For CA750 Boron, Iron, Sulfate pH are not RCRA Regulated.

QUARTERLY GROUNDWATER MONITORING REPORT

FIRST QUARTER 2004

EQUISTAR CHEMICALS, LP
TUSCOLA, ILLINOIS

IEPA Number: 0418080002
ILD 005078126
Former Closed Solid Waste Disposal Areas
Permit No. 1993-004-DE/OP
Supplemental Permit No. 2002-030-SP

Prepared for

Equistar Chemical, LP
Tuscola, Illinois

Prepared by

ENVIRON International Corporation
Deerfield, Illinois

April 15, 2004

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I. INTRODUCTION

This report summarizes and evaluates the analytical results of the First Quarter 2004 Groundwater Sampling Event for the Equistar Chemicals, LP Site (the "Site") located at 625 East US Highway 36, Tuscola, Illinois. ENVIRON International Corporation (ENVIRON) was retained to perform monitoring activities in accordance with the Illinois Environmental Protection Agency (IEPA) Supplemental Permit Number 2002-030-SP (dated July 17, 2002) to Post Closure Permit Number 1993-004-DE/OP. As specified in the Supplemental Permit, analyses of List 1-Field Parameters and List 2-Routine Indicator Parameters were conducted in the First Quarter 2004.

Groundwater elevation measurements and groundwater samples were collected from the 19 compliance monitoring wells (Monitoring Wells G101-G103, G105-G118, G126, and G127) on February 25-27, 2004.[1]

This report includes the following:

- A description of sampling methods;
- Current groundwater elevation data and a groundwater contour map for the Site;
- Results of laboratory analyses for select metals, total dissolved solids (TDS), total organic halogens (TOX), chloride, sulfate, and ammonia; and
- Identification of exceedances of groundwater quality standards.

[1] Groundwater elevations from the MW03S series wells are also measured and p resented in Figure 1.

II. INVESTIGATIVE METHODS

A. Groundwater Elevation Measurements

Depth to groundwater was measured on February 25, 2004 at the compliance monitoring wells associated with the Site prior to any sampling activities. The depth-to-groundwater measurements were collected with an electronic water level meter and were recorded to the nearest 0.01-foot. Groundwater elevations were calculated by subtracting the depth-to-water measurements from the surveyed well casing elevations. Groundwater elevations and associated data are presented in Table 1.

B. Groundwater Sampling Procedures

Groundwater sampling was conducted at the compliance monitoring wells on February 26 and 27, 2004. All groundwater samples were collected in accordance with the procedures included in the Sampling and Analysis Plan first approved in Supplemental Permit 1998-379-SP.

Groundwater purging was accomplished using disposable, polyethylene bailers. Purging continued until the level of groundwater was just above the well screen or three well volumes of water was removed. Purged groundwater was collected and deposited in the onsite wastewater treatment system. Field indicator parameters including pH, conductivity, temperature, dissolved oxygen (DO), oxidation reduction potential (ORP), and turbidity were measured periodically during purging using a Horiba U-22 Water Quality Checker. Field measurements were recorded as each gallon (approximately) of water was removed until the completion of the purge event. Field sampling logs are presented in Appendix A.

Groundwater samples were collected immediately after purging using the well's dedicated bailer, filtered if necessary, and placed into laboratory supplied containers. The containers and preservatives used for the samples along with the analytical testing methods are presented in Table 2.

C. Sample Analyses

All groundwater samples were placed in ice-filled coolers immediately after collection for delivery to the analytical laboratory, CompuChem of Cary, North Carolina. Chain-of-custody forms were completed for all the samples submitted to the laboratory and proper custody procedures were followed as specified in the Sampling and Analysis Plan. The completed chain-of-custody forms are presented in Appendix B.

III. INVESTIGATION RESULTS

A. List 1 - Field Parameters

The List 1 – Field Parameters measurements are presented in Table 1. The shallow groundwater contour map prepared for the Site based on the February 25, 2004 elevations is presented in Figure 1. In general, groundwater elevations are higher than those measured in the previous quarter (November 5, 2003), however the groundwater contours are similar.

B. List 2 - Routine Indicator Parameters

The groundwater analytical results are presented in Table 3. Historical data for samples analyzed since January 2000 are also presented. Exceedances of Illinois Administrative Code, Class II Groundwater Standards are highlighted and exceedances of the background 95% upper confidence limits are also indicated. The First Quarter 2004 groundwater analytical results have been submitted electronically using the IEPA's electronic reporting system.

C. Evaluation

Groundwater quality at the compliance monitoring wells has not changed significantly in comparison to the Fourth Quarter 2003 groundwater analytical results. During the First Quarter 2004, parameters exceeding their respective Class II Groundwater Standards in at least one compliance monitoring well include:

- Dissolved Boron (R113);
- Dissolved Iron (G103, G108, G112);
- Dissolved Sulfate (G105, G106, G108, G109, G110, G112, R113, G114, G115);
- Field filtered total dissolved solids (G105, G106, G108, G109, G110, G112, R113, G114); and
- Field measured pH (G105, G108, G109).

Analytical results for dissolved arsenic, barium, cadmium, chloride, chromium, copper, lead, manganese, mercury and nickel were below their respective Class II Groundwater Standards at all of the compliance wells.

The Second Quarter 2004 sampling event, to be scheduled during either April or May 2004, will be conducted in accordance with the most recent permit conditions.

TABLES

TABLES

TABLE 1

LIST 1 - FIELD PARAMETERS
LANDFILL COMPLIANCE MONITORING WELLS - FEBRUARY 2004
First Quarter 2004 Groundwater Sampling Event
Equistar Chemicals, LP
Tuscola, Illinois

FIELD PARAMETERS (List 1)	MONITORING WELL NUMBER																		
	G101	G102	G103	G105	G106	G107	G108	G109	G110	G111	G112	G113	G114	G115	G116	G117	G118	G126	G127
Bottom of Well Elevation (ft msl)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Depth to Water (ft below land surface)	4.91	4.27	5.76	1.66	2.06	2.34	5.98	2.19	3.02	4.23	1.12	0.22	0.89	2.56	2.81	4.14	15.3	3.7	0.42
Depth to Water (ft from measuring point)	6.93	6.38	9.22	3.84	4.2	4.47	5.98	5.13	5.03	6	4.3	1.9	2.9	5.16	5.59	6.15	17.12	3.7	4.81
Elevation of Ground Water Surface (ft msl)	690.37	692.17	690.56	687.57	687.11	687.66	697.1	690.99	686.23	690.79	696.3	695.69	691.02	689.81	691.4	685.27	681.64	680.16	690.86
pH (unfiltered)	7.55	7.65	6.82	6.28	7.23	7.64	6.41	6.41	7.08	7.53	6.78	6.51	7.58	7.43	7.77	8.33	7.58	7.68	7.69
Specific Conductance (umhos/cm, unfiltered)	68,000	85,000	140	470	230	120	750	380	630	100	2,000	350	150	140	80,000	87,000	77,000	61,000	79,000
Temperature of Water Sample (deg F)	54.7	52.5	53.1	43.2	44.4	47.3	54.9	45	50.4	55.6	50.7	45.9	43.8	45.6	47.8	43.9	52.2	49.1	44.3

Notes:

-- = Reported annually (2nd Quarter)
ft = feet
msl = Mean Sea Level
umhos/cm = micromhos per centimeter
deg F = degrees Fahrenheit
G104 deleted from Monitoring Program
Water level measurements determined on the actual date of sampling and may differ from the groundwater contour map elevations.

TABLE 2

LIST 2 - ROUTINE INDICATOR PARAMETERS: ANALYTICAL TESTING METHODS

First Quarter 2004 Groundwater Sampling Event
Equistar Chemicals, LP - Tuscola, Illinois

Parameter	PQL	Analysis Method	Sample Container - Preservative
List 2 - Routine Indicator Parameters			
FILTERED			
Ammonia	-- µg/L	EPA 350.3	250 mL plastic bottle - H_2SO_4
Chloride	1.0 mg/L	EPA 300.0	250 mL plastic bottle - no preservative
Sulfate	1.0 mg/L	EPA 300.0	
Total Dissolved Solids	10.0 mg/L	EPA 160.1	500 mL plastic bottle - no preservative
Arsenic	5.0 µg/L	SW 6020	500 mL plastic bottle - HNO_3
Barium	20.0 µg/L	SW 6020	
Boron	4.0 µg/L	SW 6010	
Cadmium	2.0 µg/L	SW 6020	
Chromium	7.0 µg/L	SW 6020	
Copper	20.0 µg/L	SW 6020	
Iron	40.0 µg/L	SW 6010	
Lead	5.0 µg/L	SW 6020	
Manganese	15.0 µg/L	SW 6010	
Mercury	0.2 µg/L	SW 7470	
Nickel	40.0 µg/L	SW 6020	
UNFILTERED			
Total Organic Halogens (TOX)	-- µg/L	EPA 9020	One liter amber bottle - no preservative

Notes:
Each sample to be analyzed for List 2 parameters requires five sample bottles.
PQL = practical quantitation limit as defined in Supplemental Permit 2002-030-SP.
-- = no PQL
µg/L = micrograms per liter
mg/L = milligrams per liter
mL = milliliter

TABLE 3
Landfill Compliance Monitoring Well Data
Wells G101 through G118 (excluding G104) and Background Wells G126 and G127
First Quarter 2004

Permit No. 1993-004-DE/OP (Post-Closure)
Supplemental Permit No. 2002-030-SP
0418080002 -- Douglas County -- ILD 005078126
Equistar Chemicals, LP - Tuscola, Illinois

Monitoring Well G101	Sample Dates	Ammonia (N)-d 00608 mg/L	Arsenic-d 01000 ug/L	Barium-d 01005 ug/L	Boron-d 01020 ug/L	Cadmium-d 01025 ug/L	Chloride-d 00941 mg/L	Chromium-d 01030 ug/L	Copper-d 01040 ug/L	Iron-d 01046 ug/L	Lead-d 01049 ug/L	Manganese-d 01056 ug/L	Mercury-d 71890 ug/L	Nickel-d 01065 ug/L	pH 00400 STD units	Sulfate-d 00946 mg/L	TDS-d 70300 mg/L	TOX-t 78115 ug/L	Zinc-d 01092 ug/L
	01/10/00	0.29	50 <	82	650	0.2 <	5 <	5 <	3.2	10 <	7.5 <	25	0.2 <	5 <	7.13	20	360	20	NA
	04/04/00	0.31	5 <	78	570	0.2 <	5 <	5 <	2.5 <	10 <	5.0 <	170	0.2 <	5 <	7.40	16	360	10 <	NA
	08/02/00	0.24	5 <	87	560	0.2 <	5 <	5 <	2.5 <	48	5.0 <	350	0.2 <	10 <	7.43	22	420	10 <	NA
	10/17/00	0.34	5 <	85	620	0.2 <	5 <	5 <	20 <	54	5.0 <	380	0.2 <	11	7.05	21	380	22	NA
	02/13/01	1.0 <	5 <	79	670	0.98	1.2	6.1	8.1	100 <	3.0 <	50 <	0.2 <	7.7	7.08	19	360	100 <	NA
	04/26/01	1.0 <	6.5	84	620	0.5 <	1 <	5.6	6.0	100 <	19	240	0.2 <	8.0	9.14	18	320	100 <	NA
	08/08/01	1.0 <	5 <	83	610	0.5 <	1 <	2 J	3 J	100 <	3 <	390	0.2 <	5.4	7.40	21	350	18	NA
	10/09/01	1.8	5 <	95	640	0.5 <	1.3	3 J	4 J	100 <	3 <	490	0.2 <	6.7	6.47	17	370	5 J	NA
	01/09/02	1 <	5 <	84	750	0.5 J	1.1	5.9	5 J	100 <	0.1 J	25	0.2 <	3 J	8.13	18	360	16	NA
	04/16/02	1 <	0.6 J	85	680	0.2 J	1.2	9.8	5 J	100 <	0.2 J	3 J	0.2 <	5.6	8.10	16	340	5 J	NA
	08/28/02	1 <	5 <	85	620	0.5 <	1.5	3 J	5 J	100 <	3 <	430	0.2 <	7.2	7.30	17	350	16	NA
	11/12/02	1 <	5 <	86	720	0.5 <	1.6	4 J	3 J	100 <	3 <	330	0.2 <	10	6.80	21	360	10 J	NA
	01/15/03	1 <	4 J	78	650	0.5 <	1	13	3 J	100 <	3 <	15 <	0.2 <	7.9	6.96	14	360	*	NA
	04/30/03	1 <	6.8	95	660	0.38 J	1 <	6.2	4.3 J	100 <	3 <	250	0.2 <	9.6	7.40	15	340	10 <	NA
	08/19/03	1 <	5 <	78	570	0.5 <	1 <	4.5 J	5 <	100 <	3 <	460	0.2 <	4.7 J	6.95	17	370	10 <	NA
	11/06/03	1 <	5 <	80	660	0.5 <	1.3	4.3 J	4.1 J	100 <	3 <	270	0.2 <	17	7.44	19	370	21	NA
	02/26/04	0.1 U	2.3 U	77.2 B	512	0.4 U	2 U	4.3 B	1.8 U	23.3 U	1.8 U	53.4	0.1 U	3.1 U	7.55	13	385	5000 <	NA
Class II GW Standard		no standard	200	2,000	2,000	50	200	1,000	650	5,000	100	10,000	10	2,000	6.5 - 9	400	1,200	no standard	10,000
Upper Confidence Limit		1.1	5.6	99.52	150.96	2	59.42	7.93	10.17	350	5	40	0.3	10.32	8.98	109.4	531.72	50	NA
Lower Confidence Limit		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.93	NA	NA	NA	NA
Confidence Limit Exceeded in Q1, 2004		No	No	No	Yes	No	No	No	No	No	No	Yes	No	No	No	No	No	No	NA

NOTES:
Data from 1994 to 1999 have been archived and are not presented on this table.
- - = No data collected.
* = Bottle broken.
J = Estimated value. Compound detected below the practical quantitation limit (PQL).
NA = Not applicable.
Bold-face value in a shaded box indicates that the concentration exceeds the Class II groundwater standard for that parameter.
Confidence limits as recalculated in October 2002 using the method provided in Attachment B to Supplemental Permit No. 2000-270-SP and non-parametric methods as applicable.
ug/L = Micrograms per liter.
mg/L = Milligrams per liter.
< = Below the practical quantitation limit (PQL).
G104 deleted from the monitoring program.
Class II groundwater quality standards from Subpart D of 35 Ill. Adm. Code Part 620.
Parameters with 100% of results below the method detection limit (MDL), during the first year of sampling for each individual parameter in monitoring wells G126 (MW08S) and G127 (MW09S), have an Upper Confidence Limit (UCL) equal to the applicable PQL contained in Attachment A of Supplemental Permit No. 2002-030-SP. These parameters include cadmium and lead.
Data prior to 2004 have not been verified by ENVIRON.
U = Below Instrument Detection Limit.
B = At or Above Instrument Detection Limit, But Below Contract Required Detection Limit.

TABLE 3
Landfill Compliance Monitoring Well Data
Wells G101 through G118 (excluding G104) and Background Wells G126 and G127
First Quarter 2004

Permit No. 1993-004-DE/OP (Post-Closure)
Supplemental Permit No. 2002-030-SP
0418080002 -- Douglas County -- ILD 005078126
Equistar Chemicals, LP - Tuscola, Illinois

Monitoring Well G102	Sample Dates	Ammonia (N)-d 00608 mg/L	Arsenic-d 01000 ug/L	Barium-d 01005 ug/L	Boron-d 01020 ug/L	Cadmium-d 01025 ug/L	Chloride-d 00941 mg/L	Chromium-d 01030 ug/L	Copper-d 01040 ug/L	Iron-d 01046 ug/L	Lead-d 01049 ug/L	Manganese-d 01056 ug/L	Mercury-d 71890 ug/L	Nickel-d 01065 ug/L	pH 00400 STD units	Sulfate-d 00946 mg/L	TDS-d 70300 mg/L	TOX-t 78115 ug/L	Zinc-d 01092 ug/L
	01/10/00	0.20	50 <	91	760	2 <	5 <	5 <	2.5 <	10 <	7.5 <	18	0.2 <	5 <	7.62	82	480	10 <	NA
	04/04/00	0.23	5 <	86	770	2 <	6.7	5 <	2.5 <	10 <	5 <	150	0.2 <	5 <	7.31	140	550	10 <	NA
	08/02/00	0.13	5 <	95	650	2 <	7.4	5 <	2.5 <	100	5 <	140	0.2 <	10 <	7.32	96	530	10 <	NA
	10/17/00	0.12 <	5 <	95	700	2 <	6.8	5 <	20 <	25 <	5 <	72	0.2 <	15	7.20	110	480	8 <	NA
	02/13/01	1 <	5 <	93	760	0.5 <	4.7	5 <	9.8	100 <	3 <	76	0.2 <	12	7.09	99	480	100 <	NA
	04/26/01	1 <	3 J	92	810	0.3 J	4.8	4 J	7.2	100 <	3 <	230	0.2 <	16	8.30	110	450	100 <	NA
	08/08/01	1 <	5 <	88	710	0.5 <	4.3	3 J	3 J	100 <	3 <	210	0.2 <	5	7.30	75	490	6 J	NA
	10/09/01	1 <	5.7	100	660	0.5 <	4.7	2 J	3 J	100 <	3 <	260	0.2 <	6.7	6.73	99	510	12	NA
	01/09/02	1 <	0.8 J	97	810	0.6	4.7	30	7.6	100 <	0.5 J	5 J	0.2 <	12	7.73	110	490	10	NA
	04/16/02	1 <	2 J	83	780	0.5 <	4.4	5.3	3 J	100 <	0.2 J	8 J	0.2 <	5.7	8.0	99	470	8 J	NA
	08/28/02	1 <	5 <	92	650	0.5 <	4.7	3 J	3 J	100 <	3 <	450	0.2 <	7.4	7.23	98	460	24	NA
	11/12/02	1 <	5 <	90	770	0.5 <	5	5 J	3 J	100 <	3 <	250	0.2 <	19	6.89	98	470	10 <	NA
	01/15/03	1 <	3 J	90	760	0.5 <	4.1	12	4 J	100 <	3 <	63	0.2 <	13	6.94	94	480	13	NA
	04/30/03	1 <	9.7	100	790	0.5 <	3.8	19	2.8 J	100 <	3 <	180	0.2 <	8.3	7.08	94	470	7.8 J	NA
	08/19/03	1 <	5 <	96	680	0.38 J	4.3	4.7 J	5.8	100 <	1.1 J	450	0.2 <	25	7.12	120	510	10 <	NA
	11/06/03	1 <	5 <	100	700	0.5 <	4.8	3.5 J	6.6	100 <	3 <	900	0.2 <	85	7.74	99	500	10 <	NA
	02/26/04	0.1 U	2.3 U	84 B	625	0.4 U	4.25	1.9 U	1.8 U	23.3 U	1.8 U	188	0.1 U	3.1 U	7.65	92.9	511	5000 <	NA
Class II GW Standard		no standard	200	2,000	2,000	50	200	1,000	650	5,000	100	10,000	10	2,000	6.5 - 9	400	1,200	no standard	10,000
Upper Confidence Limit		1.1	5.6	99.52	150.96	2	59.42	7.93	10.17	350	5	40	0.3	10.32	8.98	109.4	531.72	50	NA
Lower Confidence Limit		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.93	NA	NA	NA	NA
Confidence Limit Exceeded in Q1, 2004		No	No	No	Yes	No	No	No	No	No	No	Yes	No	No	No	No	No	No	NA

NOTES:
Data from 1994 to 1999 have been archived and are not presented on this table.
- - = No data collected.
J = Estimated value. Compound detected below the practical quantitation limit (PQL).
NA = Not applicable.
Bold-face value in a shaded box indicates that the concentration exceeds the Class II groundwater standard for that parameter.
Confidence limits as recalculated in October 2002 using the method provided in Attachment B to Supplemental Permit No. 2000-270-SP and non-parametric methods as applicable.
ug/L = Micrograms per liter.
mg/L = Milligrams per liter.
< = Below the practical quantitation limit (PQL).
G104 deleted from the monitoring program.
Class II groundwater quality standards from Subpart D of 35 Ill. Adm. Code Part 620.
Parameters with 100% of results below the method detection limit (MDL), during the first year of sampling for each individual parameter in monitoring wells G126 (MW08S) and G127 (MW09S), have an Upper Confidence Limit (UCL) equal to the applicable PQL contained in Attachment A of Supplemental Permit No. 2000-030-SP. These parameters include cadmium and lead.
Data prior to 2004 have not been verified by ENVIRON.
U = Below Instrument Detection Limit.
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First Quarter 2004

