SPARTON

SPARTON TECHNOLOGY

June 8, 1990

JUN 1990
RECEIVED
HAZARDOUS WASTE
PROGRAM

Technical Section (6H-CX)
RCRA Enforcement Branch
Hazardous Waste Management Division
U. S. Environmental Protection Agency
1445 Ross Avenue
Dallas, Texas 75202-2733

Attention: Mr. Guy L. Tidmore, Chief

Reference: Monthly Report
Sparton Technology, Inc.

Gentlemen:

This is the monthly progress report for Sparton Technology, Inc.'s Coors Road Facility located in Albuquerque, New Mexico, as required in Section IV.C of the Consent Order. This report summarizes activities during the month of May 1990.

1. The bi-weekly water level measurements taken to date, as required in Section IV.A.1 of the Consent Order, are included in Attachment 1.

2. The air stripper removal efficiencies continue to average over 99 percent for the measured indicator parameters. During the month 57,900 gallons of recovered groundwater were treated bringing the total volume treated to date to 1,019,200 gallons. Air stripper performance data is included in Attachment 2.

3. On May 15, we received permission from the county to install wells at several locations along the axis of the plume. The following week we received an excavation permit to install the first of these wells on Arrowhead Avenue approximately 1/2-mile ENE of the Sparton site. Drilling of this well (MW-52) began May 29 and should be completed the first week in June. A groundwater sample from this well will be submitted to a local laboratory for TCE analysis. We have received excavation permits for locations on either side of MW-52.

4. We have received the analytical results from the 2nd quarter routine groundwater monitoring under the State program. These results are included in Attachment 3.

Sparton Technology, Inc. □ 4901 Rockaway Blvd., SE □ Rio Rancho, NM 87124 □ P.O. Box 1784 □ Albuquerque, NM 87103 □ (505) 892-5300 □ TWX 910-989-1657

This concludes our progress report for the month of May. Additional details may be found in the weekly updates furnished to EPA during the month. If you have any questions, please contact the undersigned.

Very truly yours,

SPARTON TECHNOLOGY, INC.

Richard D. Mico
Vice President/General Manager

RDM:ejg
SPRT01.ltr

Attachments (as stated)

cc: NMEID
B. Thompson
J. DeWitt
J. Mabrey
G. Richardson
V. Samala

002000

ATTACHMENT 1

Bi-Weekly Water Level Measurements

SPARTON TECHNOLOGY, INC.
COORS ROAD FACILITY
BIWEEKLY WATER LEVEL MEASUREMENTS

	Water Level Elevation - Feet Above MSL														
DATE	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	MW-21	MW-22	MW-33	MW-34	MW-35	MW-36	MW-37
02-23-89	4978.48	4975.57	4975.23	4976.51	4974.24	4976.45	4980.07	4980.08	4979.76	4979.23	4975.07	---	---	---	---
03-08-89	4978.40	4975.36	4975.15	4976.35	4974.15	4976.36	4979.87	4980.08	4979.64	4979.14	4974.90	---	---	---	---
03-21-89	4978.81	4975.65	4975.40	4976.76	4974.07	4976.36	4979.82	4980.08	4979.68	4979.35	4975.15	---	---	---	---
04-06-89	4979.15	4975.11	4975.65	4977.18	4974.24	4976.45	4980.10	4980.16	4979.68	4979.64	4975.40	---	---	---	---
04-21-89	4979.31	4975.95	4975.73	4977.18	4974.32	4976.45	4980.07	4980.16	4979.84	4979.77	4975.40	---	---	---	---
05-03-89	4979.40	4976.03	4975.82	4977.18	4974.49	4976.53	4980.07	4980.24	4979.84	4979.81	4975.48	---	---	---	---
05-17-89	4979.65	4976.15	4975.90	4977.26	4974.32	4976.53	4980.10	4980.33	4979.93	4979.98	4975.57	---	---	---	---
06-01-89	4979.73	4976.24	4975.90	4977.43	4974.49	4976.54	4980.07	4980.41	4980.01	4979.98	4975.48	---	---	---	---
06-13-89	4979.90	4976.40	4976.07	4977.64	4974.55	4976.70	4980.32	4980.49	4980.01	4980.06	4975.65	---	---	---	---
06-30-89	4980.06	4976.49	4976.15	4977.60	4974.53	4976.53	4980.16	4980.49	4979.93	4980.19	4975.57	---	---	---	---
07-12-89	4980.40	4976.82	4976.40	4978.01	4974.82	4976.78	4980.57	4980.74	4980.26	4980.48	4975.78	---	---	---	---
07-28-89	4980.40	4976.20	4976.40	4977.93	4974.82	4976.78	4980.82	4980.87	4980.18	4980.56	4975.82	---	---	---	---
08-10-89	4980.06	4976.40	4976.07	4977.60	4974.53	4976.74	4980.68	4980.83	4980.26	4980.39	4975.73	---	---	---	---
08-24-89	4980.48	4976.90	4976.65	4978.18	4974.90	4976.99	4980.74	4980.91	4980.30	4980.30	4976.04	---	---	---	---
09-07-89	4980.65	4977.07	4976.73	4978.43	4975.07	4977.11	4980.82	4981.08	4980.30	4980.89	4976.19	---	---	---	---
09-21-89	4980.90	4977.24	4976.90	4978.46	4975.16	4977.16	4980.91	4981.16	4980.47	4981.06	4976.23	---	---	---	---
10-05-89	4980.90	4977.24	4976.94	4978.47	4975.15	4977.03	4981.07	4981.24	4980.49	4981.06	4976.32	---	---	---	---
10-20-89	4980.65	4976.82	4976.65	4978.01	4974.90	4977.07	4980.91	4981.08	4980.34	4980.81	4975.69	---	---	---	---
11-03-89	4980.40	4977.02	4976.40	4978.01	4974.90	4977.27	4980.92	4980.99	4980.58	4980.59	4975.89	---	---	---	---
11-17-89	4980.15	4977.02	4976.28	4977.60	4974.82	4977.52	4980.92	4980.87	4980.58	4980.38	4975.98	4976.98	4974.91	4984.83	4972.45
12-01-89	4979.81	4976.56	4975.90	4977.26	4974.40	4977.10	4980.83	4980.66	4980.50	4980.01	4975.81	4976.60	4974.65	4973.50	4972.35
12-15-89	4979.56	4976.27	4975.82	4977.10	4974.15	4977.10	4980.75	4980.49	4980.46	4979.88	4975.56	4976.28	4974.46	4973.35	4972.30
12-28-89	4979.31	4976.10	4975.61	4976.85	4974.15	4976.89	4980.42	4980.41	4980.33	4979.72	4975.48	4976.03	4974.21	4973.29	4972.23

[---------- Water Level Elevation - Feet Above MSL ----------]

DATE	MW-7	MW-9	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	MW-21	MW-22	MW-33	MW-34	MW-35	MW-36	MW-37
01-09-90	4979.15	4975.85	4975.44	4976.68	4973.99	4976.85	4980.33	4980.33	4980.29	4979.55	4975.31	4975.89	4974.19	4973.12	4972.12
01-24-90	4978.98	4975.85	4975.48	4976.43	4973.90	4976.68	4980.25	4980.16	4980.08	4979.55	4975.14	4975.84	4974.04	4973.01	4972.10
02-07-90	4978.81	4975.77	4975.40	4976.35	4973.82	4976.52	4980.00	4980.12	4980.08	4979.38	4975.06	4975.60	4974.00	4972.92	4971.28
02-21-90	4978.81	4975.52	4975.32	4976.35	4973.65	4976.35	4979.92	4980.08	4980.00	4979.13	4975.06	4975.52	4973.88	4972.94	4971.99
03-07-90	4978.81	4975.43	4975.07	4976.26	4973.65	4976.18	4980.00	4980.91	4979.75	4979.13	4975.06	4975.90	4973.97	4972.92	4972.16
03-21-90	4978.81	4975.43	4975.07	4976.26	4973.65	4975.93	4979.92	4980.08	4979.75	4979.13	4975.06	4975.67	4973.97	4973.07	4972.13
04-05-90	4979.23	4976.10	4975.65	4976.76	4974.07	4976.27	4980.00	4980.08	4979.75	4979.55	4975.48	4975.77	4973.00	4973.20	4972.26
04-18-90	4979.48	4976.27	4975.82	4977.10	4974.07	4976.27	4980.00	4980.16	4979.83	4979.55	4975.48	4976.27	4973.75	4972.55	4972.28
05-02-90	4979.65	4976.27	4975.90	4977.18	4974.15	4976.60	4980.08	4980.41	4980.00	4979.88	4975.81	4976.74	4974.60	4973.40	4972.41
05-16-90	4979.65	4976.27	4975.90	4977.18	4974.15	4976.35	4980.00	4980.24	4980.08	4979.63	4975.48	4976.02	4974.52	4973.32	4972.35
05-30-90	4979.65	4976.27	4975.90	4977.18	4974.07	4976.35	4980.00	4980.41	4980.08	4979.88	4975.56	4976.76	4974.60	4973.36	4972.31

ATTACHMENT 2

Air Stripper Performance Data

SPARTON TECHNOLOGY, INC.
COORS ROAD FACILITY
ALBUQUERQUE, NEW MEXICO

GROUNDWATER RECOVERY SYSTEM
VOLUME TREATED
MONTH OF MAY 1990

DATE	BEGIN READING	END READING	GALLONS	CUMULATIVE GALLONS
				961300
05-01-90	156200	158300	2100	963400
05-02-90	158300	160200	1900	965300
05-03-90	160200	161900	1700	967000
05-04-90	161900	167500	5600	972600
05-07-90	167500	169200	1700	974300
05-08-90	169200	171300	2100	976400
05-09-90	171300	173000	1700	978100
05-10-90	173000	174500	1500	979600
05-11-90	174500	180500	6000	985600
05-14-90	180500	183100	2600	988200
05-15-90	183100	185500	2400	990600
05-16-90	185500	187300	1800	992400
05-17-90	187300	189900	2600	995000
05-18-90	189900	195500	5600	1000600
05-21-90	195500	197200	1700	1002300
05-22-90	197200	198900	1700	1004000
05-23-90	198900	200800	1900	1005900
05-24-90	200800	202200	1400	1007300
05-25-90	202200	209100	6900	1014200
05-29-90	209100	210700	1600	1015800
05-30-90	210700	212400	1700	1017500
05-31-90	212400	214100	1700	1019200
			57,900	

AIR STRIPPER PERFORMANCE

Sparton Technology, Inc.
Albuquerque, New Mexico

(all concentrations in micrograms per liter (ppb))

DATE SAMPLED	1,1-Dichloroethylene INFLUENT	1,1-Dichloroethylene EFFLUENT	1,1-Dichloroethylene PERCENT REDUCTION	Methylene Chloride INFLUENT	Methylene Chloride EFFLUENT	Methylene Chloride PERCENT REDUCTION	1,1,1-Trichloroethane INFLUENT	1,1,1-Trichloroethane EFFLUENT	1,1,1-Trichloroethane PERCENT REDUCTION	Trichloroethylene INFLUENT	Trichloroethylene EFFLUENT	Trichloroethylene PERCENT REDUCTION
12/12/88	21	0.32	98.5	293	5.4	98.2	95	1.9	98.0	328	6.3	98.1
12/14/88	170	1.1	99.4	2,230	26.5	98.8	1,090	9.7	99.1	2,490	22.4	99.1
12/19/88	87	0.4	99.5	1,320	13.6	99.0	862	6.0	99.3	2,200	14.8	99.3
12/27/88	89	0.5	99.4	1,250	2.4	99.8	648	3.3	99.5	1,300	7.2	99.4
01/06/89	64	0.2	99.7	581	3.3	99.4	340	1.7	99.5	712	4.1	99.4
01/23/89	82	0.2	99.8	545	7.4	98.6	571	2.6	99.5	1,220	7.5	99.4
02/02/89	83	0.3	99.6	514	0.1	100.0	389	2.2	99.4	1,550	8.6	99.4
03/06/89	107	1.5	98.6	38	0.4	98.9	708	11.0	98.4	1,300	21.0	98.4
04/03/89	79	1	98.7	87	1	98.9	371	1	99.7	880	1.5	99.8
05/01/89	94	1	98.9	14	1	92.9	243	1	99.6	632	1	99.8
06/05/89	28	1	96.4	148	1	99.3	198	1	99.5	685	1	99.9
07/05/89	20	0.1	99.5	2.4	0.1	95.8	154	0.1	99.9	452	0.14	100.0
08/07/89	27	0.1	99.6	2.4	0.1	95.8	152	0.18	99.9	477	0.19	100.0
09/05/89	53	0.1	99.8	8.5	0.1	98.8	310	0.1	100.0	785	0.2	100.0
10/02/89	62	0.1	99.8	2.6	0.1	96.2	286	0.1	100.0	905	0.1	100.0
11/06/89	20.9	0.1	99.5	140	0.26	99.8	87.5	0.1	99.9	392	0.25	99.9
12/04/89	23.0	0.1	99.6	131	0.2	99.8	71	0.1	99.9	378	0.4	99.9
01/08/90	19.7	0.1	99.5	140	0.41	99.7	90.3	0.18	99.8	359	0.91	99.7
02/05/90	34.0	0.1	99.7	44	0.22	99.5	250	0.47	99.8	670	1.8	99.7
03/05/90	45.0	0.1	99.8	35	0.2	99.4	240	0.19	99.9	780	0.91	99.9
04/02/90	64.0	0.1	99.8	10	0.4	96.0	310	0.1	100.0	1300	0.32	100.0
05/07/90	43.0	0.1	99.8	8.7	0.1	98.9	190	0.1	99.9	720	0.18	100.0
avg	60	0.4	99.3	343	2.9	99.1	348	2.0	99.4	933	4.6	99.5

002006

ATTACHMENT 3

Routine Groundwater Monitoring
2nd Quarter 1990

Rocky Mountain
Analytical Laboratory

Enseco

April 23, 1990

Ven Samala
Sparton Technology Inc.
9621 Coors Rd. NW
Albuquerque, NM 87114

Dear Mr. Samala:

Enclosed is the report for the three aqueous samples received at Rocky Mountain Analytical Laboratory on April 3, 1990.

If you have any questions, the Program Administrator assigned to this project is Joel Holtz.

