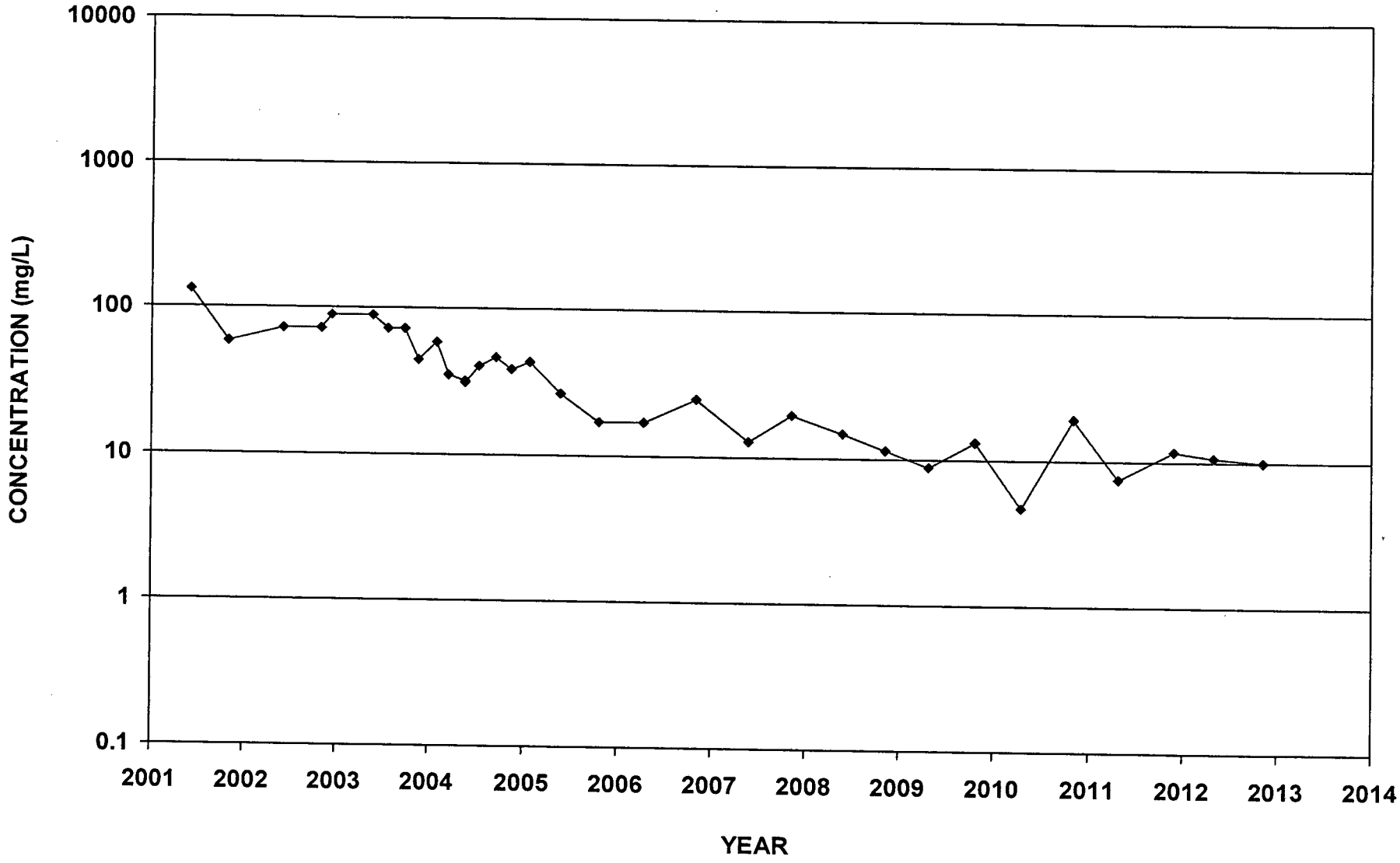
ECMW-14
Nitrate-N



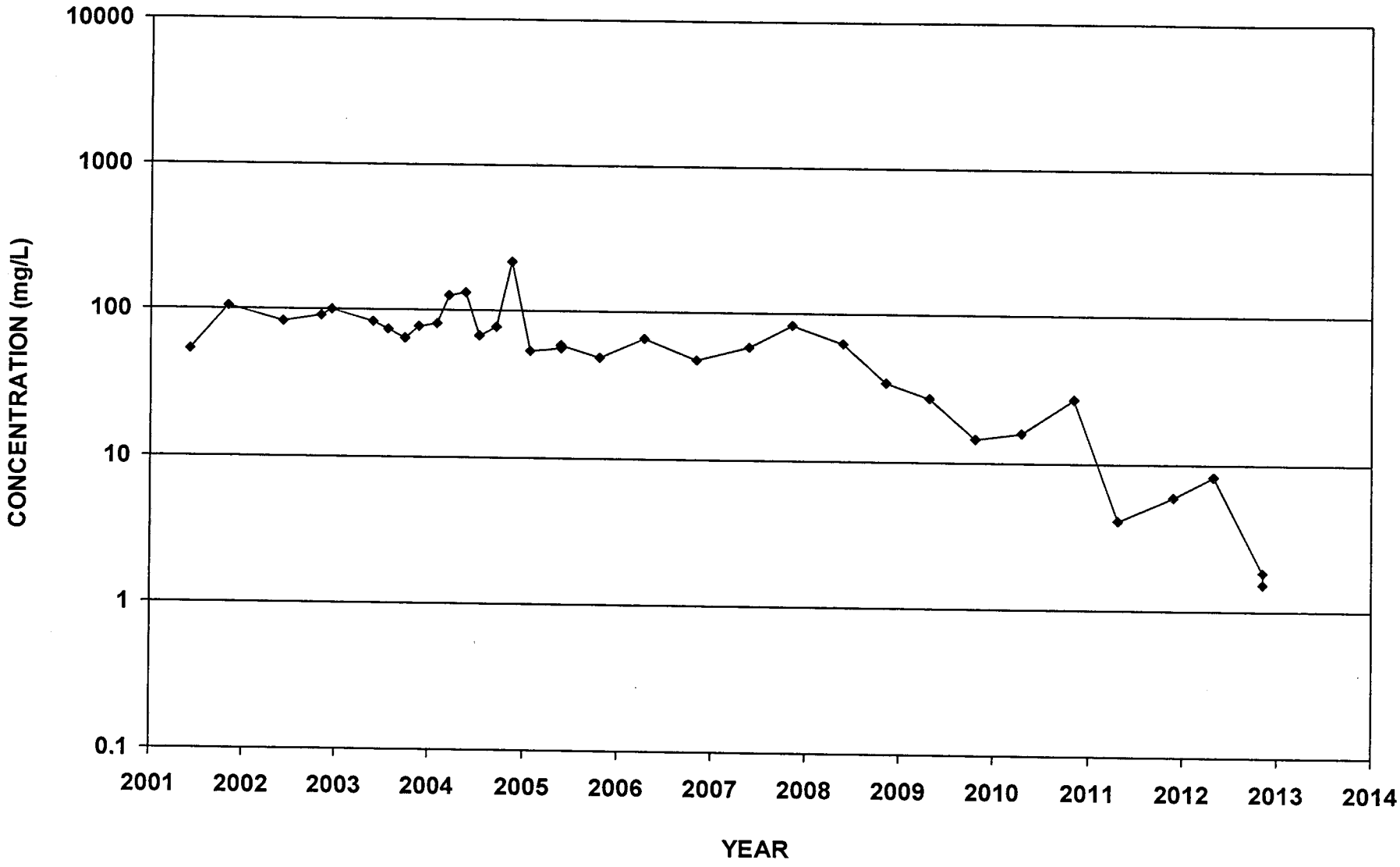
ECMW-15
Nitrate-N



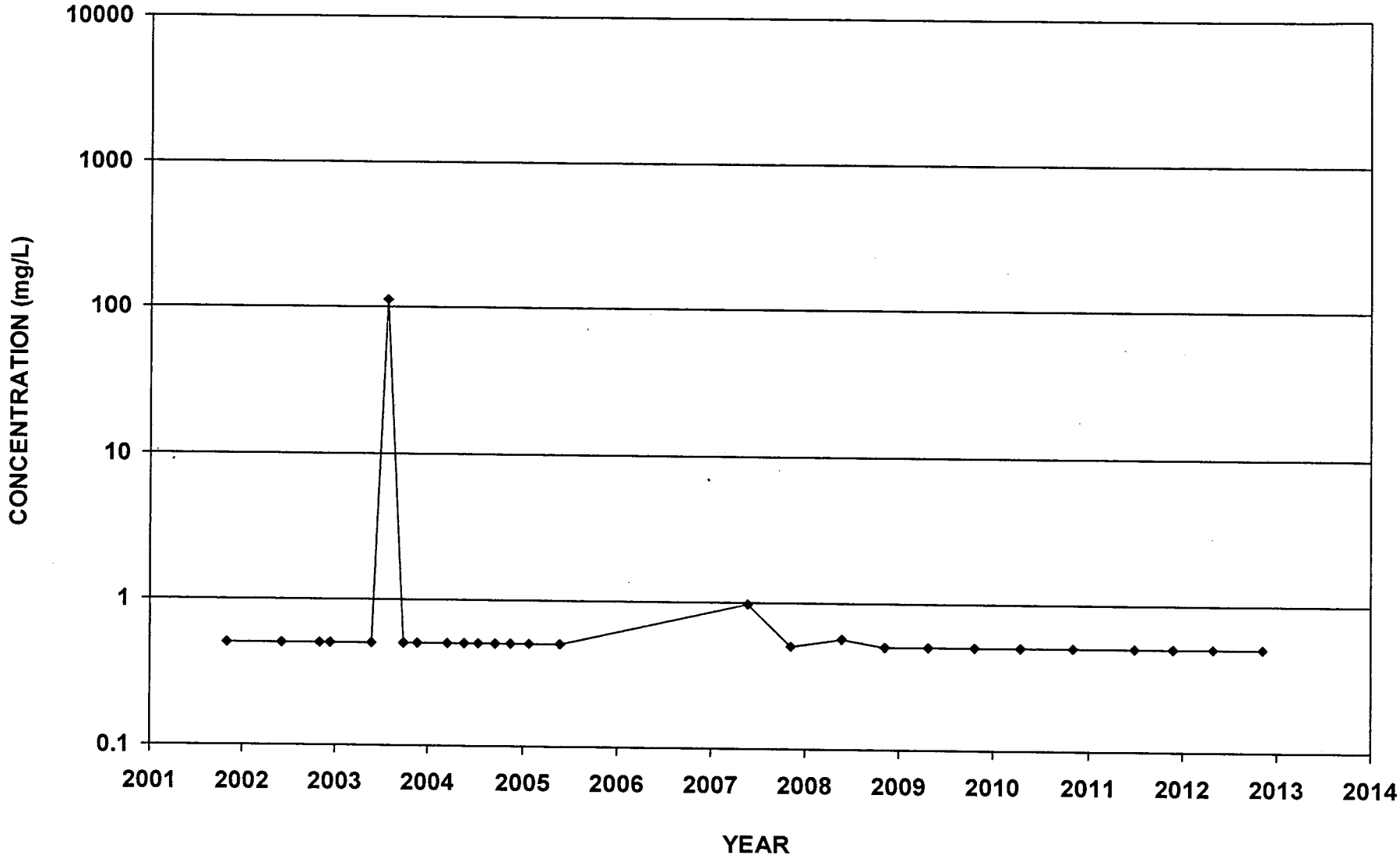
ECMW-16
Nitrate-N

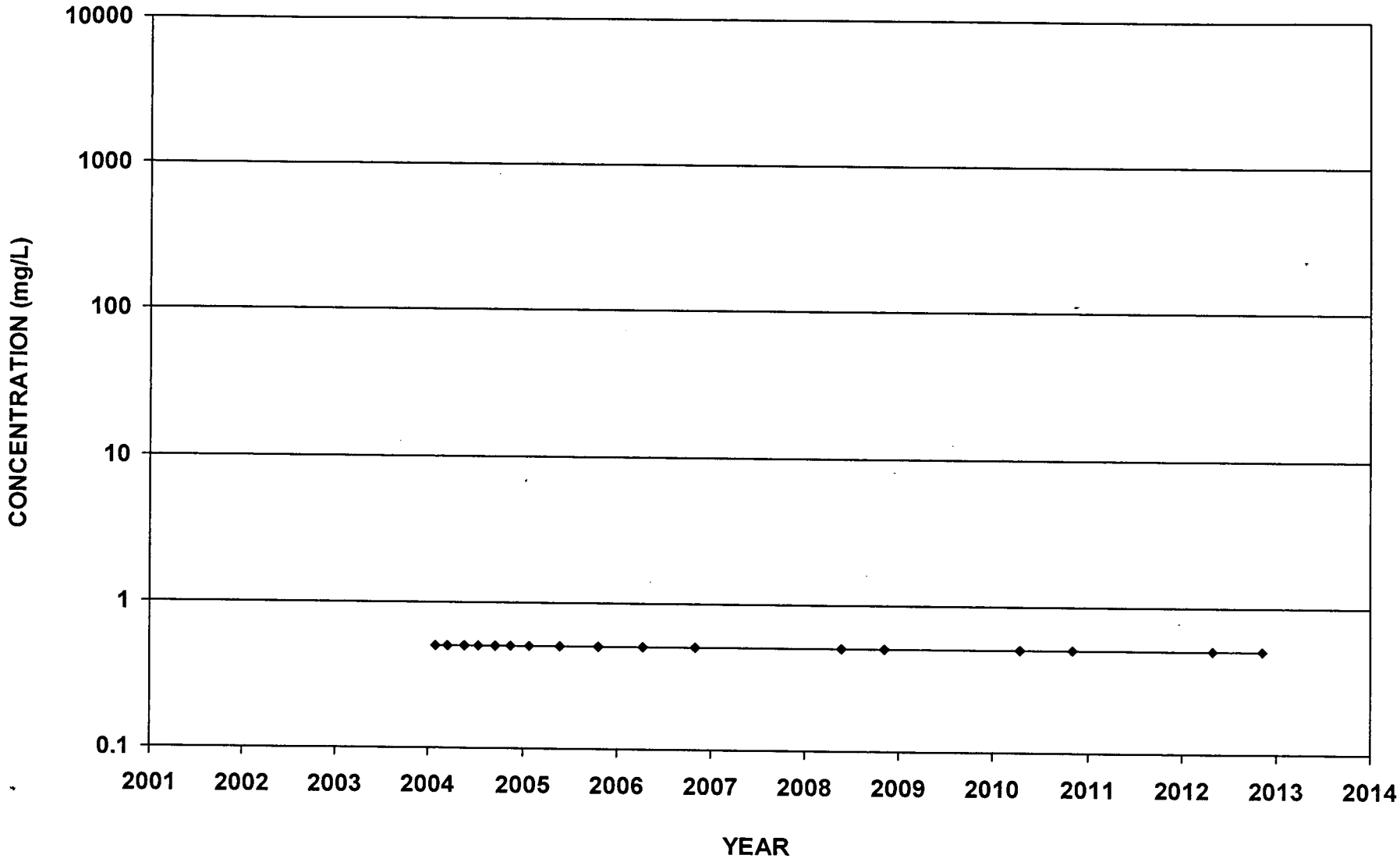


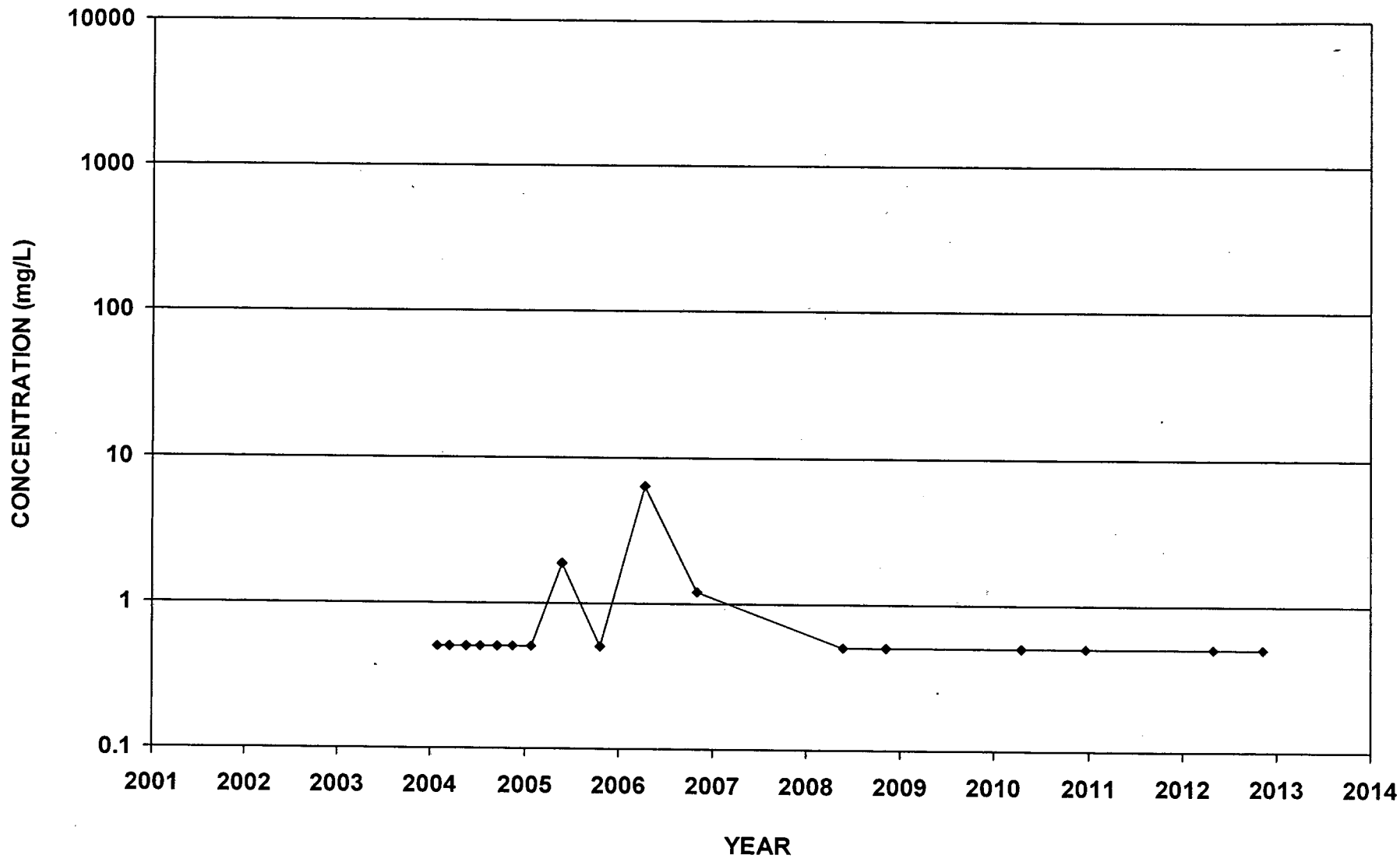
ECMW-17
Nitrate-N



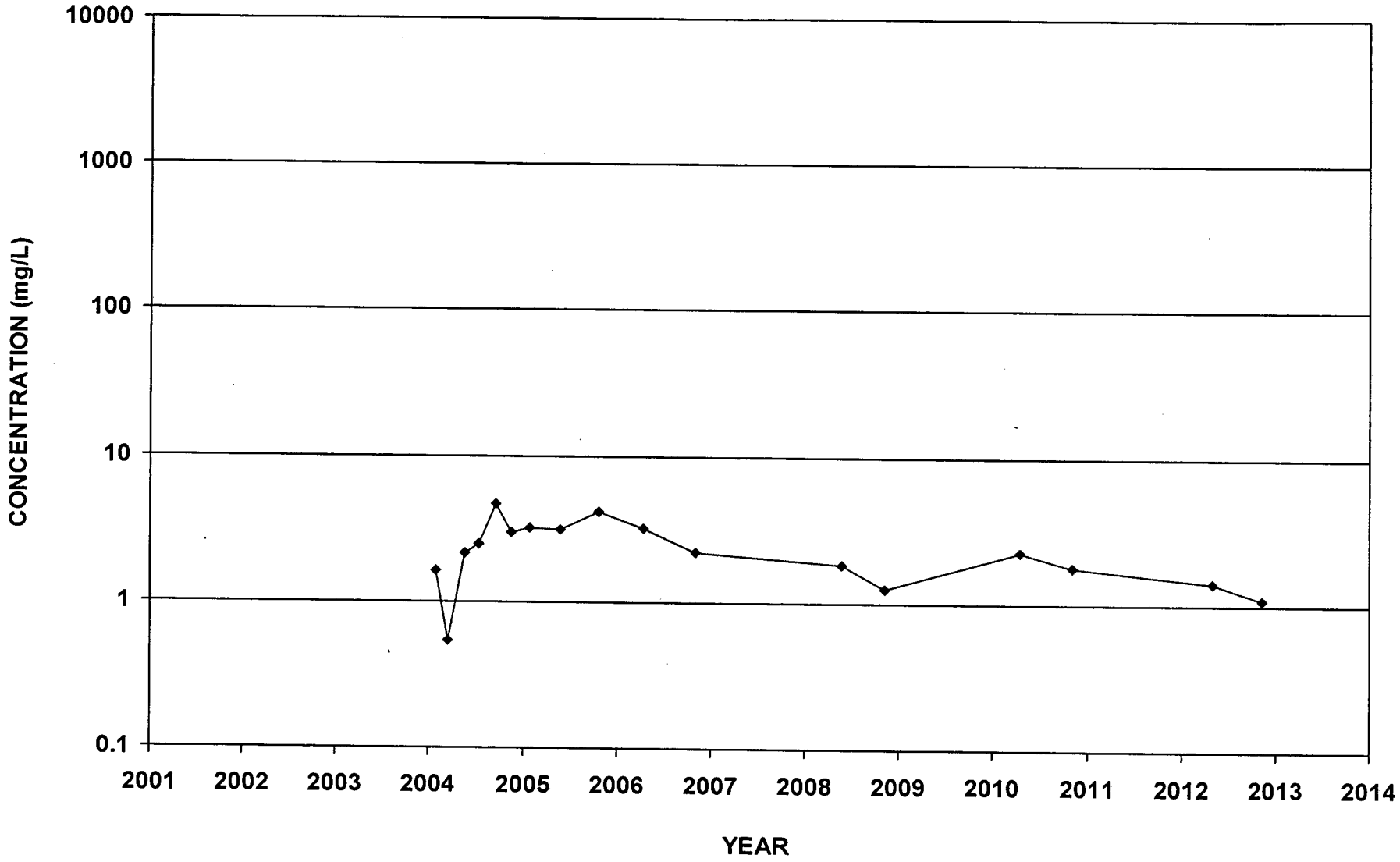