Permit No. 1993-004-DE/OP (Post-Closure)
Supplemental Permit No. 2002-030-SP
0418080002 -- Douglas County -- ILD 005078126
Equistar Chemicals, LP - Tuscola, Illinois

Monitoring Well G103	Sample Dates	Ammonia (N)-d 00608 mg/L	Arsenic-d 01000 ug/L	Barium-d 01005 ug/L	Boron-d 01020 ug/L	Cadmium-d 01025 ug/L	Chloride-d 00941 mg/L	Chromium-d 01030 ug/L	Copper-d 01040 ug/L	Iron-d 01046 ug/L	Lead-d 01049 ug/L	Manganese-d 01056 ug/L	Mercury-d 71890 ug/L	Nickel-d 01065 ug/L	pH 00400 STD units	Sulfate-d 00946 mg/L	TDS-d 70300 mg/L	TOX-t 78115 ug/L	Zinc-d 01092 ug/L
	01/10/00	22	50 <	150	170	5	15	5 <	2.5 <	18,000	7.5 <	1,300	0.2 <	5 <	7.00	75	860	10 <	NA
	04/04/00	22	5 <	230	190	3.4	9.2	5 <	2.5 <	32,000	5 <	1,500	0.2 <	5 <	9.44	15	890	10 <	NA
	08/02/00	17	15	250	210	9.4	10	5 <	2.5 <	36,000	5 <	1,400	0.2 <	10 <	7.59	19	900	10 <	NA
	10/17/00	16	17	250	220	2.5	14	5 <	20 <	31,000	5 <	1,300	0.2 <	21	7.25	69	770	19	NA
	02/13/01	17	6.3	230	210	0.5 <	7.0	5 <	5 <	23,000	3 <	1,200	0.2 <	10	6.61	56	740	100 <	NA
	04/26/01	26	15	200	360	0.5 <	1.0 <	3 J	3 J	32,000	3 <	1,300	0.2 <	10	8.22	15	530	100 <	NA
	08/08/01	19	7.3	150	220	0.5 <	6.7	5 <	5 <	34,000	3 <	1,200	0.2 <	4 J	6.70	5.6	660	10 <	NA
	10/09/01	17	20	260	210	0.5	6	5 <	3 J	40,000	3 <	1,300	0.2 <	6.8	6.29	1.8	630	15	NA
	01/09/02	15	5 J	160	210	0.2 J	6.2	0.6 J	5 J	20,000	0.3 J	970	0.2 <	4 J	7.02	67	700	14	NA
	04/16/02	20	9	220	270	0.2 J	5.4	2 J	4 J	34,000	3 <	1,100	0.2 <	5.7	7.20	16	580	25	NA
	08/28/02	18	6.4	190	160	0.4 J	6.5	5 <	7.7	35,000	1 J	1,300	0.2 <	5 <	6.56	4.2	380	14	NA
	11/12/02	15	7	260	410	0.5 <	7.3	3 J	3 J	41,000	3 <	1,200	0.2 <	11	6.26	1.8	600	16	NA
	01/15/03	15	7.6	200	240	0.5 <	6.2	2 J	3 J	21,000	3 <	1,000	0.2 <	16	6.41	38	680	8 J	NA
	04/30/03	22	14	210	320	0.5 <	6.1	3.5 J	5 <	30,000	3 <	1,200	0.2 <	8.4	6.54	35	670	14	NA
	08/20/03	17	5 <	250	150	0.56	2.7	2.2 J	2.3 J	36,000	1.4 J	980	0.2 <	9.7	6.81	20	690	10 <	NA
	11/06/03	16	10	280	310	0.51	4.8	2.1 J	3.2 J	37,000	3 <	940	0.2 <	17	7.16	21	600	10 <	NA
	2/26/04*	20.7	3.4 B	111 B	95.9 B	0.4 U	4.46	1.9 U	1.8 U	19,300	1.8 U	976	0.1 U	3.1 U	6.82	48.2	537	5000 <	NA
Class II GW Standard		no standard	200	2,000	2,000	50	200	1,000	650	5,000	100	10,000	10	2,000	6.5 - 9	400	1,200	no standard	10,000
Upper Confidence Limit		1.1	5.6	99.52	150.96	2	59.42	7.93	10.17	350	5	40	0.3	10.32	8.98	109.4	531.72	50	NA
Lower Confidence Limit		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.93	NA	NA	NA	NA
Confidence Limit Exceeded in Q1, 2004		Yes	No	No	No	No	No	No	No	Yes	No	Yes	No	No	No	No	Yes	No	NA

NOTES:
Data from 1994 to 1999 have been archived and are not presented on this table.
- - = No data collected.
J = Estimated value. Compound detected below the practical quantitation limit (PQL).
NA = Not applicable.
Bold-face value in a shaded box indicates that the concentration exceeds the Class II groundwater standard for that parameter.
Confidence limits as recalculated in October 2002 using the method provided in Attachment B to Supplemental Permit No. 2000-270-SP and non-parametric methods as applicable.
ug/L = Micrograms per liter.
mg/L = Milligrams per liter.
< = Below the practical quantitation limit (PQL).
G104 deleted from the monitoring program.
Class II groundwater quality standards from Subpart D of 35 Ill. Adm. Code Part 620.
Parameters with 100% of results below the method detection limit (MDL), during the first year of sampling for each individual parameter in monitoring wells G126 (MW08S) and G127 (MW09S), have an Upper Confidence Limit (UCL) equal to the applicable PQL contained in Attachment A of Supplemental Permit No. 2000-030-SP. These parameters include cadmium and lead.
Data prior to 2004 have not been verified by ENVIRON.
U = Below Instrument Detection Limit.
B = At or Above Instrument Detection Limit, But Below Contract Required Detection Limit.
* = Original sample bottle for TDS broke. Well was re-sampled for TDS on 3/3/04.

TABLE 3
Landfill Compliance Monitoring Well Data
Wells G101 through G118 (excluding G104) and Background Wells G126 and G127
First Quarter 2004

Permit No. 1993-004-DE/OP (Post-Closure)
Supplemental Permit No. 2002-030-SP
0418080002 -- Douglas County -- ILD 005078126
Equistar Chemicals, LP - Tuscola, Illinois

Monitoring Well G105	Sample Dates	Ammonia (N)-d 00608 mg/L	Arsenic-d 01000 ug/L	Barium-d 01005 ug/L	Boron-d 01020 ug/L	Cadmium-d 01025 ug/L	Chloride-d 00941 mg/L	Chromium-d 01030 ug/L	Copper-d 01040 ug/L	Iron-d 01046 ug/L	Lead-d 01049 ug/L	Manganese-d 01056 ug/L	Mercury-d 71890 ug/L	Nickel-d 01065 ug/L	pH 00400 STD units	Sulfate-d 00946 mg/L	TDS-d 70300 mg/L	TOX-t 78115 ug/L	Zinc-d 01092 ug/L
	01/10/00	0.13	66	20 <	980	3.1	35	5 <	5.1	11	7.5 <	6,400	0.2 <	32	6.72	2,900	4,800	20	NA
	04/04/00	0.12	120	20 <	1,100	2 <	40	5.8	20	10 <	5 <	7,800	0.2 <	66	6.68	3,600	5,600	60	NA
	08/03/00	0.10 <	110	20 <	1,400	2.8	46	5 <	3.4	53	5 <	7,300	0.2 <	77	6.18	3,300	5,400	50	NA
	10/17/00	0.88	100	20 <	1,400	2 <	49	5 <	20 <	25 <	5 <	7,000	0.2 <	130	6.17	3,100	5,100	46	NA
	02/13/01	1.0 <	81	10	1,400	1.1	41	5 <	7.2	100 <	3 <	6,700	0.2 <	88	6.12	5,400	4,700	100 <	NA
	04/26/01	1.0 <	75	8.6	1,600	0.5 <	41	4 J	7.4	210	3 <	6,600	0.2 <	82	7.53	2,600	3,900	100 <	NA
	08/09/01	1.0 <	63	12	1,600	0.5 <	43	5 <	4 J	220	3 <	7,300	0.2 <	65	6.30	3,000	5,000	95	NA
	10/09/01	1.0 <	74	13	1,400	0.5 J	34	3 J	5.6	290	3 <	7,200	0.2 <	72	6.34	2,900	4,900 H	48	NA
	01/09/02	1.0 <	100	11	1,400	0.4 J	29	2 J	8.6	100 <	0.3 J	7,000	0.2 <	75	6.51	2,900	4,900	97	NA
	04/17/02	1 <	80	9.7	1,500	1.1	35	4 J	6	100 <	0.8 J	6,900	0.2 <	83	6.02	2,500	4,100	56	NA
	08/28/02	1 <	55	9.5	1,400	2.7	34	2 J	5.6	100 <	3 <	6,000	0.2 <	62	6.46	2,700	4,400	59	NA
	11/12/02	1 <	96	8.3	1,400	0.4 J	38	5 J	12	100 <	3 <	6,500	0.2 <	82	6.47	3,000	5,000	34	NA
	01/15/03	1 <	100	10	1,500	0.3 J	29	3 J	9.2	100 <	3 <	6,300	0.2 <	95	6.12	3,400	5,800	*	NA
	04/30/03	1 <	97	13	1,500	0.31 J	41	3.9 J	8	100 <	3 <	4,500	0.2 <	93	6.21	3,000	4,700 H	37	NA
	08/20/03	3	55	11	1,400	0.41 J	43	3.1 J	18	160	1.4 J	5,000	0.2 <	89	6.24	3,200	5,000	90	NA
	11/06/03	1 <	130	10	1,500	0.5 <	35	2.3 J	15	100 <	3 <	4,900	0.2 <	95	6.70	2,900	4,800	76	NA
	02/26/04	0.1 U	91	6.5 B	1,070	0.4 U	32.5	5.7	1.8 U	23.3 U	1.8 U	3,410	0.1 U	49.9	6.28	2,680	4,280	5000 <	NA
Class II GW Standard		no standard	200	2,000	2,000	50	200	1,000	650	5,000	100	10,000	10	2,000	6.5 - 9	400	1,200	no standard	10,000
Upper Confidence Limit		1.1	5.6	99.52	150.96	2	59.42	7.93	10.17	350	5	40	0.3	10.32	8.98	109.4	531.72	50	NA
Lower Confidence Limit		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.93	NA	NA	NA	NA
Confidence Limit Exceeded in Q1, 2004		No	No	No	Yes	No	No	No	No	No	No	Yes	No	Yes	No	Yes	Yes	No	NA

NOTES:

Data from 1994 to 1999 have been archived and are not presented on this table.
- - = No data collected.
* = Bottle broken.
H = Sample analyzed outside of hold time.
J = Estimated value. Compound detected below the practical quantitation limit (PQL).
NA = Not applicable.
Bold-face value in a shaded box indicates that the concentration exceeds the Class II groundwater standard for that parameter.
Confidence limits as recalculated in October 2002 using the method provided in Attachment B to Supplemental Permit No. 2000-270-SP and non-parametric methods as applicable.
ug/L = Micrograms per liter.
mg/L = Milligrams per liter.
< = Below the practical quantitation limit (PQL).
G104 deleted from the monitoring program.
Class II groundwater quality standards from Subpart D of 35 Ill. Adm. Code Part 620.
Parameters with 100% of results below the method detection limit (MDL), during the first year of sampling for each individual parameter in monitoring wells G126 (MW08S) and G127 (MW09S), have an Upper Confidence Limit (UCL) equal to the applicable PQL contained in Attachment A of Supplemental Permit No. 2002-030-SP. These parameters include cadmium and lead.
Data prior to 2004 have not been verified by ENVIRON.
U = Below Instrument Detection Limit.
B = At or Above Instrument Detection Limit, But Below Contract Required Detection Limit.

TABLE 3
Landfill Compliance Monitoring Well Data
Wells G101 through G118 (excluding G104) and Background Wells G126 and G127
First Quarter 2004

Permit No. 1993-004-DE/OP (Post-Closure)
Supplemental Permit No. 2002-030-SP
0418080002 -- Douglas County -- ILD 005078126
Equistar Chemicals, LP - Tuscola, Illinois

Monitoring Well G106	Sample Dates	Ammonia (N)-d 00608 mg/L	Arsenic-d 01000 ug/L	Barium-d 01005 ug/L	Boron-d 01020 ug/L	Cadmium-d 01025 ug/L	Chloride-d 00941 mg/L	Chromium-d 01030 ug/L	Copper-d 01040 ug/L	Iron-d 01046 ug/L	Lead-d 01049 ug/L	Manganese-d 01056 ug/L	Mercury-d 71890 ug/L	Nickel-d 01065 ug/L	pH 00400 STD units	Sulfate-d 00946 mg/L	TDS-d 70300 mg/L	TOX-t 78115 ug/L	Zinc-d 01092 ug/L
	01/10/00	0.12	50 <	23	200	2 <	24	5.4	3.5	16	7.5 <	30	0.2 <	5 <	7.15	1,300	2,400	10 <	NA
	04/04/00	0.1 <	5 <	21	130	2 <	30	5 <	2.5 <	10 <	5 <	5 <	0.2 <	5 <	7.34	1,500	2,500	100	NA
	08/03/00	0.1 <	5 <	24	210	2 <	23	5 <	2.5 <	37	5 <	13	0.2 <	10 <	7.04	1,500	2,500	20	NA
	10/17/00	0.46	5 <	20 <	200	2 <	27	5 <	20 <	25 <	5 <	5 <	0.2 <	11	6.97	1,300	2,200	16	NA
	02/13/01	1 <	5 <	15	310	0.5 <	17	5 <	5 <	100 <	3 <	50 <	0.2 <	15	7.02	970	1,900	100 <	NA
	04/25/01	1 <	2 J	15	750	0.5 <	20	4 J	6.2	100 <	3 <	100 <	0.2 <	24	7.94	1,600	2,400	100 <	NA
	08/09/01	1 <	5 <	20	270	0.5 <	21	3 J	5 J	100 <	3 <	190	0.2 <	14	7.3	1,700	2,700	29	NA
	10/09/01	1 <	5.8	23	240	0.5 <	19	7.4	6.4	100 <	3 <	81	0.2 <	19	7.13	1,500	2,700	35	NA
	01/09/02	1 <	4 J	14	290	1.6	15	2 J	5 J	110	0.2 J	4 J	0.2 <	9.6	6.84	1,200	2,100	- -	NA
	04/16/02	1 <	5.2	17	230	0.3 J	16	4 J	5.9	100 <	0.1 J	75	0.2 <	14	6.63	1,600	2,500	31	NA
	08/28/02	1 <	5 <	19	210	0.5 <	18	3 J	6.1	100 <	3 <	280	0.2 <	19	6.68	1,600	2,700 H	54	NA
	11/12/02	1 <	5 <	23	330	0.5 <	18	6.3	6.4	100 <	3 <	130	0.2 <	30	6.82	1,500	2,700	56	NA
	01/15/03	1 <	5 <	20	220	0.5 <	15	5 J	5	100 <	3 <	15 <	0.2 <	36	6.49	1,500	2,700	38	NA
	04/29/03	1 <	8.8	15	280	0.5 <	21	6	6.2	100 <	3 <	15 <	0.2 <	20	6.88	1,400	2,200	24	NA
	08/20/03	1 <	5 <	28	180	0.61	19	2.4 J	9	240	3 <	49	0.2 <	33	6.60	1,500	2,500	36	NA
	11/06/03	1 <	5 <	19	200	0.46 J	19	6.6	11	100 <	3 <	15 <	0.2 <	37	7.22	1,400	2,500	46	NA
	02/27/04	0.1 U	2.3 U	9.6 B	47.3 B	0.4 U	12	1.9 U	1.8 U	23.3 U	1.8 U	0.91 B	0.1 U	3.1 U	7.23	1,070	1,700	5000 <	NA
Class II GW Standard		no standard	200	2,000	2,000	50	200	1,000	650	5,000	100	10,000	10	2,000	6.5 - 9	400	1,200	no standard	10,000
Upper Confidence Limit		1.1	5.6	99.52	150.96	2	59.42	7.93	10.17	350	5	40	0.3	10.32	8.98	109.4	531.72	50	NA
Lower Confidence Limit		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.93	NA	NA	NA	NA
Confidence Limit Exceeded in Q1, 2004		No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	No	NA

NOTES:

Data from 1994 to 1999 have been archived and are not presented on this table.
- - = No data collected.
H = Sample analyzed outside of hold time.
J = Estimated value. Compound detected below the practical quantitation limit (PQL).
NA = Not applicable.
Bold-face value in a shaded box indicates that the concentration exceeds the Class II groundwater standard for that parameter.
Confidence limits as recalculated in October 2002 using the method provided in Attachment B to Supplemental Permit No. 2000-270-SP and non-parametric methods as applicable.
ug/L = Micrograms per liter.
mg/L = Milligrams per liter.
< = Below the practical quantitation limit (PQL).
G104 deleted from the monitoring program.
Class II groundwater quality standards from Subpart D of 35 Ill. Adm. Code Part 620.
Parameters with 100% of results below the method detection limit (MDL), during the first year of sampling for each individual parameter in monitoring wells G126 (MW08S) and G127 (MW09S), have an Upper Confidence Limit (UCL) equal to the applicable PQL contained in Attachment A of Supplemental Permit No. 2002-030-SP. These parameters include cadmium and lead.
Data prior to 2004 have not been verified by ENVIRON.
U = Below Instrument Detection Limit.
B = At or Above Instrument Detection Limit, But Below Contract Required Detection Limit.

TABLE 3
Landfill Compliance Monitoring Well Data
Wells G101 through G118 (excluding G104) and Background Wells G126 and G127
First Quarter 2004

Permit No. 1993-004-DE/OP (Post-Closure)
Supplemental Permit No. 2002-030-SP
0418080002 -- Douglas County -- ILD 005078126
Equistar Chemicals, LP - Tuscola, Illinois

Monitoring Well G107	Sample Dates	Ammonia (N)-d 00608 mg/L	Arsenic-d 01000 ug/L	Barium-d 01005 ug/L	Boron-d 01020 ug/L	Cadmium-d 01025 ug/L	Chloride-d 00941 mg/L	Chromium-d 01030 ug/L	Copper-d 01040 ug/L	Iron-d 01046 ug/L	Lead-d 01049 ug/L	Manganese-d 01056 ug/L	Mercury-d 71890 ug/L	Nickel-d 01065 ug/L	pH 00400 STD units	Sulfate-d 00946 mg/L	TDS-d 70300 mg/L	TOX-t 78115 ug/L	Zinc-d 01092 ug/L
	01/10/00	0.15	50 <	120	250	2 <	16	5 <	2.5 <	10 <	7.5 <	5 <	0.2 <	5 <	7.37	160	560	10 <	NA
	04/04/00	0.1 <	5 <	110	170	2 <	19	5 <	2.5 <	46	5 <	5 <	0.2 <	5 <	7.55	220	620	10 <	NA
	08/03/00	0.1 <	5 <	120	210	2 <	21	5 <	2.5 <	11	5 <	16	0.2 <	10 <	7.28	210	670	10 <	NA
	10/17/00	0.36	5 <	120	230	2 <	32	5 <	20 <	25 <	5 <	7.2	0.2 <	10 <	7.25	230	620	- - 2	NA
	02/13/01	1 <	5 <	120	290	0.5 <	18	5 <	5 <	100 <	3 <	50 <	0.2 <	9.1	7.15	310	630	100 <	NA
	04/25/01	1 <	3 J	110	140	0.5 <	19	8.4	7.4	100 <	3 <	100 <	0.2 <	15	8.36	220	560	100 <	NA
	08/09/01	1 <	5 <	110	240	0.5 <	23	5.4	3 J	100 <	3 <	15 <	0.2 <	5.8	7.7	190	640	6 J	NA
	10/09/01	1 <	6	120	250	0.5 <	17	5 J	5.1	100 <	3 <	15 <	0.2 <	6.4	7.48	200	630	16	NA
	01/09/02	1 <	5 <	130	240	0.59	18	4 J	6.3	100 <	0.6 J	1 J	0.2 <	5.6	7.01	210	630	10 <	NA
	04/16/02	1 <	5 <	110	210	0.3 J	17	6.4	4 J	100 <	0.2 J	15	0.2 <	6.2	6.87	210	590	12	NA
	08/28/02	1 <	5 <	110	130	0.52	19	5.2	5.3	100 <	3 <	19	0.2 <	6.8	7.16	200	680	10 J	NA
	11/12/02	1 <	5 <	120	300	0.5 <	17	5.4	4 J	100 <	3 <	15 <	0.2 <	9.5	7.13	170	610	- -	NA
	01/15/03	1 <	5 <	120	220	0.5 <	16	5 J	3 J	100 <	3 <	15 <	0.2 <	16	6.66	230	680	13	NA
	04/29/03	1 <	5.2	120	290	0.34 J	16	4.6 J	4.8 J	100 <	3 <	15 <	0.2 <	12	7.08	240	740	17	NA
	08/20/03	1 <	5 <	120	220	0.93	17	3.8 J	5.9	100 <	3 <	75	0.2 <	17	7.47	280	1,200	10 <	NA
	11/06/03	1 <	5 <	120	210	0.5 <	16	4 J	2.5 J	100 <	3 <	85	0.2 <	72	7.91	250	770	10 <	NA
	02/27/04	0.1 U	2.3 U	99 B	69.1 B	0.4 U	14.5	2.3 B	1.8 U	23.3 U	1.8 U	1.2 B	0.1 U	4.2 B	7.64	345	834	5000 <	NA
Class II GW Standard		no standard	200	2,000	2,000	50	200	1,000	650	5,000	100	10,000	10	2,000	6.5 - 9	400	1,200	no standard	10,000
Upper Confidence Limit		1.1	5.6	99.52	150.96	2	59.42	7.93	10.17	350	5	40	0.3	10.32	8.98	109.4	531.72	50	NA
Lower Confidence Limit		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.93	NA	NA	NA	NA
Confidence Limit Exceeded in Q1, 2004		No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	No	NA

NOTES:

Data from 1994 to 1999 have been archived and are not presented on this table.
- - = No data collected.
J = Estimated value. Compound detected below the practical quantitation limit (PQL).
NA = Not applicable.
Bold-face value in a shaded box indicates that the concentration exceeds the Class II groundwater standard for that parameter.
Confidence limits as recalculated in October 2002 using the method provided in Attachment B to Supplemental Permit No. 2000-270-SP and non-parametric methods as applicable.
ug/L = Micrograms per liter.
mg/L = Milligrams per liter.
< = Below the practical quantitation limit (PQL).
G104 deleted from the monitoring program.
Class II groundwater quality standards from Subpart D of 35 Ill. Adm. Code Part 620.
Parameters with 100% of results below the method detection limit (MDL), during the first year of sampling for each individual parameter in monitoring wells G126 (MW08S) and G127 (MW09S), have an Upper Confidence Limit (UCL) equal to the applicable PQL contained in Attachment A of Supplemental Permit No. 2002-030-SP. These parameters include cadmium and lead.
Data prior to 2004 have not been verified by ENVIRON.
U = Below Instrument Detection Limit.
B = At or Above Instrument Detection Limit, But Below Contract Required Detection Limit.