Sincerely,

Ramona Power

Ramona Power
Data Control

Enclosures

cc: Joel Holtz, PA

RMAL #008933

002008

Enseco Incorporated
4955 Yarrow Street
Arvada, Colorado 80002
303/421-6611 Fax: 303/431-7171

Discussion

This report contains results and supporting quality control and sample identification information associated with analyses performed on this project. The results and supporting information are contained in tables following this section, arranged in the following order:

- Sample Description Information
- Analytical Test Requests
- Analytical Results
- Quality Control Report
- Data Quality Assessment

Analyses were performed in accordance with EPA methods and with Enseco's current Quality Assurance Program Plan for Environmental Chemical Monitoring. The specific analytical methods used are presented with each result. The first four sections below describes the format, content, and organization for the four corresponding separate components of this report. The fifth section provides an overall data quality assessment of the results.

Sample Description Information

The Sample Description Information lists all the samples received in this project together with the internal laboratory identification number assigned for each sample. Each project received at Enseco - RMAL is assigned a unique six digit number. Samples within the project are numbered sequentially. The laboratory identification number is a combination of the six digit project code and the sample sequence number.

Also given in the Sample Description Information is the Sample Type (matrix), Date of Sampling (if known) and Date of Receipt at the laboratory.

Analytical Test Requests

The Analytical Test Requests lists the analyses that were performed on each sample. The Custom Test column indicates where tests have been modified to conform to the specific requirements of this project.

Analytical Results

The analytical results for this project are presented in data tables. Each data table includes sample identification information, and where available and appropriate, dates sampled, received, authorized, prepared, and analyzed.

Data sheets contain a listing of the parameters measured in each test, the analytical results, the analytical method, and the Enseco reporting limit. Reporting limits are adjusted to reflect dilution of the sample, when appropriate. Solid and waste samples are reported on an "as received" basis, i.e. no correction is made for moisture content.

Enseco-RMAL is no longer routinely blank-correcting analytical data. Uncorrected analytical results are reported, along with associated blank results, for all organic and metals analyses. Analytical results and blank results are reported for conventional inorganic parameters as specified in the method. This policy is described in detail in the Enseco Incorporated Quality Assurance Program Plan for Environmental Chemical Monitoring, Revision 3.3, April, 1989.

Quality Control Reports

As documented in more detail in Enseco's QAPP, various internal quality control checks are performed to assure that the laboratory was in control during the time that samples on this project were analyzed. The QC checks include analysis of method blanks, duplicate control samples (DCS), and single control samples (SCS). Results from these analyses are presented along with the control limits.

Method Blank Results: A method blank is a laboratory generated sample used to assess the degree to which laboratory operations and procedures cause false positive analytical results.

Duplicate Control Samples (DCS): Each DCS consists of a standard control matrix that is spiked with a group of target analytes representative of the method analytes. One Duplicate Control Sample is prepared for every twenty (20) samples.

Single Control Samples (SCS): An SCS is a spiked sample analyzed with each batch of samples.

Accuracy for DCS and SCS is measured by Percent Recovery.

$$\% \text{ Recovery} = \frac{\text{Measured Concentration}}{\text{Actual Concentration}} \times 100$$

Precision for DCS is measured by Relative Percent Difference (RPD).

$$\text{RPD} = \frac{|\text{Measured Concentration DCS1} - \text{Measured Concentration DCS2}|}{(\text{Measured Concentration DCS1} + \text{Measured Concentration DCS2})/2} \times 100$$

Data Quality Assessment

The results contained in this report were reviewed relative to data acceptance criteria as specified in Enseco's Quality Assurance Project Plan for completeness, precision, accuracy, representativeness and defensibility of the data. Unless otherwise stated below, no quality control problems or technical difficulties were encountered.

All GC/MS analyses were performed to achieve the lowest possible reporting limit within the constraints of the method. Some samples required dilutions to achieve linearity for a specific target compound. The reporting limits for these samples are therefore proportionate to the dilution required.

Enseco
A CORNING Company

SAMPLE DESCRIPTION INFORMATION
for
Sparton Technology Inc.

Lab ID	Client ID	Matrix	Sampled Date	Sampled Time	Received Date
008933-0001-SA	MW-22	AQUEOUS	02 APR 90	08:45	03 APR 90
008933-0002-SA	MW-16	AQUEOUS	02 APR 90	09:40	03 APR 90
008933-0003-SA	MW-21	AQUEOUS	02 APR 90	11:03	03 APR 90

Enseco
A CORNING Company

ANALYTICAL TEST REQUESTS
for
Sparton Technology Inc.

Lab ID: 008933	Group Code	Analysis Description	Custom Test?
0001 - 0003	A	pH	N
		Total Organic Carbon (TOC)	N
		Total Organic Halogen (TOX)	N
		Specific Conductance	N
		Chloride, Ion Chromatography	N
		Nitrate, as Nitrogen	N
		Sulfate, Ion Chromatography	N
		Total Kjeldahl Nitrogen (TKN)	N
		Chromium III Calculation	N
		Chromium VI (Total)	N
		ICP Metals (Total)	Y
		Prep - Total Metals, ICP	N
		Appendix IX Volatile Organics	N
		Prep-Volatile Organics by GC/MS	N

Enseco
A CORNING Company

Appendix IX Volatile Organics

Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-22
Lab ID: 008933-0001-SA Enseco ID: 1070748
Matrix: AQUEOUS Sampled: 02 APR 90 Received: 03 APR 90
Authorized: 03 APR 90 Prepared: 04 APR 90 Analyzed: 08 APR 90

Parameter	Result	Units	Reporting Limit
Acetone	ND	ug/L	25
Acetonitrile	ND	ug/L	250
Acrolein	ND	ug/L	250
Acrylonitrile	ND	ug/L	250
Allyl chloride	ND	ug/L	12
Benzene	ND	ug/L	12
Bromodichloromethane	ND	ug/L	12
Bromoform	ND	ug/L	12
Bromomethane	ND	ug/L	25
Carbon disulfide	ND	ug/L	12
Carbon tetrachloride	ND	ug/L	12
Chlorobenzene	ND	ug/L	12
Chloroprene	ND	ug/L	12
Chloroethane	ND	ug/L	25
Chlorodibromomethane	ND	ug/L	12
Chloroform	ND	ug/L	12
Chloromethane	ND	ug/L	25
DBCP (1,2-Dibromo-3-chloropropane)	ND	ug/L	12
EDB (1,2-Dibromoethane)	ND	ug/L	12
Dibromomethane	ND	ug/L	12
trans-1,4-Dichloro-2-butene	ND	ug/L	12
Dichlorodifluoromethane	ND	ug/L	25
1,1-Dichloroethane	ND	ug/L	12
1,2-Dichloroethane	ND	ug/L	12
trans-1,2-Dichloroethene	ND	ug/L	12
1,1-Dichloroethene	40	ug/L	12
Dichloromethane	ND	ug/L	12
1,2-Dichloropropane	ND	ug/L	12
cis-1,3-Dichloropropene	ND	ug/L	12
trans-1,3-Dichloropropene	ND	ug/L	12
1,4-Dioxane	ND	ug/L	250
Ethylbenzene	ND	ug/L	12
Ethyl cyanide	ND	ug/L	12
2-Hexanone	ND	ug/L	25
Iodomethane	ND	ug/L	12
Isobutyl alcohol	ND	ug/L	250
Methacrylonitrile	ND	ug/L	12
2-Butanone (MEK)	ND	ug/L	25
4-Methyl-2-pentanone	ND	ug/L	25

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Cesar Rojas Approved By: Jeff Lowry

Enseco
A CORNING Company

Appendix IX Volatile Organics (CONT.)

Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-22
Lab ID: 008933-0001-SA Enseco ID: 1070748
Matrix: AQUEOUS Sampled: 02 APR 90 Received: 03 APR 90
Authorized: 03 APR 90 Prepared: 04 APR 90 Analyzed: 08 APR 90

Parameter	Result	Units	Reporting Limit
Styrene	ND	ug/L	12
1,1,1,2-Tetrachloroethane	ND	ug/L	12
1,1,2,2-Tetrachloroethane	ND	ug/L	12
Tetrachloroethene	ND	ug/L	12
Toluene	ND	ug/L	12
1,1,1-Trichloroethane	210	ug/L	12
1,1,2-Trichloroethane	ND	ug/L	12
Trichloroethene	130	ug/L	12
Trichlorofluoromethane	ND	ug/L	12
1,2,3-Trichloropropane	ND	ug/L	12
Vinyl acetate	ND	ug/L	25
Vinyl chloride	ND	ug/L	25
Xylenes (total)	ND	ug/L	12
Toluene-d8	98	%	--
4-Bromofluorobenzene	93	%	--
1,2-Dichloroethane-d4	97	%	--

ND = Not detected
NA = Not applicable

Reported By: Cesar Rojas Approved By: Jeff Lowry

Enseco
A CORNING Company

Appendix IX Volatile Organics

Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-16
Lab ID: 008933-0002-SA Enseco ID: 1070750
Matrix: AQUEOUS Sampled: 02 APR 90 Received: 03 APR 90
Authorized: 03 APR 90 Prepared: 04 APR 90 Analyzed: 08 APR 90

Parameter	Result	Units	Reporting Limit
Acetone	7900	ug/L	2000
Acetonitrile	ND	ug/L	20000
Acrolein	ND	ug/L	20000
Acrylonitrile	ND	ug/L	20000
Allyl chloride	ND	ug/L	1000
Benzene	ND	ug/L	1000
Bromodichloromethane	ND	ug/L	1000
Bromoform	ND	ug/L	1000
Bromomethane	ND	ug/L	2000
Carbon disulfide	ND	ug/L	1000
Carbon tetrachloride	ND	ug/L	1000
Chlorobenzene	ND	ug/L	1000
Chloroprene	ND	ug/L	1000
Chloroethane	ND	ug/L	2000
Chlorodibromomethane	ND	ug/L	1000
Chloroform	ND	ug/L	1000
Chloromethane	ND	ug/L	2000
DBCP (1,2-Dibromo-3-chloropropane)	ND	ug/L	1000
EDB (1,2-Dibromoethane)	ND	ug/L	1000
Dibromomethane	ND	ug/L	1000
trans-1,4-Dichloro-2-butene	ND	ug/L	1000
Dichlorodifluoromethane	ND	ug/L	2000
1,1-Dichloroethane	ND	ug/L	1000
1,2-Dichloroethane	ND	ug/L	1000
trans-1,2-Dichloroethene	ND	ug/L	1000
1,1-Dichloroethene	ND	ug/L	1000
Dichloromethane	ND	ug/L	1000
1,2-Dichloropropane	ND	ug/L	1000
cis-1,3-Dichloropropene	ND	ug/L	1000
trans-1,3-Dichloropropene	ND	ug/L	1000
1,4-Dioxane	ND	ug/L	20000
Ethylbenzene	ND	ug/L	1000
Ethyl cyanide	ND	ug/L	1000
2-Hexanone	ND	ug/L	2000
Iodomethane	ND	ug/L	1000
Isobutyl alcohol	ND	ug/L	20000
Methacrylonitrile	ND	ug/L	1000
2-Butanone (MEK)	ND	ug/L	2000
4-Methyl-2-pentanone	ND	ug/L	2000

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Cesar Rojas Approved By: Jeff Lowry

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Appendix IX Volatile Organics (CONT.)

Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-16
Lab ID: 008933-0002-SA Enseco ID: 1070750
Matrix: AQUEOUS Sampled: 02 APR 90 Received: 03 APR 90
Authorized: 03 APR 90 Prepared: 04 APR 90 Analyzed: 08 APR 90

Parameter	Result	Units	Reporting Limit
Styrene	ND	ug/L	1000
1,1,1,2-Tetrachloroethane	ND	ug/L	1000
1,1,2,2-Tetrachloroethane	ND	ug/L	1000
Tetrachloroethene	ND	ug/L	1000
Toluene	ND	ug/L	1000
1,1,1-Trichloroethane	16000	ug/L	1000
1,1,2-Trichloroethane	ND	ug/L	1000
Trichloroethene	20000	ug/L	1000
Trichlorofluoromethane	ND	ug/L	1000
1,2,3-Trichloropropane	ND	ug/L	1000
Vinyl acetate	ND	ug/L	2000
Vinyl chloride	ND	ug/L	2000
Xylenes (total)	ND	ug/L	1000
Toluene-d8	100	%	--
4-Bromofluorobenzene	94	%	--
1,2-Dichloroethane-d4	96	%	--

ND = Not detected
NA = Not applicable

Reported By: Cesar Rojas Approved By: Jeff Lowry

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Appendix IX Volatile Organics

Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-21
Lab ID: 008933-0003-SA Enseco ID: 1070751
Matrix: AQUEOUS Sampled: 02 APR 90 Received: 03 APR 90
Authorized: 03 APR 90 Prepared: 04 APR 90 Analyzed: 08 APR 90

Parameter	Result	Units	Reporting Limit
Acetone	ND	ug/L	70
Acetonitrile	ND	ug/L	700
Acrolein	ND	ug/L	700
Acrylonitrile	ND	ug/L	700
Allyl chloride	ND	ug/L	35
Benzene	ND	ug/L	35
Bromodichloromethane	ND	ug/L	35
Bromoform	ND	ug/L	35
Bromomethane	ND	ug/L	70
Carbon disulfide	ND	ug/L	35
Carbon tetrachloride	ND	ug/L	35
Chlorobenzene	ND	ug/L	35
Chloroprene	ND	ug/L	35
Chloroethane	ND	ug/L	70
Chlorodibromomethane	ND	ug/L	35
Chloroform	ND	ug/L	35
Chloromethane	ND	ug/L	70
DBCP (1,2-Dibromo-3-chloropropane)	ND	ug/L	35
EDB (1,2-Dibromoethane)	ND	ug/L	35
Dibromomethane	ND	ug/L	35
trans-1,4-Dichloro-2-butene	ND	ug/L	35
Dichlorodifluoromethane	ND	ug/L	70
1,1-Dichloroethane	ND	ug/L	35
1,2-Dichloroethane	ND	ug/L	35
trans-1,2-Dichloroethene	ND	ug/L	35
1,1-Dichloroethene	ND	ug/L	35
Dichloromethane	ND	ug/L	35
1,2-Dichloropropane	ND	ug/L	35
cis-1,3-Dichloropropene	ND	ug/L	35
trans-1,3-Dichloropropene	ND	ug/L	35
1,4-Dioxane	ND	ug/L	700
Ethylbenzene	ND	ug/L	35
Ethyl cyanide	ND	ug/L	35
2-Hexanone	ND	ug/L	70
Iodomethane	ND	ug/L	35
Isobutyl alcohol	ND	ug/L	700
Methacrylonitrile	ND	ug/L	35
2-Butanone (MEK)	ND	ug/L	70
4-Methyl-2-pentanone	ND	ug/L	70

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Cesar Rojas Approved By: Jeff Lowry

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Appendix IX Volatile Organics (CONT.)

Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-21
Lab ID: 008933-0003-SA Enseco ID: 1070751
Matrix: AQUEOUS Sampled: 02 APR 90 Received: 03 APR 90
Authorized: 03 APR 90 Prepared: 04 APR 90 Analyzed: 08 APR 90

Parameter	Result	Units	Reporting Limit
Styrene	ND	ug/L	35
1,1,1,2-Tetrachloroethane	ND	ug/L	35
1,1,2,2-Tetrachloroethane	ND	ug/L	35
Tetrachloroethene	ND	ug/L	35
Toluene	ND	ug/L	35
1,1,1-Trichloroethane	370	ug/L	35
1,1,2-Trichloroethane	ND	ug/L	35
Trichloroethene	400	ug/L	35
Trichlorofluoromethane	ND	ug/L	35
1,2,3-Trichloropropane	ND	ug/L	35
Vinyl acetate	ND	ug/L	70
Vinyl chloride	ND	ug/L	70
Xylenes (total)	ND	ug/L	35
Toluene-d8	100	%	--
4-Bromofluorobenzene	92	%	--
1,2-Dichloroethane-d4	101	%	--

ND = Not detected
NA = Not applicable

Reported By: Cesar Rojas Approved By: Jeff Lowry

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Metals

Total Metals

Client Name: Sparton Technology Inc.
Client ID: MW-22
Lab ID: 008933-0001-SA Enseco ID: 1070748
Matrix: AQUEOUS Sampled: 02 APR 90 Received: 03 APR 90
Authorized: 03 APR 90 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium III	ND	mg/L	0.010	7196/6010	NA	13 APR 90
Chromium (VI)	ND	mg/L	0.010	7196	NA	03 APR 90
Boron	0.17	mg/L	0.047	6010	11 APR 90	12 APR 90
Chromium	ND	mg/L	0.010	6010	11 APR 90	12 APR 90
Manganese	0.024	mg/L	0.010	6010	11 APR 90	12 APR 90
Nickel	ND	mg/L	0.040	6010	11 APR 90	12 APR 90
Sodium	46.5	mg/L	5.0	6010	11 APR 90	12 APR 90

ND = Not detected
NA = Not applicable

Reported By: Fred Velasquez Approved By: Tammy Bailey

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Metals

Total Metals

Client Name: Sparton Technology Inc.
Client ID: MW-16
Lab ID: 008933-0002-SA Enseco ID: 1070750
Matrix: AQUEOUS Sampled: 02 APR 90 Received: 03 APR 90
Authorized: 03 APR 90 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium (VI)	0.035	mg/L	0.010	7196	NA	03 APR 90
Chromium III	ND	mg/L	0.010	7196/6010	NA	13 APR 90
Boron	1.7	mg/L	0.047	6010	11 APR 90	12 APR 90
Chromium	0.041	mg/L	0.010	6010	11 APR 90	12 APR 90
Manganese	0.088	mg/L	0.010	6010	11 APR 90	12 APR 90
Nickel	0.049	mg/L	0.040	6010	11 APR 90	12 APR 90
Sodium	83.9	mg/L	5.0	6010	11 APR 90	12 APR 90

ND = Not detected
NA = Not applicable

Reported By: Fred Velasquez Approved By: Tammy Bailey

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Metals

Total Metals

Client Name: Sparton Technology Inc.
Client ID: MW-21
Lab ID: 008933-0003-SA Enseco ID: 1070751
Matrix: AQUEOUS Sampled: 02 APR 90 Received: 03 APR 90
Authorized: 03 APR 90 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium III	ND	mg/L	0.010	7196/6010	NA	13 APR 90
Chromium (VI)	ND	mg/L	0.010	7196	NA	03 APR 90
Boron	0.17	mg/L	0.047	6010	11 APR 90	12 APR 90
Chromium	ND	mg/L	0.010	6010	11 APR 90	12 APR 90
Manganese	ND	mg/L	0.010	6010	11 APR 90	12 APR 90
Nickel	ND	mg/L	0.040	6010	11 APR 90	12 APR 90
Sodium	48.6	mg/L	5.0	6010	11 APR 90	12 APR 90

ND = Not detected
NA = Not applicable

Reported By: Fred Velasquez Approved By: Tammy Bailey

Enseco
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General Inorganics

Client Name: Sparton Technology Inc.
Client ID: MW-22
Lab ID: 008933-0001-SA Enseco ID: 1070748
Matrix: AQUEOUS Sampled: 02 APR 90 Received: 03 APR 90
Authorized: 03 APR 90 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chloride	20.5	mg/L	3.0	300.0	NA	10 APR 90
Nitrate as N	2.5	mg/L	0.50	353.2	NA	20 APR 90
pH	7.8	units	--	9040	NA	03 APR 90
Sulfate	83.0	mg/L	5.0	300.0	NA	10 APR 90
Specific Conductance at 25 deg.C	633	umhos/cm	1.0	120.1	NA	03 APR 90
Total Kjeldahl Nitrogen as N	ND	mg/L	0.50	351.2	NA	05 APR 90
Total Organic Carbon	1.5	mg/L	1.0	9060	NA	16 APR 90
Total Organic Halogen as Cl	310	ug/L	300	9020	NA	05 APR 90

ND = Not detected
NA = Not applicable

Reported By: Dan Appelhans Approved By: Toni Lusk

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General Inorganics

Client Name: Sparton Technology Inc.
Client ID: MW-16
Lab ID: 008933-0002-SA Enseco ID: 1070750
Matrix: AQUEOUS Sampled: 02 APR 90 Received: 03 APR 90
Authorized: 03 APR 90 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chloride	92.3	mg/L	3.0	300.0	NA	10 APR 90
Nitrate as N	1.7	mg/L	0.50	353.2	NA	06 APR 90
pH	7.6	units	--	9040	NA	03 APR 90
Sulfate	189	mg/L	5.0	300.0	NA	10 APR 90
Specific Conductance at 25 deg.C	1340	umhos/cm	1.0	120.1	NA	03 APR 90
Total Kjeldahl Nitrogen as N	94.3	mg/L	5.0	351.2	NA	05 APR 90
Total Organic Carbon	5.2	mg/L	1.0	9060	NA	16 APR 90
Total Organic Halogen as Cl	10100	ug/L	3000	9020	NA	05 APR 90

ND = Not detected
NA = Not applicable

Reported By: Dan Appelhans Approved By: Toni Lusk

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General Inorganics

Client Name: Sparton Technology Inc.
Client ID: MW-21
Lab ID: 008933-0003-SA Enseco ID: 1070751
Matrix: AQUEOUS Sampled: 02 APR 90 Received: 03 APR 90
Authorized: 03 APR 90 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chloride	19.0	mg/L	3.0	300.0	NA	10 APR 90
Nitrate as N	3.1	mg/L	0.50	353.2	NA	06 APR 90
pH	7.9	units	--	9040	NA	03 APR 90
Sulfate	85.7	mg/L	5.0	300.0	NA	10 APR 90
Specific Conductance at 25 deg.C	591	umhos/cm	1.0	120.1	NA	03 APR 90
Total Kjeldahl Nitrogen as N	ND	mg/L	0.50	351.2	NA	05 APR 90
Total Organic Carbon	1.2	mg/L	1.0	9060	NA	16 APR 90
Total Organic Halogen as Cl	677	ug/L	300	9020	NA	05 APR 90

ND = Not detected
NA = Not applicable

Reported By: Dan Appelhans Approved By: Toni Lusk

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QC LOT ASSIGNMENT REPORT
Volatile Organics by GC/MS

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
008933-0001-SA	AQUEOUS	624-A	06 APR 90-F	08 APR 90-F
008933-0002-SA	AQUEOUS	624-A	06 APR 90-F	08 APR 90-F
008933-0003-SA	AQUEOUS	624-A	06 APR 90-F	08 APR 90-F

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DUPLICATE CONTROL SAMPLE REPORT
Volatile Organics by GC/MS

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Average(%) Limits	Precision (RPD) DCS	Precision (RPD) Limit
Category: 624-A								
Matrix: AQUEOUS								
QC Lot: 06 APR 90-F								
Concentration Units: ug/L								
1,1-Dichloroethene	50	49.4	47.2	48.3	97	61-145	4.6	14
Trichloroethene	50	54.1	51.1	52.6	105	71-120	5.7	14
Benzene	50	43.6	42.8	43.2	86	76-127	1.9	11
Toluene	50	52.4	53.7	53.0	106	76-125	2.5	13
Chlorobenzene	50	54.2	54.1	54.2	108	75-130	0.2	13

Calculations are performed before rounding to avoid round-off errors in calculated results.

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SINGLE CONTROL SAMPLE REPORT
Volatile Organics by GC/MS

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) SCS	Accuracy(%) Limits
Category: 624-A				
Matrix: AQUEOUS				
QC Lot: 06 APR 90-F QC Run: 08 APR 90-F				
Concentration Units: ug/L				
1,2-Dichloroethane-d4	50.0	51.2	102	76-114
4-Bromofluorobenzene	50.0	47.1	94	86-115
Toluene-d8	50.0	50.5	101	88-110

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT
Volatile Organics by GC/MS

Test: 624-AP9-AP
Matrix: AQUEOUS
QC Lot: 06 APR 90-F QC Run: 08 APR 90-F

Analyte	Result	Units	Reporting Limit
Acetone	ND	ug/L	10
Acetonitrile	ND	ug/L	100
Acrolein	ND	ug/L	100
Acrylonitrile	ND	ug/L	100
Allyl chloride	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
Bromodichloromethane	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
Bromomethane	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Chloroprene	ND	ug/L	5.0
Chloroethane	ND	ug/L	10
Chlorodibromomethane	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
Chloromethane	ND	ug/L	10
DBCP (1,2-Dibromo-3-chloropropane)	ND	ug/L	5.0
EDB (1,2-Dibromoethane)	ND	ug/L	5.0
Dibromomethane	ND	ug/L	5.0
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0
Dichlorodifluoromethane	ND	ug/L	10
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
trans-1,2-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
Dichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
1,4-Dioxane	ND	ug/L	100
Ethylbenzene	ND	ug/L	5.0
Ethyl cyanide	ND	ug/L	5.0
2-Hexanone	ND	ug/L	10
Iodomethane	ND	ug/L	5.0
Isobutyl alcohol	ND	ug/L	100
Methacrylonitrile	ND	ug/L	5.0
2-Butanone (MEK)	ND	ug/L	10
4-Methyl-2-pentanone	ND	ug/L	10

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METHOD BLANK REPORT
Volatile Organics by GC/MS (cont.)

Analyte	Result	Units	Reporting Limit
Test: 624-AP9-AP			
Matrix: AQUEOUS			
QC Lot: 06 APR 90-F QC Run: 08 APR 90-F			
Styrene	ND	ug/L	5.0
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
1,1,1-Trichloroethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Trichlorofluoromethane	ND	ug/L	5.0
1,2,3-Trichloropropane	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Xylenes (total)	ND	ug/L	5.0

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QC LOT ASSIGNMENT REPORT
Metals Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
008933-0001-SA	AQUEOUS	CR6-AT	03 APR 90-A	-
008933-0001-SA	AQUEOUS	ICP-AT	11 APR 90-D	11 APR 90-D
008933-0002-SA	AQUEOUS	CR6-AT	03 APR 90-A	-
008933-0002-SA	AQUEOUS	ICP-AT	11 APR 90-D	11 APR 90-D
008933-0003-SA	AQUEOUS	CR6-AT	03 APR 90-A	-
008933-0003-SA	AQUEOUS	ICP-AT	11 APR 90-D	11 APR 90-D

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DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Average(%) Limits	Precision (RPD) DCS	Precision (RPD) Limit
Category: CR6-AT								
Matrix: AQUEOUS								
QC Lot: 03 APR 90-A								
Concentration Units: mg/L								
Chromium (VI)	0.05	0.0490	0.0510	0.0500	100	75-125	4.0	20
Category: ICP-AT								
Matrix: AQUEOUS								
QC Lot: 11 APR 90-D								
Concentration Units: mg/L								
Aluminum	2.0	1.91	1.76	1.84	92	75-125	8.2	20
Antimony	0.5	0.458	0.429	0.444	89	75-125	6.5	20
Arsenic	0.5	0.475	0.468	0.472	94	75-125	1.5	20
Barium	2.0	1.71	1.56	1.64	82	75-125	9.2	20
Beryllium	0.05	0.0443	0.0403	0.0423	85	75-125	9.5	20
Cadmium	0.05	0.0536	0.0522	0.0529	106	75-125	2.6	20
Calcium	100	91.5	91.0	91.2	91	75-125	0.6	20
Chromium	0.2	0.191	0.173	0.182	91	75-125	9.9	20
Cobalt	0.5	0.479	0.475	0.477	95	75-125	0.8	20
Copper	0.25	0.255	0.253	0.254	102	75-125	0.8	20
Iron	1.0	0.928	0.854	0.891	89	75-125	8.3	20
Lead	0.5	0.495	0.500	0.498	100	75-125	1.0	20
Magnesium	50	48.2	48.0	48.1	96	75-125	0.4	20
Manganese	0.5	0.505	0.502	0.504	101	75-125	0.6	20
Nickel	0.5	0.467	0.464	0.466	93	75-125	0.6	20
Potassium	50	46.6	46.2	46.4	93	75-125	0.9	20
Silver	0.05	0.0468	0.0451	0.0460	92	75-125	3.7	20
Sodium	100	95.4	94.6	95.0	95	75-125	0.8	20
Vanadium	0.5	0.459	0.420	0.440	88	75-125	8.9	20
Zinc	0.5	0.490	0.506	0.498	100	75-125	3.2	20

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT
Metals Analysis and Preparation

Analyte	Result	Units	Reporting Limit
Test: ICP-AT			
Matrix: AQUEOUS			
QC Lot: 11 APR 90-D QC Run: 11 APR 90-D			
Boron	0.047	mg/L	0.020
Chromium	ND	mg/L	0.010
Manganese	ND	mg/L	0.010
Nickel	ND	mg/L	0.040
Sodium	ND	mg/L	5.0