ECMW-18
Nitrate-N



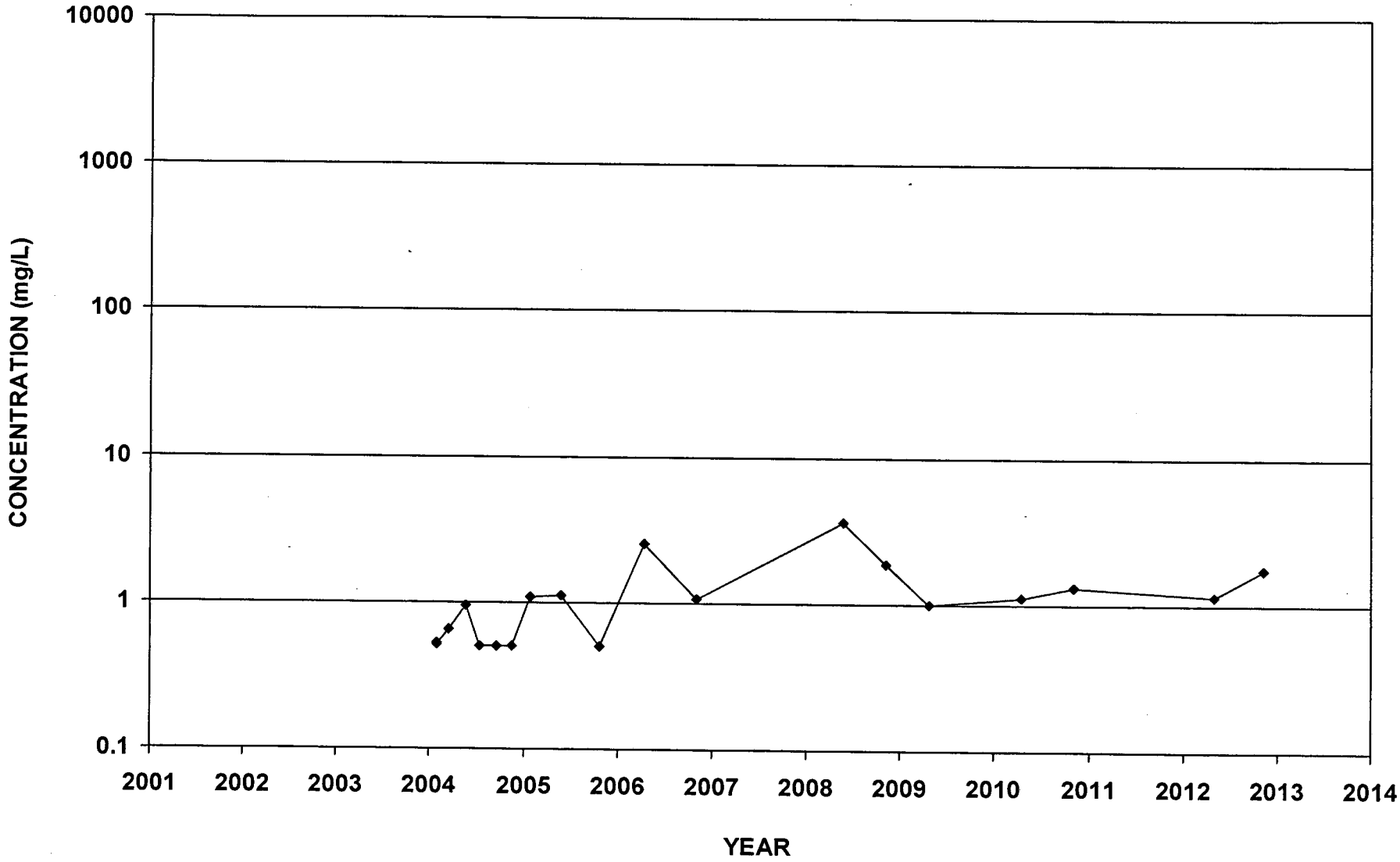

ECMW-19
Nitrate-N
10000
1000
100
10
1
0.1
CONCENTRATION (mg/L)
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
YEAR


ECMW-20
Nitrate-N
10000
1000
100
10
1
0.1
CONCENTRATION (mg/L)
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
YEAR