TABLE 3
Landfill Compliance Monitoring Well Data
Wells G101 through G118 (excluding G104) and Background Wells G126 and G127
First Quarter 2004

Permit No. 1993-004-DE/OP (Post-Closure)
Supplemental Permit No. 2002-030-SP
0418080002 -- Douglas County -- ILD 005078126
Equistar Chemicals, LP - Tuscola, Illinois

Monitoring Well G108	Sample Dates	Ammonia (N)-d 00608 mg/L	Arsenic-d 01000 ug/L	Barium-d 01005 ug/L	Boron-d 01020 ug/L	Cadmium-d 01025 ug/L	Chloride-d 00941 mg/L	Chromium-d 01030 ug/L	Copper-d 01040 ug/L	Iron-d 01046 ug/L	Lead-d 01049 ug/L	Manganese-d 01056 ug/L	Mercury-d 71890 ug/L	Nickel-d 01065 ug/L	pH 00400 STD units	Sulfate-d 00946 mg/L	TDS-d 70300 mg/L	TOX-t 78115 ug/L	Zinc-d 01092 ug/L
	01/10/00	2	50 <	20 <	310	7.4	53	5 <	2.5 <	13,000	14	2,300	0.2 <	20	6.76	4,000	7,400	20	NA
	04/04/00	1.6	35	20 <	350	2.6	41	6.5	2.5 <	12,000	5 <	2,100	0.2 <	17	8.33	4,100	7,500	40	NA
	08/03/00	1.5	38	20 <	350	6.5	48	5.6	2.5 <	10,000	5 <	2,000	0.2 <	11	7.17	4,000	7,500	30	NA
	10/17/00	1.7	44	20 <	370	2 <	58	5 <	20 <	11,000	5 <	2,000	0.2 <	59	6.91	4,200	7,500	60	NA
	02/13/01	1.8	38	8.7	690	0.5	24	5 <	5.9	12,000	3 <	2,100	0.2 <	40	6.14	9,500	7,300	100 <	NA
	04/25/01	3.3	25	2 J	360	0.2 J	21	6.6	12	5,300	3 <	1,800	0.2 <	52	7.08	3,700	5,500	100 <	NA
	08/09/01	2	38	8.8	450	0.5 <	26	3 J	4 J	15,000	3 <	2,400	0.2 <	24	6.30	3,800	7,400	10	NA
	10/09/01	1.6	45	7.4	420	0.5 <	22	3 J	6.4	13,000	3 <	1,800	0.2 <	29	6.29	3,900	7,100 H	38	NA
	01/09/02	2.4	35	3 J	500	0.4 J	22	1 J	5.5	10,000	3 <	1,700	0.2 <	25	6.52	3,800	6,700 H	72	NA
	04/17/02	4.4	37	1 J	470	0.2 J	22	4 J	8.3	3,100	3 <	2,100	0.2 <	29	6.58	3,500	5,800	72	NA
	08/28/02	2	42	4 J	510	0.5 <	28	5 <	4 J	12,000	3 <	1,900	0.2 <	31	6.34	3,900	7,300	26	NA
	11/12/02	1.9	36	7.7	540	0.5 <	25	3 J	4 J	12,000	3 <	1,600	0.2 <	38	6.13	4,100	7,100	220	NA
	01/15/03	2.7	51	3 J	610	0.5 <	19	3 J	5.1	7,500	3 <	1,700	0.2 <	51	6.10	3,700	7,000	42	NA
	04/30/03	3.7	53	5 <	520	0.57	21	4.9 J	6.9	300	3 <	1,500	0.2 <	40	6.27	3,700	6,400	460	NA
	08/20/03	3.1	37	7.6	410	0.5 <	19	2.2 J	20	10,000	3 <	1,600	0.2 <	48	6.36	4,100	6,500	33	NA
	11/06/03	2.4	41	5	440	0.5 <	20	2.6 J	22	11,000	3 <	1,600	0.2 <	47	6.72	3,800	6,800	44	NA
	02/26/04	1.68	39.2	0.34 B	441	0.4 U	16.6	9.5	1.8 U	5,820	1.8 U	1,600	0.1 U	12.6 B	6.41	3,500	6,980	5000 <	NA
Class II GW Standard		no standard	200	2,000	2,000	50	200	1,000	650	5,000	100	10,000	10	2,000	6.5 - 9	400	1,200	no standard	10,000
Upper Confidence Limit		1.1	5.6	99.52	150.96	2	59.42	7.93	10.17	350	5	40	0.3	10.32	8.98	109.4	531.72	50	NA
Lower Confidence Limit		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.93	NA	NA	NA	NA
Confidence Limit Exceeded in Q1, 2004		Yes	No	No	Yes	No	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	Yes	No	NA

NOTES:

Data from 1994 to 1999 have been archived and are not presented on this table.
- - = No data collected.
H = Sample analyzed outside of hold time.
J = Estimated value. Compound detected below the practical quantitation limit (PQL).
NA = Not applicable.
Bold-face value in a shaded box indicates that the concentration exceeds the Class II groundwater standard for that parameter.
Confidence limits as recalculated in October 2002 using the method provided in Attachment B to Supplemental Permit No. 2000-270-SP and non-parametric methods as applicable.
ug/L = Micrograms per liter.
mg/L = Milligrams per liter.
< = Below the practical quantitation limit (PQL).
G104 deleted from the monitoring program.
Class II groundwater quality standards from Subpart D of 35 Ill. Adm. Code Part 620.
Parameters with 100% of results below the method detection limit (MDL), during the first year of sampling for each individual parameter in monitoring wells G126 (MW08S) and G127 (MW09S), have an Upper Confidence Limit (UCL) equal to the applicable PQL contained in Attachment A of Supplemental Permit No. 2002-030-SP. These parameters include cadmium and lead.
Data prior to 2004 have not been verified by ENVIRON.
U = Below Instrument Detection Limit.
B = At or Above Instrument Detection Limit, But Below Contract Required Detection Limit.

TABLE 3
Landfill Compliance Monitoring Well Data
Wells G101 through G118 (excluding G104) and Background Wells G126 and G127
First Quarter 2004

Permit No. 1993-004-DE/OP (Post-Closure)
Supplemental Permit No. 2002-030-SP
0418080002 -- Douglas County -- ILD 005078126
Equistar Chemicals, LP - Tuscola, Illinois

Monitoring Well G109	Sample Dates	Ammonia (N)-d 00608 mg/L	Arsenic-d 01000 ug/L	Barium-d 01005 ug/L	Boron-d 01020 ug/L	Cadmium-d 01025 ug/L	Chloride-d 00941 mg/L	Chromium-d 01030 ug/L	Copper-d 01040 ug/L	Iron-d 01046 ug/L	Lead-d 01049 ug/L	Manganese-d 01056 ug/L	Mercury-d 71890 ug/L	Nickel-d 01065 ug/L	pH 00400 STD units	Sulfate-d 00946 mg/L	TDS-d 70300 mg/L	TOX-t 78115 ug/L	Zinc-d 01092 ug/L
	01/10/00	0.22	50 <	20 <	110	3.4	26	5 <	2.7	370	7.5 <	7,400	0.2 <	67	6.80	2,300	3,900	100	NA
	04/04/00	0.17	33	20 <	110	2 <	24	5 <	2.5 <	940	5 <	7,100	0.2 <	72	6.55	2,400	4,000	70	NA
	08/02/00	1.4	39	20 <	150	3.3	39	5 <	2.5 <	2,500	5 <	9,500	0.2 <	98	6.58	2,700	5,000	80	NA
	10/17/00	0.19	45	20 <	170	2 <	30	5 <	20 <	1,900	5 <	8,800	0.2 <	150	6.25	2,500	4,100	81	NA
	02/13/01	1 <	40	9.0	330	0.5 <	13	5 <	5.8	800	3 <	8,200	0.2 <	100	6.03	4,300	4,200	100 <	NA
	04/26/01	1 <	39	8.9	560	0.2 J	12	4 J	11	1,700	3 <	8,300	0.2 <	120	7.52	2,500	3,700	100 <	NA
	08/08/01	1 <	31	10	220	0.5 <	11	5 <	5 J	1,900	3 <	9,000	0.2 <	85	6.2	2,200	3,900	120	NA
	10/09/01	1 <	37	18	160	0.4 J	17	5.4	6.6	2,700	3 <	10,000	0.2 <	100	6.93	2,800	4,800 H	110	NA
	01/09/02	1 <	41	7.1	180	0.62	12	2 J	9	500	0.6 J	6,500	0.2 <	75	7.05	2,200	3,800	130	NA
	04/16/02	1 <	45	5.7	200	0.3 J	10	4 J	5 J	830	0.2 J	6,800	0.2 <	83	6.48	1,900	3,100	70	NA
	08/28/02	1 <	31	14	50 <	0.4 J	5.8	3 J	5 J	3,300	3 <	9,200	0.2 <	71	6.50	2,200	3,500	120	NA
	11/12/02	1 <	21	11	210	0.4 J	21	3 J	5.2	3,500	3 <	8,500	0.2 <	70	5.69	2,600	4,400	40	NA
	01/15/03	1 <	33	8.2	130	2.9	12	4 J	8.8	320	3 <	5,600	0.2 <	75	6.00	2,000	3,400	*	NA
	04/29/03	1 <	44	8.2	210	1.1	13	5.7	10	380	3 <	4,500	0.2 <	75	6.19	2,200	4,000	73	NA
	08/19/03	1 <	40	10	210	1.9	12	3.8 J	14	1,700	3 <	7,200	0.2 <	100	6.06	2,400	4,000	120	NA
	11/06/03	1 <	42	7	160	1.9	11	2.7 J	15	660	3 <	5,900	0.2 <	98	6.88	2,100	3,800	98	NA
	02/26/04	0.1 U	34.0	3.8 B	30.3 B	0.4 U	7.98	2.3 B	1.8 U	720	1.8 U	5,350	0.1 U	59.8	6.41	2,050	3,200	5000 <	NA
Class II GW Standard		no standard	200	2,000	2,000	50	200	1,000	650	5,000	100	10,000	10	2,000	6.5 - 9	400	1,200	no standard	10,000
Upper Confidence Limit		1.1	5.6	99.52	150.96	2	59.42	7.93	10.17	350	5	40	0.3	10.32	8.98	109.4	531.72	50	NA
Lower Confidence Limit		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.93	NA	NA	NA	NA
Confidence Limit Exceeded in Q1, 2004		No	Yes	No	No	No	No	No	No	Yes	No	Yes	No	Yes	No	Yes	Yes	No	NA

NOTES:
Data from 1994 to 1999 have been archived and are not presented on this table.
-- = No data collected.
* = Bottle broken.
H = Sample analyzed outside of hold time.
J = Estimated value. Compound detected below the practical quantitation limit (PQL).
NA = Not applicable.
Bold-face value in a shaded box indicates that the concentration exceeds the Class II groundwater standard for that parameter.
Confidence limits as recalculated in October 2002 using the method provided in Attachment B to Supplemental Permit No. 2000-270-SP and non-parametric methods as applicable.
ug/L = Micrograms per liter.
mg/L = Milligrams per liter.
< = Below the practical quantitation limit (PQL).
G104 deleted from the monitoring program.
Class II groundwater quality standards from Subpart D of 35 Ill. Adm. Code Part 620.
Parameters with 100% of results below the method detection limit (MDL), during the first year of sampling for each individual parameter in monitoring wells G126 (MW08S) and G127 (MW09S), have an Upper Confidence Limit (UCL) equal to the applicable PQL contained in Attachment A of Supplemental Permit No. 2002-030-SP. These parameters include cadmium and lead.
Data prior to 2004 have not been verified by ENVIRON.
U = Below Instrument Detection Limit.
B = At or Above Instrument Detection Limit, But Below Contract Required Detection Limit.

TABLE 3

Landfill Compliance Monitoring Well Data
Wells G101 through G118 (excluding G104) and Background Wells G126 and G127
First Quarter 2004

Permit No. 1993-004-DE/OP (Post-Closure)
Supplemental Permit No. 2002-030-SP
0418080002 -- Douglas County -- ILD 005078126
Equistar Chemicals, LP - Tuscola, Illinois

Monitoring Well G110	Sample Dates	Ammonia (N)-d 00608 mg/L	Arsenic-d 01000 ug/L	Barium-d 01005 ug/L	Boron-d 01020 ug/L	Cadmium-d 01025 ug/L	Chloride-d 00941 mg/L	Chromium-d 01030 ug/L	Copper-d 01040 ug/L	Iron-d 01046 ug/L	Lead-d 01049 ug/L	Manganese-d 01056 ug/L	Mercury-d 71890 ug/L	Nickel-d 01065 ug/L	pH 00400 STD units	Sulfate-d 00946 mg/L	TDS-d 70300 mg/L	TOX-t 78115 ug/L	Zinc-d 01092 ug/L
	01/10/00	0.26	50 <	24	270	5.2	200	5 <	2.5 <	110	17	1,800	0.2 <	9.0	6.66	3,300	5,900	20	NA
	04/04/00	0.22	5 <	21	260	2 <	180	5.2	2.5 <	350	5 <	1,600	0.2 <	5.9	7.00	3,300	6,000	90	NA
	08/02/00	0.29	5 <	20 <	260	4.3	210	5 <	2.5 <	310	5 <	1,700	0.2 <	10 <	6.70	3,200	6,000	30	NA
	10/17/00	0.23	10 <	23	280	2 <	200	5 <	20 <	470	5 <	1,600	0.2 <	24	6.33	3,300	6,000	44	NA
	02/13/01	1 <	5 <	27	560	0.5 <	230	5 <	6.8	180	3 <	1,700	0.2 <	48	6.40	7,100	5,900	100 <	NA
	04/25/01	1 <	5.9	21	270	0.2 J	170	6.9	11	1,700	3 <	1,500	0.2 <	74	7.50	3,200	5,300	100 <	NA
	08/09/01	1 <	5 <	19	300	0.5 <	240	4 J	5.2	160	3 <	1,900	0.2 <	25	6.7	2,800	6,000	42	NA
	10/09/01	1 <	3 J	21	280	0.5 <	170	3 J	7.3	100 <	3 <	1,600	0.2 <	33	6.65	3,100	5,800 H	34	NA
	01/10/02	1 <	5 <	20	380	0.4 J	170	2 J	6.6	310	0.1 J	1,500	0.2 <	25	6.48	3,100	2,500 H	39	NA
	04/17/02	1 <	5 <	21	370	1.3	170	4 J	5.4	790	0.2 J	1,700	0.2 <	33	6.93	3,000	5,100	35	NA
	08/28/02	1 <	5 <	18	210	0.5 <	180	3 J	6.3	100 <	3 <	1,700	0.2 <	39	6.69	3,300	4,700 H	96	NA
	11/12/02	1 <	5 <	20	330	0.4 J	170	5.3	5.9	350	3 <	1,500	0.2 <	54	6.65	3,200	6,200	28	NA
	01/15/03	1 <	5 <	18	320	0.5 <	180	3 J	5.1	100 <	3 <	1,400	0.2 <	64	6.15	3,200	6,200 H	24	NA
	04/30/03	1 <	6.3	21	340	0.61	170	6.1	6.8	1,600	3 <	1,500	0.2 <	41	6.59	3,300	1,600	42	NA
	08/20/03	1 <	5 <	18	250	0.39 J	170	2.8 J	6.3	590	3 <	1,300	0.2 <	49	6.89	3,700	7,100	49	NA
	11/06/03	1 <	5 <	20	210	1.7	160	3.2 J	9	100 <	3 <	1,300	0.2 <	66	6.99	3,300	5,800	56	NA
	02/27/04	0.1 U	2.3 U	17.1 B	172 B	0.4 U	193	1.9 U	1.8 U	126	1.8 U	1,390	0.1 U	3.6 B	7.08	2,670	6,170	5000 <	NA
Class II GW Standard		no standard	200	2,000	2,000	50	200	1,000	650	5,000	100	10,000	10	2,000	6.5 - 9	400	1,200	no standard	10,000
Upper Confidence Limit		1.1	5.6	99.52	150.96	2	59.42	7.93	10.17	350	5	40	0.3	10.32	8.98	109.4	531.72	50	NA
Lower Confidence Limit		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.93	NA	NA	NA	NA
Confidence Limit Exceeded in Q1, 2004		No	No	No	Yes	No	Yes	No	No	No	No	Yes	No	No	No	Yes	Yes	No	NA

NOTES:

Data from 1994 to 1999 have been archived and are not presented on this table.
-- = No data collected.
H = Sample analyzed outside of hold time.
J = Estimated value. Compound detected below the practical quantitation limit (PQL).
NA = Not applicable.
Bold-face value in a shaded box indicates that the concentration exceeds the Class II groundwater standard for that parameter.
Confidence limits as recalculated in October 2002 using the method provided in Attachment B to Supplemental Permit No. 2000-270-SP and non-parametric methods as applicable.
ug/L = Micrograms per liter.
mg/L = Milligrams per liter.
< = Below the practical quantitation limit (PQL).
G104 deleted from the monitoring program.
Class II groundwater quality standards from Subpart D of 35 Ill. Adm. Code Part 620.
Parameters with 100% of results below the method detection limit (MDL), during the first year of sampling for each individual parameter in monitoring wells G126 (MW08S) and G127 (MW09S), have an Upper Confidence Limit (UCL) equal to the applicable PQL contained in Attachment A of Supplemental Permit No. 2002-030-SP. These parameters include cadmium and lead.
Data prior to 2004 have not been verified by ENVIRON.
U = Below Instrument Detection Limit.
B = At or Above Instrument Detection Limit, But Below Contract Required Detection Limit.