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QC LOT ASSIGNMENT REPORT
Wet Chemistry Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
008933-0001-SA	AQUEOUS	PH-A	03 APR 90-C	-
008933-0001-SA	AQUEOUS	TOX-A	05 APR 90-A	-
008933-0001-SA	AQUEOUS	COND-A	03 APR 90-B	-
008933-0001-SA	AQUEOUS	CL-IC-A	10 APR 90-M	-
008933-0001-SA	AQUEOUS	NO3-A	20 APR 90-A	-
008933-0001-SA	AQUEOUS	SO4-IC-A	10 APR 90-M	-
008933-0001-SA	AQUEOUS	TKN-A	04 APR 90-A	04 APR 90-A
008933-0002-SA	AQUEOUS	PH-A	03 APR 90-C	-
008933-0002-SA	AQUEOUS	TOX-A	05 APR 90-A	-
008933-0002-SA	AQUEOUS	COND-A	03 APR 90-B	-
008933-0002-SA	AQUEOUS	CL-IC-A	10 APR 90-M	-
008933-0002-SA	AQUEOUS	NO3-A	06 APR 90-A	-
008933-0002-SA	AQUEOUS	SO4-IC-A	10 APR 90-M	-
008933-0002-SA	AQUEOUS	TKN-A	04 APR 90-A	04 APR 90-A
008933-0003-SA	AQUEOUS	PH-A	03 APR 90-C	-
008933-0003-SA	AQUEOUS	TOX-A	05 APR 90-A	-
008933-0003-SA	AQUEOUS	COND-A	03 APR 90-B	-
008933-0003-SA	AQUEOUS	CL-IC-A	10 APR 90-M	-
008933-0003-SA	AQUEOUS	NO3-A	06 APR 90-A	-
008933-0003-SA	AQUEOUS	SO4-IC-A	10 APR 90-M	-
008933-0003-SA	AQUEOUS	TKN-A	04 APR 90-A	04 APR 90-A

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DUPLICATE CONTROL SAMPLE REPORT
Wet Chemistry Analysis and Preparation

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Average(%) Limits	Precision (RPD) DCS	Precision (RPD) Limit
Category: PH-A Matrix: AQUEOUS QC Lot: 03 APR 90-C Concentration Units: units								
pH	9.1	9.10	9.10	9.10	100	98-102	0.0	5
Category: TOX-A Matrix: AQUEOUS QC Lot: 05 APR 90-A Concentration Units: ug Cl/L								
Total Organic Halogen as Cl	100	98.3	114	106	106	80-120	15	20
Category: COND-A Matrix: AQUEOUS QC Lot: 03 APR 90-B Concentration Units: umhos/cm								
Specific Conductance at 25 deg.C	1650	1650	1630	1640	99	95-105	1.2	5
Category: CL-IC-A Matrix: AQUEOUS QC Lot: 10 APR 90-M Concentration Units: mg/L								
Chloride	100	101	100	100	101	92-108	1.0	20
Category: NO3-A Matrix: AQUEOUS QC Lot: 20 APR 90-A Concentration Units: mg/L								
Nitrate as N	5.4	5.70	5.77	5.74	106	91-109	1.2	10

Calculations are performed before rounding to avoid round-off errors in calculated results.

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DUPLICATE CONTROL SAMPLE REPORT
Wet Chemistry Analysis and Preparation (cont.)

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Average(%) Limits	Precision (RPD) DCS	Precision (RPD) Limit
Category: SO4-IC-A Matrix: AQUEOUS QC Lot: 10 APR 90-M Concentration Units: mg/L								
Sulfate	200	203	203	203	102	93-107	0.0	20
Category: TKN-A Matrix: AQUEOUS QC Lot: 04 APR 90-A Concentration Units: mg/L								
Total Kjeldahl Nitrogen as N	5.2	4.96	5.63	5.30	102	78-122	13	20
Category: NO3-A Matrix: AQUEOUS QC Lot: 06 APR 90-A Concentration Units: mg/L								
Nitrate as N	5.4	5.72	5.64	5.68	105	91-109	1.4	10

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT
Wet Chemistry Analysis and Preparation

Analyte	Result	Units	Reporting Limit
Test: TKN-TEC-A			
Matrix: AQUEOUS			
QC Lot: 04 APR 90-A QC Run: 04 APR 90-A			
Total Kjeldahl Nitrogen as N	ND	mg/L	0.50

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QC LOT ASSIGNMENT REPORT
Wet Chemistry Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)
008933-0001-SA	AQUEOUS	TOC-A	16 APR 90-Z
008933-0002-SA	AQUEOUS	TOC-A	16 APR 90-Z
008933-0003-SA	AQUEOUS	TOC-A	16 APR 90-Z

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DUPLICATE CONTROL SAMPLE REPORT
Wet Chemistry Analysis and Preparation

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Average(%) Limit	Precision (RPD) DCS	Precision (RPD) Limit
Category: TOC-A								
Matrix: AQUEOUS								
QC Lot: 16 APR 90-Z								
Concentration Units: mg/L								
Total Organic Carbon	200	218.1	218.7	218.4	109	70-130	0.27	30

Calculations are performed before rounding to avoid round-off errors in calculated results.

Enseco

April 19, 1990

Ven Samala
Sparton Technology Inc.
9621 Coors Rd. NW
Albuquerque, NM 87114

Dear Mr. Samala:

Enclosed is the report for the three aqueous samples received at Rocky Mountain Analytical Laboratory on April 4, 1990.

If you have any questions, the Program Administrator assigned to this project is Joel Holtz.

Sincerely,

Ramona Power

Ramona Power
Data Control

Enclosures

cc: Joel Holtz, PA

RMAL #008950

002039

4955 Yarrow Street
Arvada, Colorado 80002
303/421-6611 Fax: 303/431-7171

Discussion

This report contains results and supporting quality control and sample identification information associated with analyses performed on this project. The results and supporting information are contained in tables following this section, arranged in the following order:

- Sample Description Information
- Analytical Test Requests
- Analytical Results
- Quality Control Report
- Data Quality Assessment

Analyses were performed in accordance with EPA methods and with Enseco's current Quality Assurance Program Plan for Environmental Chemical Monitoring. The specific analytical methods used are presented with each result. The first four sections below describes the format, content, and organization for the four corresponding separate components of this report. The fifth section provides an overall data quality assessment of the results.

Sample Description Information

The Sample Description Information lists all the samples received in this project together with the internal laboratory identification number assigned for each sample. Each project received at Enseco - RMAL is assigned a unique six digit number. Samples within the project are numbered sequentially. The laboratory identification number is a combination of the six digit project code and the sample sequence number.

Also given in the Sample Description Information is the Sample Type (matrix), Date of Sampling (if known) and Date of Receipt at the laboratory.

Analytical Test Requests

The Analytical Test Requests lists the analyses that were performed on each sample. The Custom Test column indicates where tests have been modified to conform to the specific requirements of this project.

Analytical Results

The analytical results for this project are presented in data tables. Each data table includes sample identification information, and where available and appropriate, dates sampled, received, authorized, prepared, and analyzed.

Data sheets contain a listing of the parameters measured in each test, the analytical results, the analytical method, and the Enseco reporting limit. Reporting limits are adjusted to reflect dilution of the sample, when appropriate. Solid and waste samples are reported on an "as received" basis, i.e. no correction is made for moisture content.

Enseco-RMAL is no longer routinely blank-correcting analytical data. Uncorrected analytical results are reported, along with associated blank results, for all organic and metals analyses. Analytical results and blank results are reported for conventional inorganic parameters as specified in the method. This policy is described in detail in the Enseco Incorporated Quality Assurance Program Plan for Environmental Chemical Monitoring, Revision 3.3, April, 1989.

Quality Control Reports

As documented in more detail in Enseco's QAPP, various internal quality control checks are performed to assure that the laboratory was in control during the time that samples on this project were analyzed. The QC checks include analysis of method blanks, duplicate control samples (DCS), and single control samples (SCS). Results from these analyses are presented along with the control limits.

Method Blank Results: A method blank is a laboratory generated sample used to assess the degree to which laboratory operations and procedures cause false positive analytical results.

Duplicate Control Samples (DCS): Each DCS consists of a standard control matrix that is spiked with a group of target analytes representative of the method analytes. One Duplicate Control Sample is prepared for every twenty (20) samples.

Single Control Samples (SCS): An SCS is a spiked sample analyzed with each batch of samples.

Accuracy for DCS and SCS is measured by Percent Recovery.

$$\% \text{ Recovery} = \frac{\text{Measured Concentration}}{\text{Actual Concentration}} \times 100$$

Precision for DCS is measured by Relative Percent Difference (RPD).

$$\text{RPD} = \frac{|\text{Measured Concentration DCS1} - \text{Measured Concentration DCS2}|}{(\text{Measured Concentration DCS1} + \text{Measured Concentration DCS2})/2} \times 100$$

Data Quality Assessment

The results contained in this report were reviewed relative to data acceptance criteria as specified in Enseco's Quality Assurance Project Plan for completeness, precision, accuracy, representativeness and defensibility of the data. Unless otherwise stated below, no quality control problems or technical difficulties were encountered.

All GC/MS analyses were performed to achieve the lowest possible reporting limit within the constraints of the method. Some samples required dilutions to achieve linearity for a specific target compound. The reporting limits for these samples are therefore proportionate to the dilution required.

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SAMPLE DESCRIPTION INFORMATION
for
Sparton Technology Inc.

Lab ID	Client ID	Matrix	Sampled Date	Sampled Time	Received Date
008950-0001-SA	GROUNDWATER MW-15	AQUEOUS	03 APR 90	09:46	04 APR 90
008950-0002-SA	GROUNDWATER MW-14	AQUEOUS	03 APR 90	11:09	04 APR 90
008950-0003-SA	GROUNDWATER MW-9	AQUEOUS	03 APR 90	14:10	04 APR 90

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ANALYTICAL TEST REQUESTS
for
Sparton Technology Inc.

Lab ID: 008950	Group Code	Analysis Description	Custom Test?
0001 - 0003	A	pH	N
		Total Organic Carbon (TOC)	N
		Total Organic Halogen (TOX)	N
		Specific Conductance	N
		Chloride, Ion Chromatography	N
		Nitrate, as Nitrogen	N
		Sulfate, Ion Chromatography	N
		Total Kjeldahl Nitrogen (TKN)	N
		Chromium III Calculation	N
		Chromium VI (Total)	N
		ICP Metals (Total)	Y
		Prep - Total Metals, ICP	N
		Appendix IX Volatile Organics	N
		Prep-Volatile Organics by GC/MS	N

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Appendix IX Volatile Organics

Method 8240

Client Name: Sparton Technology Inc.
Client ID: GROUNDWATER MW-15
Lab ID: 008950-0001-SA Enseco ID: 1070899
Matrix: AQUEOUS Sampled: 03 APR 90 Received: 04 APR 90
Authorized: 04 APR 90 Prepared: 04 APR 90 Analyzed: 10 APR 90

Parameter	Result	Units	Reporting Limit
Acetone	ND	ug/L	10
Acetonitrile	ND	ug/L	100
Acrolein	ND	ug/L	100
Acrylonitrile	ND	ug/L	100
Allyl chloride	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
Bromodichloromethane	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
Bromomethane	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Chloroprene	ND	ug/L	5.0
Chloroethane	ND	ug/L	10
Chlorodibromomethane	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
Chloromethane	ND	ug/L	10
DBCP (1,2-Dibromo-3-chloropropane)	ND	ug/L	5.0
EDB (1,2-Dibromoethane)	ND	ug/L	5.0
Dibromomethane	ND	ug/L	5.0
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0
Dichlorodifluoromethane	ND	ug/L	10
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
trans-1,2-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethene	11	ug/L	5.0
Dichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
1,4-Dioxane	ND	ug/L	100
Ethylbenzene	ND	ug/L	5.0
Ethyl cyanide	ND	ug/L	5.0
2-Hexanone	ND	ug/L	10
Iodomethane	ND	ug/L	5.0
Isobutyl alcohol	ND	ug/L	100
Methacrylonitrile	ND	ug/L	5.0
2-Butanone (MEK)	ND	ug/L	10
4-Methyl-2-pentanone	ND	ug/L	10

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Deneen Miller Approved By: Jeff Lowry

Enseco
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Appendix IX Volatile Organics (CONT.)

Method 8240

Client Name: Sparton Technology Inc.
Client ID: GROUNDWATER MW-15
Lab ID: 008950-0001-SA Enseco ID: 1070899
Matrix: AQUEOUS Sampled: 03 APR 90 Received: 04 APR 90
Authorized: 04 APR 90 Prepared: 04 APR 90 Analyzed: 10 APR 90

Parameter	Result	Units	Reporting Limit
Styrene	ND	ug/L	5.0
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
1,1,1-Trichloroethane	73	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Trichloroethene	160	ug/L	5.0
Trichlorofluoromethane	ND	ug/L	5.0
1,2,3-Trichloropropane	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Xylenes (total)	ND	ug/L	5.0
Toluene-d8	101	%	--
4-Bromofluorobenzene	101	%	--
1,2-Dichloroethane-d4	101	%	--

ND = Not detected
NA = Not applicable

Reported By: Deneen Miller Approved By: Jeff Lowry

Enseco
A CORNING Company

Appendix IX Volatile Organics

Method 8240

Client Name: Sparton Technology Inc.
Client ID: GROUNDWATER MW-14
Lab ID: 008950-0002-SA Enseco ID: 1070900
Matrix: AQUEOUS Sampled: 03 APR 90 Received: 04 APR 90
Authorized: 04 APR 90 Prepared: 04 APR 90 Analyzed: 10 APR 90

Parameter	Result	Units	Reporting Limit
Acetone	ND	ug/L	200
Acetonitrile	ND	ug/L	2000
Acrolein	ND	ug/L	2000
Acrylonitrile	ND	ug/L	2000
Allyl chloride	ND	ug/L	100
Benzene	ND	ug/L	100
Bromodichloromethane	ND	ug/L	100
Bromoform	ND	ug/L	100
Bromomethane	ND	ug/L	200
Carbon disulfide	ND	ug/L	100
Carbon tetrachloride	ND	ug/L	100
Chlorobenzene	ND	ug/L	100
Chloroprene	ND	ug/L	100
Chloroethane	ND	ug/L	200
Chlorodibromomethane	ND	ug/L	100
Chloroform	ND	ug/L	100
Chloromethane	ND	ug/L	200
DBCP (1,2-Dibromo-3-chloropropane)	ND	ug/L	100
EDB (1,2-Dibromoethane)	ND	ug/L	100
Dibromomethane	ND	ug/L	100
trans-1,4-Dichloro-2-butene	ND	ug/L	100
Dichlorodifluoromethane	ND	ug/L	200
1,1-Dichloroethane	ND	ug/L	100
1,2-Dichloroethane	ND	ug/L	100
trans-1,2-Dichloroethene	ND	ug/L	100
1,1-Dichloroethene	ND	ug/L	100
Dichloromethane	ND	ug/L	100
1,2-Dichloropropane	ND	ug/L	100
cis-1,3-Dichloropropene	ND	ug/L	100
trans-1,3-Dichloropropene	ND	ug/L	100
1,4-Dioxane	ND	ug/L	2000
Ethylbenzene	ND	ug/L	100
Ethyl cyanide	ND	ug/L	100
2-Hexanone	ND	ug/L	200
Iodomethane	ND	ug/L	100
Isobutyl alcohol	ND	ug/L	2000
Methacrylonitrile	ND	ug/L	100
2-Butanone (MEK)	ND	ug/L	200
4-Methyl-2-pentanone	ND	ug/L	200

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Cesar Rojas Approved By: Jeff Lowry

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Appendix IX Volatile Organics (CONT.)