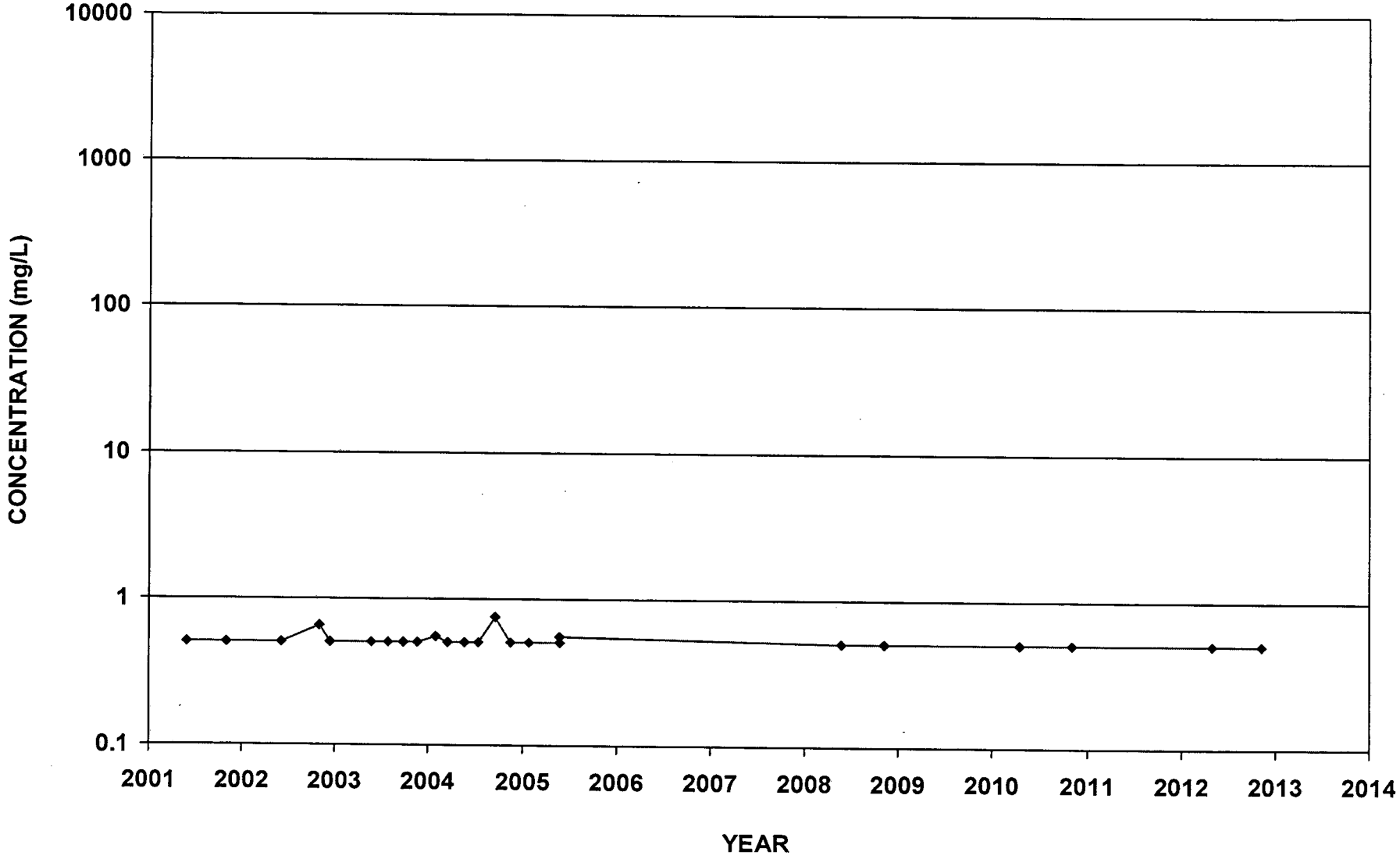
ECMW-21
Nitrate-N



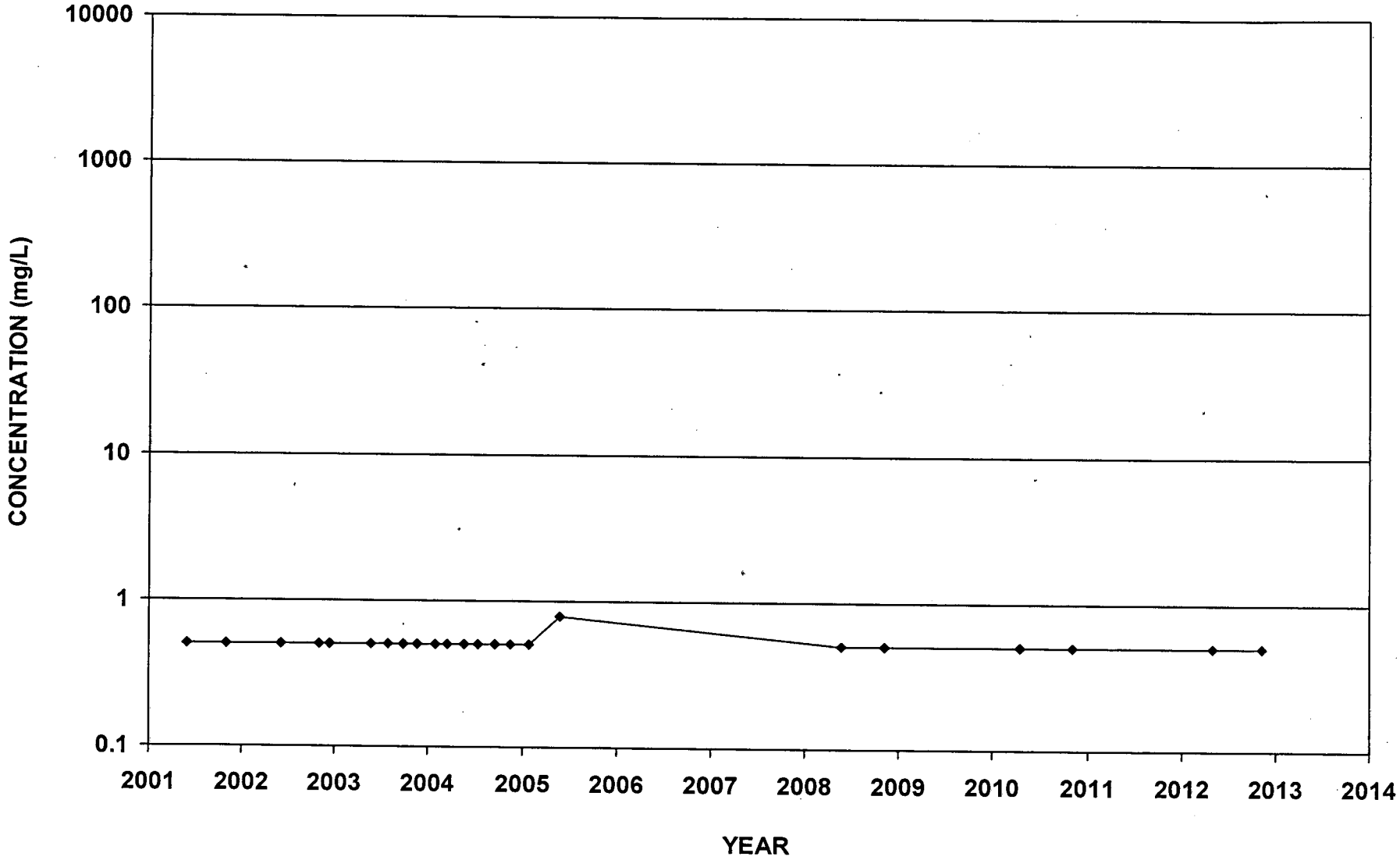
ECMW-22
Nitrate-N



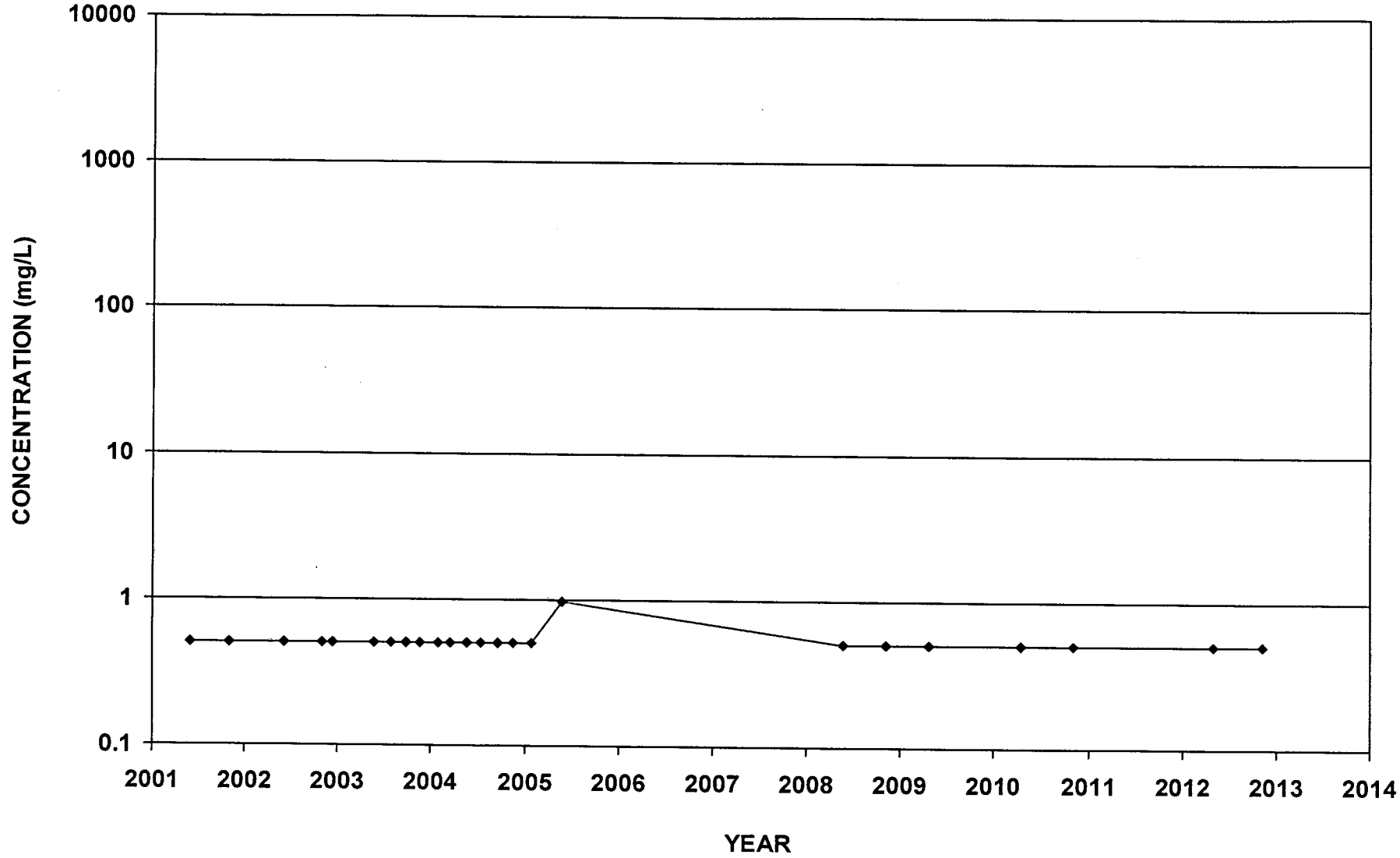
ECMW-1
Ammonia-N

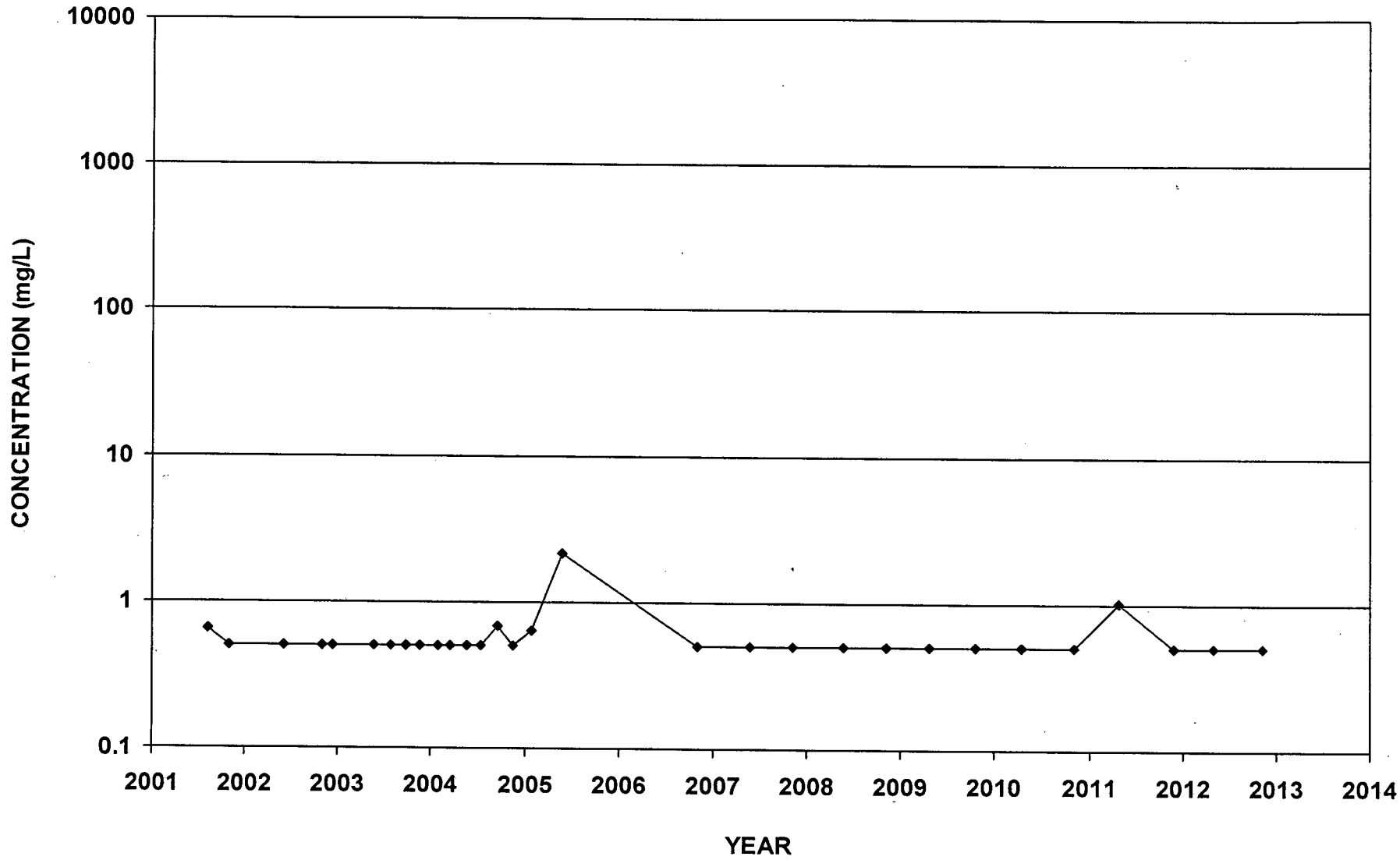


ECMW-2
Ammonia-N

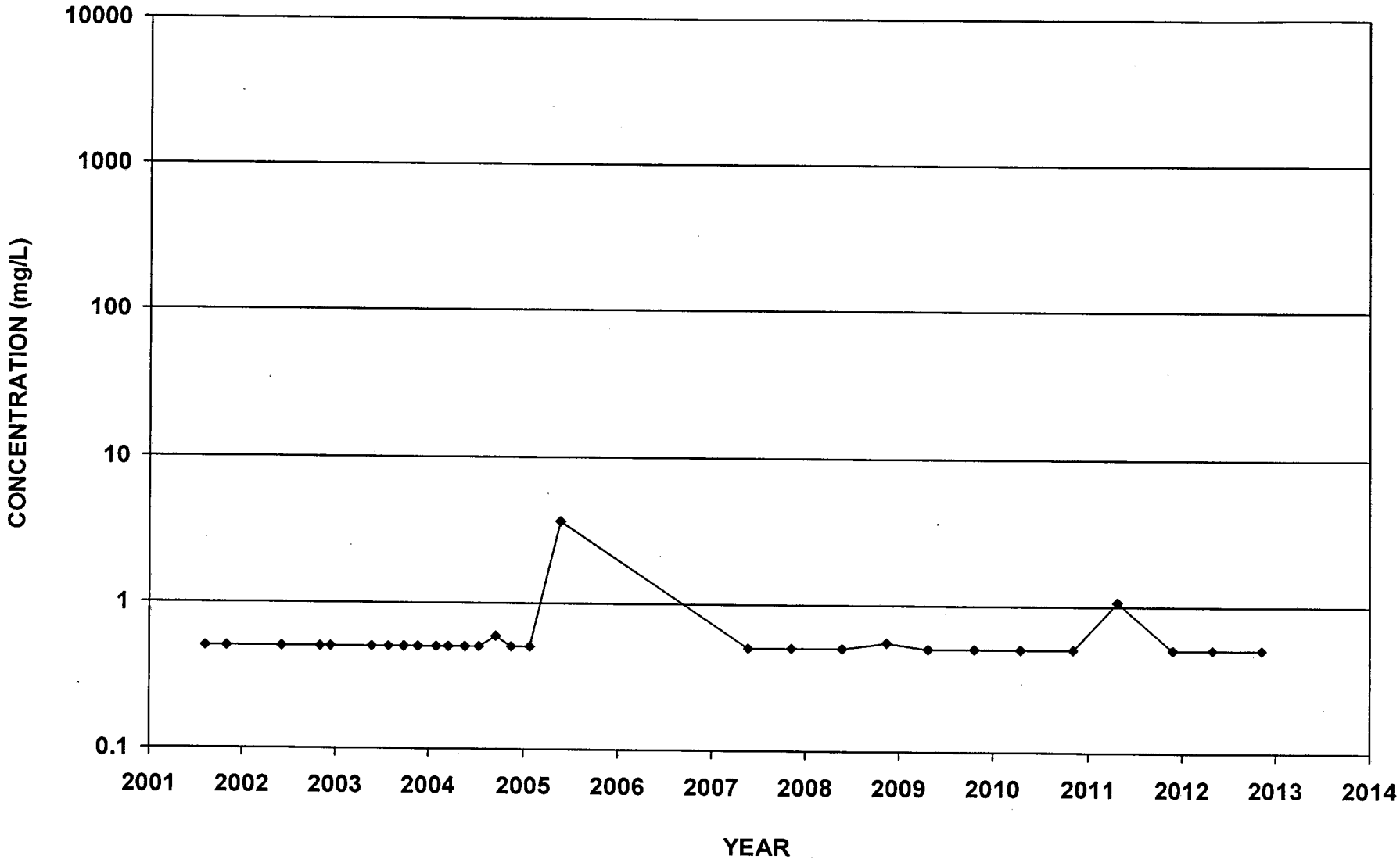


ECMW-3
Ammonia-N

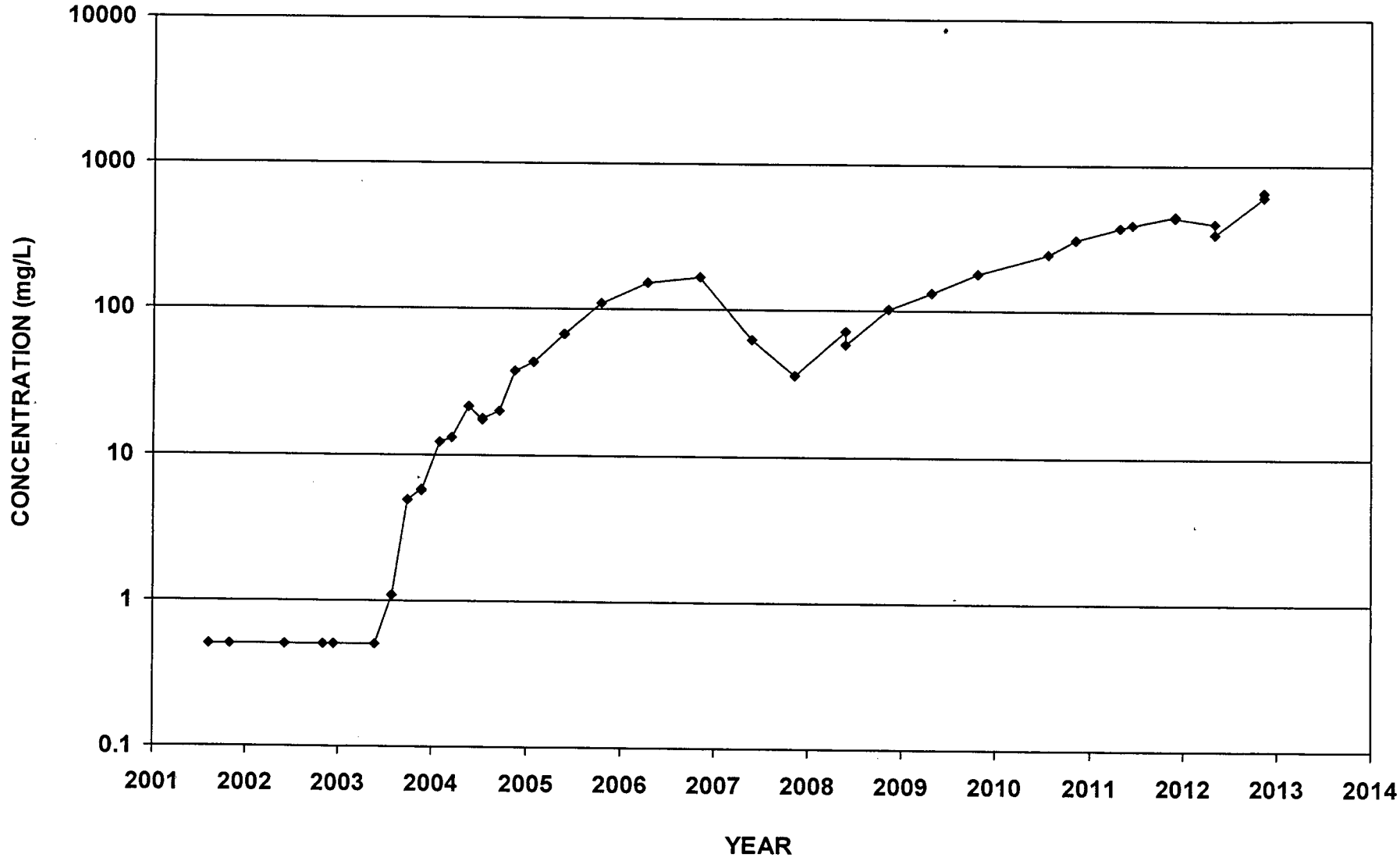



ECMW-4
Ammonia-N
10000
1000
100
10
1
0.1
CONCENTRATION (mg/L)
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
YEAR