TABLE 3
Landfill Compliance Monitoring Well Data
Wells G101 through G118 (excluding G104) and Background Wells G126 and G127
First Quarter 2004

Permit No. 1993-004-DE/OP (Post-Closure)
Supplemental Permit No. 2002-030-SP
0418080002 -- Douglas County -- ILD 005078126
Equistar Chemicals, LP - Tuscola, Illinois

Monitoring Well G111	Sample Dates	Ammonia (N)-d 00608 mg/L	Arsenic-d 01000 ug/L	Barium-d 01005 ug/L	Boron-d 01020 ug/L	Cadmium-d 01025 ug/L	Chloride-d 00941 mg/L	Chromium-d 01030 ug/L	Copper-d 01040 ug/L	Iron-d 01046 ug/L	Lead-d 01049 ug/L	Manganese-d 01056 ug/L	Mercury-d 71890 ug/L	Nickel-d 01065 ug/L	pH 00400 STD units	Sulfate-d 00946 mg/L	TDS-d 70300 mg/L	TOX-t 78115 ug/L	Zinc-d 01092 ug/L
	01/10/00	0.14	50 <	62	840	2 <	5 <	5 <	4.5	10 <	7.5 <	8.2	0.2 <	5 <	7.21	110	500	10 <	NA
	04/04/00	0.1 <	5 <	60	830	2 <	5 <	5 <	22	10 <	5 <	9.3	0.2 <	5 <	7.65	130	530	10 <	NA
	08/02/00	0.1	5 <	66	770	2 <	8.1	5 <	2.5 <	10 <	5 <	41	0.2 <	10 <	7.33	130	620	10 <	NA
	10/17/00	0.66	5 <	76	830	2 <	8.8	5 <	20 <	25 <	5 <	9.9	0.2 <	10 <	7.20	150	550	8 <	NA
	02/13/01	1 <	5 <	65	870	0.5 <	2.9	5 <	7.9	100 <	3 <	50 <	0.2 <	6.5	6.95	140	520	100 <	NA
	04/25/01	1 <	5 <	71	710	0.5 <	2.8	7.8	5	100 <	3 <	100 <	0.2 <	10	8.50	140	480	100 <	NA
	08/09/01	1 <	5 <	69	830	0.75	2.7	4 J	5 J	100 <	3 <	10 J	0.2 <	4 J	7.5	140	580	10	NA
	10/09/01	1 <	5 J	84	800	0.5 <	2.8	5 J	5.4	100 <	3 <	18	0.2 <	6.8	6.91	140	570	13	NA
	01/09/02	1 <	5 <	80	800	0.1 J	3	4 J	4 J	100 <	0.04 J	5 J	0.2 <	4 J	7.71	140	530	10 <	NA
	04/17/02	1 <	5 <	68	790	0.06 J	2.9	6.6	5.3	100 <	0.06 J	1 J	0.2 <	5.3	7.55	160	530	14	NA
	08/28/02	1 <	5 <	78	710	0.5 <	3.7	3 J	5.5	100 <	3 <	120	0.2 <	6.1	7.40	170	570	12	NA
	11/12/02	1 <	5 <	80	850	0.5 <	3.1	4 J	4 J	100 <	3 <	5 J	0.2 <	8.3	7.15	160	570	- -	NA
	01/15/03	1 <	5 <	66	880	0.5 <	2.8	5.3	4 J	100 <	3 <	15 <	0.2 <	10	7.01	160	580	14	NA
	04/29/03	1 <	4.7 J	76	880	0.5 <	3	8.5	4.6 J	100 <	3 <	15 <	0.2 <	6.7	7.20	180	570	10 <	NA
	08/20/03	1 <	5 <	79	820	0.37 J	2.7	2.7 J	4.9 J	100 <	3 <	540	0.2 <	12	7.70	180	630	23	NA
	11/06/03	1 <	5 <	76	860	0.37 J	3.3	3.6 J	5.4	100 <	3 <	160	0.2 <	90	8.24	170	510	12	NA
	2/26/04*	0.1 U	2.3 U	62.9 B	721	0.4 U	7.14	2.9 B	1.8 U	23.3 U	1.8 U	54.4	0.1 U	8.8 B	7.53	182	631	5000 <	NA
Class II GW Standard		no standard	200	2,000	2,000	50	200	1,000	650	5,000	100	10,000	10	2,000	6.5 - 9	400	1,200	no standard	10,000
Upper Confidence Limit		1.1	5.6	99.52	150.96	2	59.42	7.93	10.17	350	5	40	0.3	10.32	8.98	109.4	531.72	50	NA
Lower Confidence Limit		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.93	NA	NA	NA	NA
Confidence Limit Exceeded in Q1, 2004		No	No	No	Yes	No	No	No	No	No	No	Yes	No	No	No	Yes	Yes	No	NA

NOTES:
Data from 1994 to 1999 have been archived and are not presented on this table.
- - = No data collected.
J = Estimated value. Compound detected below the practical quantitation limit (PQL).
NA = Not applicable.
Bold-face value in a shaded box indicates that the concentration exceeds the Class II groundwater standard for that parameter.
Confidence limits as recalculated in October 2002 using the method provided in Attachment B to Supplemental Permit No. 2000-270-SP and non-parametric methods as applicable.
ug/L = Micrograms per liter.
mg/L = Milligrams per liter.
< = Below the practical quantitation limit (PQL).
G104 deleted from the monitoring program.
Class II groundwater quality standards from Subpart D of 35 Ill. Adm. Code Part 620.
Parameters with 100% of results below the method detection limit (MDL), during the first year of sampling for each individual parameter in monitoring wells G126 (MW08S) and G127 (MW09S), have an Upper Confidence Limit (UCL) equal to the applicable PQL contained in Attachment A of Supplemental Permit No. 2002-030-SP. These parameters include cadmium and lead.
Data prior to 2004 have not been verified by ENVIRON.
U = Below Instrument Detection Limit.
B = At or Above Instrument Detection Limit, But Below Contract Required Detection Limit.
* = Original sample bottle for ammonia broke. Well was re-sampled for ammonia on 3/3/04.

TABLE 3
Landfill Compliance Monitoring Well Data
Wells G101 through G118 (excluding G104) and Background Wells G126 and G127
First Quarter 2004

Permit No. 1993-004-DE/OP (Post-Closure)
Supplemental Permit No. 2002-030-SP
0418080002 -- Douglas County -- ILD 005078126
Equistar Chemicals, LP - Tuscola, Illinois

Monitoring Well G112	Sample Dates	Ammonia (N)-d 00608 mg/L	Arsenic-d 01000 ug/L	Barium-d 01005 ug/L	Boron-d 01020 ug/L	Cadmium-d 01025 ug/L	Chloride-d 00941 mg/L	Chromium-d 01030 ug/L	Copper-d 01040 ug/L	Iron-d 01046 ug/L	Lead-d 01049 ug/L	Manganese-d 01056 ug/L	Mercury-d 71890 ug/L	Nickel-d 01065 ug/L	pH 00400 STD units	Sulfate-d 00946 mg/L	TDS-d 70300 mg/L	TOX-t 78115 ug/L	Zinc-d 01092 ug/L
	01/10/00	0.79	50 <	20 <	1,200	25	58	25	8	480	98	2,700	0.2 <	48	6.85	20,000	28,000	10 <	NA
	04/04/00	1	5 <	20 <	1,700	13	50	33	2.5 <	20,000	5 <	1,500	0.2 <	29	7.55	21,000	30,000	60	NA
	08/03/00	0.65	5 <	20 <	1,600	44	67	32	8.6	5,900	5 <	3,400	0.2 <	10 <	6.95	21,000	30,000	10 <	NA
	10/17/00	0.54	11	20 <	1,300	6.2	74	20	130	1,600	10 <	2,700	0.2 <	25	6.46	23,000	30,000	29	NA
	02/13/01	1 <	5 <	19	2,600	0.5 <	99	5.3	23	2,000	3 <	2,200	0.2 <	47	6.43	54,000	29,000	100 <	NA
	04/25/01	1 <	3 J	15	1,500	0.5 <	43	11	26	5,500	3 <	2,100	0.2 <	65	7.63	20,000	20,000	100 <	NA
	08/09/01	1 <	5 <	17	1,600	0.5 <	7.9	6.1	17	7,800	3 <	3,100	0.2 <	26	6.6	19,000	30,000 H	10	NA
	10/10/01	1.4	7.4	22	1,600	0.5 <	52	6	34	3,300	2 J	2,700	0.2 <	36	6.75	21,000	29,000	15	NA
	01/10/02	1 <	5 <	21	1,400	0.1 J	45	5.3	24	460	0.1 J	1,900	0.2 <	30	7.06	20,000	28,000 H	10 <	NA
	04/17/02	1 <	1 J	16	1,700	0.5 <	100	8.1	22	3,500	0.1 J	2,200	0.2 <	36	7.19	20,000	7,400	31	NA
	08/28/02	1 <	5 <	17	1,900	0.5 <	61	4 J	15	5,800	3 <	2,400	0.2 <	31	6.66	21,000	25,000 H	19	NA
	11/12/02	1 <	5 <	16	1,800	0.5 <	63	6.3	22	230	3 <	2,100	0.2 <	38	7.01	21,000	31,000	310	NA
	01/15/03	2.5	5 <	16	1,700	0.5 <	49	4 J	25	800	3 <	2,100	0.2 <	55	6.43	19,000	29,000 H	*	NA
	04/29/03	1 <	5 <	18	1,700	0.5 <	56	8.4	31	5,300	3 <	1,900	0.2 <	41	6.80	24,000	25,000 H	30	NA
	08/20/03	1 <	5 <	16	1,400	0.5 <	64	4.1 J	4.5 J	5,700	3 <	2,000	0.2 <	62	6.60	21,000	32,000	24	NA
	11/06/03	1 <	5 <	21	1,400	1.9	52	7.1	11	200	1.6 J	2,600	0.2 <	76	7.06	13,000	28,000	20	NA
	2/27/04**	0.573	3.6 B	17 B	1,950	0.4 U	46.2	3.4 B	1.8 U	24,600	1.8 U	1,350	0.1 U	6.3 B	6.78	21,300	50,400	5000 <	NA
Class II GW Standard		no standard	200	2,000	2,000	50	200	1,000	650	5,000	100	10,000	10	2,000	6.5 - 9	400	1,200	no standard	10,000
Upper Confidence Limit		1.1	5.6	99.52	150.96	2	59.42	7.93	10.17	350	5	40	0.3	10.32	8.98	109.4	531.72	50	NA
Lower Confidence Limit		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.93	NA	NA	NA	NA
Confidence Limit Exceeded in Q1, 2004		No	No	No	Yes	No	No	No	No	Yes	No	Yes	No	No	No	Yes	Yes	No	NA

NOTES:
Data from 1994 to 1999 have been archived and are not presented on this table.
-- = No data collected.
* = Bottle broken.
H = Sample analyzed outside of hold time.
J = Estimated value. Compound detected below the practical quantitation limit (PQL).
NA = Not applicable.
Bold-face value in a shaded box indicates that the concentration exceeds the Class II groundwater standard for that parameter.
Confidence limits as recalculated in October 2002 using the method provided in Attachment B to Supplemental Permit No. 2000-270-SP and non-parametric methods as applicable.
ug/L = Micrograms per liter.
mg/L = Milligrams per liter.
< = Below the practical quantitation limit (PQL).
G104 deleted from the monitoring program.
Class II groundwater quality standards from Subpart D of 35 Ill. Adm. Code Part 620.
Parameters with 100% of results below the method detection limit (MDL), during the first year of sampling for each individual parameter in monitoring wells G126 (MW08S) and G127 (MW09S), have an Upper Confidence Limit (UCL) equal to the applicable PQL contained in Attachment A of Supplemental Permit No. 2002-030-SP. These parameters include cadmium and lead.
Data prior to 2004 have not been verified by ENVIRON.
U = Below Instrument Detection Limit.
B = At or Above Instrument Detection Limit, But Below Contract Required Detection Limit.
** = Original sample bottle for TDS broke. Well was re-sampled for TDS on 3/3/04.

TABLE 3
Landfill Compliance Monitoring Well Data
Wells G101 through G118 (excluding G104) and Background Wells G126 and G127
First Quarter 2004

Permit No. 1993-004-DE/OP (Post-Closure)
Supplemental Permit No. 2002-030-SP
0418080002 -- Douglas County -- ILD 005078126
Equistar Chemicals, LP - Tuscola, Illinois

Monitoring Well G113 / R113	Sample Dates	Ammonia (N)-d 00608 mg/L	Arsenic-d 01000 ug/L	Barium-d 01005 ug/L	Boron-d 01020 ug/L	Cadmium-d 01025 ug/L	Chloride-d 00941 mg/L	Chromium-d 01030 ug/L	Copper-d 01040 ug/L	Iron-d 01046 ug/L	Lead-d 01049 ug/L	Manganese-d 01056 ug/L	Mercury-d 71890 ug/L	Nickel-d 01065 ug/L	pH 00400 STD units	Sulfate-d 00946 mg/L	TDS-d 70300 mg/L	TOX-t 78115 ug/L	Zinc-d 01092 ug/L
	01/10/00	0.18	50 <	25 <	9,700	2.5	220	5 <	3.6	150	7.5 <	1,600	0.2 <	13	6.95	1,300	2,600	20	NA
	04/04/00	0.16	5.1	20 <	7,700	2 <	79	5 <	21	180	5 <	3,000	0.2 <	17	7.02	1,400	2,200	10 <	NA
	08/03/00	0.16	50 <	20 <	7,100	2.6	270	5 <	2.5 <	700	5 <	3,200	0.2 <	10 <	6.88	1,200	2,500	10 <	NA
	10/17/00	0.12 <	5 <	23	7,300	2 <	270	5 <	20 <	44	5 <	2,300	0.2 <	16	6.71	1,200	2,400	33	NA
	02/13/01	1 <	5 <	19	9,300	0.5 <	270	5 <	5 <	140	3 <	2,900	0.2 <	39	6.55	2,000	2,400	100 <	NA
	04/25/01	1 <	5 <	20	12,000	0.5 <	110	6.8	5.8	540	3 <	5,200	0.2 <	77	7.63	1,900	3,200	100 <	NA
	08/08/01	1 <	5 <	17	14,000	0.5 <	150	2 J	3 J	1,100	3 <	5,400	0.2 <	23	6.7	3,400	3,500	17	NA
	10/09/01	1 <	5.2	21	12,000	0.5 <	160	2 J	5.4	100 <	3 <	4,700	0.2 <	35	7.50	1,700	3,300	29	NA
	01/09/02	1 <	5 <	20	10,000	0.1 J	180	3 J	7.5	100 <	0.5 J	1,200	0.2 <	25	7.10	1,600	3,100 H	28	NA
	04/17/02	1 <	5 <	19	19,000	0.5 <	90	4 J	6.2	390	3 <	7,400	0.2 <	42	6.92	2,100	3,600	35	NA
	08/28/02	1 <	5 <	17	23,000	0.3 J	100	2 J	5 J	1,700	3 <	7,800	0.2 <	47	6.26	2,500	4,200 H	55	NA
	11/12/02	1 <	5 <	19	18,000	0.5 <	150	4 J	5 J	540	3 <	1,600	0.2 <	55	6.65	2,300	4,100	320	NA
	01/15/03	1 <	5 <	14	16,000	0.5 <	160	3 J	6.3	100 <	3 <	3,900	0.2 <	70	6.43	2,300	3,900	*	NA
	04/29/03	1 <	5 <	15	13,000	0.5 <	210	5.2	6.5	420	3 <	3,500	0.2 <	42	6.68	1,900	3,900	31	NA
	08/20/03	1 <	5 <	12	8,800	0.5 <	130	2.7 J	4.3 J	970	1 J	2,800	0.2 <	49	7.26	1,300	2,900	20	NA
	11/06/03	1 <	5 <	12	10,000	0.5 <	140	3.8 J	3.7 J	100 <	3 <	480	0.2 <	57	8.18	1,400	2,500	25	NA
	02/26/04	0.1 U	2.3 U	12.4 B	9,170	0.4 U	55.6	1.9 U	1.8 U	23.3 U	1.8 U	6,500	0.1 U	4.5 B	6.51	2,060	3,400	5000 <	NA
Class II GW Standard		no standard	200	2,000	2,000	50	200	1,000	650	5,000	100	10,000	10	2,000	6.5 - 9	400	1,200	no standard	10,000
Upper Confidence Limit		1.1	5.6	99.52	150.96	2	59.42	7.93	10.17	350	5	40	0.3	10.32	8.98	109.4	531.72	50	NA
Lower Confidence Limit		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.93	NA	NA	NA	NA
Confidence Limit Exceeded in Q1, 2004		No	No	No	Yes	No	No	No	No	No	No	Yes	No	No	No	Yes	Yes	No	NA

NOTES:

Data from 1994 to 1999 have been archived and are not presented on this table.
- - = No data collected.
* = Bottle broken.
H = Sample analyzed outside of hold time.
J = Estimated value. Compound detected below the practical quantitation limit (PQL).
NA = Not applicable.
Bold-face value in a shaded box indicates that the concentration exceeds the Class II groundwater standard for that parameter.
Confidence limits as recalculated in October 2002 using the method provided in Attachment B to Supplemental Permit No. 2000-270-SP and non-parametric methods as applicable.
ug/L = Micrograms per liter.
mg/L = Milligrams per liter.
< = Below the practical quantitation limit (PQL).
G104 deleted from the monitoring program.
Class II groundwater quality standards from Subpart D of 35 Ill. Adm. Code Part 620.
Parameters with 100% of results below the method detection limit (MDL), during the first year of sampling for each individual parameter in monitoring wells G126 (MW08S) and G127 (MW09S), have an Upper Confidence Limit (UCL) equal to the applicable PQL contained in Attachment A of Supplemental Permit No. 2002-030-SP. These parameters include cadmium and lead.
Data prior to 2004 have not been verified by ENVIRON.
U = Below Instrument Detection Limit.
B = At or Above Instrument Detection Limit, But Below Contract Required Detection Limit.