Method 8240

Client Name: Sparton Technology Inc.
Client ID: GROUNDWATER MW-14
Lab ID: 008950-0002-SA Enseco ID: 1070900
Matrix: AQUEOUS Sampled: 03 APR 90 Received: 04 APR 90
Authorized: 04 APR 90 Prepared: 04 APR 90 Analyzed: 10 APR 90

Parameter	Result	Units	Reporting Limit
Styrene	ND	ug/L	100
1,1,1,2-Tetrachloroethane	ND	ug/L	100
1,1,2,2-Tetrachloroethane	ND	ug/L	100
Tetrachloroethene	ND	ug/L	100
Toluene	ND	ug/L	100
1,1,1-Trichloroethane	ND	ug/L	100
1,1,2-Trichloroethane	ND	ug/L	100
Trichloroethene	1800	ug/L	100
Trichlorofluoromethane	ND	ug/L	100
1,2,3-Trichloropropane	ND	ug/L	100
Vinyl acetate	ND	ug/L	200
Vinyl chloride	ND	ug/L	200
Xylenes (total)	ND	ug/L	100
Toluene-d8	100	%	--
4-Bromofluorobenzene	93	%	--
1,2-Dichloroethane-d4	95	%	--

ND = Not detected
NA = Not applicable

Reported By: Cesar Rojas Approved By: Jeff Lowry

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Appendix IX Volatile Organics

Method 8240

Client Name: Sparton Technology Inc.
Client ID: GROUNDWATER MW-9
Lab ID: 008950-0003-SA Enseco ID: 1070901
Matrix: AQUEOUS Sampled: 03 APR 90 Received: 04 APR 90
Authorized: 04 APR 90 Prepared: 04 APR 90 Analyzed: 10 APR 90

Parameter	Result	Units	Reporting Limit
Acetone	ND	ug/L	250
Acetonitrile	ND	ug/L	2500
Acrolein	ND	ug/L	2500
Acrylonitrile	ND	ug/L	2500
Allyl chloride	ND	ug/L	120
Benzene	ND	ug/L	120
Bromodichloromethane	ND	ug/L	120
Bromoform	ND	ug/L	120
Bromomethane	ND	ug/L	250
Carbon disulfide	ND	ug/L	120
Carbon tetrachloride	ND	ug/L	120
Chlorobenzene	ND	ug/L	120
Chloroprene	ND	ug/L	120
Chloroethane	ND	ug/L	250
Chlorodibromomethane	ND	ug/L	120
Chloroform	ND	ug/L	120
Chloromethane	ND	ug/L	250
DBCP (1,2-Dibromo-3-chloropropane)	ND	ug/L	120
EDB (1,2-Dibromoethane)	ND	ug/L	120
Dibromomethane	ND	ug/L	120
trans-1,4-Dichloro-2-butene	ND	ug/L	120
Dichlorodifluoromethane	ND	ug/L	250
1,1-Dichloroethane	ND	ug/L	120
1,2-Dichloroethane	ND	ug/L	120
trans-1,2-Dichloroethene	ND	ug/L	120
1,1-Dichloroethene	260	ug/L	120
Dichloromethane	ND	ug/L	120
1,2-Dichloropropane	ND	ug/L	120
cis-1,3-Dichloropropene	ND	ug/L	120
trans-1,3-Dichloropropene	ND	ug/L	120
1,4-Dioxane	ND	ug/L	2500
Ethylbenzene	ND	ug/L	120
Ethyl cyanide	ND	ug/L	120
2-Hexanone	ND	ug/L	250
Iodomethane	ND	ug/L	120
Isobutyl alcohol	ND	ug/L	2500
Methacrylonitrile	ND	ug/L	120
2-Butanone (MEK)	ND	ug/L	250
4-Methyl-2-pentanone	ND	ug/L	250

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Deneen Miller Approved By: Jeff Lowry

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Appendix IX Volatile Organics (CONT.)

Method 8240

Client Name: Sparton Technology Inc.
Client ID: GROUNDWATER MW-9
Lab ID: 008950-0003-SA Enseco ID: 1070901
Matrix: AQUEOUS Sampled: 03 APR 90 Received: 04 APR 90
Authorized: 04 APR 90 Prepared: 04 APR 90 Analyzed: 10 APR 90

Parameter	Result	Units	Reporting Limit
Styrene	ND	ug/L	120
1,1,1,2-Tetrachloroethane	ND	ug/L	120
1,1,2,2-Tetrachloroethane	ND	ug/L	120
Tetrachloroethene	ND	ug/L	120
Toluene	ND	ug/L	120
1,1,1-Trichloroethane	890	ug/L	120
1,1,2-Trichloroethane	ND	ug/L	120
Trichloroethene	2400	ug/L	120
Trichlorofluoromethane	ND	ug/L	120
1,2,3-Trichloropropane	ND	ug/L	120
Vinyl acetate	ND	ug/L	250
Vinyl chloride	ND	ug/L	250
Xylenes (total)	ND	ug/L	120
Toluene-d8	100	%	--
4-Bromofluorobenzene	96	%	--
1,2-Dichloroethane-d4	97	%	--

ND = Not detected
NA = Not applicable

Reported By: Deneen Miller Approved By: Jeff Lowry

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Metals

Total Metals

Client Name: Sparton Technology Inc.
Client ID: GROUNDWATER MW-15
Lab ID: 008950-0001-SA Enseco ID: 1070899
Matrix: AQUEOUS Sampled: 03 APR 90 Received: 04 APR 90
Authorized: 04 APR 90 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium III	ND	mg/L	0.010	7196/6010	NA	13 APR 90
Chromium (VI)	ND	mg/L	0.010	7196	NA	04 APR 90
Boron	0.12	mg/L	0.047	6010	11 APR 90	12 APR 90
Chromium	ND	mg/L	0.010	6010	11 APR 90	12 APR 90
Manganese	ND	mg/L	0.010	6010	11 APR 90	12 APR 90
Nickel	ND	mg/L	0.040	6010	11 APR 90	12 APR 90
Sodium	49.2	mg/L	5.0	6010	11 APR 90	12 APR 90

ND = Not detected
NA = Not applicable

Reported By: Fred Velasquez Approved By: Tammy Bailey

Enseco
A CORNING Company

Metals

Total Metals

Client Name: Sparton Technology Inc.
Client ID: GROUNDWATER MW-14
Lab ID: 008950-0002-SA Enseco ID: 1070900
Matrix: AQUEOUS Sampled: 03 APR 90 Received: 04 APR 90
Authorized: 04 APR 90 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium (VI)	0.90	mg/L	0.10	7196	NA	04 APR 90
Chromium III	ND	mg/L	0.10	7196/6010	NA	13 APR 90
Boron	0.87	mg/L	0.047	6010	11 APR 90	12 APR 90
Chromium	0.80	mg/L	0.010	6010	11 APR 90	12 APR 90
Manganese	ND	mg/L	0.010	6010	11 APR 90	12 APR 90
Nickel	ND	mg/L	0.040	6010	11 APR 90	12 APR 90
Sodium	59.6	mg/L	5.0	6010	11 APR 90	12 APR 90

ND = Not detected
NA = Not applicable

Reported By: Fred Velasquez Approved By: Tammy Bailey

Enseco
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Metals

Total Metals

Client Name: Sparton Technology Inc.
Client ID: GROUNDWATER MW-9
Lab ID: 008950-0003-SA Enseco ID: 1070901
Matrix: AQUEOUS Sampled: 03 APR 90 Received: 04 APR 90
Authorized: 04 APR 90 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium III	0.011	mg/L	0.010	7196/6010	NA	13 APR 90
Chromium (VI)	ND	mg/L	0.010	7196	NA	04 APR 90
Boron	2.1	mg/L	0.047	6010	11 APR 90	12 APR 90
Chromium	0.011	mg/L	0.010	6010	11 APR 90	12 APR 90
Manganese	0.026	mg/L	0.010	6010	11 APR 90	12 APR 90
Nickel	0.21	mg/L	0.040	6010	11 APR 90	12 APR 90
Sodium	88.2	mg/L	5.0	6010	11 APR 90	12 APR 90

ND = Not detected
NA = Not applicable

Reported By: Fred Velasquez Approved By: Tammy Bailey

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General Inorganics

Client Name: Sparton Technology Inc.
Client ID: GROUNDWATER MW-15
Lab ID: 008950-0001-SA Enseco ID: 1070899
Matrix: AQUEOUS Sampled: 03 APR 90 Received: 04 APR 90
Authorized: 04 APR 90 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chloride	27.1	mg/L	3.0	300.0	NA	10 APR 90
Nitrate as N	4.8	mg/L	2.0	353.2	NA	06 APR 90
pH	7.8	units	--	9040	NA	04 APR 90
Sulfate	98.8	mg/L	5.0	300.0	NA	10 APR 90
Specific Conductance at 25 deg.C	653	umhos/cm	1.0	120.1	NA	04 APR 90
Total Kjeldahl Nitrogen as N	ND	mg/L	0.50	351.2	NA	13 APR 90
Total Organic Carbon	1.9	mg/L	1.0	9060	NA	16 APR 90
Total Organic Halogen as Cl	113	ug/L	30.0	9020	NA	10 APR 90

ND = Not detected
NA = Not applicable

Reported By: Dan Appelhans Approved By: Toni Lusk

Enseco
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General Inorganics

Client Name: Sparton Technology Inc.
Client ID: GROUNDWATER MW-14
Lab ID: 008950-0002-SA Enseco ID: 1070900
Matrix: AQUEOUS Sampled: 03 APR 90 Received: 04 APR 90
Authorized: 04 APR 90 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chloride	63.5	mg/L	3.0	300.0	NA	10 APR 90
Nitrate as N	22.3	mg/L	2.0	353.2	NA	06 APR 90
pH	11.3	units	--	9040	NA	04 APR 90
Sulfate	167	mg/L	5.0	300.0	NA	10 APR 90
Specific Conductance at 25 deg.C	1080	umhos/cm	1.0	120.1	NA	04 APR 90
Total Kjeldahl Nitrogen as N	ND	mg/L	0.50	351.2	NA	13 APR 90
Total Organic Carbon	2.6	mg/L	1.0	9060	NA	16 APR 90
Total Organic Halogen as Cl	1360	ug/L	300	9020	NA	10 APR 90

ND = Not detected
NA = Not applicable

Reported By: Dan Appelhans Approved By: Toni Lusk

Enseco
A CORNING Company

General Inorganics

Client Name: Sparton Technology Inc.
Client ID: GROUNDWATER MW-9
Lab ID: 008950-0003-SA Enseco ID: 1070901
Matrix: AQUEOUS Sampled: 03 APR 90 Received: 04 APR 90
Authorized: 04 APR 90 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chloride	69.4	mg/L	3.0	300.0	NA	10 APR 90
Nitrate as N	ND	mg/L	0.10	353.2	NA	06 APR 90
pH	7.4	units	--	9040	NA	04 APR 90
Sulfate	208	mg/L	5.0	300.0	NA	10 APR 90
Specific Conductance at 25 deg.C	969	umhos/cm	1.0	120.1	NA	04 APR 90
Total Kjeldahl Nitrogen as N	0.60	mg/L	0.50	351.2	NA	16 APR 90
Total Organic Carbon	3.0	mg/L	1.0	9060	NA	16 APR 90
Total Organic Halogen as Cl	2300	ug/L	300	9020	NA	10 APR 90

ND = Not detected
NA = Not applicable

Reported By: Dan Appelhans Approved By: Toni Lusk

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QC LOT ASSIGNMENT REPORT
Volatile Organics by GC/MS

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
008950-0001-SA	AQUEOUS	624-A	09 APR 90-B	10 APR 90-B
008950-0002-SA	AQUEOUS	624-A	06 APR 90-F	09 APR 90-F
008950-0003-SA	AQUEOUS	624-A	09 APR 90-B	10 APR 90-B

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DUPLICATE CONTROL SAMPLE REPORT
Volatile Organics by GC/MS

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Average(%) Limits	Precision (RPD) DCS	Precision (RPD) Limit
Category: 624-A Matrix: AQUEOUS QC Lot: 09 APR 90-B Concentration Units: ug/L								
1,1-Dichloroethene	50	69.3	69.1	69.2	138	61-145	0.3	14
Trichloroethene	50	50.4	53.1	51.8	104	71-120	5.2	14
Benzene	50	51.8	56.5	54.2	108	76-127	8.7	11
Toluene	50	48.9	53.1	51.0	102	76-125	8.2	13
Chlorobenzene	50	52.3	56.1	54.2	108	75-130	7.0	13
Category: 624-A Matrix: AQUEOUS QC Lot: 06 APR 90-F Concentration Units: ug/L								
1,1-Dichloroethene	50	49.4	47.2	48.3	97	61-145	4.6	14
Trichloroethene	50	54.1	51.1	52.6	105	71-120	5.7	14
Benzene	50	43.6	42.8	43.2	86	76-127	1.9	11
Toluene	50	52.4	53.7	53.0	106	76-125	2.5	13
Chlorobenzene	50	54.2	54.1	54.2	108	75-130	0.2	13

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT
Volatile Organics by GC/MS