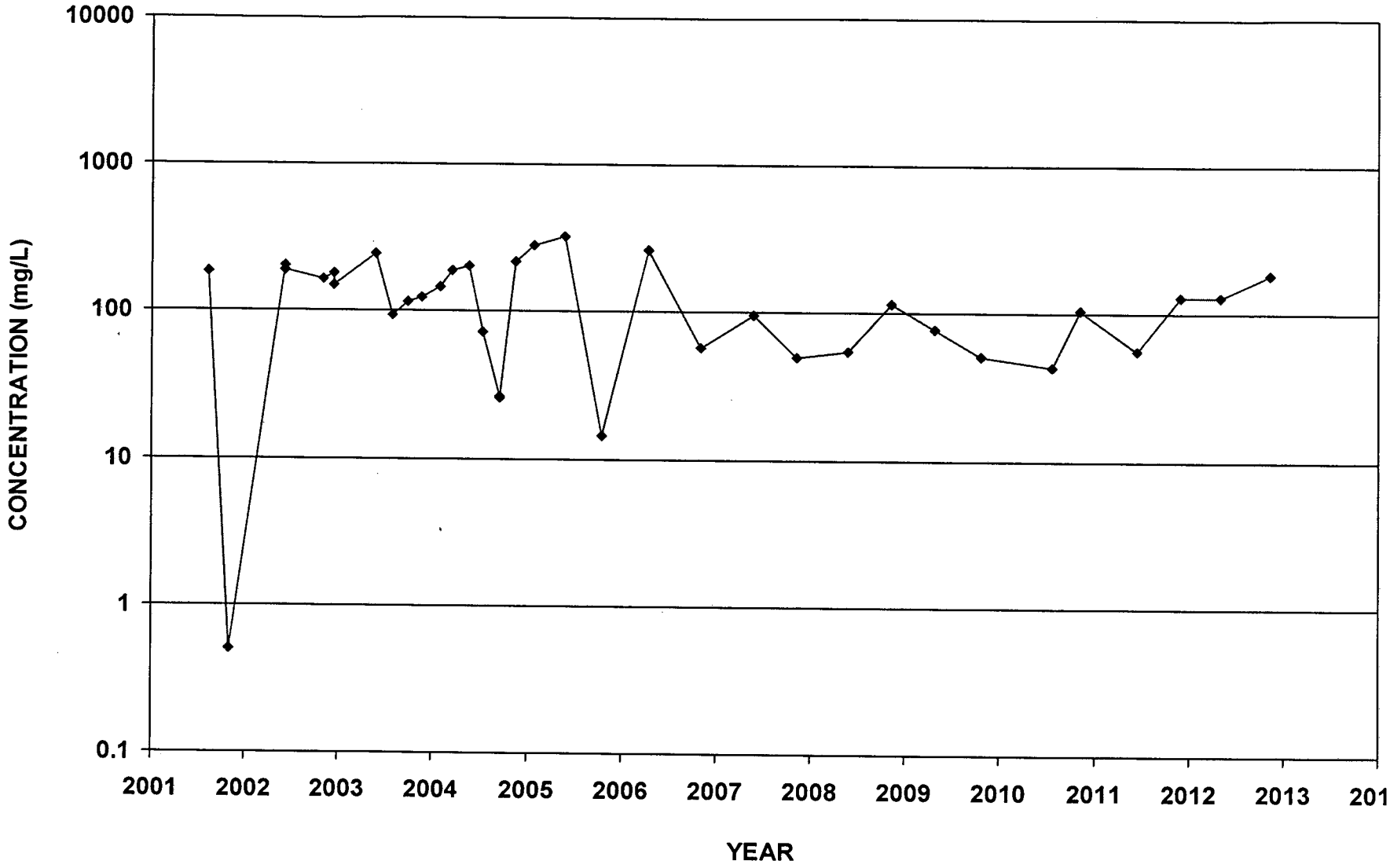
ECMW-5
Ammonia-N



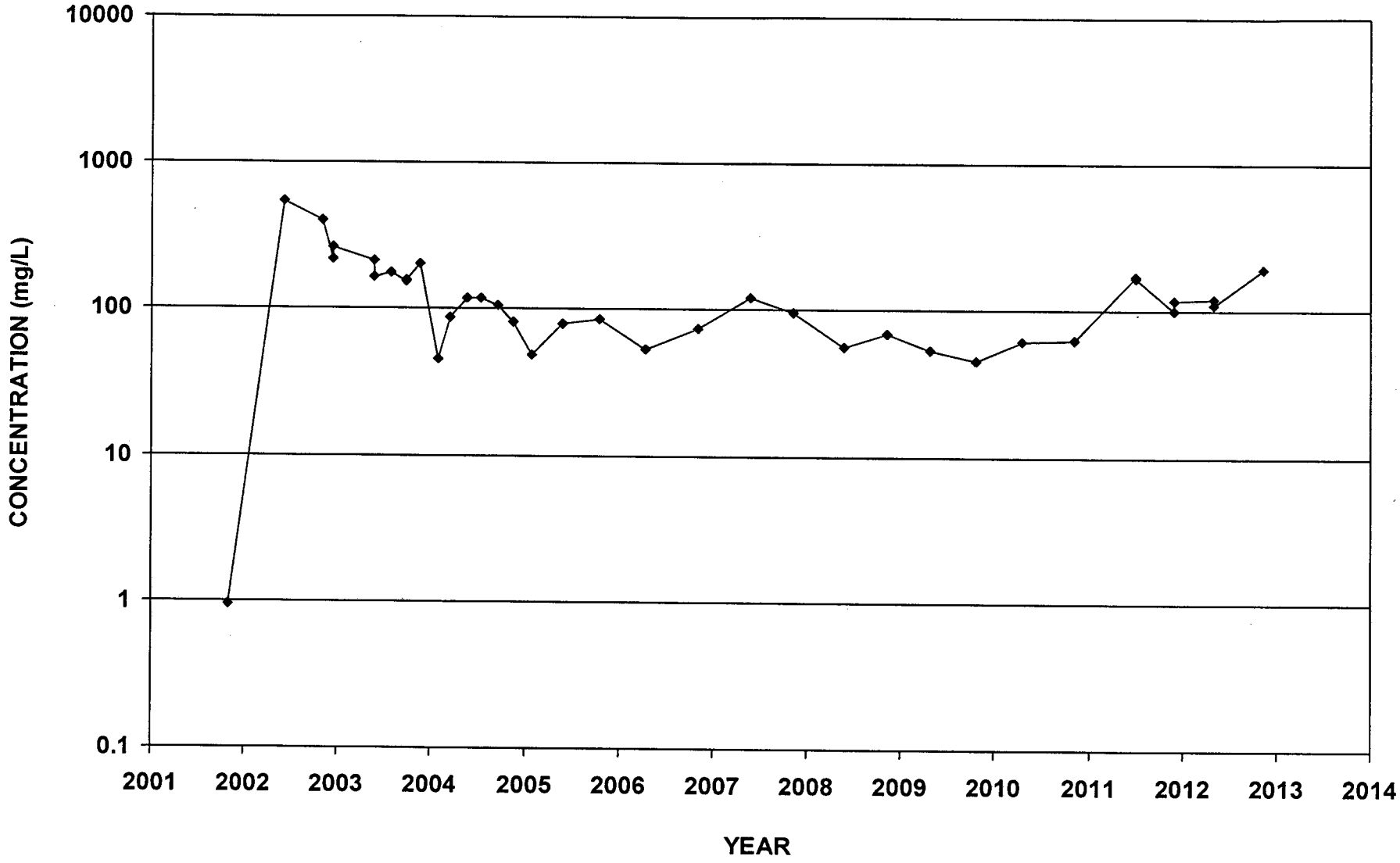
ECMW-6
Ammonia-N



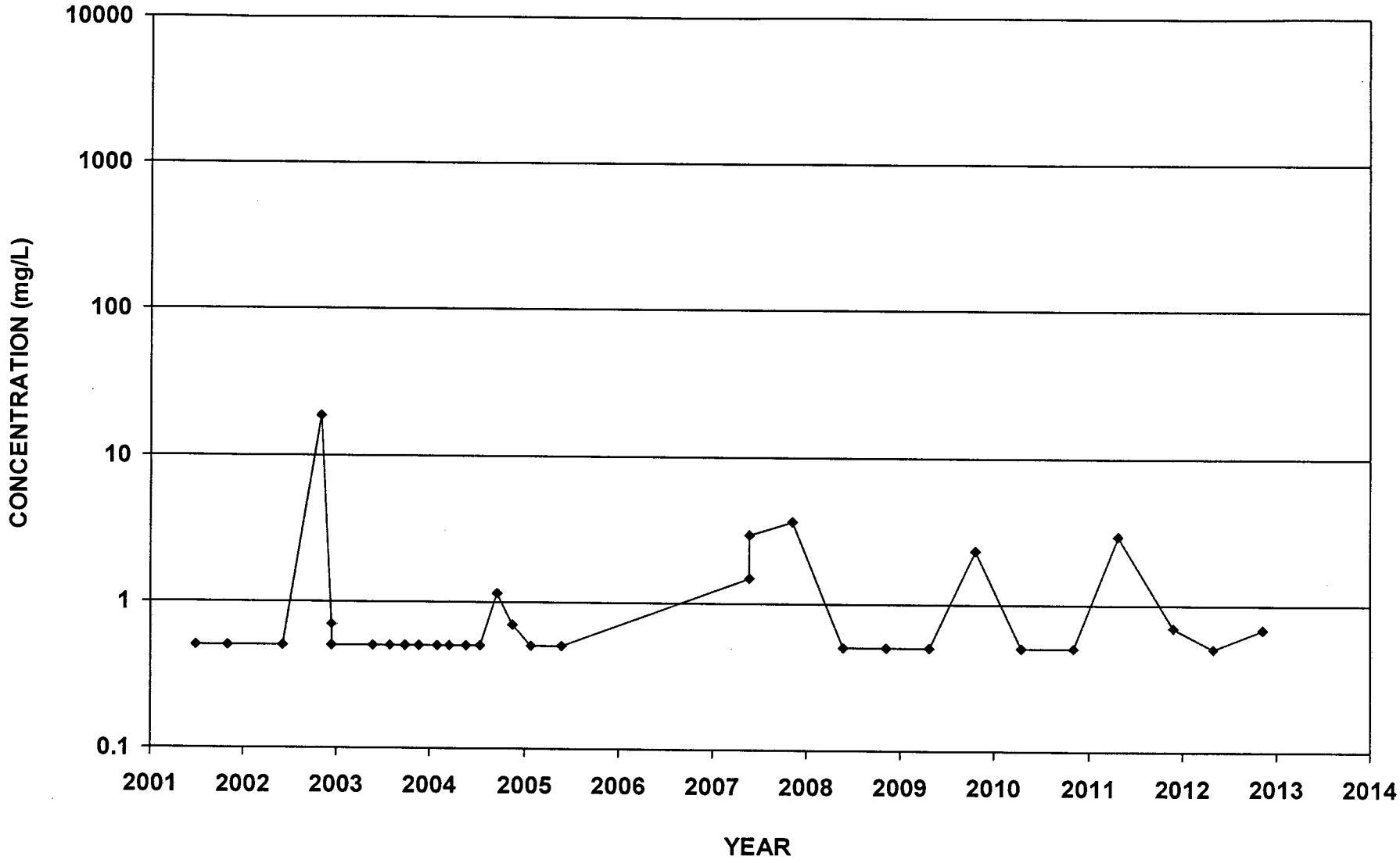
ECMW-7
Ammonia-N



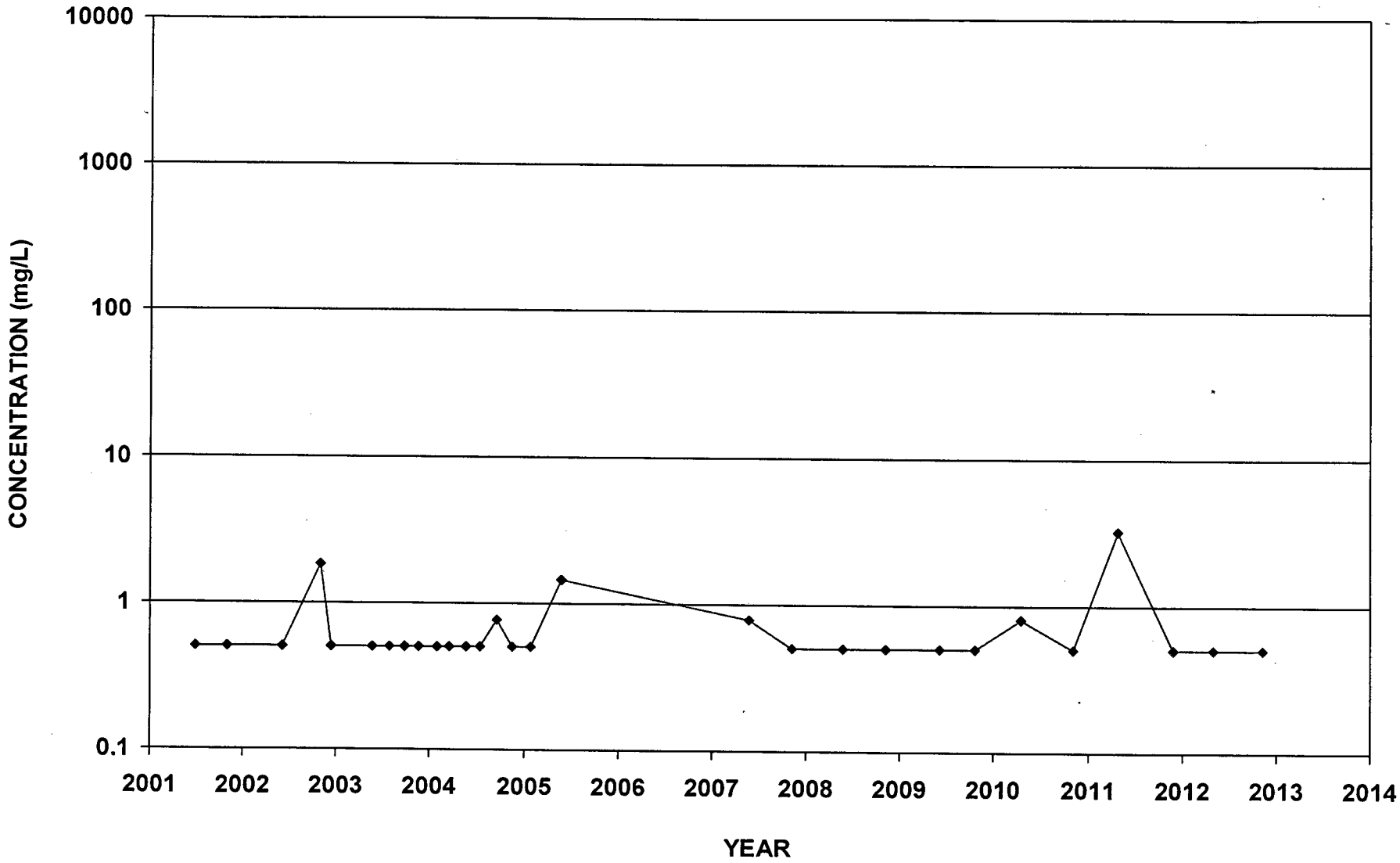
ECMW-8
Ammonia-N

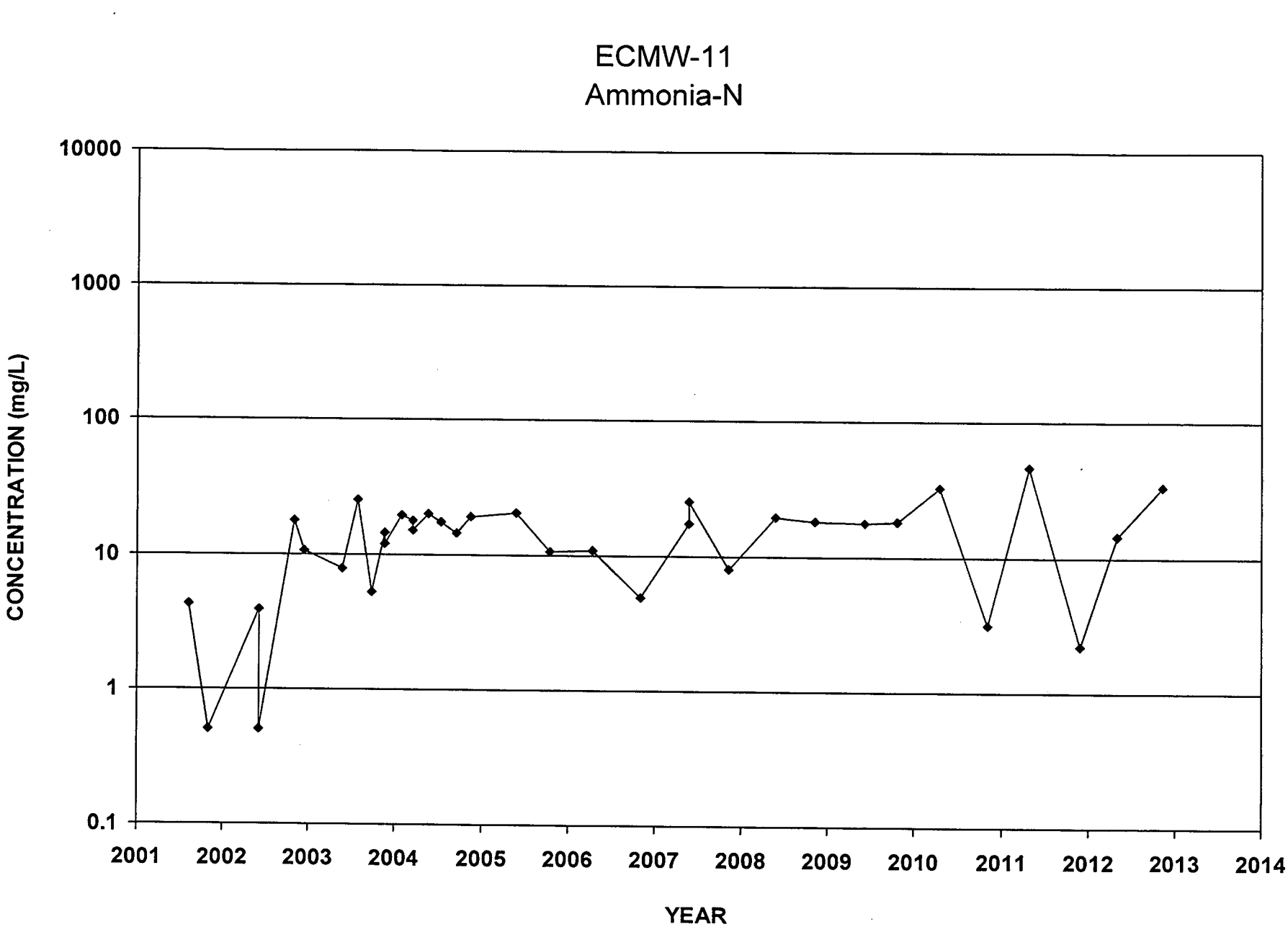


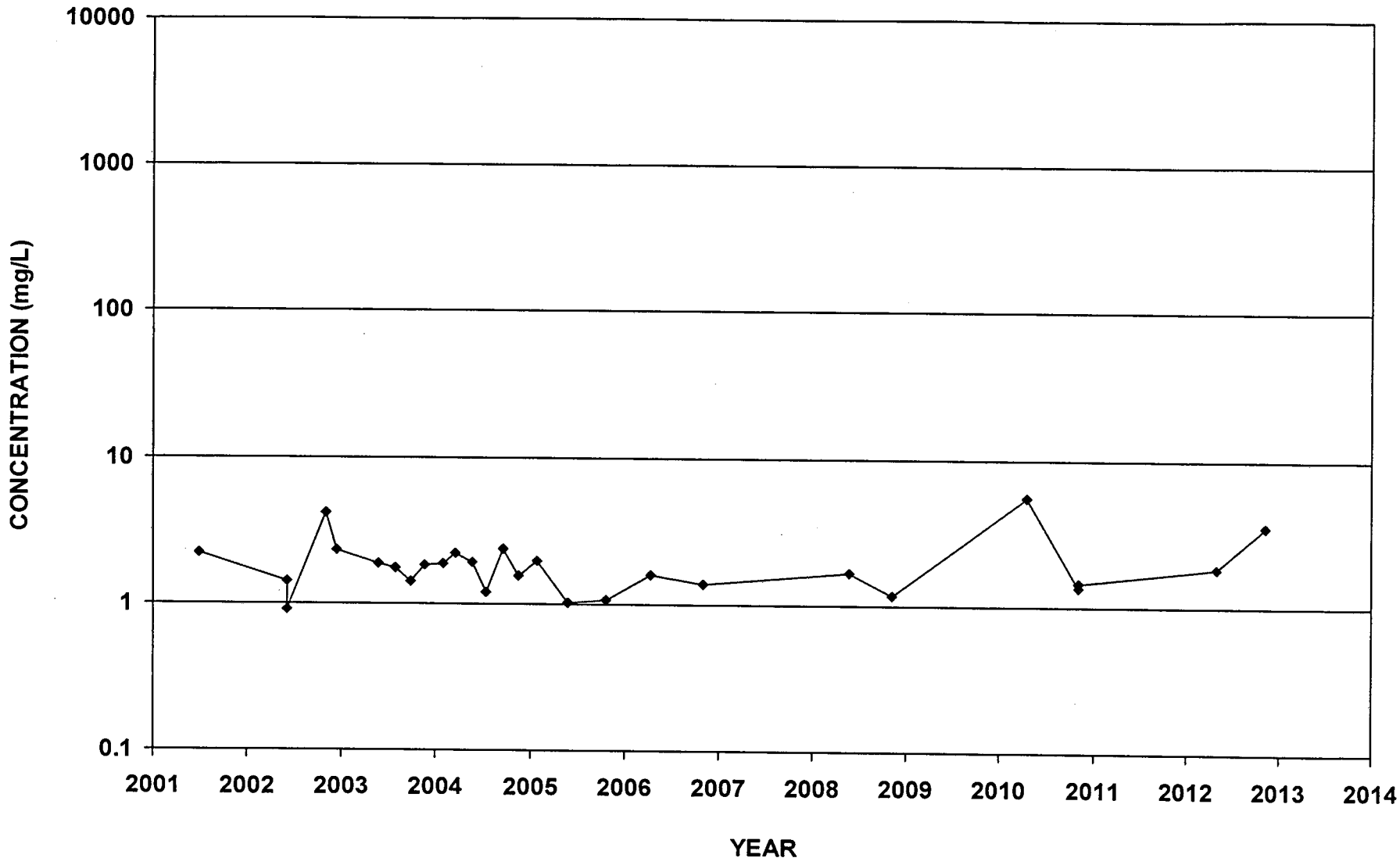
ECMW-9
Ammonia-N