TABLE 3
Landfill Compliance Monitoring Well Data
Wells G101 through G118 (excluding G104) and Background Wells G126 and G127
First Quarter 2004

Permit No. 1993-004-DE/OP (Post-Closure)
Supplemental Permit No. 2002-030-SP
0418080002 -- Douglas County -- ILD 005078126
Equistar Chemicals, LP - Tuscola, Illinois

Monitoring Well G114	Sample Dates	Ammonia (N)-d 00608 mg/L	Arsenic-d 01000 ug/L	Barium-d 01005 ug/L	Boron-d 01020 ug/L	Cadmium-d 01025 ug/L	Chloride-d 00941 mg/L	Chromium-d 01030 ug/L	Copper-d 01040 ug/L	Iron-d 01046 ug/L	Lead-d 01049 ug/L	Manganese-d 01056 ug/L	Mercury-d 71890 ug/L	Nickel-d 01065 ug/L	pH 00400 STD units	Sulfate-d 00946 mg/L	TDS-d 70300 mg/L	TOX-t 78115 ug/L	Zinc-d 01092 ug/L
	01/10/00	0.46	50 <	96	110	2 <	34	5 <	2.5 <	310	7.5 <	600	0.2 <	5 <	7.23	**610**	1,200	10 <	NA
	04/04/00	0.22	5 <	83	86	2 <	38	5 <	2.5 <	610	5 <	340	0.2 <	5 <	7.35	**640**	1,200	10 <	NA
	08/03/00	0.38	5 <	76	120	2 <	37	5 <	2.5 <	920	5 <	510	0.2 <	10 <	7.12	**500**	1,200	10 <	NA
	10/17/00	0.26	5 <	75	140	2 <	53	5 <	20 <	570	5 <	310	0.2 <	14	7.15	**530**	990	8 <	NA
	02/13/01	1 <	5 <	87	190	0.5 <	21	5 <	5 <	1,600	3 <	500	0.2 <	17	6.99	**720**	1,200	100 <	NA
	04/25/01	1 <	4 J	78	100 <	0.5 <	22	6.8	4 J	1,300	3 <	390	0.2 <	25	8.11	**550**	1,000	100 <	NA
	08/09/01	1 <	5 <	63	140	0.5 <	24	2 J	3 J	860	3 <	380	0.2 <	6.6	7.5	**450**	1,000	8 J	NA
	10/09/01	1 <	5 J	81	110	0.5 <	19	3 J	4 J	870	3 <	480	0.2 <	9	7.36	**500**	1,100	15	NA
	01/09/02	1 <	5 <	75	160	0.5 <	21	2 J	4 J	330	3 <	460	0.2 <	10	7.03	**540**	1,200	13	NA
	04/16/02	1 <	5 <	80	100 <	0.08 J	22	5 J	4 J	1,200	0.2 J	470	0.2 <	11	6.67	**600**	1,200	15	NA
	08/28/02	1 <	5 <	81	50 <	0.5 <	22	4 J	3 J	1,000	3 <	480	0.2 <	11	7.09	**650**	**1,500**	9 J	NA
	11/12/02	1 <	5 <	91	140	0.5 <	23	4 J	5.4	570	3 <	590	0.2 <	20	7.20	**730**	**1,500**	17	NA
	01/15/03	1 <	5 <	73	140	0.5 <	24	3 J	3 J	130	3 <	420	0.2 <	42	6.65	**720**	**1,500**	34	NA
	04/29/03	1 <	6.8	78	140	0.5 <	24	2.1 J	2.4 J	560	3 <	550	0.2 <	19	6.90	**720**	**1,500**	12	NA
	08/20/03	1 <	5 <	61	77	0.5 <	23	4.5 J	5 <	440	3 <	260	0.2 <	21	7.75	**490**	790	41	NA
	11/06/03	1 <	5 <	33	100	0.36 J	18	3.9 J	4 J	100 <	3 <	16	0.2 <	15	7.62	**450**	860	19	NA
	02/27/04	0.1 U	2.3 U	39.8 B	17.2 U	0.4 U	18.8	1.9 U	1.8 U	23.3 U	2.1 B	193	0.1 U	3.1 U	7.58	**622**	**1,280**	5000 <	NA
Class II GW Standard		no standard	200	2,000	2,000	50	200	1,000	650	5,000	100	10,000	10	2,000	6.5 - 9	400	1,200	no standard	10,000
Upper Confidence Limit		1.1	5.6	99.52	150.96	2	59.42	7.93	10.17	350	5	40	0.3	10.32	8.98	109.4	531.72	50	NA
Lower Confidence Limit		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.93	NA	NA	NA	NA
Confidence Limit Exceeded in Q1, 2004		No	No	No	No	No	No	No	No	No	No	Yes	No	No	No	Yes	Yes	No	NA

NOTES:

Data from 1994 to 1999 have been archived and are not presented on this table.
-- = No data collected.
J = Estimated value. Compound detected below the practical quantitation limit (PQL).
NA = Not applicable.
Bold-face value in a shaded box indicates that the concentration exceeds the Class II groundwater standard for that parameter.
Confidence limits as recalculated in October 2002 using the method provided in Attachment B to Supplemental Permit No. 2000-270-SP and non-parametric methods as applicable.
ug/L = Micrograms per liter.
mg/L = Milligrams per liter.
< = Below the practical quantitation limit (PQL).
G104 deleted from the monitoring program.
Class II groundwater quality standards from Subpart D of 35 Ill. Adm. Code Part 620.
Parameters with 100% of results below the method detection limit (MDL), during the first year of sampling for each individual parameter in monitoring wells G126 (MW08S) and G127 (MW09S), have an Upper Confidence Limit (UCL) equal to the applicable PQL contained in Attachment A of Supplemental Permit No. 2002-030-SP. These parameters include cadmium and lead.
Data prior to 2004 have not been verified by ENVIRON.
U = Below Instrument Detection Limit.
B = At or Above Instrument Detection Limit, But Below Contract Required Detection Limit.

TABLE 3
Landfill Compliance Monitoring Well Data
Wells G101 through G118 (excluding G104) and Background Wells G126 and G127
First Quarter 2004

Permit No. 1993-004-DE/OP (Post-Closure)
Supplemental Permit No. 2002-030-SP
0418080002 -- Douglas County -- ILD 005078126
Equistar Chemicals, LP - Tuscola, Illinois

Monitoring Well G115	Sample Dates	Ammonia (N)-d 00608 mg/L	Arsenic-d 01000 ug/L	Barium-d 01005 ug/L	Boron-d 01020 ug/L	Cadmium-d 01025 ug/L	Chloride-d 00941 mg/L	Chromium-d 01030 ug/L	Copper-d 01040 ug/L	Iron-d 01046 ug/L	Lead-d 01049 ug/L	Manganese-d 01056 ug/L	Mercury-d 71890 ug/L	Nickel-d 01065 ug/L	pH 00400 STD units	Sulfate-d 00946 mg/L	TDS-d 70300 mg/L	TOX-t 78115 ug/L	Zinc-d 01092 ug/L
	01/10/00	0.1 <	50 <	29	140	2 <	22	9.5	2.5 <	10 <	7.5 <	45	0.2 <	5 <	7.24	630	1,200	20	NA
	04/04/00	0.1 <	5 <	23	97	2 <	21	5 <	2.5 <	10 <	5 <	19	0.2 <	5 <	7.97	670	1,200	20	NA
	08/03/00	0.1 <	5 <	23	130	2 <	22	5 <	2.5 <	10 <	5 <	300	0.2 <	10 <	7.02	590	1,200	10 <	NA
	10/17/00	0.12 <	5 <	25	130	2 <	27	5 <	20 <	25 <	5 <	98	0.2 <	13	7.28	510	970	10	NA
	02/13/01	1 <	5 <	25	150	0.5 <	14	5 <	5 <	100 <	3 <	63	0.2 <	16	7.35	680	1,200	100 <	NA
	04/25/01	1 <	3 J	26	140	0.5 <	11	7.2	7.6	100 <	3 <	100 <	0.2 <	22	8.19	580	1,100	100 <	NA
	08/09/01	1 <	5 <	21	210	0.5 <	12	2 J	5 <	100 <	3 <	250	0.2 <	8.4	7.4	650	1,000	12	NA
	10/09/01	1 <	5.9	24	140	0.5 <	10	5 <	4 J	100 <	3 <	260	0.2 <	11	7.17	450	1,000	17	NA
	01/09/02	1 <	1 J	27	220	0.5 <	10	5 J	5.7	100 <	3 <	34	0.2 <	6.6	6.95	510	1,100	15	NA
	04/16/02	1 <	5 <	23	100 <	0.82	9.1	6.8	4 J	100 <	0.1 J	65	0.2 <	11	6.41	520	1,100	15	NA
	08/28/02	1 <	5 <	23	50 <	0.5 <	7.8	4 J	5 J	100 <	3 <	210	0.2 <	12	6.95	470	990	21	NA
	11/12/02	1 <	5 <	22	180	0.3 J	7.8	5.1	3 J	100 <	3 <	87	0.2 <	16	6.85	450	970	34	NA
	01/15/03	1 <	5 <	22	140	0.5 <	8.3	6.1	4 J	100 <	3 <	22	0.2 <	20	6.52	450	1,000	25	NA
	04/30/03	1 <	7	27	170	0.5 <	11	7.5	3.3 J	100 <	3 <	16	0.2 <	23	6.29	550	1,200	13	NA
	08/20/03	1 <	5 <	22	130	0.5 <	15	3.3 J	4.8 J	100 <	3 <	110	0.2 <	22	6.92	510	1,100	21	NA
	11/06/03	1 <	3.1 J	21	110	0.5 <	16	5.1	3.7 J	100 <	3 <	24	0.2 <	21	7.69	420	960	18	NA
	2/27/04*	0.1 U	3.5 B	19.5 B	17.2 U	0.4 U	10.1	1.9 U	1.8 U	23.3 U	1.8 U	26.1	0.1 U	3.1 U	7.43	475	1,080	5000 <	NA
Class II GW Standard		no standard	200	2,000	2,000	50	200	1,000	650	5,000	100	10,000	10	2,000	6.5 - 9	400	1,200	no standard	10,000
Upper Confidence Limit		1.1	5.6	99.52	150.96	2	59.42	7.93	10.17	350	5	40	0.3	10.32	8.98	109.4	531.72	50	NA
Lower Confidence Limit		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.93	NA	NA	NA	NA
Confidence Limit Exceeded in Q1, 2004		No	No	No	No	No	No	No	No	No	No	No	No	No	No	Yes	Yes	No	NA

NOTES:
Data from 1994 to 1999 have been archived and are not presented on this table.
-- = No data collected.
J = Estimated value. Compound detected below the practical quantitation limit (PQL).
NA = Not applicable.
Bold-face value in a shaded box indicates that the concentration exceeds the Class II groundwater standard for that parameter.
Confidence limits as recalculated in October 2002 using the method provided in Attachment B to Supplemental Permit No. 2000-270-SP and non-parametric methods as applicable.
ug/L = Micrograms per liter.
mg/L = Milligrams per liter.
< = Below the practical quantitation limit (PQL).
G104 deleted from the monitoring program.
Class II groundwater quality standards from Subpart D of 35 Ill. Adm. Code Part 620.
Parameters with 100% of results below the method detection limit (MDL), during the first year of sampling for each individual parameter in monitoring wells G126 (MW08S) and G127 (MW09S), have an Upper Confidence Limit (UCL) equal to the applicable PQL contained in Attachment A of Supplemental Permit No. 2002-030-SP. These parameters include cadmium and lead.
Data prior to 2004 have not been verified by ENVIRON.
U = Below Instrument Detection Limit.
B = At or Above Instrument Detection Limit, But Below Contract Required Detection Limit.
* = Original sample bottle for TDS broke. Well was re-sampled for TDS on 3/3/04.

TABLE 3
Landfill Compliance Monitoring Well Data
Wells G101 through G118 (excluding G104) and Background Wells G126 and G127
First Quarter 2004

Permit No. 1993-004-DE/OP (Post-Closure)
Supplemental Permit No. 2002-030-SP
0418080002 -- Douglas County -- ILD 005078126
Equistar Chemicals, LP - Tuscola, Illinois

Monitoring Well G116	Sample Dates	Ammonia (N)-d 00608 mg/L	Arsenic-d 01000 ug/L	Barium-d 01005 ug/L	Boron-d 01020 ug/L	Cadmium-d 01025 ug/L	Chloride-d 00941 mg/L	Chromium-d 01030 ug/L	Copper-d 01040 ug/L	Iron-d 01046 ug/L	Lead-d 01049 ug/L	Manganese-d 01056 ug/L	Mercury-d 71890 ug/L	Nickel-d 01065 ug/L	pH 00400 STD units	Sulfate-d 00946 mg/L	TDS-d 70300 mg/L	TOX-t 78115 ug/L	Zinc-d 01092 ug/L
	01/10/00	0.1 <	50 <	68	190	2 <	16	5 <	2.5 <	17	7.5 <	16	0.2 <	5 <	7.23	65	380	10 <	NA
	04/04/00	0.1 <	5 <	76	200	2 <	14	5 <	2.5 <	10 <	5 <	5 <	0.2 <	14	8.05	120	480	10 <	NA
	08/02/00	0.13	5 <	74	200	2 <	23	5 <	2.5 <	10	5 <	540	0.2 <	10 <	7.55	60	440	10 <	NA
	10/17/00	0.12 <	5 <	75	200	2 <	19	5 <	20 <	37	5 <	8.2	0.2 <	10 <	7.18	73	410	17	NA
	02/13/01	1 <	5 <	77	250	0.5 <	12	5 <	5 <	190	3 <	50 <	0.2 <	7.5	7.35	67	400	100 <	NA
	04/24/01	1 <	5 <	81	430	0.6	13	5.9	5.1	100 <	2 J	100 <	0.2 <	9.9	- -	60	410	100 <	NA
	08/08/01	1 <	5 <	66	270	0.5 <	21	3 J	5 <	100 <	3 <	15 <	0.2 <	3 J	7.4	59	410	- -	NA
	10/09/01	1 <	4 J	75	190	0.52	13	4 J	3 J	100 <	1 J	10 J	0.2 <	4 J	7.72	65	420	5 J	NA
	01/10/02	1.5	5 <	67	240	1.3	15	6.7	8.2	100 <	0.1 J	3 J	0.2 <	3 J	6.57	68	410	10 <	NA
	04/17/02	1 <	0.8 J	72	180	0.4 J	15	5.9	3 J	100 <	0.08 J	0.8 J	0.2 <	4 J	7.35	65	430	4 J	NA
	08/28/02	1 <	5 <	68	100	0.5 <	16	3 J	5 <	100 <	3 <	51	0.2 <	5.7	7.63	66	450	8 J	NA
	11/12/02	1 <	5 <	71	370	0.5 <	15	5.3	4 J	100 <	3 <	15 <	0.2 <	7.2	7.45	69	440	13	NA
	01/15/03	1 <	5 <	73	190	0.4 J	13	4 J	5 <	100 <	3 <	15 <	0.2 <	12	6.58	69	450	22	NA
	04/30/03	1 <	5 J	80	270	0.5 <	13	6.3	2.9 J	100 <	3 <	15 <	0.2 <	5.9	6.92	74	490	14	NA
	08/20/03	1 <	5 <	70	200	0.5 <	14	3 J	4 J	100 <	3 <	15 <	0.2 <	10	7.94	78	490	14	NA
	11/06/03	1 <	5 <	82	220	0.89	13	3.5 J	5 <	100 <	3 <	15 <	0.2 <	11	7.72	71	430	10 <	NA
	02/27/04	0.1 U	2.3 U	67.6 B	61 B	0.4 U	11.6	1.9 U	1.8 U	23.3 U	1.8 U	0.7 U	0.1 U	3.1 U	7.77	71	464	5000 <	NA
	02/27/04*	0.1 U	2.3 U	66.1 B	22.7 B	0.4 U	12	1.9 U	1.8 U	23.3 U	1.8 U	2.2 B	0.1 U	3.1 U	7.77	68.6	443	5000 <	NA
Class II GW Standard		no standard	200	2,000	2,000	50	200	1,000	650	5,000	100	10,000	10	2,000	6.5 - 9	400	1,200	no standard	10,000
Upper Confidence Limit		1.1	5.6	99.52	150.96	2	59.42	7.93	10.17	350	5	40	0.3	10.32	8.98	109.4	531.72	50	NA
Lower Confidence Limit		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.93	NA	NA	NA	NA
Confidence Limit Exceeded in Q1, 2004		No	No	No	Yes	No	No	No	No	No	No	No	No	No	No	No	No	No	NA

NOTES:
Data from 1994 to 1999 have been archived and are not presented on this table.
- - = No data collected.
J = Estimated value. Compound detected below the practical quantitation limit (PQL).
NA = Not applicable.
Bold-face value in a shaded box indicates that the concentration exceeds the Class II groundwater standard for that parameter.
Confidence limits as recalculated in October 2002 using the method provided in Attachment B to Supplemental Permit No. 2000-270-SP and non-parametric methods as applicable.
ug/L = Micrograms per liter.
mg/L = Milligrams per liter.
< = Below the practical quantitation limit (PQL).
G104 deleted from the monitoring program.
Class II groundwater quality standards from Subpart D of 35 Ill. Adm. Code Part 620.
Parameters with 100% of results below the method detection limit (MDL), during the first year of sampling for each individual parameter in monitoring wells G126 (MW08S) and G127 (MW09S), have an Upper Confidence Limit (UCL) equal to the applicable PQL contained in Attachment A of Supplemental Permit No. 2002-030-SP. These parameters include cadmium and lead.
Data prior to 2004 have not been verified by ENVIRON.
U = Below Instrument Detection Limit.
B = At or Above Instrument Detection Limit, But Below Contract Required Detection Limit.
* Duplicate sample.

TABLE 3
Landfill Compliance Monitoring Well Data
Wells G101 through G118 (excluding G104) and Background Wells G126 and G127
First Quarter 2004

Permit No. 1993-004-DE/OP (Post-Closure)
Supplemental Permit No. 2002-030-SP
0418080002 -- Douglas County -- ILD 005078126
Equistar Chemicals, LP - Tuscola, Illinois

Monitoring Well G117	Sample Dates	Ammonia (N)-d 00608 mg/L	Arsenic-d 01000 ug/L	Barium-d 01005 ug/L	Boron-d 01020 ug/L	Cadmium-d 01025 ug/L	Chloride-d 00941 mg/L	Chromium-d 01030 ug/L	Copper-d 01040 ug/L	Iron-d 01046 ug/L	Lead-d 01049 ug/L	Manganese-d 01056 ug/L	Mercury-d 71890 ug/L	Nickel-d 01065 ug/L	pH 00400 STD units	Sulfate-d 00946 mg/L	TDS-d 70300 mg/L	TOX-t 78115 ug/L	Zinc-d 01092 ug/L
	01/10/00	0.1 <	50 <	84	210	2 <	20	5 <	2.5 <	14	7.5 <	20	0.2 <	5 <	7.56	48	410	10 <	NA
	04/04/00	0.1 <	5 <	87	220	2 <	19	5 <	2.5 <	10 <	5 <	5 <	0.2 <	5 <	7.52	61	430	10 <	NA
	08/03/00	0.1 <	5 <	63	150	2 <	37	5 <	2.5 <	10 <	5 <	5 <	0.2 <	10 <	7.38	67	490	20	NA
	10/17/00	0.12 <	5 <	77	190	2 <	30	5 <	20 <	25 <	5 <	5 <	0.2 <	10 <	7.13	62	440	8 <	NA
	02/13/01	1 <	5 <	68	170	0.5 <	26	5 <	5 <	100 <	3 <	50 <	0.2 <	7.7	6.98	50	450	100 <	NA
	04/25/01	1 <	5.2	73	180	0.5 <	24	7	6.2	100 <	3 <	100 <	0.2 <	8.6	8.31	55	420	100 <	NA
	08/09/01	1 <	5 <	75	210	0.5 <	19	3 J	5 <	100 <	3 <	15 <	0.2 <	3 J	7.5	37	420	10 <	NA
	10/09/01	1 <	5 <	80	160	0.5 <	19	4 J	3 J	100 <	3 <	15 <	0.2 <	4 J	7.28	38	430	10 <	NA
	01/10/02	1 <	5 <	68	190	0.2 J	27	2 J	5.3	100 <	0.1 J	0.7 J	0.2 <	4 J	6.88	50	380	10 <	NA
	04/16/02	1 <	3 J	61	150	0.98	29	5 J	6.6	100 <	0.6 J	2 J	0.2 <	5.1	6.36	54	450	6 J	NA
	08/28/02	1 <	5 <	70	50 <	0.5 <	27	4 J	4 J	100 <	3 <	15 <	0.2 <	5.2	7.55	47	470	10 <	NA
	11/12/02	1 <	5 <	78	190	0.5 <	21	4 J	3 J	100 <	3 <	15 <	0.2 <	8.3	7.09	43	440	10 <	NA
	01/15/03	1 <	5 <	79	180	0.4 J	23	4 J	3 J	100 <	3 <	15 <	0.2 <	11	6.01	49	450	14	NA
	04/29/03	1 <	4.4 J	62	140	0.46 J	32	6.8	2.8 J	100 <	3 <	15 <	0.2 <	6.3	6.91	56	530	10 <	NA
	08/19/03	1 <	5 <	66	75	1.1	34	2.6 J	6	100 <	3 <	15 <	0.2 <	9.1	7.08	59	530	10 <	NA
	11/06/03	1 <	5 <	83	210	2.7	26	3.1 J	5.4	100 <	1.3 J	15 <	0.2 <	15	7.50	52	480	10 <	NA
	02/27/04	0.1 U	2.3 U	61 B	17.2 U	0.4 U	26.2	1.9 U	1.8 U	23.3 U	1.8 U	0.7 U	0.1 U	3.1 U	8.33	51.9	500	5000 <	NA
Class II GW Standard		no standard	200	2,000	2,000	50	200	1,000	650	5,000	100	10,000	10	2,000	6.5 - 9	400	1,200	no standard	10,000
Upper Confidence Limit		1.1	5.6	99.52	150.96	2	59.42	7.93	10.17	350	5	40	0.3	10.32	8.98	109.4	531.72	50	NA
Lower Confidence Limit		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.93	NA	NA	NA	NA
Confidence Limit Exceeded in Q1, 2004		No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	NA

NOTES:
Data from 1994 to 1999 have been archived and are not presented on this table.
- - = No data collected.
J = Estimated value. Compound detected below the practical quantitation limit (PQL).
NA = Not applicable.
Bold-face value in a shaded box indicates that the concentration exceeds the Class II groundwater standard for that parameter.
Confidence limits as recalculated in October 2002 using the method provided in Attachment B to Supplemental Permit No. 2000-270-SP and non-parametric methods as applicable.
ug/L = Micrograms per liter.
mg/L = Milligrams per liter.
< = Below the practical quantitation limit (PQL).
G104 deleted from the monitoring program.
Class II groundwater quality standards from Subpart D of 35 Ill. Adm. Code Part 620.
Parameters with 100% of results below the method detection limit (MDL), during the first year of sampling for each individual parameter in monitoring wells G126 (MW08S) and G127 (MW09S), have an Upper Confidence Limit (UCL) equal to the applicable PQL contained in Attachment A of Supplemental Permit No. 2002-030-SP. These parameters include cadmium and lead.
Data prior to 2004 have not been verified by ENVIRON.
U = Below Instrument Detection Limit.
B = At or Above Instrument Detection Limit, But Below Contract Required Detection Limit.