Test: 624-AP9-AP
Matrix: AQUEOUS
QC Lot: 09 APR 90-B QC Run: 10 APR 90-B

Analyte	Result	Units	Reporting Limit
Acetone	ND	ug/L	10
Acetonitrile	ND	ug/L	100
Acrolein	ND	ug/L	100
Acrylonitrile	ND	ug/L	100
Allyl chloride	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
Bromodichloromethane	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
Bromomethane	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Chloroprene	ND	ug/L	5.0
Chloroethane	ND	ug/L	10
Chlorodibromomethane	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
Chloromethane	ND	ug/L	10
DBCP (1,2-Dibromo-3-chloropropane)	ND	ug/L	5.0
EDB (1,2-Dibromoethane)	ND	ug/L	5.0
Dibromomethane	ND	ug/L	5.0
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0
Dichlorodifluoromethane	ND	ug/L	10
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
trans-1,2-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
Dichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
1,4-Dioxane	ND	ug/L	100
Ethylbenzene	ND	ug/L	5.0
Ethyl cyanide	ND	ug/L	5.0
2-Hexanone	ND	ug/L	10
Iodomethane	ND	ug/L	5.0
Isobutyl alcohol	ND	ug/L	100
Methacrylonitrile	ND	ug/L	5.0
2-Butanone (MEK)	ND	ug/L	10
4-Methyl-2-pentanone	ND	ug/L	10

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DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Average(%) Limits	Precision (RPD) DCS	Precision (RPD) Limit
Category: CR6-AT Matrix: AQUEOUS QC Lot: 04 APR 90-A Concentration Units: mg/L								
Chromium (VI)	0.05	0.0500	0.0500	0.0500	100	75-125	0.0	20
Category: ICP-AT Matrix: AQUEOUS QC Lot: 11 APR 90-D Concentration Units: mg/L								
Aluminum	2.0	1.91	1.76	1.84	92	75-125	8.2	20
Antimony	0.5	0.458	0.429	0.444	89	75-125	6.5	20
Arsenic	0.5	0.475	0.468	0.472	94	75-125	1.5	20
Barium	2.0	1.71	1.56	1.64	82	75-125	9.2	20
Beryllium	0.05	0.0443	0.0403	0.0423	85	75-125	9.5	20
Cadmium	0.05	0.0536	0.0522	0.0529	106	75-125	2.6	20
Calcium	100	91.5	91.0	91.2	91	75-125	0.6	20
Chromium	0.2	0.191	0.173	0.182	91	75-125	9.9	20
Cobalt	0.5	0.479	0.475	0.477	95	75-125	0.8	20
Copper	0.25	0.255	0.253	0.254	102	75-125	0.8	20
Iron	1.0	0.928	0.854	0.891	89	75-125	8.3	20
Lead	0.5	0.495	0.500	0.498	100	75-125	1.0	20
Magnesium	50	48.2	48.0	48.1	96	75-125	0.4	20
Manganese	0.5	0.505	0.502	0.504	101	75-125	0.6	20
Nickel	0.5	0.467	0.464	0.466	93	75-125	0.6	20
Potassium	50	46.6	46.2	46.4	93	75-125	0.9	20
Silver	0.05	0.0468	0.0451	0.0460	92	75-125	3.7	20
Sodium	100	95.4	94.6	95.0	95	75-125	0.8	20
Vanadium	0.5	0.459	0.420	0.440	88	75-125	8.9	20
Zinc	0.5	0.490	0.506	0.498	100	75-125	3.2	20

Calculations are performed before rounding to avoid round-off errors in calculated results.

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QC LOT ASSIGNMENT REPORT
Wet Chemistry Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
008950-0001-SA	AQUEOUS	PH-A	04 APR 90-M	-
008950-0001-SA	AQUEOUS	TOX-A	09 APR 90-A	-
008950-0001-SA	AQUEOUS	COND-A	04 APR 90-M	-
008950-0001-SA	AQUEOUS	CL-IC-A	10 APR 90-M	-
008950-0001-SA	AQUEOUS	NO3-A	06 APR 90-A	-
008950-0001-SA	AQUEOUS	SO4-IC-A	10 APR 90-M	-
008950-0001-SA	AQUEOUS	TKN-A	12 APR 90-A	12 APR 90-A
008950-0002-SA	AQUEOUS	PH-A	04 APR 90-M	-
008950-0002-SA	AQUEOUS	TOX-A	09 APR 90-A	-
008950-0002-SA	AQUEOUS	COND-A	04 APR 90-M	-
008950-0002-SA	AQUEOUS	CL-IC-A	10 APR 90-M	-
008950-0002-SA	AQUEOUS	NO3-A	06 APR 90-A	-
008950-0002-SA	AQUEOUS	SO4-IC-A	10 APR 90-M	-
008950-0002-SA	AQUEOUS	TKN-A	12 APR 90-A	12 APR 90-A
008950-0003-SA	AQUEOUS	PH-A	04 APR 90-M	-
008950-0003-SA	AQUEOUS	TOX-A	09 APR 90-A	-
008950-0003-SA	AQUEOUS	COND-A	04 APR 90-M	-
008950-0003-SA	AQUEOUS	CL-IC-A	10 APR 90-M	-
008950-0003-SA	AQUEOUS	NO3-A	06 APR 90-A	-
008950-0003-SA	AQUEOUS	SO4-IC-A	10 APR 90-M	-
008950-0003-SA	AQUEOUS	TKN-A	13 APR 90-A	13 APR 90-A

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DUPLICATE CONTROL SAMPLE REPORT
Wet Chemistry Analysis and Preparation

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Average(%) Limits	Precision (RPD) DCS	Precision (RPD) Limit
Category: PH-A Matrix: AQUEOUS QC Lot: 04 APR 90-M Concentration Units: units								
pH	9.1	9.04	9.05	9.04	99	98-102	0.1	5
Category: TOX-A Matrix: AQUEOUS QC Lot: 09 APR 90-A Concentration Units: ug Cl/L								
Total Organic Halogen as Cl	100	110	94.9	102	102	80-120	15	20
Category: COND-A Matrix: AQUEOUS QC Lot: 04 APR 90-M Concentration Units: umhos/cm								
Specific Conductance at 25 deg.C	1650	1670	1670	1670	101	95-105	0.0	5
Category: CL-IC-A Matrix: AQUEOUS QC Lot: 10 APR 90-M Concentration Units: mg/L								
Chloride	100	101	100	100	101	92-108	1.0	20
Category: NO3-A Matrix: AQUEOUS QC Lot: 06 APR 90-A Concentration Units: mg/L								
Nitrate as N	5.4	5.72	5.64	5.68	105	91-109	1.4	10

Calculations are performed before rounding to avoid round-off errors in calculated results.

DUPLICATE CONTROL SAMPLE REPORT
Wet Chemistry Analysis and Preparation (cont.)

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Limits	Precision (RPD) DCS	Precision Limit
Category: SO4-IC-A Matrix: AQUEOUS QC Lot: 10 APR 90-M Concentration Units: mg/L								
Sulfate	200	203	203	203	102	93-107	0.0	20
Category: TKN-A Matrix: AQUEOUS QC Lot: 12 APR 90-A Concentration Units: mg/L								
Total Kjeldahl Nitrogen as N	5.2	5.87	5.36	5.62	108	78-122	9.1	20
Category: TKN-A Matrix: AQUEOUS QC Lot: 13 APR 90-A Concentration Units: mg/L								
Total Kjeldahl Nitrogen as N	5.2	4.57	4.67	4.62	89	78-122	2.2	20

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT
Wet Chemistry Analysis and Preparation

Analyte	Result	Units	Reporting Limit
Test: TKN-TEC-A Matrix: AQUEOUS QC Lot: 12 APR 90-A QC Run: 12 APR 90-A			
Total Kjeldahl Nitrogen as N	ND	mg/L	0.50
Test: TKN-TEC-A Matrix: AQUEOUS QC Lot: 13 APR 90-A QC Run: 13 APR 90-A			
Total Kjeldahl Nitrogen as N	ND	mg/L	0.50

Rocky Mountain
Analytical Laboratory

Enseco

April 26, 1990

Ven Samala
Sparton Technology Inc.
9621 Coors Rd. NW
Albuquerque, NM 87114

Dear Mr. Samala:

Enclosed is the report for the four aqueous samples received at Rocky Mountain Analytical Laboratory on April 5, 1990.

If you have any questions, the Program Administrator assigned to this project is Joel Holtz.

Sincerely,

Ramona Power

Ramona Power
Data Control

Enclosures

cc: Joel Holtz, PA

RMAL #008964

002069

Enseco Incorporated
4955 Yarrow Street
Arvada, Colorado 80002
303/421-6611 Fax: 303/431-7171

Discussion

This report contains results and supporting quality control and sample identification information associated with analyses performed on this project. The results and supporting information are contained in tables following this section, arranged in the following order:

- Sample Description Information
- Analytical Test Requests
- Analytical Results
- Quality Control Report
- Data Quality Assessment

Analyses were performed in accordance with EPA methods and with Enseco's current Quality Assurance Program Plan for Environmental Chemical Monitoring. The specific analytical methods used are presented with each result. The first four sections below describes the format, content, and organization for the four corresponding separate components of this report. The fifth section provides an overall data quality assessment of the results.

Sample Description Information

The Sample Description Information lists all the samples received in this project together with the internal laboratory identification number assigned for each sample. Each project received at Enseco - RMAL is assigned a unique six digit number. Samples within the project are numbered sequentially. The laboratory identification number is a combination of the six digit project code and the sample sequence number.

Also given in the Sample Description Information is the Sample Type (matrix), Date of Sampling (if known) and Date of Receipt at the laboratory.

Analytical Test Requests

The Analytical Test Requests lists the analyses that were performed on each sample. The Custom Test column indicates where tests have been modified to conform to the specific requirements of this project.

Analytical Results

The analytical results for this project are presented in data tables. Each data table includes sample identification information, and where available and appropriate, dates sampled, received, authorized, prepared, and analyzed.

Data sheets contain a listing of the parameters measured in each test, the analytical results, the analytical method, and the Enseco reporting limit. Reporting limits are adjusted to reflect dilution of the sample, when appropriate. Solid and waste samples are reported on an "as received" basis, i.e. no correction is made for moisture content.

Enseco-RMAL is no longer routinely blank-correcting analytical data. Uncorrected analytical results are reported, along with associated blank results, for all organic and metals analyses. Analytical results and blank results are reported for conventional inorganic parameters as specified in the method. This policy is described in detail in the Enseco Incorporated Quality Assurance Program Plan for Environmental Chemical Monitoring, Revision 3.3, April, 1989.

Quality Control Reports

As documented in more detail in Enseco's QAPP, various internal quality control checks are performed to assure that the laboratory was in control during the time that samples on this project were analyzed. The QC checks include analysis of method blanks, duplicate control samples (DCS), and single control samples (SCS). Results from these analyses are presented along with the control limits.

Method Blank Results: A method blank is a laboratory generated sample used to assess the degree to which laboratory operations and procedures cause false positive analytical results.

Duplicate Control Samples (DCS): Each DCS consists of a standard control matrix that is spiked with a group of target analytes representative of the method analytes. One Duplicate Control Sample is prepared for every twenty (20) samples.

Single Control Samples (SCS): An SCS is a spiked sample analyzed with each batch of samples.

Accuracy for DCS and SCS is measured by Percent Recovery.

$$\% \text{ Recovery} = \frac{\text{Measured Concentration}}{\text{Actual Concentration}} \times 100$$

Precision for DCS is measured by Relative Percent Difference (RPD).

$$\text{RPD} = \frac{|\text{Measured Concentration DCS1} - \text{Measured Concentration DCS2}|}{(\text{Measured Concentration DCS1} + \text{Measured Concentration DCS2})/2} \times 100$$

Data Quality Assessment

The results contained in this report were reviewed relative to data acceptance criteria as specified in Enseco's Quality Assurance Project Plan for completeness, precision, accuracy, representativeness and defensibility of the data. Unless otherwise stated below, no quality control problems or technical difficulties were encountered.

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SAMPLE DESCRIPTION INFORMATION
for
Sparton Technology Inc.

Lab ID	Client ID	Matrix	Sampled Date	Sampled Time	Received Date
008964-0001-SA	MW-19	AQUEOUS	04 APR 90	12:45	05 APR 90
008964-0002-SA	FIELD BLANK	AQUEOUS	04 APR 90	12:55	05 APR 90
008964-0003-SA	MW-20	AQUEOUS	04 APR 90	14:03	05 APR 90
008964-0004-SA	TRIP BLANK	AQUEOUS	04 APR 90		05 APR 90

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ANALYTICAL TEST REQUESTS
for
Sparton Technology Inc.

Lab ID: 008964	Group Code	Analysis Description	Custom Test?
0001 - 0004	A	pH	N
		Total Organic Carbon (TOC)	N
		Total Organic Halogen (TOX)	N
		Specific Conductance	N
		Chloride, Ion Chromatography	N
		Nitrate, as Nitrogen	N
		Sulfate, Ion Chromatography	N
		Total Kjeldahl Nitrogen (TKN)	N
		Chromium III Calculation	N
		Chromium VI (Total)	N
		ICP Metals (Total)	Y
		Prep - Total Metals, ICP	N
		Appendix IX Volatile Organics	N
		Prep-Volatile Organics by GC/MS	N

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Appendix IX Volatile Organics

Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-19
Lab ID: 008964-0001-SA Enseco ID: 1071120
Matrix: AQUEOUS Sampled: 04 APR 90 Received: 05 APR 90
Authorized: 05 APR 90 Prepared: 06 APR 90 Analyzed: 15 APR 90

Parameter	Result	Units	Reporting Limit
Acetone	ND	ug/L	100
Acetonitrile	ND	ug/L	1000
Acrolein	ND	ug/L	1000
Acrylonitrile	ND	ug/L	1000
Allyl chloride	ND	ug/L	50
Benzene	ND	ug/L	50
Bromodichloromethane	ND	ug/L	50
Bromoform	ND	ug/L	50
Bromomethane	ND	ug/L	100
Carbon disulfide	ND	ug/L	50
Carbon tetrachloride	ND	ug/L	50
Chlorobenzene	ND	ug/L	50
Chloroprene	ND	ug/L	50
Chloroethane	ND	ug/L	100
Chlorodibromomethane	ND	ug/L	50
Chloroform	ND	ug/L	50
Chloromethane	ND	ug/L	100
DBCP (1,2-Dibromo-3-chloropropane)	ND	ug/L	50
EDB (1,2-Dibromoethane)	ND	ug/L	50
Dibromomethane	ND	ug/L	50
trans-1,4-Dichloro-2-butene	ND	ug/L	50
Dichlorodifluoromethane	ND	ug/L	100
1,1-Dichloroethane	ND	ug/L	50
1,2-Dichloroethane	ND	ug/L	50
trans-1,2-Dichloroethene	ND	ug/L	50
1,1-Dichloroethene	100	ug/L	50
Dichloromethane	320	ug/L	50
1,2-Dichloropropane	ND	ug/L	50
cis-1,3-Dichloropropene	ND	ug/L	50
trans-1,3-Dichloropropene	ND	ug/L	50
1,4-Dioxane	ND	ug/L	1000
Ethylbenzene	ND	ug/L	50
Ethyl cyanide	ND	ug/L	50
2-Hexanone	ND	ug/L	100
Iodomethane	ND	ug/L	50
Isobutyl alcohol	ND	ug/L	1000
Methacrylonitrile	ND	ug/L	50
2-Butanone (MEK)	ND	ug/L	100
4-Methyl-2-pentanone	ND	ug/L	100

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Michael Blades Approved By: Jeff Lowry

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Appendix IX Volatile Organics (CONT.)

Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-19
Lab ID: 008964-0001-SA Enseco ID: 1071120
Matrix: AQUEOUS Sampled: 04 APR 90 Received: 05 APR 90
Authorized: 05 APR 90 Prepared: 06 APR 90 Analyzed: 15 APR 90

Parameter	Result	Units	Reporting Limit
Styrene	ND	ug/L	50
1,1,1,2-Tetrachloroethane	ND	ug/L	50
1,1,2,2-Tetrachloroethane	ND	ug/L	50
Tetrachloroethene	ND	ug/L	50
Toluene	ND	ug/L	50
1,1,1-Trichloroethane	ND	ug/L	50
1,1,2-Trichloroethane	ND	ug/L	50
Trichloroethene	1000	ug/L	50
Trichlorofluoromethane	ND	ug/L	50
1,2,3-Trichloropropane	ND	ug/L	50
Vinyl acetate	ND	ug/L	100
Vinyl chloride	ND	ug/L	100
Xylenes (total)	ND	ug/L	50
Toluene-d8	99	%	--
4-Bromofluorobenzene	97	%	--
1,2-Dichloroethane-d4	92	%	--

ND = Not detected
NA = Not applicable

Reported By: Michael Blades Approved By: Jeff Lowry

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A CORNING Company

Appendix IX Volatile Organics

Method 8240

Client Name: Sparton Technology Inc.
Client ID: FIELD BLANK
Lab ID: 008964-0002-SA Enseco ID: 1071121
Matrix: AQUEOUS Sampled: 04 APR 90 Received: 05 APR 90
Authorized: 05 APR 90 Prepared: 06 APR 90 Analyzed: 15 APR 90

Parameter	Result	Units	Reporting Limit
Acetone	ND	ug/L	10
Acetonitrile	ND	ug/L	100
Acrolein	ND	ug/L	100
Acrylonitrile	ND	ug/L	100
Allyl chloride	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
Bromodichloromethane	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
Bromomethane	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Chloroprene	ND	ug/L	5.0
Chloroethane	ND	ug/L	10
Chlorodibromomethane	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
Chloromethane	ND	ug/L	10
DBCP (1,2-Dibromo-3-chloropropane)	ND	ug/L	5.0
EDB (1,2-Dibromoethane)	ND	ug/L	5.0
Dibromomethane	ND	ug/L	5.0
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0
Dichlorodifluoromethane	ND	ug/L	10
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
trans-1,2-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
Dichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
1,4-Dioxane	ND	ug/L	100
Ethylbenzene	ND	ug/L	5.0
Ethyl cyanide	ND	ug/L	5.0
2-Hexanone	ND	ug/L	10
Iodomethane	ND	ug/L	5.0
Isobutyl alcohol	ND	ug/L	100
Methacrylonitrile	ND	ug/L	5.0
2-Butanone (MEK)	ND	ug/L	10
4-Methyl-2-pentanone	ND	ug/L	10

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Michael Blades Approved By: Jeff Lowry

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Appendix IX Volatile Organics (CONT.)

Method 8240

Client Name: Sparton Technology Inc.
Client ID: FIELD BLANK
Lab ID: 008964-0002-SA Enseco ID: 1071121
Matrix: AQUEOUS Sampled: 04 APR 90 Received: 05 APR 90
Authorized: 05 APR 90 Prepared: 06 APR 90 Analyzed: 15 APR 90

Parameter	Result	Units	Reporting Limit
Styrene	ND	ug/L	5.0
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
1,1,1-Trichloroethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Trichlorofluoromethane	ND	ug/L	5.0
1,2,3-Trichloropropane	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Xylenes (total)	ND	ug/L	5.0
Toluene-d8	98	%	--
4-Bromofluorobenzene	101	%	--
1,2-Dichloroethane-d4	93	%	--

ND = Not detected
NA = Not applicable

Reported By: Michael Blades Approved By: Jeff Lowry

Enseco
A CORNING Company

Appendix IX Volatile Organics

Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-20
Lab ID: 008964-0003-SA Enseco ID: 1071122
Matrix: AQUEOUS Sampled: 04 APR 90 Received: 05 APR 90
Authorized: 05 APR 90 Prepared: 06 APR 90 Analyzed: 15 APR 90

Parameter	Result	Units	Reporting Limit
Acetone	ND	ug/L	10
Acetonitrile	ND	ug/L	100
Acrolein	ND	ug/L	100
Acrylonitrile	ND	ug/L	100
Allyl chloride	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
Bromodichloromethane	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
Bromomethane	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Chloroprene	ND	ug/L	5.0
Chloroethane	ND	ug/L	10
Chlorodibromomethane	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
Chloromethane	ND	ug/L	10
DBCP (1,2-Dibromo-3-chloropropane)	ND	ug/L	5.0
EDB (1,2-Dibromoethane)	ND	ug/L	5.0
Dibromomethane	ND	ug/L	5.0
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0
Dichlorodifluoromethane	ND	ug/L	10
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
trans-1,2-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
Dichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
1,4-Dioxane	ND	ug/L	100
Ethylbenzene	ND	ug/L	5.0
Ethyl cyanide	ND	ug/L	5.0
2-Hexanone	ND	ug/L	10
Iodomethane	ND	ug/L	5.0
Isobutyl alcohol	ND	ug/L	100
Methacrylonitrile	ND	ug/L	5.0
2-Butanone (MEK)	ND	ug/L	10
4-Methyl-2-pentanone	ND	ug/L	10

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Michael Blades Approved By: Jeff Lowry

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Appendix IX Volatile Organics (CONT.)

Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-20
Lab ID: 008964-0003-SA Enseco ID: 1071122
Matrix: AQUEOUS Sampled: 04 APR 90 Received: 05 APR 90
Authorized: 05 APR 90 Prepared: 06 APR 90 Analyzed: 15 APR 90

Parameter	Result	Units	Reporting Limit
Styrene	ND	ug/L	5.0
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
1,1,1-Trichloroethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Trichloroethene	21	ug/L	5.0
Trichlorofluoromethane	ND	ug/L	5.0
1,2,3-Trichloropropane	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Xylenes (total)	ND	ug/L	5.0
Toluene-d8	98	%	--
4-Bromofluorobenzene	96	%	--
1,2-Dichloroethane-d4	94	%	--

ND = Not detected
NA = Not applicable

Reported By: Michael Blades Approved By: Jeff Lowry

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Appendix IX Volatile Organics

Method 8240

Client Name: Sparton Technology Inc.
Client ID: TRIP BLANK
Lab ID: 008964-0004-SA Enseco ID: 1071123
Matrix: AQUEOUS Sampled: 04 APR 90 Received: 05 APR 90
Authorized: 05 APR 90 Prepared: 06 APR 90 Analyzed: 15 APR 90

Parameter	Result	Units	Reporting Limit
Acetone	ND	ug/L	10
Acetonitrile	ND	ug/L	100
Acrolein	ND	ug/L	100
Acrylonitrile	ND	ug/L	100
Allyl chloride	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
Bromodichloromethane	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
Bromomethane	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Chloroprene	ND	ug/L	5.0
Chloroethane	ND	ug/L	10
Chlorodibromomethane	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
Chloromethane	ND	ug/L	10
DBCP (1,2-Dibromo-3-chloropropane)	ND	ug/L	5.0
EDB (1,2-Dibromoethane)	ND	ug/L	5.0
Dibromomethane	ND	ug/L	5.0
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0
Dichlorodifluoromethane	ND	ug/L	10
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
trans-1,2-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
Dichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
1,4-Dioxane	ND	ug/L	100
Ethylbenzene	ND	ug/L	5.0
Ethyl cyanide	ND	ug/L	5.0
2-Hexanone	ND	ug/L	10
Iodomethane	ND	ug/L	5.0
Isobutyl alcohol	ND	ug/L	100
Methacrylonitrile	ND	ug/L	5.0
2-Butanone (MEK)	ND	ug/L	10
4-Methyl-2-pentanone	ND	ug/L	10

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Michael Blades Approved By: Jeff Lowry

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Appendix IX Volatile Organics (CONT.)

Method 8240

Client Name: Sparton Technology Inc.
Client ID: TRIP BLANK
Lab ID: 008964-0004-SA Enseco ID: 1071123
Matrix: AQUEOUS Sampled: 04 APR 90 Received: 05 APR 90
Authorized: 05 APR 90 Prepared: 06 APR 90 Analyzed: 15 APR 90

Parameter	Result	Units	Reporting Limit
Styrene	ND	ug/L	5.0
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
1,1,1-Trichloroethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Trichlorofluoromethane	ND	ug/L	5.0
1,2,3-Trichloropropane	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Xylenes (total)	ND	ug/L	5.0
Toluene-d8	99	%	--
4-Bromofluorobenzene	98	%	--
1,2-Dichloroethane-d4	95	%	--

ND = Not detected
NA = Not applicable

Reported By: Michael Blades Approved By: Jeff Lowry

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Metals

Total Metals

Client Name: Sparton Technology Inc.
Client ID: MW-19
Lab ID: 008964-0001-SA Enseco ID: 1071120
Matrix: AQUEOUS Sampled: 04 APR 90 Received: 05 APR 90
Authorized: 05 APR 90 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium III	ND	mg/L	0.010	7196/6010	NA	13 APR 90
Chromium (VI)	ND	mg/L	0.010	7196	NA	05 APR 90
Boron	0.24	mg/L	0.047	6010	11 APR 90	12 APR 90
Chromium	ND	mg/L	0.010	6010	11 APR 90	12 APR 90
Manganese	0.032	mg/L	0.010	6010	11 APR 90	12 APR 90
Nickel	ND	mg/L	0.040	6010	11 APR 90	12 APR 90
Sodium	56.4	mg/L	5.0	6010	11 APR 90	12 APR 90

ND = Not detected
NA = Not applicable

Reported By: Fred Velasquez Approved By: Kimberly Conroy

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Metals

Total Metals

Client Name: Sparton Technology Inc.
Client ID: FIELD BLANK
Lab ID: 008964-0002-SA Enseco ID: 1071121
Matrix: AQUEOUS Sampled: 04 APR 90 Received: 05 APR 90
Authorized: 05 APR 90 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium III	ND	mg/L	0.010	7196/6010	NA	13 APR 90
Chromium (VI)	ND	mg/L	0.010	7196	NA	05 APR 90
Boron	0.073	mg/L	0.047	6010	11 APR 90	12 APR 90
Chromium	ND	mg/L	0.010	6010	11 APR 90	12 APR 90
Manganese	ND	mg/L	0.010	6010	11 APR 90	12 APR 90
Nickel	ND	mg/L	0.040	6010	11 APR 90	12 APR 90
Sodium	ND	mg/L	5.0	6010	11 APR 90	12 APR 90

ND = Not detected
NA = Not applicable

Reported By: Fred Velasquez Approved By: Kimberly Conroy

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Metals

Total Metals

Client Name: Sparton Technology Inc.
Client ID: MW-20
Lab ID: 008964-0003-SA Enseco ID: 1071122
Matrix: AQUEOUS Sampled: 04 APR 90 Received: 05 APR 90
Authorized: 05 APR 90 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium (VI)	ND	mg/L	0.010	7196	NA	05 APR 90
Chromium III	ND	mg/L	0.010	7196/6010	NA	13 APR 90
Boron	0.13	mg/L	0.047	6010	11 APR 90	12 APR 90
Chromium	ND	mg/L	0.010	6010	11 APR 90	12 APR 90
Manganese	0.58	mg/L	0.010	6010	11 APR 90	12 APR 90
Nickel	ND	mg/L	0.040	6010	11 APR 90	12 APR 90
Sodium	48.2	mg/L	5.0	6010	11 APR 90	12 APR 90

ND = Not detected
NA = Not applicable

Reported By: Fred Velasquez Approved By: Kimberly Conroy

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Metals

Total Metals

Client Name: Sparton Technology Inc.
Client ID: TRIP BLANK
Lab ID: 008964-0004-SA Enseco ID: 1071123
Matrix: AQUEOUS Sampled: 04 APR 90 Received: 05 APR 90
Authorized: 05 APR 90 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chromium III	ND	mg/L	0.010	7196/6010	NA	13 APR 90
Chromium (VI)	ND	mg/L	0.010	7196	NA	05 APR 90
Boron	ND	mg/L	0.047	6010	11 APR 90	12 APR 90
Chromium	ND	mg/L	0.010	6010	11 APR 90	12 APR 90
Manganese	0.011	mg/L	0.010	6010	11 APR 90	12 APR 90
Nickel	ND	mg/L	0.040	6010	11 APR 90	12 APR 90
Sodium	ND	mg/L	5.0	6010	11 APR 90	12 APR 90

ND = Not detected
NA = Not applicable

Reported By: Fred Velasquez Approved By: Kimberly Conroy

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General Inorganics

Client Name: Sparton Technology Inc.
Client ID: MW-19
Lab ID: 008964-0001-SA Enseco ID: 1071120
Matrix: AQUEOUS Sampled: 04 APR 90 Received: 05 APR 90
Authorized: 05 APR 90 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chloride	30.5	mg/L	3.0	300.0	NA	10 APR 90
Nitrate as N	1.9	mg/L	0.10	353.2	NA	06 APR 90
pH	7.5	units	--	9040	NA	05 APR 90
Sulfate	121	mg/L	5.0	300.0	NA	10 APR 90
Specific Conductance at 25 deg.C	690	umhos/cm	1.0	120.1	NA	05 APR 90
Total Kjeldahl Nitrogen as N	ND	mg/L	0.50	351.2	NA	13 APR 90
Total Organic Carbon	2.3	mg/L	1.0	9060	NA	16 APR 90
Total Organic Halogen as Cl	1300	ug/L	300	9020	NA	16 APR 90