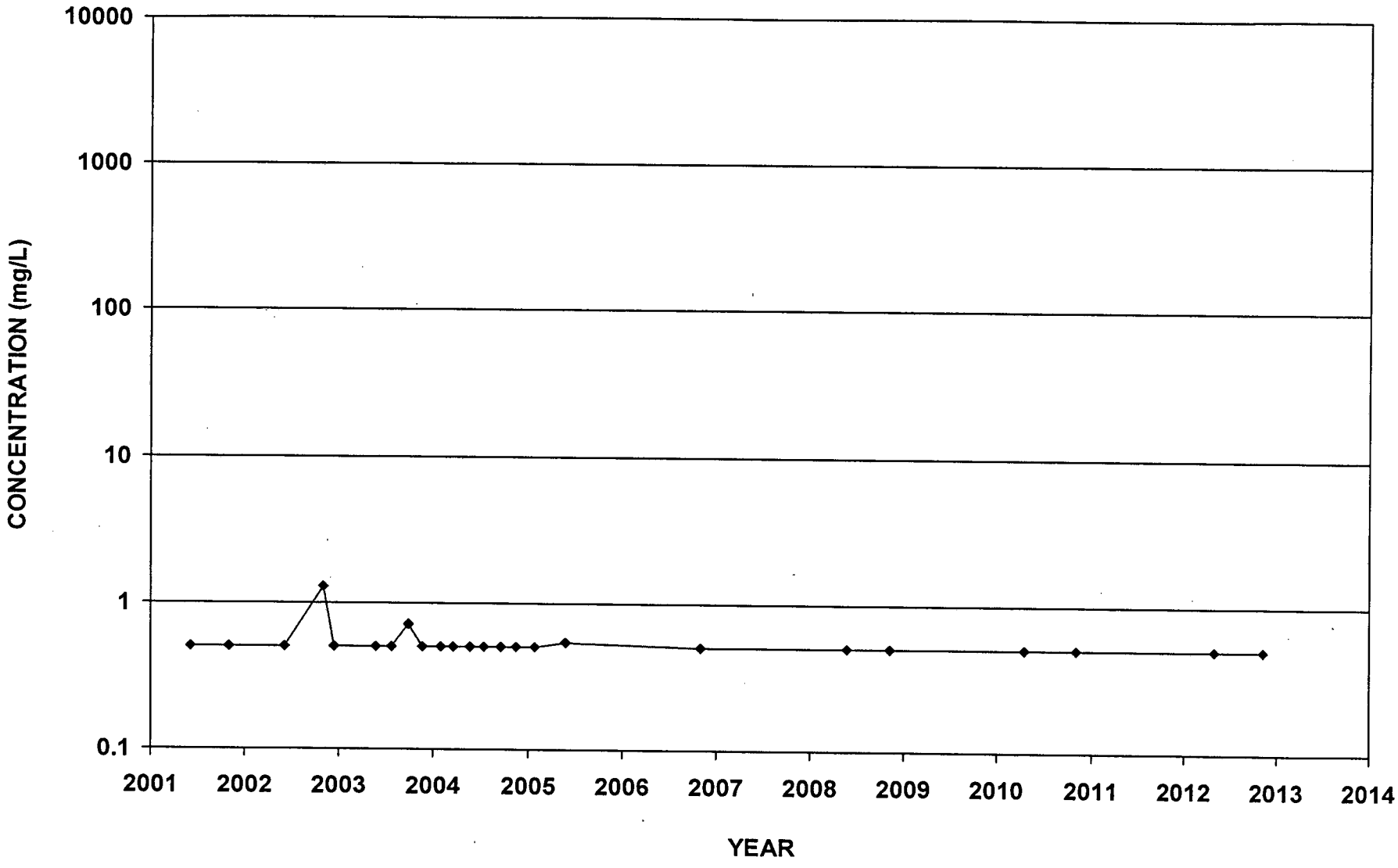
ECMW-10
Ammonia-N

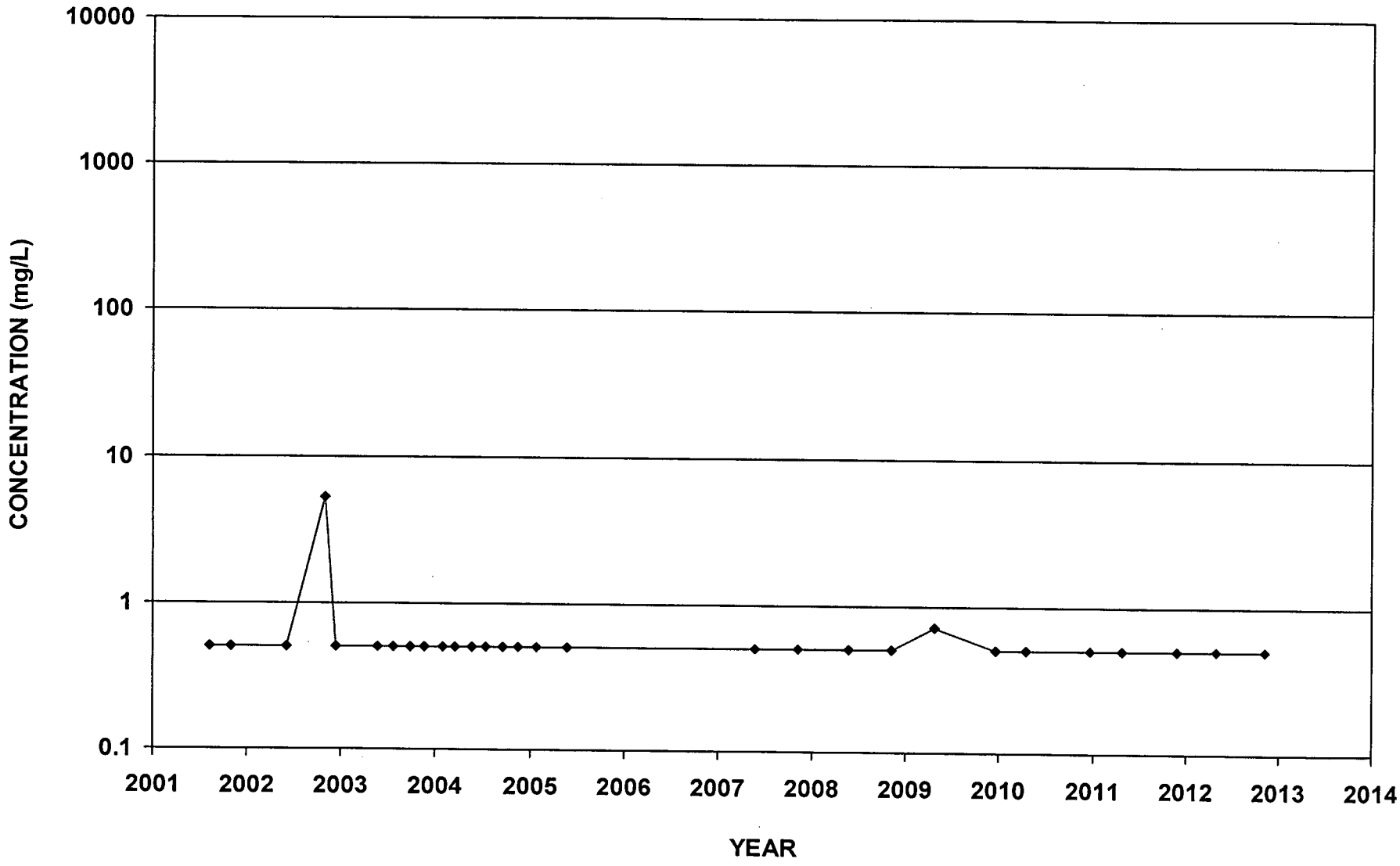



ECMW-11
Ammonia-N
10000
1000
100
10
1
0.1
CONCENTRATION (mg/L)
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
YEAR


ECMW-12
Ammonia-N
10000
1000
100
10
1
0.1
CONCENTRATION (mg/L)
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
YEAR