TABLE 3
Landfill Compliance Monitoring Well Data
Wells G101 through G118 (excluding G104) and Background Wells G126 and G127
First Quarter 2004

Permit No. 1993-004-DE/OP (Post-Closure)
Supplemental Permit No. 2002-030-SP
0418080002 -- Douglas County -- ILD 005078126
Equistar Chemicals, LP - Tuscola, Illinois

Monitoring Well G118	Sample Dates	Ammonia (N)-d 00608 mg/L	Arsenic-d 01000 ug/L	Barium-d 01005 ug/L	Boron-d 01020 ug/L	Cadmium-d 01025 ug/L	Chloride-d 00941 mg/L	Chromium-d 01030 ug/L	Copper-d 01040 ug/L	Iron-d 01046 ug/L	Lead-d 01049 ug/L	Manganese-d 01056 ug/L	Mercury-d 71890 ug/L	Nickel-d 01065 ug/L	pH 00400 STD units	Sulfate-d 00946 mg/L	TDS-d 70300 mg/L	TOX-t 78115 ug/L	Zinc-d 01092 ug/L
	01/10/00	0.1 <	50 <	59	7,700	2 <	16	5.0 <	2.5 <	140	7.5 <	5 <	0.2 <	5 <	7.13	310	890	20	NA
	04/04/00	0.42	5 <	70	8,500	2 <	10	5.0 <	2.5 <	2,300	5 <	290	0.2 <	5.2	7.98	310	820	10 <	NA
	08/02/00	0.22	5 <	65	3,600	2 <	14	5.0 <	2.5 <	10	5 <	140	0.2 <	10 <	7.59	130	630	10 <	NA
	10/17/00	0.12 <	5 <	81	1,800	2 <	19	5 <	20 <	30	5 <	50	0.2 <	10 <	7.32	85	500	8 <	NA
	02/13/01	1 <	5 <	92	2,900	0.5 <	26	5 <	5 <	100 <	3 <	210	0.2 <	9.1	7.07	99	460	100 <	NA
	04/26/01	1 <	13	90	2,700	0.5 <	8.5	5.2	3 J	100 <	3 <	130	0.2 <	6.3	9.09	99	450	100 <	NA
	08/09/01	1 <	5 <	91	2,100	0.5 <	7.9	3 J	2 J	180	3 <	310	0.2 <	4 J	7.30	73	530	- -	NA
	10/09/01	1 <	6.5	99	1,400	0.5 <	4.6	5 <	3 J	190	3 <	250	0.2 <	5	6.60	39	420	20	NA
	01/09/02	1 <	4 J	90	1,400	0.5 <	11	2 J	3 J	150	0.2 J	21	0.2 <	3 J	7.85	37	400	15	NA
	04/16/02	1.2	5 <	96	2,700	0.5 <	7.6	5.2	3 J	660	0.2 J	660	0.2 <	6.1	7.71	75	420	10 <	NA
	08/28/02	1 <	4 J	85	2,300	0.5 <	8	3 J	2 J	560	3 <	380	0.2 <	4 J	7.26	63	440	8 J	NA
	11/12/02	1 <	5 <	91	1,400	0.5 <	11	3 J	3 J	180	3 <	300	0.2 <	6.9	7.15	44	420	9 J	NA
	01/15/03	1 <	5 <	91	1,500	0.5 <	9	2 J	3 J	100 <	3 <	10 J	0.2 <	11	6.69	47	420	10 <	NA
	04/30/03	1 <	4.3 J	95	2,200	0.5 <	7.2	5	2.6 J	190	3 <	360	0.2 <	5.5	6.69	57	440	9.7 J	NA
	08/20/03	1 <	5 <	91	1,900	0.38 J	7.7	2 J	2.1 J	1,100	3 <	310	0.2 <	4.5 J	7.34	53	450	10	NA
	11/06/03	1 <	5.3	87	1,300	0.5 <	10	5 <	3.8 J	560	3 <	270	0.2 <	12	7.13	37	420	10 <	NA
	02/26/04	0.1 U	2.3 U	104 B	1,750	0.4 U	6.75	1.9 U	1.8 U	23.3 U	1.8 U	195	0.1 U	3.1 U	7.58	44.3	495	5000 <	NA
Class II GW Standard		no standard	200	2,000	2,000	50	200	1,000	650	5,000	100	10,000	10	2,000	6.5 - 9	400	1,200	no standard	10,000
Upper Confidence Limit		1.1	5.6	99.52	150.96	2	59.42	7.93	10.17	350	5	40	0.3	10.32	8.98	109.4	531.72	50	NA
Lower Confidence Limit		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.93	NA	NA	NA	NA
Confidence Limit Exceeded in Q1, 2004		No	No	Yes	Yes	No	No	No	No	No	No	Yes	No	No	No	No	No	No	NA

NOTES:
- - = No data collected.
J = Estimated value. Compound detected below the practical quantitation limit (PQL).
NA = Not applicable.
Bold-face value in a shaded box indicates that the concentration exceeds the Class II groundwater standard for that parameter.
Confidence limits as recalculated in October 2002 using the method provided in Attachment B to Supplemental Permit No. 2000-270-SP and non-parametric methods as applicable.
ug/L = Micrograms per liter.
mg/L = Milligrams per liter.
< = Below the practical quantitation limit (PQL).
G104 deleted from the monitoring program.
Class II groundwater quality standards from Subpart D of 35 Ill. Adm. Code Part 620.
Parameters with 100% of results below the method detection limit (MDL), during the first year of sampling for each individual parameter in monitoring wells G126 (MW08S) and G127 (MW09S), have an Upper Confidence Limit (UCL) equal to the applicable PQL contained in Attachment A of Supplemental Permit No. 2002-030-SP. These parameters include cadmium and lead.
Data prior to 2004 have not been verified by ENVIRON.
U = Below Instrument Detection Limit.
B = At or Above Instrument Detection Limit, But Below Contract Required Detection Limit.

TABLE 3
Landfill Compliance Monitoring Well Data
Wells G101 through G118 (excluding G104) and Background Wells G126 and G127
First Quarter 2004

Permit No. 1993-004-DE/OP (Post-Closure)
Supplemental Permit No. 2002-030-SP
0418080002 -- Douglas County -- ILD 005078126
Equistar Chemicals, LP - Tuscola, Illinois

Monitoring Well G126 (MW08S) Background	Sample Dates	Ammonia (N)-d 00608 mg/L	Arsenic-d 01000 ug/L	Barium-d 01005 ug/L	Boron-d 01020 ug/L	Cadmium-d 01025 ug/L	Chloride-d 00941 mg/L	Chromium-d 01030 ug/L	Copper-d 01040 ug/L	Iron-d 01046 ug/L	Lead-d 01049 ug/L	Manganese-d 01056 ug/L	Mercury-d 71890 ug/L	Nickel-d 01065 ug/L	pH 00400 STD units	Sulfate-d 00946 mg/L	TDS-d 70300 mg/L	TOX-t 78115 ug/L	Zinc-d 01092 ug/L
	12/13/00	<1	5.6	44	130	<0.5	13	6.7	5.8	<100	<3	<100	<0.2	6.9	8.72	28	- -	- -	<10
	02/13/01	<1	<5	36	72	<0.5	13	<5	7.2	<100	<3	<50	<0.2	8.5	7.86	55	270	<100	--
	03/07/01	<1	<5	73	<100	<0.5	10	4 J	4 J	<100	<3	<100	<0.2	8.8	7.49	29	- -	- -	2 J
	04/24/01	<1	<5	68	160	<0.5	9.7	4 J	12	<100	<3	<100	<0.2	9	8.38	33	360	<100	--
	06/26/01	<1	<5	74	92	<0.5	11	<5	<5	<100	<3	40	<0.2	7.2	6.73	32	390	8 J	--
	08/10/01	<1	<5	83	<50	<0.5	10	<5	3 J	<100	<3	<50	<0.2	5.8	6.83	32	- -	- -	10 J
	10/10/01	1.1	4 J	93	110	<0.5	5.3	9.1	4 J	<100	<3	34	<0.2	10	7.56	30	340	17	NA
	01/10/02	<1	3 J	77	160	<0.5	8.2	3 J	4 J	<100	0.6 J	5 J	<0.2	6.1	7.82	34	400	11	NA
	04/16/02	<1	0.9 J	47	<100	<0.5	3.2	5.8	5.4	<100	0.3 J	6 J	<0.2	5 J	8.26	19	220	14	NA
	08/28/02	<1	<5	77	<50	<0.5	8	3 J	3 J	<100	<3	81	<0.2	8.5	7.03	29	390	10 J	NA
	11/12/02	<1	<5	83	110	<0.5	6.2	5 J	3 J	<100	<3	42	<0.2	10	7.36	32	430	9 J	NA
	01/15/03	<1	4 J	54	<50	<0.5	6.1	5.8	3 J	<100	<3	<15	<0.2	19	6.63	30	330	8 J	NA
	04/30/03	<1	5.8	83	94	<0.5	7.1	6.9	4.3 J	<100	<3	23	<0.2	8.3	6.78	29	440	13	NA
	08/20/03	<1	<5	88	71	<0.5	4.3	5.6	3.5 J	<100	<3	29	<0.2	11	**6.35**	25	400	<10	NA
	11/06/03	<1	<5	72	54	0.96	9.1	5.7	4.4 J	<100	<3	26	<0.2	17	6.62	25	330	<10	NA
	02/27/04	0.1 U	2.3 U	72.4 B	17.2 U	0.4 U	5.76	1.9 U	1.8 U	23.3 U	1.9 B	4.3 B	0.1 U	3.1 U	7.68	28.6	408	5000 <	NA
Class II GW Standard		no standard	200	2,000	2,000	50	200	1,000	650	5,000	100	10,000	10	2,000	6.5 - 9	400	1,200	no standard	10,000
Upper Confidence Limit		1.1	5.6	99.52	150.96	2	59.42	7.93	10.17	350	5	40	0.3	10.32	8.98	109.4	531.72	50	NA
Lower Confidence Limit		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.93	NA	NA	NA	NA
Confidence Limit Exceeded in Q1, 2004		No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	NA

NOTES:
- - = No data collected.
J = Estimated value. Compound detected below the practical quantitation limit (PQL).
NA = Not applicable.
Bold-face value in a shaded box indicates that the concentration exceeds the Class II groundwater standard for that parameter.
Confidence limits as recalculated in October 2002 using the method provided in Attachment B to Supplemental Permit No. 2000-270-SP and non-parametric methods as applicable.
ug/L = Micrograms per liter.
mg/L = Milligrams per liter.
< = Below the practical quantitation limit (PQL).
G104 deleted from the monitoring program.
Class II groundwater quality standards from Subpart D of 35 Ill. Adm. Code Part 620.
Parameters with 100% of results below the method detection limit (MDL), during the first year of sampling for each individual parameter in monitoring wells G126 (MW08S) and G127 (MW09S), have an Upper Confidence Limit (UCL) equal to the applicable PQL contained in Attachment A of Supplemental Permit No. 2002-030-SP. These parameters include cadmium and lead.
Data prior to 2004 have not been verified by ENVIRON.
U = Below Instrument Detection Limit.
B = At or Above Instrument Detection Limit, But Below Contract Required Detection Limit.

TABLE 3
Landfill Compliance Monitoring Well Data
Wells G101 through G118 (excluding G104) and Background Wells G126 and G127
First Quarter 2004

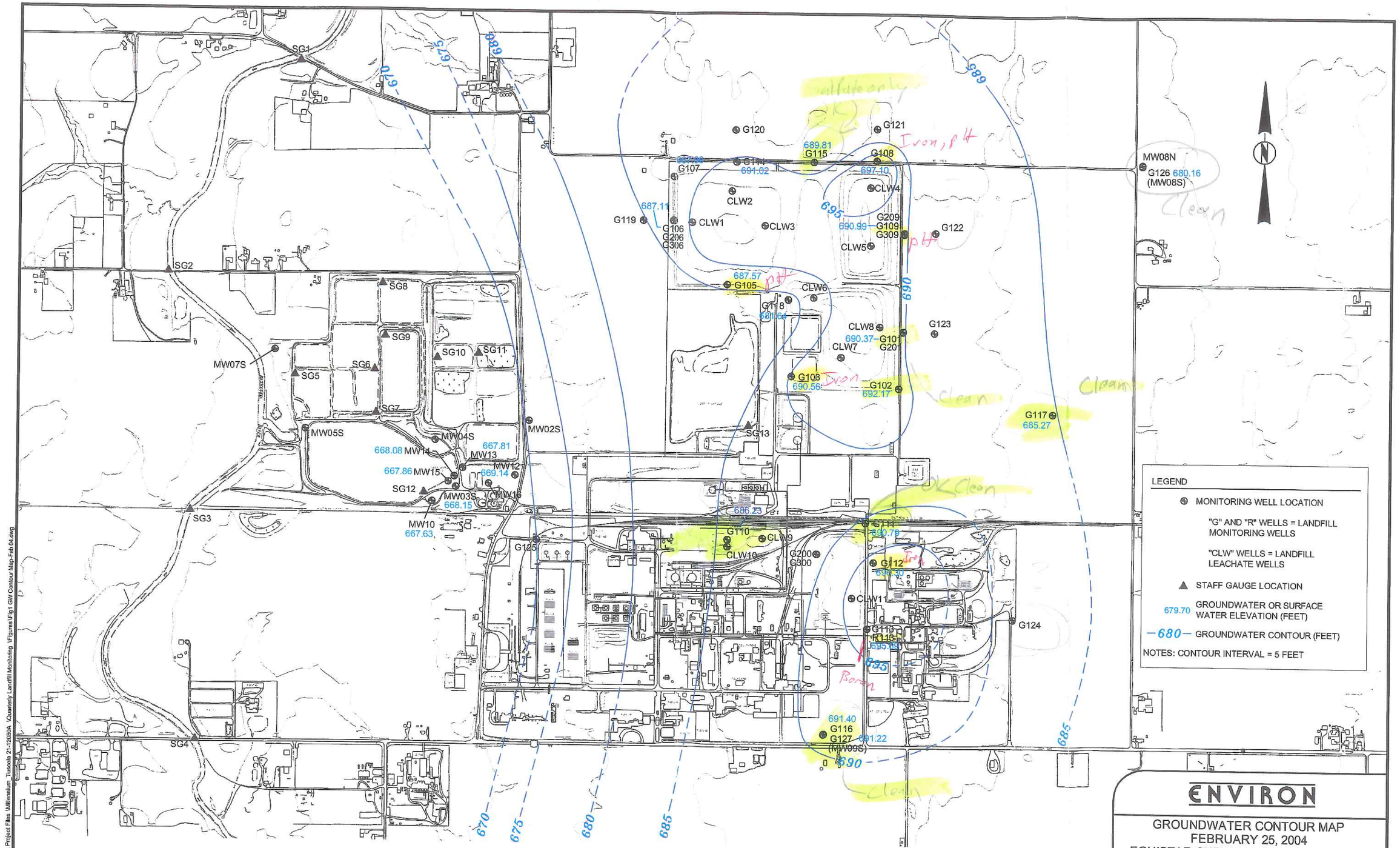
Permit No. 1993-004-DE/OP (Post-Closure)
Supplemental Permit No. 2002-030-SP
0418080002 -- Douglas County -- ILD 005078126
Equistar Chemicals, LP - Tuscola, Illinois

Monitoring Well G127 (MW09S) Background	Sample Dates	Ammonia (N)-d 00608 mg/L	Arsenic-d 01000 ug/L	Barium-d 01005 ug/L	Boron-d 01020 ug/L	Cadmium-d 01025 ug/L	Chloride-d 00941 mg/L	Chromium-d 01030 ug/L	Copper-d 01040 ug/L	Iron-d 01046 ug/L	Lead-d 01049 ug/L	Manganese-d 01056 ug/L	Mercury-d 71890 ug/L	Nickel-d 01065 ug/L	pH 00400 STD units	Sulfate-d 00946 mg/L	TDS-d 70300 mg/L	TOX-t 78115 ug/L	Zinc-d 01092 ug/L
	12/12/00	<1	4 J	72	100	<0.5	28	4 J	9.1	<100	<3	<100	0.3	8	7.24	62	--	--	3 J
	02/13/01	<1	<5	72	64	<0.5	33	<5	<5	350	<3	<50	<0.2	8.2	6.98	75	420	<100	--
	03/07/01	<1	<5	67	<100	<0.5	29	3 J	5.4	<100	<3	<100	<0.2	7.4	7.12	59	--	--	14
	04/24/01	<1	<5	68	<100	<0.5	29	4 J	2 J	<100	<3	<100	<0.2	6.6	8.40	61	400	<100	--
	06/26/01	<1	<5	79	100	<0.5	29	<5	<5	<100	<3	<15	<0.2	8.4	6.53	55	430	12	--
	08/09/01	<1	<5	81	120	<0.5	60	3 J	3 J	<100	<3	<50	<0.2	4 J	6.87	120	--	--	18
	10/09/01	<1	5 J	88	82	<0.5	21	3 J	3 J	<100	<3	20	<0.2	6.4	7.61	70	510	7 J	NA
	01/10/02	<1	<5	73	160	0.07 J	27	2 J	5.1	170	0.1 J	2 J	<0.2	5.3	6.51	59	450	<10	NA
	04/17/02	<1	<5	66	<100	<0.5	25	12	4 J	<100	0.1 J	2 J	<0.2	7.7	7.33	53	460	17	NA
	08/28/02	<1	<5	91	<50	<0.5	20	11	4 J	280	<3	20	<0.2	9.5	7.23	56	530	18	NA
	11/12/02	<1	<5	81	110	<0.5	18	14	5 J	<100	<3	<15	<0.2	12	7.18	72	510	10 <	NA
	01/15/03	<1	<5	71	62	<0.5	15	12	4 J	<100	<3	9 J	<0.2	15	6.43	70	490	7 J	NA
	04/30/03	<1	9.2	73	94	<0.5	18	9.2	14	<100	<3	<15	<0.2	7.6	7.02	64	510	7.8 J	NA
	08/20/03	<1	<5	81	93	<0.5	23	2.9 J	8.8	<100	1.1 J	18	<0.2	12	7.55	79	480	31	NA
	11/06/03	<1	<5	84	75	<0.5	19	7.2	3.6 J	<100	2.7 J	5.6 J	<0.2	14	7.54	69	520	<10	NA
	02/27/04	0.1 U	2.3 U	63.2 B	17.2 U	0.4 U	19.8	1.9 U	1.8 U	23.3 U	1.8 U	0.7 U	0.1 U	3.1 U	7.69	56.6	445	5000 <	NA
Class II GW Standard		no standard	200	2,000	2,000	50	200	1,000	650	5,000	100	10,000	10	2,000	6.5 - 9	400	1,200	no standard	10,000
Upper Confidence Limit		1.1	5.6	99.52	150.96	2	59.42	7.93	10.17	350	5	40	0.3	10.32	8.98	109.4	531.72	50	NA
Lower Confidence Limit		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.93	NA	NA	NA	NA
Confidence Limit Exceeded in Q1, 2004		No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	NA

NOTES:
-- = No data collected.
J = Estimated value. Compound detected below the practical quantitation limit (PQL).
NA = Not Applicable.
Bold-face value in a shaded box indicates that the concentration exceeds the Class II groundwater standard for that parameter.
Confidence limits as recalculated in October 2002 using the method provided in Attachment B to Supplemental Permit No. 2000-270-SP and non-parametric methods as applicable.
ug/L = Micrograms per liter.
mg/L = Milligrams per liter.
< = Below the practical quantitation limit (PQL).
G104 deleted from the monitoring program.
Class II groundwater quality standards from Subpart D of 35 Ill. Adm. Code Part 620.
Parameters with 100% of results below the method detection limit (MDL), during the first year of sampling for each individual parameter in monitoring wells G126 (MW08S) and G127 (MW09S), have an Upper Confidence Limit (UCL) equal to the applicable PQL contained in Attachment A of Supplemental Permit No. 2002-030-SP. These parameters include cadmium and lead.
Data prior to 2004 have not been verified by ENVIRON.
U = Below Instrument Detection Limit.
B = At or Above Instrument Detection Limit, But Below Contract Required Detection Limit.