ND = Not detected
NA = Not applicable

Reported By: Dan Appelhans Approved By: Toni Lusk

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General Inorganics

Client Name: Sparton Technology Inc.
Client ID: FIELD BLANK
Lab ID: 008964-0002-SA Enseco ID: 1071121
Matrix: AQUEOUS Sampled: 04 APR 90 Received: 05 APR 90
Authorized: 05 APR 90 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chloride	ND	mg/L	3.0	300.0	NA	10 APR 90
Nitrate as N	ND	mg/L	0.10	353.2	NA	06 APR 90
pH	6.4	units	--	9040	NA	05 APR 90
Sulfate	ND	mg/L	5.0	300.0	NA	10 APR 90
Specific Conductance at 25 deg.C	1.6	umhos/cm	1.0	120.1	NA	05 APR 90
Total Kjeldahl Nitrogen as N	ND	mg/L	0.50	351.2	NA	13 APR 90
Total Organic Carbon	ND	mg/L	1.0	9060	NA	16 APR 90
Total Organic Halogen as Cl	ND	ug/L	30.0	9020	NA	16 APR 90

ND = Not detected
NA = Not applicable

Reported By: Dan Appelhans Approved By: Toni Lusk

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General Inorganics

Client Name: Sparton Technology Inc.
Client ID: MW-20
Lab ID: 008964-0003-SA Enseco ID: 1071122
Matrix: AQUEOUS Sampled: 04 APR 90 Received: 05 APR 90
Authorized: 05 APR 90 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chloride	21.4	mg/L	3.0	300.0	NA	10 APR 90
Nitrate as N	1.1	mg/L	0.10	353.2	NA	06 APR 90
pH	7.7	units	--	9040	NA	05 APR 90
Sulfate	104	mg/L	5.0	300.0	NA	10 APR 90
Specific Conductance at 25 deg.C	660	umhos/cm	1.0	120.1	NA	05 APR 90
Total Kjeldahl Nitrogen as N	ND	mg/L	0.50	351.2	NA	13 APR 90
Total Organic Carbon	3.1	mg/L	1.0	9060	NA	16 APR 90
Total Organic Halogen as Cl	ND	ug/L	30.0	9020	NA	16 APR 90

ND = Not detected
NA = Not applicable

Reported By: Dan Appelhans Approved By: Toni Lusk

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General Inorganics

Client Name: Sparton Technology Inc.
Client ID: TRIP BLANK
Lab ID: 008964-0004-SA Enseco ID: 1071123
Matrix: AQUEOUS Sampled: 04 APR 90 Received: 05 APR 90
Authorized: 05 APR 90 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chloride	ND	mg/L	3.0	300.0	NA	10 APR 90
Nitrate as N	ND	mg/L	0.10	353.2	NA	06 APR 90
pH	6.1	units	--	9040	NA	05 APR 90
Sulfate	ND	mg/L	5.0	300.0	NA	10 APR 90
Specific Conductance at 25 deg.C	1.3	umhos/cm	1.0	120.1	NA	05 APR 90
Total Kjeldahl Nitrogen as N	ND	mg/L	0.50	351.2	NA	13 APR 90
Total Organic Carbon	ND	mg/L	1.0	9060	NA	16 APR 90
Total Organic Halogen as Cl	ND	ug/L	30.0	9020	NA	16 APR 90

ND = Not detected
NA = Not applicable

Reported By: Dan Appelhans Approved By: Toni Lusk

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QC LOT ASSIGNMENT REPORT
Volatile Organics by GC/MS

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
008964-0001-SA	AQUEOUS	624-A	11 APR 90-H	15 APR 90-H
008964-0002-SA	AQUEOUS	624-A	11 APR 90-H	15 APR 90-H
008964-0003-SA	AQUEOUS	624-A	11 APR 90-H	15 APR 90-H
008964-0004-SA	AQUEOUS	624-A	11 APR 90-H	15 APR 90-H

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DUPLICATE CONTROL SAMPLE REPORT
Volatile Organics by GC/MS

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Limits	Precision (RPD) DCS	Precision Limit
Category: 624-A								
Matrix: AQUEOUS								
QC Lot: 11 APR 90-H								
Concentration Units: ug/L								
1,1-Dichloroethene	50	60.1	67.9	64.0	128	61-145	12	14
Trichloroethene	50	51.8	53.2	52.5	105	71-120	2.7	14
Benzene	50	54.6	55.1	54.8	110	76-127	0.9	11
Toluene	50	53.2	53.2	53.2	106	76-125	0.0	13
Chlorobenzene	50	56.9	57.7	57.3	115	75-130	1.4	13

Calculations are performed before rounding to avoid round-off errors in calculated results.

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SINGLE CONTROL SAMPLE REPORT
Volatile Organics by GC/MS

Analyte	Concentration Spiked	Concentration Measured	Accuracy(%) SCS	Accuracy(%) Limits
Category: 624-A				
Matrix: AQUEOUS				
QC Lot: 11 APR 90-H QC Run: 15 APR 90-H				
Concentration Units: ug/L				
1,2-Dichloroethane-d4	50.0	44.6	89	76-114
4-Bromofluorobenzene	50.0	49.5	99	86-115
Toluene-d8	50.0	49.3	99	88-110

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT
Volatile Organics by GC/MS

Test: 624-AP9-AP
Matrix: AQUEOUS
QC Lot: 11 APR 90-H QC Run: 15 APR 90-H

Analyte	Result	Units	Reporting Limit
Acetone	ND	ug/L	10
Acetonitrile	ND	ug/L	100
Acrolein	ND	ug/L	100
Acrylonitrile	ND	ug/L	100
Allyl chloride	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
Bromodichloromethane	ND	ug/L	5.0
Bromoform	ND	ug/L	5.0
Bromomethane	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Chloroprene	ND	ug/L	5.0
Chloroethane	ND	ug/L	10
Chlorodibromomethane	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
Chloromethane	ND	ug/L	10
DBCP (1,2-Dibromo-3-chloropropane)	ND	ug/L	5.0
EDB (1,2-Dibromoethane)	ND	ug/L	5.0
Dibromomethane	ND	ug/L	5.0
trans-1,4-Dichloro-2-butene	ND	ug/L	5.0
Dichlorodifluoromethane	ND	ug/L	10
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
trans-1,2-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
Dichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
1,4-Dioxane	ND	ug/L	100
Ethylbenzene	ND	ug/L	5.0
Ethyl cyanide	ND	ug/L	5.0
2-Hexanone	ND	ug/L	10
Iodomethane	ND	ug/L	5.0
Isobutyl alcohol	ND	ug/L	100
Methacrylonitrile	ND	ug/L	5.0
2-Butanone (MEK)	ND	ug/L	10
4-Methyl-2-pentanone	ND	ug/L	10

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METHOD BLANK REPORT
Volatile Organics by GC/MS (cont.)

Analyte	Result	Units	Reporting Limit
Test: 624-AP9-AP			
Matrix: AQUEOUS			
QC Lot: 11 APR 90-H QC Run: 15 APR 90-H			
Styrene	ND	ug/L	5.0
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
1,1,1-Trichloroethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Trichlorofluoromethane	ND	ug/L	5.0
1,2,3-Trichloropropane	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Xylenes (total)	ND	ug/L	5.0

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QC LOT ASSIGNMENT REPORT
Metals Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
008964-0001-SA	AQUEOUS	CR6-AT	05 APR 90-A	-
008964-0001-SA	AQUEOUS	ICP-AT	11 APR 90-D	11 APR 90-D
008964-0002-SA	AQUEOUS	CR6-AT	05 APR 90-A	-
008964-0002-SA	AQUEOUS	ICP-AT	11 APR 90-D	11 APR 90-D
008964-0003-SA	AQUEOUS	CR6-AT	05 APR 90-A	-
008964-0003-SA	AQUEOUS	ICP-AT	11 APR 90-D	11 APR 90-D
008964-0004-SA	AQUEOUS	CR6-AT	05 APR 90-A	-
008964-0004-SA	AQUEOUS	ICP-AT	11 APR 90-D	11 APR 90-D

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METHOD BLANK REPORT
Metals Analysis and Preparation

Analyte	Result	Units	Reporting Limit
Test: ICP-AT			
Matrix: AQUEOUS			
QC Lot: 11 APR 90-D QC Run: 11 APR 90-D			
Boron	0.047	mg/L	0.020
Chromium	ND	mg/L	0.010
Manganese	ND	mg/L	0.010
Nickel	ND	mg/L	0.040
Sodium	ND	mg/L	5.0

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QC LOT ASSIGNMENT REPORT
Wet Chemistry Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
008964-0001-SA	AQUEOUS	PH-A	05 APR 90-H	-
008964-0001-SA	AQUEOUS	TOX-A	16 APR 90-A	-
008964-0001-SA	AQUEOUS	COND-A	05 APR 90-H	-
008964-0001-SA	AQUEOUS	CL-IC-A	10 APR 90-M	-
008964-0001-SA	AQUEOUS	NO3-A	06 APR 90-A	-
008964-0001-SA	AQUEOUS	SO4-IC-A	10 APR 90-M	-
008964-0001-SA	AQUEOUS	TKN-A	12 APR 90-A	12 APR 90-A
008964-0002-SA	AQUEOUS	PH-A	05 APR 90-H	-
008964-0002-SA	AQUEOUS	TOX-A	16 APR 90-A	-
008964-0002-SA	AQUEOUS	COND-A	05 APR 90-H	-
008964-0002-SA	AQUEOUS	CL-IC-A	10 APR 90-M	-
008964-0002-SA	AQUEOUS	NO3-A	06 APR 90-A	-
008964-0002-SA	AQUEOUS	SO4-IC-A	10 APR 90-M	-
008964-0002-SA	AQUEOUS	TKN-A	12 APR 90-A	12 APR 90-A
008964-0003-SA	AQUEOUS	PH-A	05 APR 90-H	-
008964-0003-SA	AQUEOUS	TOX-A	16 APR 90-A	-
008964-0003-SA	AQUEOUS	COND-A	05 APR 90-H	-
008964-0003-SA	AQUEOUS	CL-IC-A	10 APR 90-M	-
008964-0003-SA	AQUEOUS	NO3-A	06 APR 90-A	-
008964-0003-SA	AQUEOUS	SO4-IC-A	10 APR 90-M	-
008964-0003-SA	AQUEOUS	TKN-A	12 APR 90-A	12 APR 90-A
008964-0004-SA	AQUEOUS	PH-A	05 APR 90-H	-
008964-0004-SA	AQUEOUS	TOX-A	16 APR 90-A	-
008964-0004-SA	AQUEOUS	COND-A	05 APR 90-H	-
008964-0004-SA	AQUEOUS	CL-IC-A	10 APR 90-M	-
008964-0004-SA	AQUEOUS	NO3-A	06 APR 90-A	-
008964-0004-SA	AQUEOUS	SO4-IC-A	10 APR 90-M	-
008964-0004-SA	AQUEOUS	TKN-A	12 APR 90-A	12 APR 90-A

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DUPLICATE CONTROL SAMPLE REPORT
Wet Chemistry Analysis and Preparation

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Average(%) Limits	Precision (RPD) DCS	Precision (RPD) Limit
Category: PH-A Matrix: AQUEOUS QC Lot: 05 APR 90-H Concentration Units: units								
pH	9.1	9.08	9.07	9.08	100	98-102	0.1	5
Category: TOX-A Matrix: AQUEOUS QC Lot: 16 APR 90-A Concentration Units: ug Cl/L								
Total Organic Halogen as Cl	100	102	99.6	101	101	80-120	2.4	20
Category: COND-A Matrix: AQUEOUS QC Lot: 05 APR 90-H Concentration Units: umhos/cm								
Specific Conductance at 25 deg.C	1650	1680	1670	1680	102	95-105	0.6	5
Category: CL-IC-A Matrix: AQUEOUS QC Lot: 10 APR 90-M Concentration Units: mg/L								
Chloride	100	101	100	100	101	92-108	1.0	20
Category: NO3-A Matrix: AQUEOUS QC Lot: 06 APR 90-A Concentration Units: mg/L								
Nitrate as N	5.4	5.72	5.64	5.68	105	91-109	1.4	10

Calculations are performed before rounding to avoid round-off errors in calculated results.

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DUPLICATE CONTROL SAMPLE REPORT
Wet Chemistry Analysis and Preparation (cont.)

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Average(%) Limits	Precision (RPD) DCS	Precision (RPD) Limit
Category: SO4-IC-A Matrix: AQUEOUS QC Lot: 10 APR 90-M Concentration Units: mg/L								
Sulfate	200	203	203	203	102	93-107	0.0	20
Category: TKN-A Matrix: AQUEOUS QC Lot: 12 APR 90-A Concentration Units: mg/L								
Total Kjeldahl Nitrogen as N	5.2	5.87	5.36	5.62	108	78-122	9.1	20

Calculations are performed before rounding to avoid round-off errors in calculated results.

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METHOD BLANK REPORT
Wet Chemistry Analysis and Preparation

Analyte	Result	Units	Reporting Limit
Test: TKN-TEC-A			
Matrix: AQUEOUS			
QC Lot: 12 APR 90-A QC Run: 12 APR 90-A			
Total Kjeldahl Nitrogen as N	ND	mg/L	0.50

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QC LOT ASSIGNMENT REPORT
Wet Chemistry Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)
008964-0001-SA	AQUEOUS	TOC-A	16 APR 90-Z
008964-0002-SA	AQUEOUS	TOC-A	16 APR 90-Z
008964-0003-SA	AQUEOUS	TOC-A	16 APR 90-Z
008964-0004-SA	AQUEOUS	TOC-A	16 APR 90-Z

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DUPLICATE CONTROL SAMPLE REPORT
Wet Chemistry Analysis and Preparation

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Average(%) Limit	Precision (RPD) DCS	Precision (RPD) Limit
Category: TOC-A								
Matrix: AQUEOUS								
QC Lot: 16 APR 90-Z								
Concentration Units: mg/L								
Total Organic Carbon	200	218.1	218.7	218.4	109	70-130	0.27	30

Calculations are performed before rounding to avoid round-off errors in calculated results.