ECMW-13
Ammonia-N




ECMW-14
Ammonia-N
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1000
100
10
1
0.1
CONCENTRATION (mg/L)
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2002
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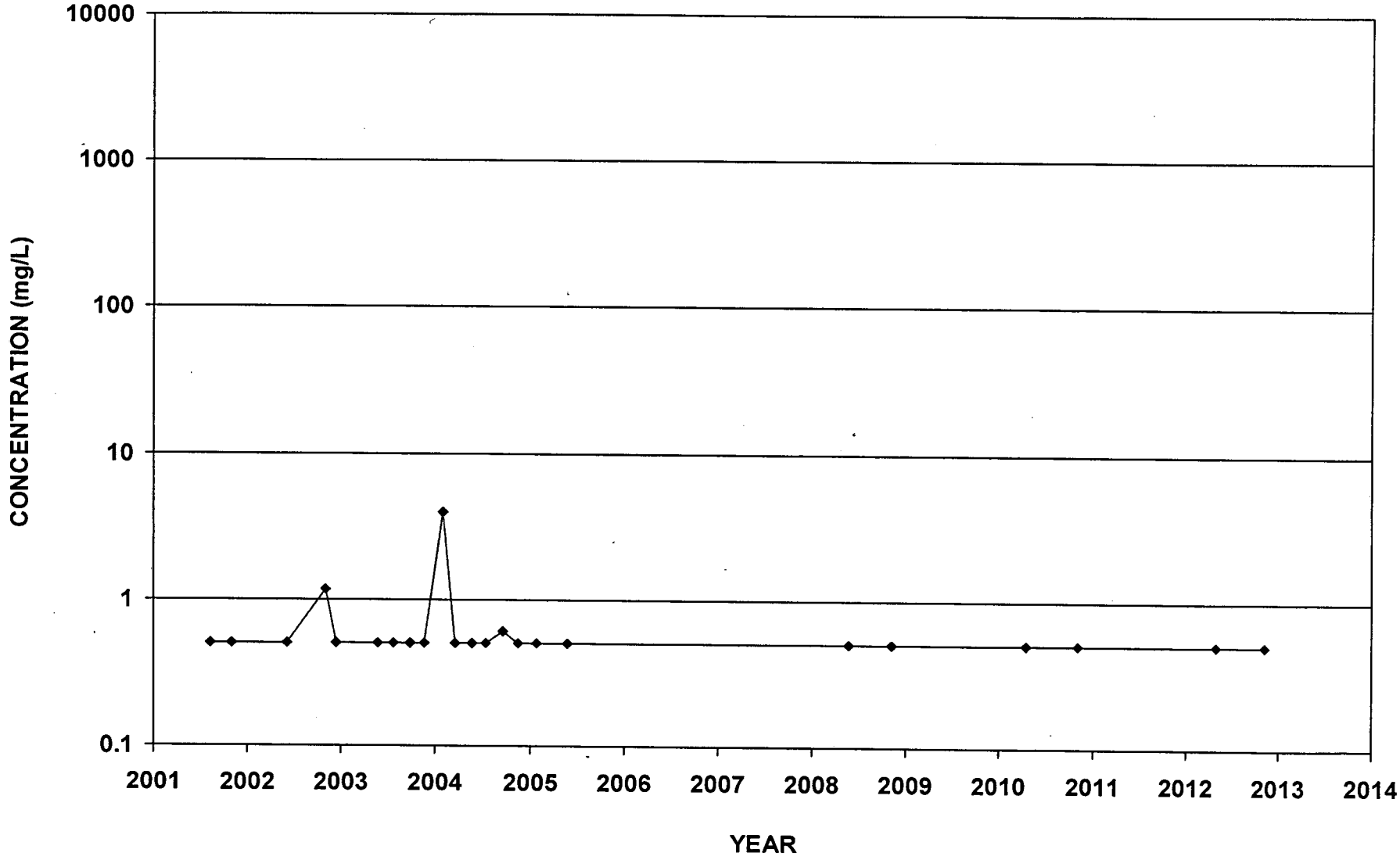
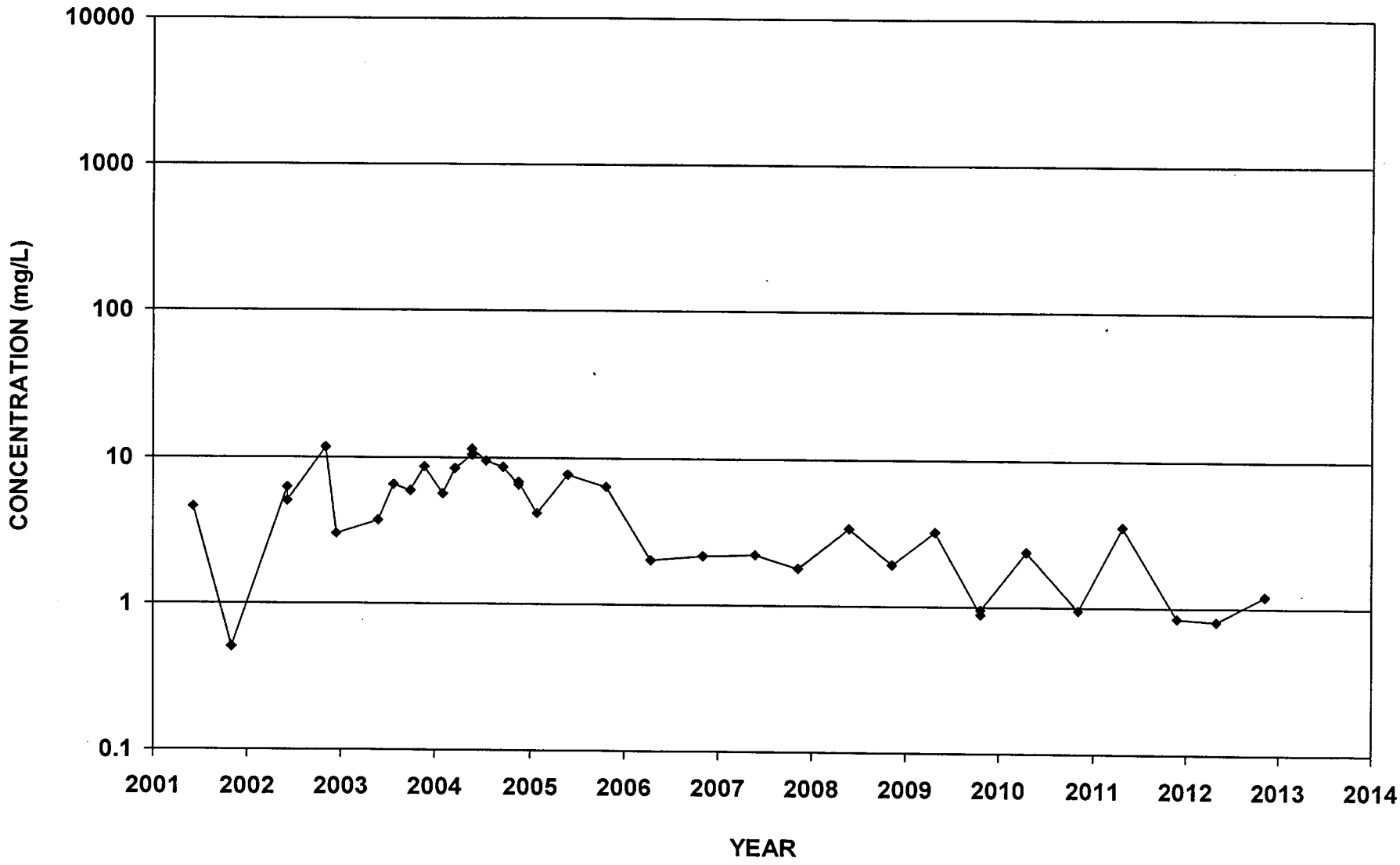
2010
2011
2012
2013
2014
YEAR