FIGURES

FIGURE



ENVIRON

GROUNDWATER CONTOUR MAP
FEBRUARY 25, 2004
EQUISTAR CHEMICALS, LP/MILLENNIUM PETROCHEMICALS, INC.
TUSCOLA, ILLINOIS

DATE:	CONTRACT NUMBER:		FIGURE
4/6/04	21-12080A		1
DRAFTER: APR	APPROVED:	REVISED:	

APPENDIX A

APPENDIX A

Field Sampling Logs, February 2004

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GROUNDWATER DATA FORM

PROJECT INFORMATION

					Low-Flow Groundwater Sampling
EVENT		Well Development		Groundwater Sampling	
Project Name				Well ID	G101
Project No.				Start Date	
Field Personnel				End Date	

WELL AND DEVELOPMENT / PURGE INFORMATION

Casing ID	Purging Method	Tube/Pump Intake Depth
Screened Interval	Pump Make, Size, or Type	Pump Rate

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth	Time	Depth	Time
Product				
Groundwater	6.93			
Casing Base				

VOLUME PRODUCTION INFORMATION

Volume Type:		Borehole		Well Casing
Linear Feet of Water in Well		4.4 gal		26.8'
Amount Equal to One Volume				
Total Volumes Produced				

NOTES: DTS: 23.7'
MP: 13.1 gal

PHYSIOCHEMICAL PARAMETERS

Date	Time (24 hour)	Flow Rate ( )	No. of Vol Removed (#)	Volume Purged (gal)	Depth to Water (ft BTOC)	Drawdown (ft)	Temp (°C)	pH	Conduct. (mS/cm)	TDS (ppm)	Dissolv. Oxygen (ppm)	Eh (mV)	PID (ppm)	Turbid. (ntu)	V C
2-26-04	1132		~~1 gal~~	1 gal	11.6		9.1	7.57	69	0.44	7.03	107		7	
2-26-04	1143			2 gal	17.6		10.9	7.6	69	0.44	4.48	98		28	
2-26-04	1148			3 gal	20.0		12.0	7.6	70	0.45	2.85	100		1	
2-26-04	1155			4 gal	23.2		12.6	7.55	68	0.44	2.4	99		36	

Well ID No. _____

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GROUNDWATER DATA FORM

PROJECT INFORMATION

EVENT		Well Development		Groundwater Sampling		Low-Flow Groundwater Sampling

Project Name	Well ID G102
Project No.	Start Date 2-26-04
Field Personnel J Brooke	End Date

WELL AND DEVELOPMENT / PURGE INFORMATION

Casing ID	Purging Method Bailer	Tube/Pump Intake Depth
Screened Interval	Pump Make, Size, or Type	Pump Rate

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth	Time	Depth	Time
Product	--	--	--	--
Groundwater	6.38	1037	21.4	1108
Casing Base				

VOLUME PRODUCTION INFORMATION

Volume Type:	9	Borehole		Well Casing
Linear Feet of Water in Well	23.2'			
Amount Equal to One Volume	3.8 gal			
Total Volumes Produced				

NOTES: DTS: 19.6'
WAS: 13.2'
MP: 11.4 gal

PHYSICOCHEMICAL PARAMETERS

Date	Time (24 hour)	Flow Rate ( )	No. of Vol Removed (#)	Volume Purged (gal)	Depth to Water (ft BTOC)	Drawdown (ft)	Temp (°C)	pH	Conduct. (mS/cm)	TDS (ppm)	Dissolv. Oxygen (ppm)	Eh (mV)	PID (ppm)	Turbid. (ntu)	Vi Cl
2-26-04	1045		*	1	11.1		9.9	7.7	87.0		4.0	-20		83	
"	1052			2	15.34		10.8	7.73	88.0		2.47	19		30	
"	1058			3	19.35		11.4	7.65	85.0		2.38	34		130	

sampled @1100

Page ___ of ___

Well ID No. ___

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GROUNDWATER DATA FORM

11.0 gal / all

MP: ~~8.9 gal~~

PROJECT INFORMATION

DTW: ~~13.49~~ 9.2' DTS: 21.7 WAS: 8.21

EVENT		Well Development		Groundwater Sampling		Low-Flow Groundwater Sampling

Project Name	Well ID G103
Project No.	Start Date 2-26-04
Field Personnel J. Brieske S. Hayter	End Date 2-26-04

WELL AND DEVELOPMENT / PURGE INFORMATION

Casing ID G103	Purging Method Bailer	Tube/Pump Intake Depth
Screened Interval	Pump Make, Size, or Type	Pump Rate

DEPTH MEASUREMENTS

	INITIAL Depth	INITIAL Time	FINAL Depth	FINAL Time
Product	—			
Groundwater	9.22	9.47	21.31	10.10
Casing Base				

VOLUME PRODUCTION INFORMATION

Volume Type:		Borehole		Well Casing
Linear Feet of Water in Well	22.5'			
Amount Equal to One Volume	3.7 gal			
Total Volumes Produced	3			

NOTES:

PHYSICOCHEMICAL PARAMETERS

Date	Time (24 hour)	Flow Rate (___)	No. of Vol Removed (#)	Volume Purged (gal)	Depth to Water (ft BTOC)	Drawdown (ft)	Temp (°C)	pH	Conduct. (mS/cm)	TDS g/L ~~(ppm)~~	Dissolv. Oxygen mg/L ~~(ppm)~~	Eh (mV)	PID (ppm)	Turbid (ntu)
2-26-04	954			1	14.56		9.8	6.8	0.14		10.44	-79		180
"	1001			2	17.39		10.4	6.84	0.14		3.78	-81		130
"	1007			3	21.31		11.7	6.82	0.14		0.82	-101		110

sampled @ 10:15

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Well ID No. _____

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GROUNDWATER DATA FORM

PROJECT INFORMATION

EVENT		Well Development		Groundwater Sampling		Low-Flow Groundwater Sampling

Project Name	Well ID ~~G102~~ G105
Project No.	Start Date 1435
Field Personnel	End Date 1505

WELL AND DEVELOPMENT / PURGE INFORMATION

Casing ID	Purging Method Bailer	Tube/Pump Intake Depth
Screened Interval	Pump Make, Size, or Type	Pump Rate

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth	Time	Depth	Time
Product	--	--	--	--
Groundwater	3.84	1435	4.33	1450
Casing Base				

VOLUME PRODUCTION INFORMATION

Volume Type:	Borehole ☐ Well Casing ☐
Linear Feet of Water in Well	12.2'
Amount Equal to One Volume	2.0 gal
Total Volumes Produced	6 gal

NOTES: DTS: 6.1' MP: 6.0 gal

PHYSIOCHEMICAL PARAMETERS

Date	Time (24 hour)	Flow Rate ( )	No. of Vol Removed (#)	Volume Purged (gal)	Depth to Water (ft BTOC)	Drawdown (ft)	Temp (° C)	pH	Conduct. (mS/cm)	TDS (ppm)	Dissolv. Oxygen (ppm)	Eh (mV)	PID (ppm)	Turbid. (ntu)	V C
2-26-04	1439			1 gal	4.37		6.6	6.30	0.50	3.2	3.40	158		-5	
	1444			3.5 gal	4.75		6.3	6.29	0.48	3.0	2.95	156		32	
	1450			6.0 gal	4.33		6.2	6.28	0.47	3.0	3.42	159		26	

Well ID No. _____

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GROUNDWATER DATA FORM

PROJECT INFORMATION

EVENT		Well Development		Groundwater Sampling		Low-Flow Groundwater Sampling

Project Name

Project No.

Field Personnel J. Bries Kr

Well ID G106

Start Date 24-27-04

End Date 24-27-04

WELL AND DEVELOPMENT / PURGE INFORMATION

Casing ID	Purging Method	Tube/Pump Intake Depth
Screened Interval	Pump Make, Size, or Type	Pump Rate

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth	Time	Depth	Time
Product				
Groundwater	4.2	817	5.7	
Casing Base				

VOLUME PRODUCTION INFORMATION

Volume Type:		Borehole		Well Casing

Linear Feet of Water in Well 13.3'

Amount Equal to One Volume 2.2 gal

Total Volumes Produced

NOTES: DTS: 7.5' MP: 6.5 gal

PHYSICOCHEMICAL PARAMETERS

Date	Time (24 hour)	Flow Rate (___)	No. of Vol Removed (#)	Volume Purged (gal)	Depth to Water (ft BTOC)	Drawdown (ft)	Temp (° C)	pH	Conduct. (mS/cm)	TDS (ppm)	Dissolv. Oxygen (ppm)	Eh (mV)	PID (ppm)	Turbid. (ntu)	V C
2 4-27-04	850			1 gal	6.1		6.6	7.22	0.24	1.6	4.78	228		-10	
	850			2.5 gal	6.1		6.7	7.19	0.24	1.5	4.07	222		150	
	900			3.5	6.2		6.8	7.21	0.23	1.5	3.67	217		4	
	905			6.5	6.1		6.9	7.23	0.23	1.5	4.94	211		-10	

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Well ID No. _____

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GROUNDWATER DATA FORM

PROJECT INFORMATION

EVENT		Well Development		Groundwater Sampling		Low-Flow Groundwater Sampling

Project Name	Well ID G107
Project No.	Start Date 2 4-27-04
Field Personnel BMeske	End Date 2 4-27-04

WELL AND DEVELOPMENT / PURGE INFORMATION

Casing ID	Purging Method	Tube/Pump Intake Depth
Screened Interval	Pump Make, Size, or Type	Pump Rate

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth	Time	Depth	Time
Product				
Groundwater	4.47	750	10.8	809
Casing Base				

VOLUME PRODUCTION INFORMATION

Volume Type:		Borehole		Well Casing
Linear Feet of Water in Well	15.8'			
Amount Equal to One Volume	2.6 gal			
Total Volumes Produced				

NOTES: DTS: 10.8 MP: 7.7 gal

PHYSIOCHEMICAL PARAMETERS

Date	Time (24 hour)	Flow Rate ( )	No. of Vol Removed (#)	Volume Purged (gal)	Depth to Water (ft BTOC)	Drawdown (ft)	Temp (° C)	pH	Conduct. (mS/cm)	TDS (ppm)	Dissolv. Oxygen (ppm)	ORP Eh (mV)	PID (ppm)	Turbid. (ntu)	Vi Cl
2				1	8.67		6.7	7.62	0.12		6.73	202		-10	
4-27-04	755			2	10.18		8.5	7.64	0.12		7.0	194		-0	
	800														

Well ID No. _____

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GROUNDWATER DATA FORM

PROJECT INFORMATION

EVENT		Well Development	✓	Groundwater Sampling		Low-Flow Groundwater Sampling

Project Name		Well ID	G108
Project No.		Start Date	1335 2-26-04
Field Personnel		End Date	1355 —

WELL AND DEVELOPMENT / PURGE INFORMATION

Casing ID	Purging Method	Tube/Pump Intake Depth
Screened Interval	Pump Make, Size, or Type	Pump Rate

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth	Time	Depth	Time
Product	--	--	--	--
Groundwater	5.98'	1335	29.3'	1350
Casing Base				

VOLUME PRODUCTION INFORMATION

Volume Type:		Borehole		Well Casing
Linear Feet of Water in Well	34.3'			
Amount Equal to One Volume	5.6 gal			
Total Volumes Produced				

NOTES: DTS: 30.2' MP: 16.8 gal

PHYSIOCHEMICAL PARAMETERS

Date	Time (24 hour)	Flow Rate ( )	No. of Vol Removed (#)	Volume Purged (gal)	Depth to Water (ft BTOC)	Drawdown (ft)	Temp (° C)	pH	Conduct. (mS/cm)	TDS (ppm)	Dissolv. Oxygen (ppm)	Eh (mV)	PID (ppm)	Turbid. (ntu)	V C
2-26-04				1 gal	11.91		10.5	6.85	0.73	4.6	--	-76		220	
				2 gal	16.7		11.2	6.76	0.73	4.6	3.95	-6		208	
↓	1345			6 gal	27.8		12.7	6.41	0.75	4.7	1.06	-113		520	

Well ID No. _____

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GROUNDWATER DATA FORM

PROJECT INFORMATION

EVENT		Well Development		Groundwater Sampling	✓ Low-Flow Groundwater Sampling
Project Name				Well ID	G109
Project No.				Start Date	1301 2-26-04
Field Personnel	S. Hayter W. Weber			End Date	1317 2-26-04

WELL AND DEVELOPMENT / PURGE INFORMATION

Casing ID	G109	Purging Method	Tube/Pump Intake Depth
Screened Interval		Pump Make, Size, or Type	Pump Rate

DEPTH MEASUREMENTS

	INITIAL Depth	INITIAL Time	FINAL Depth	FINAL Time
Product	--	--	--	--
Groundwater	5.13	1301	5.6	1316
Casing Base				

VOLUME PRODUCTION INFORMATION

Volume Type:		Borehole		Well Casing
Linear Feet of Water in Well	12.9'			
Amount Equal to One Volume	2.1 gal			
Total Volumes Produced				

NOTES: DTS: 8.0' MP: 6.28 gal

PHYSIOCHEMICAL PARAMETERS

Date	Time (24 hour)	Flow Rate ( )	No. of Vol Removed (#)	Volume Purged (gal)	Depth to Water (ft BTOC)	Drawdown (ft)	Temp (° C)	pH	Conduct. (mS/cm)	TDS (ppm)	Dissolv. Oxygen (ppm)	Eh (mV)	PID (ppm)	Turbid. (ntu)	V C
2-26-04	1305		1.2 gal →		7		7.2	6.41	0.38	2.4	4.5	35		230	

Well ID No. _____

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GROUNDWATER DATA FORM

PROJECT INFORMATION

EVENT		Well Development		Groundwater Sampling		Low-Flow Groundwater Sampling

Project Name	Well ID G110
Project No.	Start Date 2/27/04
Field Personnel JKL, WAW	End Date 2/27/04

WELL AND DEVELOPMENT / PURGE INFORMATION

Casing ID	Purging Method	Tube/Pump Intake Depth
Screened Interval	Pump Make, Size, or Type	Pump Rate

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth	Time	Depth	Time
Product				
Groundwater	5.03			
Casing Base				

VOLUME PRODUCTION INFORMATION

Volume Type:		Borehole		Well Casing
Linear Feet of Water in Well	16.9			
Amount Equal to One Volume	2.8			
Total Volumes Produced				

NOTES: DTS: 11.9' MP: 6.3 gal Sampled @ 1445

PHYSIOCHEMICAL PARAMETERS

Date	Time (24 hour)	Flow Rate (__)	No. of Vol Removed (#)	Volume Purged (gal)	Depth to Water (ft BTOC)	Drawdown (ft)	Temp (° C)	pH	Conduct. (mS/cm)	TDS (ppm)	Dissolv. Oxygen (ppm)	ORP Eh (mV)	PID (ppm)	Turbid. (ntu)	V C
2/27	1432			1	8.10		10.21	7.08	0.63	4.0	7.67	90		324	

Well ID No. _____

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GROUNDWATER DATA FORM

PROJECT INFORMATION

EVENT		Well Development		Groundwater Sampling		Low-Flow Groundwater Sampling

Project Name	Well ID G111
Project No.	Start Date
Field Personnel	End Date

WELL AND DEVELOPMENT / PURGE INFORMATION

Casing ID	Purging Method	Tube/Pump Intake Depth
Screened Interval	Pump Make, Size, or Type	Pump Rate

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth	Time	Depth	Time
Product				
Groundwater	6.0			
Casing Base				

VOLUME PRODUCTION INFORMATION

Volume Type:		Borehole		Well Casing
Linear Feet of Water in Well	24.3'			
Amount Equal to One Volume	4.0			
Total Volumes Produced				

NOTES: DTS: 20.3' MP: 11.9 gal

PHYSIOCHEMICAL PARAMETERS

Date	Time (24 hour)	Flow Rate ( )	No. of Vol Removed (#)	Volume Purged (gal)	Depth to Water (ft BTOC)	Drawdown (ft)	Temp (° C)	pH	Conduct. (mS/cm)	TDS (ppm)	Dissolv. Oxygen (ppm)	Eh (mV)	PID (ppm)	Turbid. (ntu)	Vi Cl
2/26/04	1526			1.0	10.5		10.5	7.53	0.10	0.7	4.67	-33		3	
2/26/04	1537			4.0	12.9		13.1	7.53	0.10	0.6	3.34	2		190	

Well ID No. _____

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GROUNDWATER DATA FORM

PROJECT INFORMATION

EVENT		Well Development		Groundwater Sampling		Low-Flow Groundwater Sampling

Project Name	Well ID G112
Project No.	Start Date 4-27-04
Field Personnel JBP/BS/Ka / H Miller	End Date

WELL AND DEVELOPMENT / PURGE INFORMATION

Casing ID	Purging Method	Tube/Pump Intake Depth
Screened Interval	Pump Make, Size, or Type	Pump Rate

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth	Time	Depth	Time
Product				
Groundwater	4.3	923	13.22	945
Casing Base				

VOLUME PRODUCTION INFORMATION

Volume Type:		Borehole		Well Casing
Linear Feet of Water in Well	19.31'			
Amount Equal to One Volume	3.2 gal			
Total Volumes Produced				

NOTES: DTS: 13.6' MP: 9.4 gal

PHYSIOCHEMICAL PARAMETERS

Date	Time (24 hour)	Flow Rate ( )	No. of Vol Removed (#)	Volume Purged (gal)	Depth to Water (ft BTOC)	Drawdown (ft)	Temp (° C)	pH	Conduct. (mS/cm)	TDS (ppm)	Dissolv. Oxygen (ppm)	ORP ~~Eh~~ (mV)	PID (ppm)	Turbid. (ntu)	V C
4-27-04	923			1	7.24		7.1	7.0	2.0		9.69	160		340	
	930			2	10.3		9.0	6.96	2.0		2.01	115		310	
	940			3	12.41		10.4	6.78	2.0		2.026	6		300	

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Well ID No. _____

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GROUNDWATER DATA FORM

PROJECT INFORMATION

EVENT		Well Development		Groundwater Sampling		Low-Flow Groundwater Sampling
Project Name				Well ID	6113 / R113
Project No.				Start Date	2-26-04
Field Personnel				End Date	

WELL AND DEVELOPMENT / PURGE INFORMATION

Casing ID	Purging Method	Tube/Pump Intake Depth
Screened Interval	Pump Make, Size, or Type	Pump Rate

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth	Time	Depth	Time
Product				
Groundwater	1.9			
Casing Base				

VOLUME PRODUCTION INFORMATION

Volume Type:		Borehole		Well Casing
Linear Feet of Water in Well	18.3'			
Amount Equal to One Volume	3.0			
Total Volumes Produced				

NOTES: DTS: 9.8' MP: 8.9

PHYSICOCHEMICAL PARAMETERS

Date	Time (24 hour)	Flow Rate ( )	No. of Vol Removed (#)	Volume Purged (gal)	Depth to Water (ft BTOC)	Drawdown (ft)	Temp (°C)	pH	Conduct. (mS/cm)	TDS (ppm)	Dissolv. Oxygen (ppm)	Eh (mV)	PID (ppm)	Turbid. (ntu)
	1976			1.0	3.1		7.6	6.74	0.39	2.6	4.28	183		180
	1614			4.0	3.0		8.5	6.60	0.39	2.5	3.97	153		390
	1620			6.0	3.2		8.4	6.56	0.37	2.4	2.60	137		280
	1629			8.5	3.3		7.7	6.51	0.35	2.3	2.82	135		64

Well ID No. _____

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GROUNDWATER DATA FORM

PROJECT INFORMATION

EVENT		Well Development		Groundwater Sampling		Low-Flow Groundwater Sampling
Project Name				Well ID	G114
Project No.				Start Date	
Field Personnel				End Date	

WELL AND DEVELOPMENT / PURGE INFORMATION

Casing ID	Purging Method	Tube/Pump Intake Depth
Screened Interval	Pump Make, Size, or Type	Pump Rate

DEPTH MEASUREMENTS

	INITIAL Depth	INITIAL Time	FINAL Depth	FINAL Time
Product				
Groundwater	2.9'		6.21	9:35
Casing Base				

VOLUME PRODUCTION INFORMATION

Volume Type:		Borehole		Well Casing
Linear Feet of Water in Well	16.8'			
Amount Equal to One Volume	2.7 gal			
Total Volumes Produced				