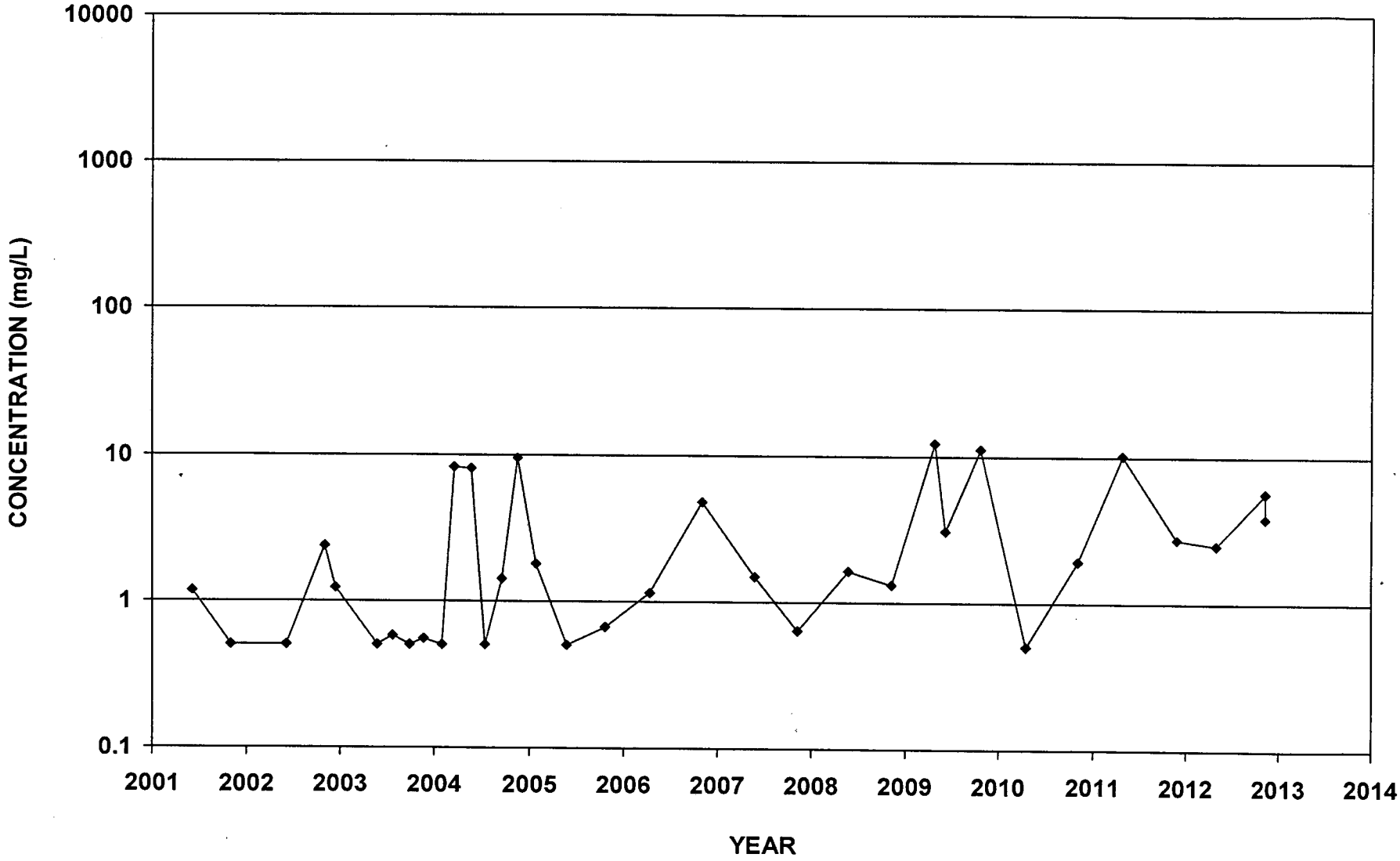
ECMW-15
Ammonia-N



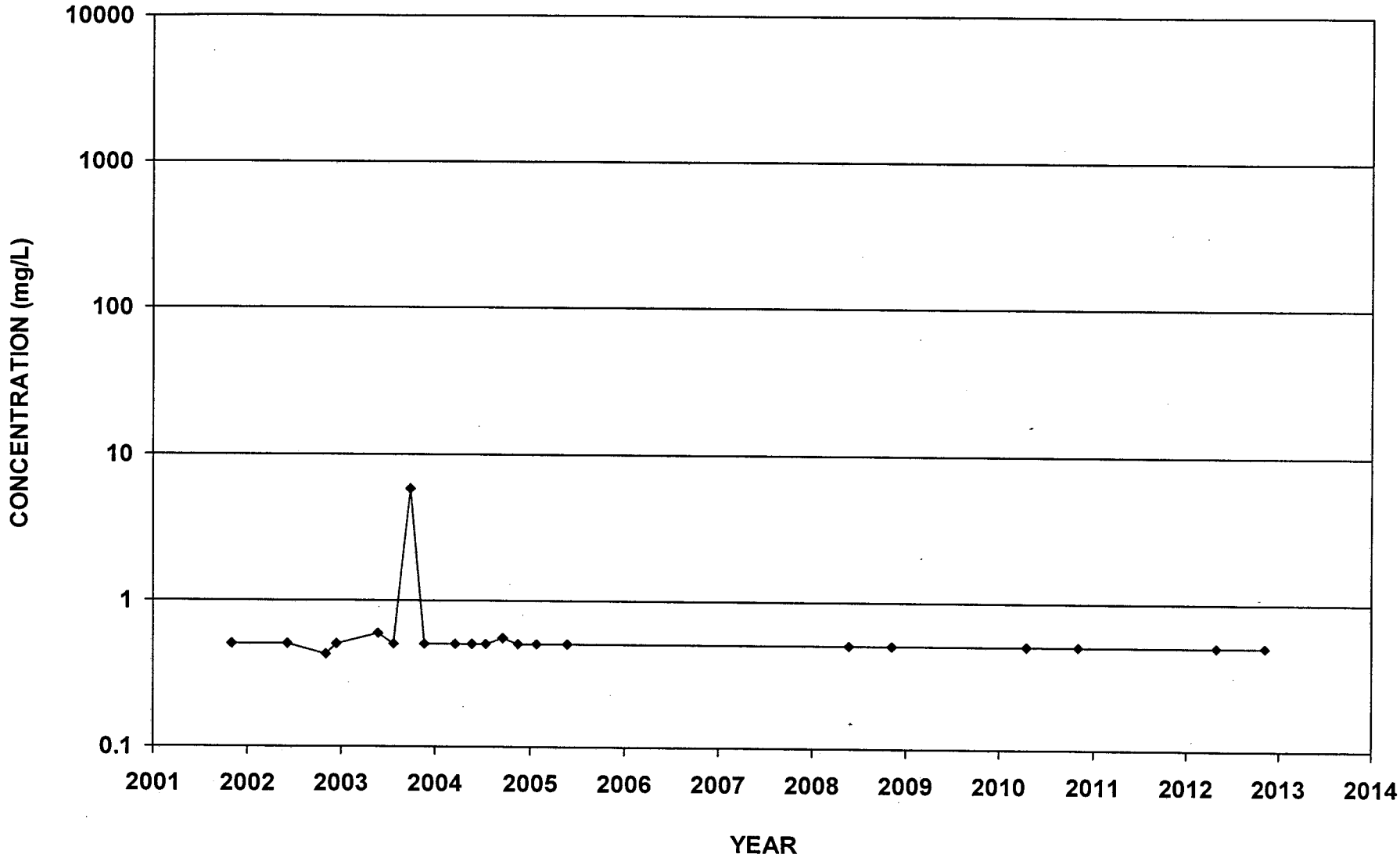
ECMW-16
Ammonia-N

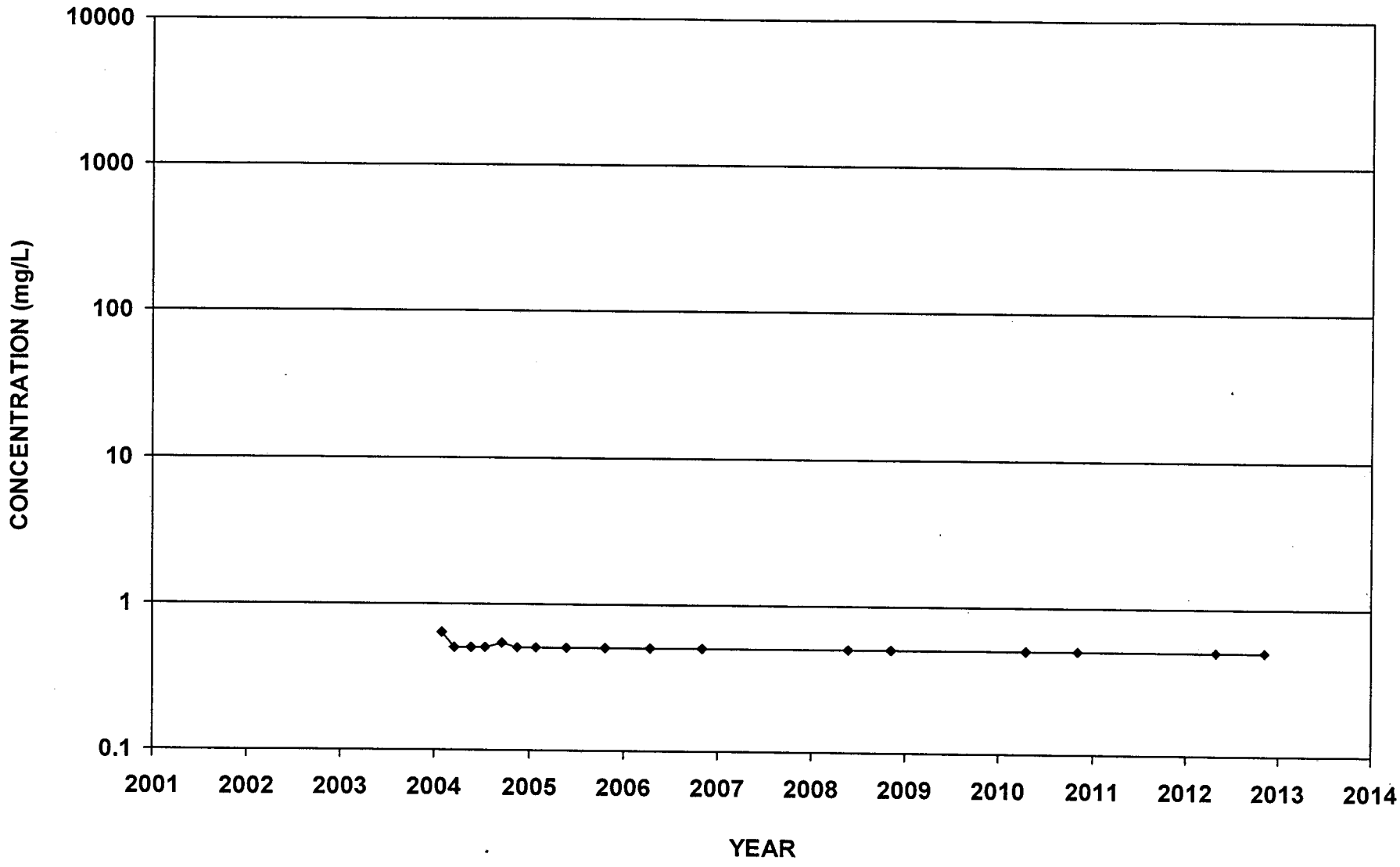


ECMW-17
Ammonia-N



ECMW-18
Ammonia-N

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Ammonia-N
10000
1000
100
10
1
0.1
CONCENTRATION (mg/L)
2001
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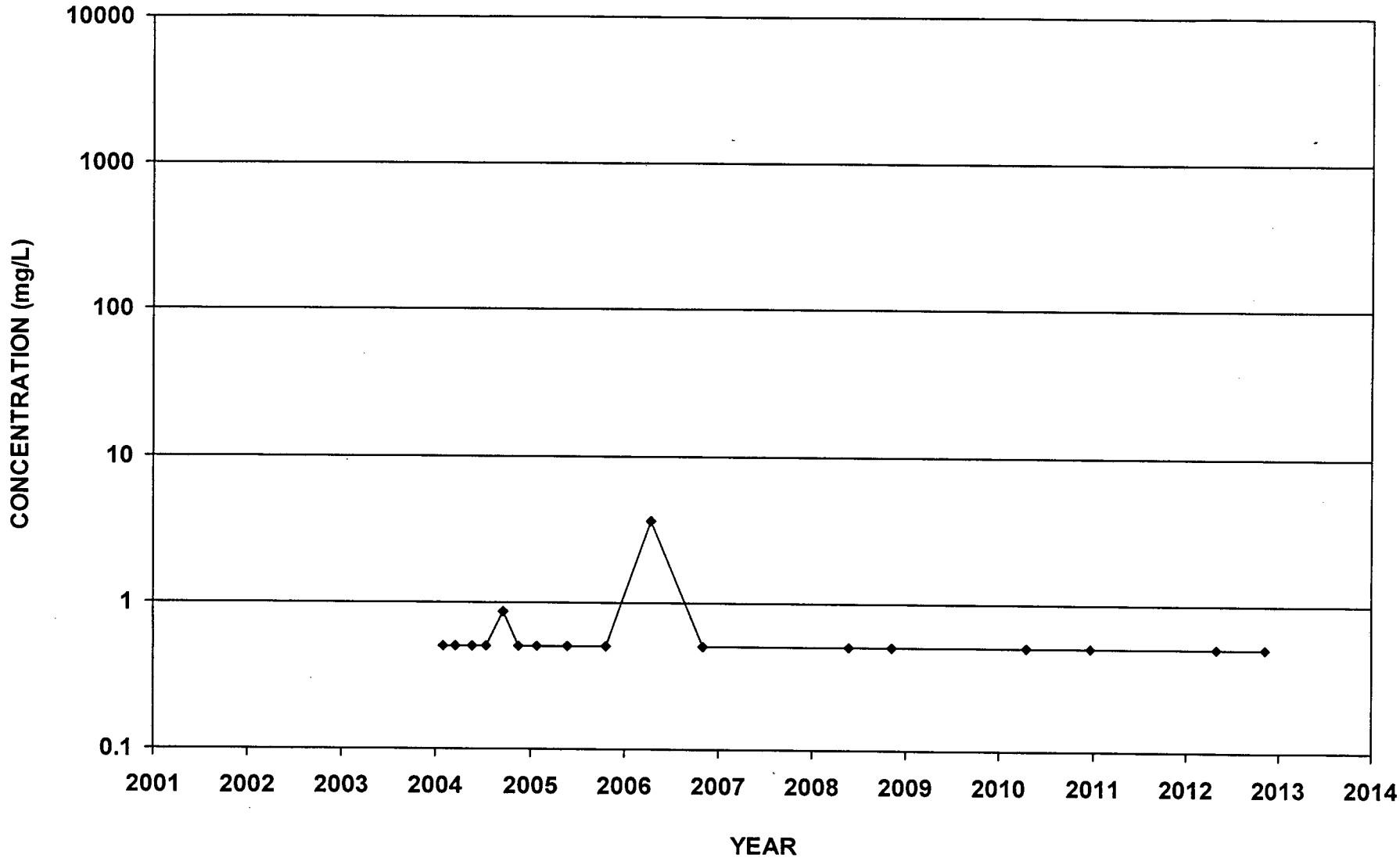
YEAR


ECMW-20
Ammonia-N
10000
1000
100
10
1
0.1
CONCENTRATION (mg/L)
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2002
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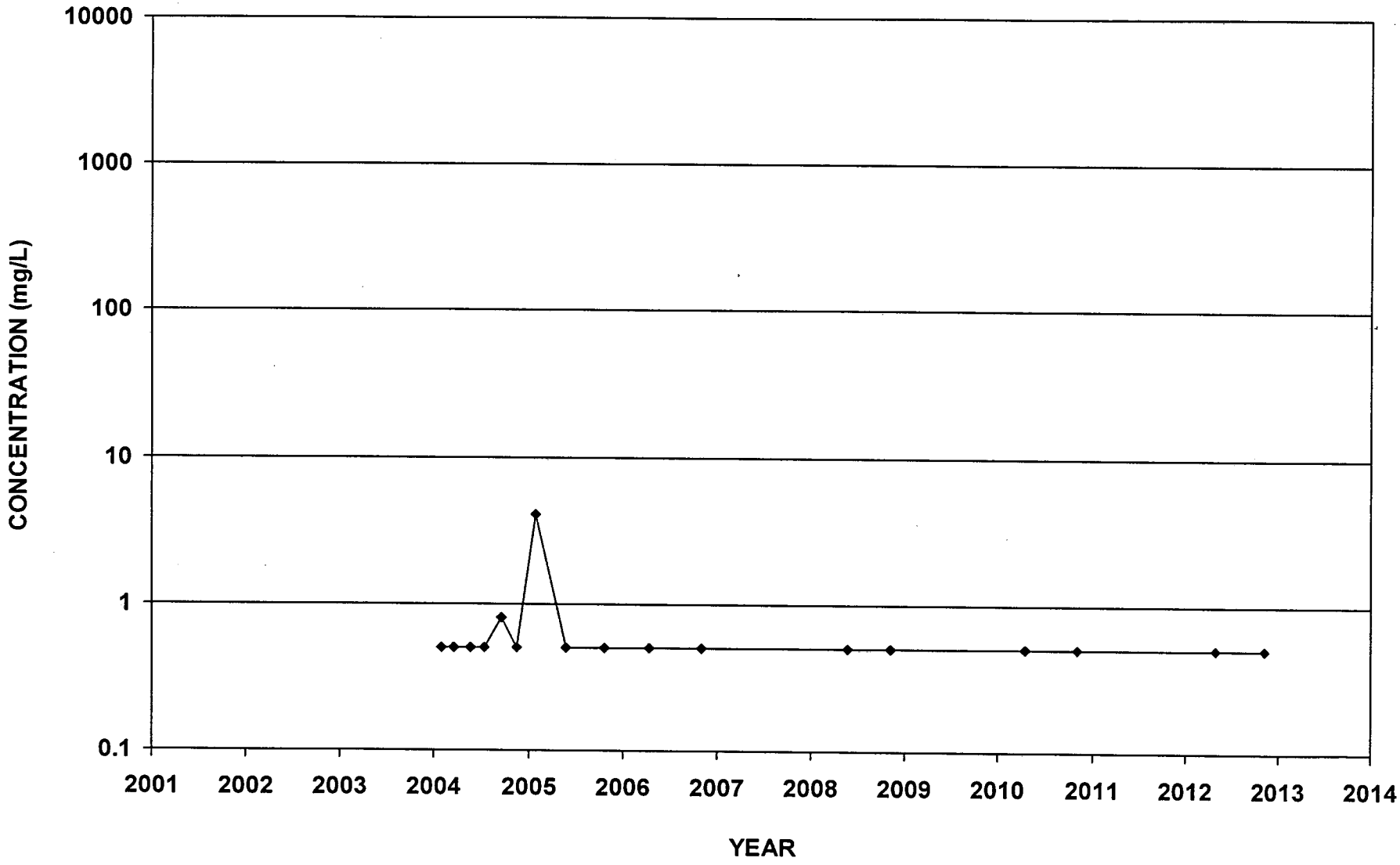
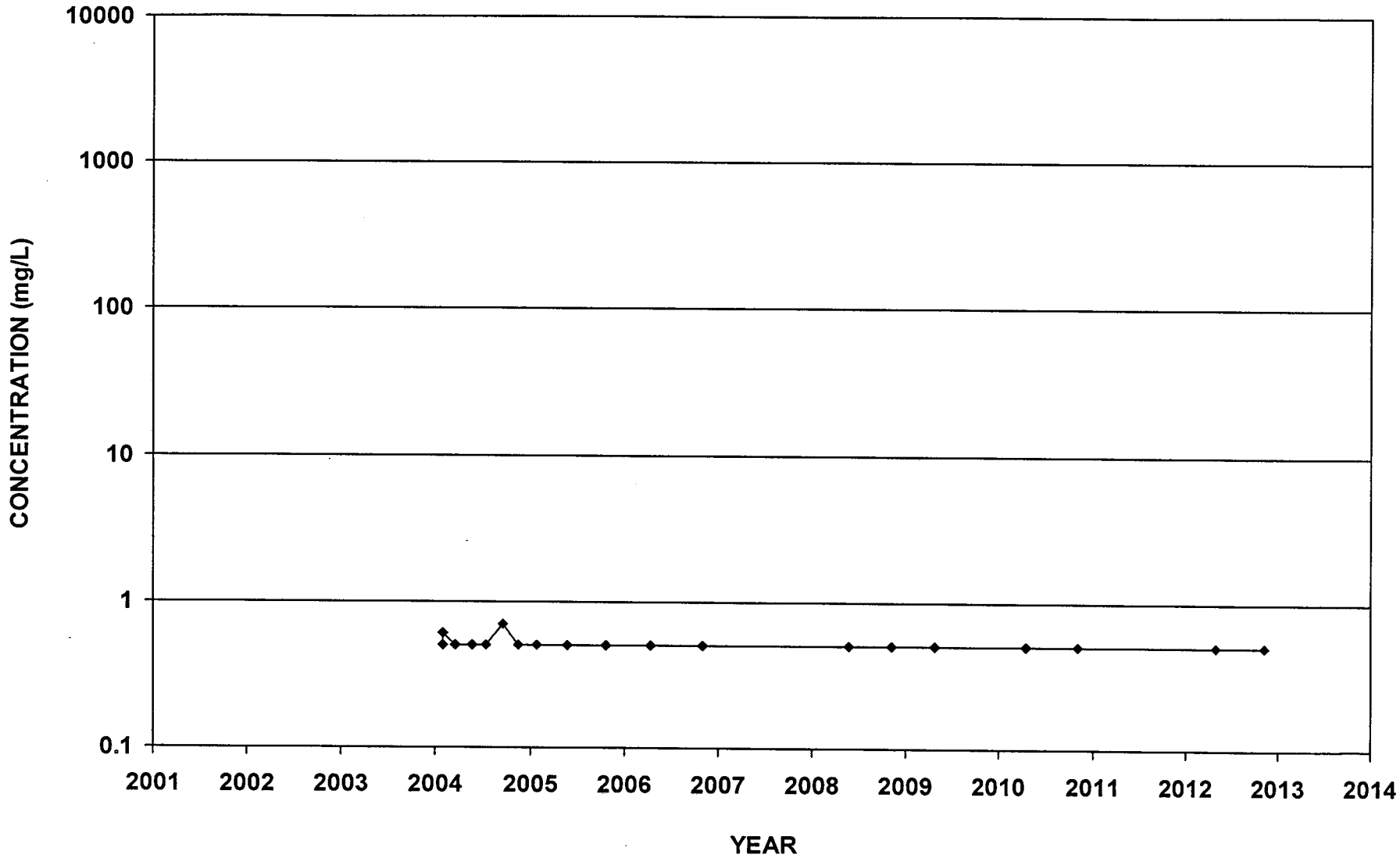
2014
YEAR

ECMW-21
Ammonia-N




ECMW-22
Ammonia-N
10000
1000
100
10
1
0.1
CONCENTRATION (mg/L)
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2014
YEAR

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