NOTES: DTS: ~~2.9~~ 9.7' MP: 8.2 gal

PHYSICOCHEMICAL PARAMETERS

Date	Time (24 hour)	Flow Rate (___)	No. of Vol Removed (#)	Volume Purged (gal)	Depth to Water (ft BTOC)	Drawdown (ft)	Temp (° C)	pH	Conduct. (mS/cm)	g/L TDS (ppm)	Dissolv. Oxygen (ppm)	Eh (mV)	PID (ppm)	Turbid. (ntu)	V C
2/27/04	9:13			1.0	5.1		5.69	7.77	0.19 S/cm	1.2	6.06	155		22.6	
	9:19			3.0	5.8		7.00	7.70	0.18 S/cm	1.1	4.32	148		25.8	
	9:26			6.0	6.7		7.06	7.63	0.16 S/cm	1.0	4.23	141		42.8	
	9:33			9.0	6.1		6.58	7.58	0.15 S/cm	1.0	4.23	139		60.1	

Well ID No. _____

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GROUNDWATER DATA FORM

PROJECT INFORMATION

EVENT		Well Development		Groundwater Sampling		Low-Flow Groundwater Sampling

Project Name	Well ID G115
Project No.	Start Date
Field Personnel	End Date

WELL AND DEVELOPMENT / PURGE INFORMATION

Casing ID	Purging Method	Tube/Pump Intake Depth
Screened Interval	Pump Make, Size, or Type	Pump Rate

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth	Time	Depth	Time
Product				
Groundwater	5.16			
Casing Base				

VOLUME PRODUCTION INFORMATION

Volume Type:		Borehole		Well Casing
Linear Feet of Water in Well	17.0			
Amount Equal to One Volume	2.8 gal			
Total Volumes Produced				

NOTES: DTS: 12.2' MP: 8.3 Sampled @ 1100

PHYSIOCHEMICAL PARAMETERS

Date	Time (24 hour)	Flow Rate ( )	No. of Vol Removed (#)	Volume Purged (gal)	Depth to Water (ft BTOC)	Drawdown (ft)	Temp (°C)	pH	Conduct. (mS/cm)	TDS (ppm)	Dissolv. Oxygen (ppm)	ORP Eh (mV)	PID (ppm)	Turbid. (ntu)
2/27/04	~~9:13~~ 041			1	5.65		7.30	7.62	0.16	1.0	9.45	146		113.0
	1045			3	5.75		7.68	7.47	0.15	1.0	7.32	148		114.0
	1049 gm			5 gm	5.72		7.72	7.41	0.15	0.9	5.55	148		212.0
	~~1053~~ 1055			~~7~~ 8	5.69		7.57	7.43	0.14	0.9	4.50	147		177.0

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Well ID No. _____

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GROUNDWATER DATA FORM

PROJECT INFORMATION

EVENT		Well Development		Groundwater Sampling		Low-Flow Groundwater Sampling

Project Name	Well ID G116
Project No.	Start Date
Field Personnel	End Date

WELL AND DEVELOPMENT / PURGE INFORMATION

Casing ID	Purging Method	Tube/Pump Intake Depth
Screened Interval	Pump Make, Size, or Type	Pump Rate

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth	Time	Depth	Time
Product				
Groundwater	5.57		9.6	1310
Casing Base				

VOLUME PRODUCTION INFORMATION

Volume Type:		Borehole		Well Casing
Linear Feet of Water in Well	27.4'			
Amount Equal to One Volume	4.5 gal			
Total Volumes Produced				

NOTES: DTS: 13.0' MP: 13.4 gal Collected Duplicate Sample

PHYSIOCHEMICAL PARAMETERS

Date	Time (24 hour)	Flow Rate ( )	No. of Vol Removed (#)	Volume Purged (gal)	Depth to Water (ft BTOC)	Drawdown (ft)	Temp (° C)	pH	Conduct. (mS/cm)	g/L TDS (ppm)	Dissolv. Oxygen (ppm)	Eh (mV)	PID (ppm)	Turbid. (ntu)	V C
2/27/04	1250		0.5		13.5		8.75	7.77	80	0.51	7.71	140		20.1	

Well ID No. _____

Page ____ of ____

Clayto
ENVIRONME
CONSULTA

GROUNDWATER DATA FORM

PROJECT INFORMATION

EVENT		Well Development	X	Groundwater Sampling	Low-Flow Groundwater Sampling
Project Name	Equistar			Well ID	G117
Project No.				Start Date	2/27/04
Field Personnel	JKL, WAW			End Date	2/27/04

WELL AND DEVELOPMENT / PURGE INFORMATION

Casing ID	Purging Method bailer	Tube/Pump Intake Depth
Screened Interval	Pump Make, Size, or Type	Pump Rate

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth	Time	Depth	Time
Product				
Groundwater	6.15	800	14.1	825
Casing Base				

VOLUME PRODUCTION INFORMATION

Volume Type:		Borehole		Well Casing
Linear Feet of Water in Well	26.7			
Amount Equal to One Volume	4.35 gal			
Total Volumes Produced				

NOTES: DTS: 12.9' MP: 13.1 gal

PHYSIOCHEMICAL PARAMETERS

Date	Time (24 hour)	Flow Rate ( )	No. of Vol Removed (#)	Volume Purged (gal)	Depth to Water (ft BTOC)	Drawdown (ft)	Temp (°C)	pH	Conduct. (mS/cm)	TDS (ppm)	Dissolv. Oxygen (ppm)	Eh (mV)	PID (ppm)	Turbid. (ntu)	V C
2/27/04	8:07			1.0	10.15		6.60	8.33	87	0.55	7.14	152		30	

Well ID No. _____

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Clayt
ENVIRONME
CONSULTA

GROUNDWATER DATA FORM

PROJECT INFORMATION

MP: 6.5gal DTW: 17.12 DTS: 20.4' WAS: 3.28

EVENT		Well Development		Groundwater Sampling		Low-Flow Groundwater Sampling
Project Name				Well ID	G118
Project No.				Start Date	2/26/04
Field Personnel	S. Hayter J. Brooke			End Date	2/26/04

WELL AND DEVELOPMENT / PURGE INFORMATION

Casing ID	G118	Purging Method	Bailer
Screened Interval		Pump Make, Size, or Type	
Tube/Pump Intake Depth		Pump Rate	

DEPTH MEASUREMENTS

	INITIAL Depth	INITIAL Time	FINAL Depth	FINAL Time
Product	--	--	--	--
Groundwater	17.12	830	21.3	855
Casing Base				

VOLUME PRODUCTION INFORMATION

Volume Type:	gal	Borehole	Well Casing
Linear Feet of Water in Well	24'		
Amount Equal to One Volume	4.0 gal		
Total Volumes Produced	4 gal		

NOTES:

PHYSICOCHEMICAL PARAMETERS

Date	Time (24 hour)	Flow Rate ( )	No. of Vol Removed (#)	Volume Purged (gal)	Depth to Water (ft BTOC)	Drawdown (ft)	Temp (° C)	pH	Conduct. ~~(mS/cm)~~ µS/cm	TDS ~~(ppm)~~ g/L	Dissolv. Oxygen ~~(ppm)~~ mg/L	Eh (mV)	PID (ppm)	Turbid. (ntu)
2-26-04	835			1	12.15		10.6	7.25	78	0.49	3.92			81
2-26-04	855			4	21.3		11.2	7.58	~~10~~ 77		4.89	85		130

Well ID No. _____

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1.59 × 3 = 4.77

13.24 − 3.70 = 9.54

1.59 × 6 = 9.54

Clayton ENVIRONMENTAL CONSULTANTS

GROUNDWATER DATA FORM

PROJECT INFORMATION

EVENT		Well Development	X	Groundwater Sampling	Low-Flow Groundwater Sampling
Project Name	Equistar			Well ID	G126 ~~G126~~ MW08S
Project No.				Start Date	2/27/04
Field Personnel	JKL, WAM			End Date	2/27/04

WELL AND DEVELOPMENT / PURGE INFORMATION

Casing ID		Purging Method	bailer
Screened Interval		Pump Make, Size, or Type	
Tube/Pump Intake Depth		Pump Rate	

DEPTH MEASUREMENTS

	INITIAL Depth	INITIAL Time	FINAL Depth	FINAL Time
Product				
Groundwater	3.70			
Casing Base TD	13.24			

VOLUME PRODUCTION INFORMATION

Volume Type:		Borehole		Well Casing
Linear Feet of Water in Well	9.54			
Amount Equal to One Volume	1.59			
Total Volumes Produced				

NOTES: DTS: 3.24 MP: 4.77 Sampled @ 1200 TDW = 4.1 ft btoc

PHYSIOCHEMICAL PARAMETERS

Date	Time (24 hour)	Flow Rate ( )	No. of Vol Removed (#)	Volume Purged (gal)	Depth to Water (ft BTOC)	Drawdown (ft)	Temp (°C)	pH	Conduct. (mS/cm)	TDS (ppm)	Dissolv. Oxygen (ppm)	Eh (mV)	PID (ppm)	Turbid. (ntu)
2/27/04	1145			1	6.54		9.52	7.96	54	0.35	9.46	140		608
	1149			2	7.00		9.50	7.68	61	0.39	7.23	143		580

Well ID No. _____

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6
17.05
4.81
12.24

2.04
6 | 12.24
12
02
0
24

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GROUNDWATER DATA FORM

PROJECT INFORMATION

EVENT		Well Development		Groundwater Sampling	Low-Flow Groundwater Sampling
Project Name				Well ID	4127 ~~G127~~ MW09S
Project No.				Start Date	2/27/04
Field Personnel				End Date	2/27/04

WELL AND DEVELOPMENT / PURGE INFORMATION

Casing ID	Purging Method	Tube/Pump Intake Depth
Screened Interval	Pump Make, Size, or Type	Pump Rate

DEPTH MEASUREMENTS

	INITIAL		FINAL	
	Depth	Time	Depth	Time
Product				
Groundwater	4.81			
Casing Base TD	17.05			

VOLUME PRODUCTION INFORMATION

Volume Type:		Borehole		Well Casing
Linear Feet of Water in Well	12.24			
Amount Equal to One Volume	2.04			
Total Volumes Produced				

NOTES: DTS: 7.05 ft MP: 6.24 gal Collected MS/MSA

PHYSIOOCHEMICAL PARAMETERS

Date	Time (24 hour)	Flow Rate ( )	No. of Vol Removed (#)	Volume Purged (gal)	Depth to Water (ft BTOC)	Drawdown (ft)	Temp (° C)	pH	Conduct. (mS/cm)	TDS (ppm)	Dissolv. Oxygen (ppm)	Eh (mV)	PID (ppm)	Turbid. (ntu)	V C
2/27/04	1314			1.0	5.0		6.89	7.90	82	520	5.00	143		220	
	1319			3.0	5.2		6.43	7.78	80	510	3.59	147		249	
	1324			5.0	5.35		6.83	7.69	79	510	3.83	148		334	

Well ID No. _____

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APPENDIX B

APPENDIX B

Chain-of-Custody Forms

CompuChem
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CHAIN OF CUSTODY

501 Madison Ave.
Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Page ____ of ____

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

mpany Name: ENVIRON
ldress: 740 Waukegan Rd st 401
ty: Deerfield State: IL Zip: 60015
oject Contact: Scott Hastor
hone #: 847-444-9200
ampler's Name: Joel Brieske

Project Information

Project Name: Millenium
Sampling Location: Tuscola, IL
Turnaround time: Standard
Batch QC or Project Specific? If Specific, which Sample ID?
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Requested Analysis (include method and bottle type)

CompuChem No. (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	NHO3	H2SO4	MEOH	Other HNO3	Chloride, Sulfate	Ammonia (N)	*METALS	TDS	Total Organic Halogens						pH / Sample Info (Lab Use)
	G101022604	2-26-04	1158	GW	6				1		1	X	X	X	X	X						
	G102022604	2-26-04	1100	GW	6				1		1											
	G103022604	2-26-04	1015	GW	6				1		1											
	G105022604	2-26-04	1500	GW	6				1		1											
	G108022604	2-26-04	1355	GW	6				1		1											
	G109022604	2-26-04	1317	GW	6				1		1											
	G111022604	2-26-04	1545	GW	5				1		1											
	G117022604	2-26-04	1630	GW	5				1		1											
	G118022604	2-26-04	905	GW	6				1		1											
	G106022704	2-27-04	910	GW	6				1		1											
	G107022704	2-27-04	810	GW	6				1		1											

Matrices
GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Lab Use Only

Sample Unpacked By:
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments
*As, Ba, B, Cd, Cr, Cu, Fe, Pb, Mn, Hg, Ni

Sample Custody

Relinquished by: Joel Brieske
Date/Time: 3-1-04 1300
Received by: Fedex
Date/Time: 3-1-04
Relinquished by:
Date/Time:
Received by:
Date/Time:
Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: °C

White & Yellow copy to lab • Pink copy for customer

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CHAIN OF CUSTODY

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Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Page ____ of ____

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: ENVIRON
Address: 740 Waukegan Rd Ste 401
City: Deerfield State: IL Zip: 60015
Project Contact: Scott Hayter
Phone #: 847-444-9200
Sampler's Name: Joel Briere

Project Information

Project Name: Millennium
Sampling Location: Tuscola, IL
Turnaround time: standard
Batch QC or Project Specific? If Specific, which Sample ID? batch
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Requested Analysis (include method and bottle type)

Matrices
GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

Corrected date is 02-27-04 J.B.

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	NHO3	H2SO4	MEOH	Other HNO3	Chloride, Sulfate	Ammonia (N)	* Metals	TDS	Total organic Halides	pH / Sample Info (Lab Use)
	6110022704	~~2-27-04~~	1445	GW	5				1		1	X	X	X	X	X	
	6112022704	02-27-04	942		5				1		1						
	6114022704	2-27-04	935		6				1		1						
	6115022704	2-27-04	1100		6				1		1						
	6116022704	2-27-04	1310		5				1		1						
	6117022704	2-27-04	825		6				1		1						
	6126022704	2-27-04	1200		5				1		1						
	~~6127022704~~ 6127022704	2-27-04	1330		5				1		1						
	~~6127022704MS~~	~~2-27-04~~	~~1330~~		~~4~~				~~1~~		~~1~~						
	~~6127022704MSD~~	~~2-27-04~~	~~1330~~		~~4~~				~~1~~		~~1~~						
	6116022704D	2-27-04	1310		5				1		1						

For Lab Use Only

Sample Unpacked By:
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

* As, Ba, B, Cd, Cr, Cu, Fe, Pb, Mn, Hg, Ni
6127022704 has enough bottles for MS/MSD

Shipping Custody

Relinquished by: Joel Briere	Date/Time: 3-1-04 1300	Received by: Fed Ex	Date/Time: 3-1-04
Relinquished by:	Date/Time:	Received by:	Date/Time:
Subcontact? Y or N If yes, where?	Custody Seal(s) intact? Y or N	On Ice? Y or N	Cooler Temp: °C

White & Yellow copy to lab • Pink copy for customer

Samples stored 60 days after date report mailed at no extra charge.

CHAIN OF CUSTODY

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Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

Page ____ of ____

Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

mpany Name: ENVIRON
ldress: 740 Waukegan Rd St. 401
ty: Deerfield State: IL Zip: 60015
oject Contact: Scott Hayter
one #: 847-444-9200
mpler's Name: J. Brieske

Project Information

Project Name: Millenium
Sampling Location: Tuscola, IL
Turnaround time: standard
Batch QC or Project Specific? If Specific, which Sample ID?
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Requested Analysis (include method and bottle type)

CompuChem No (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	NHO3	H2SO4	MEOH	Other HNO3	Chloride, Sulfate	Ammonia (N)	*Metals	TDS	Total Organic Halogens	VOC								
	FB022704	2-27-04	—	FB	4				1		1	X	X	X	X	X									
	RB022704	2-27-04	—	RB	4				1		1	X	X	X	X	X									
	MW035022604	2-26-04	1525	GW	3	3											X								
	~~MW035MS022604~~	~~2-26-04~~	~~1530~~	~~GW~~	~~3~~	~~3~~											X								
	~~MW035MSD022604~~	~~2-26-04~~	~~1535~~	~~GW~~	~~3~~	~~3~~											X								
	MW10022604	2-26-04	1315	GW	3	3											X								
	MW12 022604	2-26-04	1630	GW	3	3											X								
	MW13 022604	2-26-04	1450	GW	3	3											X								
	MW14 022604	2-26-04	1425	GW	3	3											X								
	MW15 022604	2-26-04	1345	GW	3	3											X								
	MW15 022604D	2-26-04	1348	GW	3	3											X								

Matrices

GW - Ground water
WW - Waste water
SW - Surface water
SO - Soil/Sediment
TB - Trip Blank
RI - Rinsate
WP - Wipe
O - Other

pH / Sample Info (Lab Use)

Lab Use Only

Sample Unpacked By:
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

*As, Ba, B, Cd, Cr, Co, Fe, Pb, Mn, Hg, Ni
MW035022604 has enough bottles for Ms/Msd

Sample Custody

Relinquished by: Joel Brieske — Date/Time: 3-1-04 1300 — Received by: Fed Ex — Date/Time: 3-1-04
Relinquished by: — Date/Time: — Received by: — Date/Time:
Subcontact? Y or N If yes, where? — Custody Seal(s) intact? Y or N — On Ice? Y or N — Cooler Temp: °C

White & Yellow copy to lab • Pink copy for customer

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CHAIN OF CUSTODY

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Cary, NC 27513
Phone: 919-379-4100 Fax 919-379-4040

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: ENVIRON
Address: 740 Waukegan Rd Ste 401
City: Deerfield State: WI Zip: 53405
Project Contact: Scott Harter
Phone #: 847-444-9200
Sampler's Name: J. Briere

Project Information

Project Name: Millennium
Sampling Location: Tiscola, IL
Turnaround time: standard
Batch QC or Project Specific? If Specific, which Sample ID?
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Requested Analysis (include method and bottle type): VOC

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No. (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	NHO3	H2SO4	MEOH	Other	VOC	pH / Sample Info (Lab Use)
	MW16022604	2-26-04	1600	GW	3	3						X	
	TB022604	—	—	TB	2							X	
	Temp Blank	—	—	—	1								

Lab Use Only

Sample Unpacked By:
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

Sample Custody

Relinquished by: Joel Briere — Date/Time: 3-1-04 1300 — Received by: FedEx — Date/Time: 3-1-04
Relinquished by: — Date/Time: — Received by: — Date/Time:
Subcontact? Y or N If yes, where? — Custody Seal(s) intact? Y or N — On Ice? Y or N — Cooler Temp: °C

White & Yellow copy to lab • Pink copy for customer

Samples stored 60 days after date report mailed at no extra charge.

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CHAIN OF CUSTODY

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Courier
Airbill No.
Sampling Complete? Y or N

Client/Reporting Information

Company Name: ENVIRON
Address: 740 Waukegan Rd
Deerfield State: IL Zip: 60015
Project Contact: Scott Hayter
Phone #: 847-444-9200
Sampler's Name: Joel Briske

Project Information

Project Name: Millennium
Sampling Location: Tuscola, IL
Turnaround time: standard
Batch QC or Project Specific? If Specific, which Sample ID?
Are aqueous samples field filtered for metals? Y or N
Are high concentrations expected? Y or N? If yes, which ID(s)?

Requested Analysis (include method and bottle type)

Matrices: GW - Ground water; WW - Waste water; SW - Surface water; SO - Soil/Sediment; TB - Trip Blank; RI - Rinsate; WP - Wipe; O - Other

CompuChem No. (Lab Use)	Field ID	Collection Date	Collection Time	Matrix	# of bottles	HCl	NaOH	NHO3	H2SO4	MEOH	Other	*TDS	*Ammonia (N)	pH / Sample Info (Lab Use)
	G111030304	3-3-04	1234	GW	2								X	
	G103030304	↓	1250	↓	2							X		
	G115030304	↓	1303	↓	2							X		
	G112030304	↓	1323	↓	2							X		

Lab Use Only

Sample Unpacked By:
Sample Order Entry By:
Samples Received in Good Condition? Y or N
If no, explain:

Cyanide samples checked for sulfide & chlorine? Y or NA
625 & Phenol samples checked for chlorine? Y or NA
608 samples checked for pH between 5.0-9.0? Y or NA

Comments

*Please filter samples

Relinquish Chain

Relinquished by: Joel Briske	Date/Time: 930 3-4-04	Received by: Fedex	Date/Time: 3-4-04
Relinquished by:	Date/Time:	Received by:	Date/Time:

Subcontact? Y or N If yes, where?
Custody Seal(s) intact? Y or N
On Ice? Y or N
Cooler Temp: °C

White & Yellow copy to lab • Pink copy for customer

Samples stored 60 days after date report mailed at no extra charge.