SPARTON

SPARTON TECHNOLOGY

RECEIVED JAN 16 1990

January 12, 1990

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 December 1989.

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 of December, we experienced problems with the water meter which measures the quantity of treated groundwater. We are in the process of repairing and recalibrating the meter. Data is included in Attachment 2.

3. The installation of offsite upper flow zone wells 47 and 48 was completed. Initial sampling of these wells is scheduled for early January. A well location map is attached showing the location of all current wells.

4. Both initial and confirmational sampling of onsite lower flow zone (LFZ) wells 42 and 43 were conducted during December.

5. We have received the analytical results from both initial and confirmational samplings of onsite LFZ wells 38-41. Well 41 near well 32, showed levels of 1,1-DCE, 1,1,1-TCA, and TCE above state standards. Raw lab data sheets and a summary of results are included in Attachment 3.

001424

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

6. Results from the state routine groundwater monitoring program for the 4th quarter of 1989 are included in Attachment 4.

This concludes our progress report for the month of December. 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,

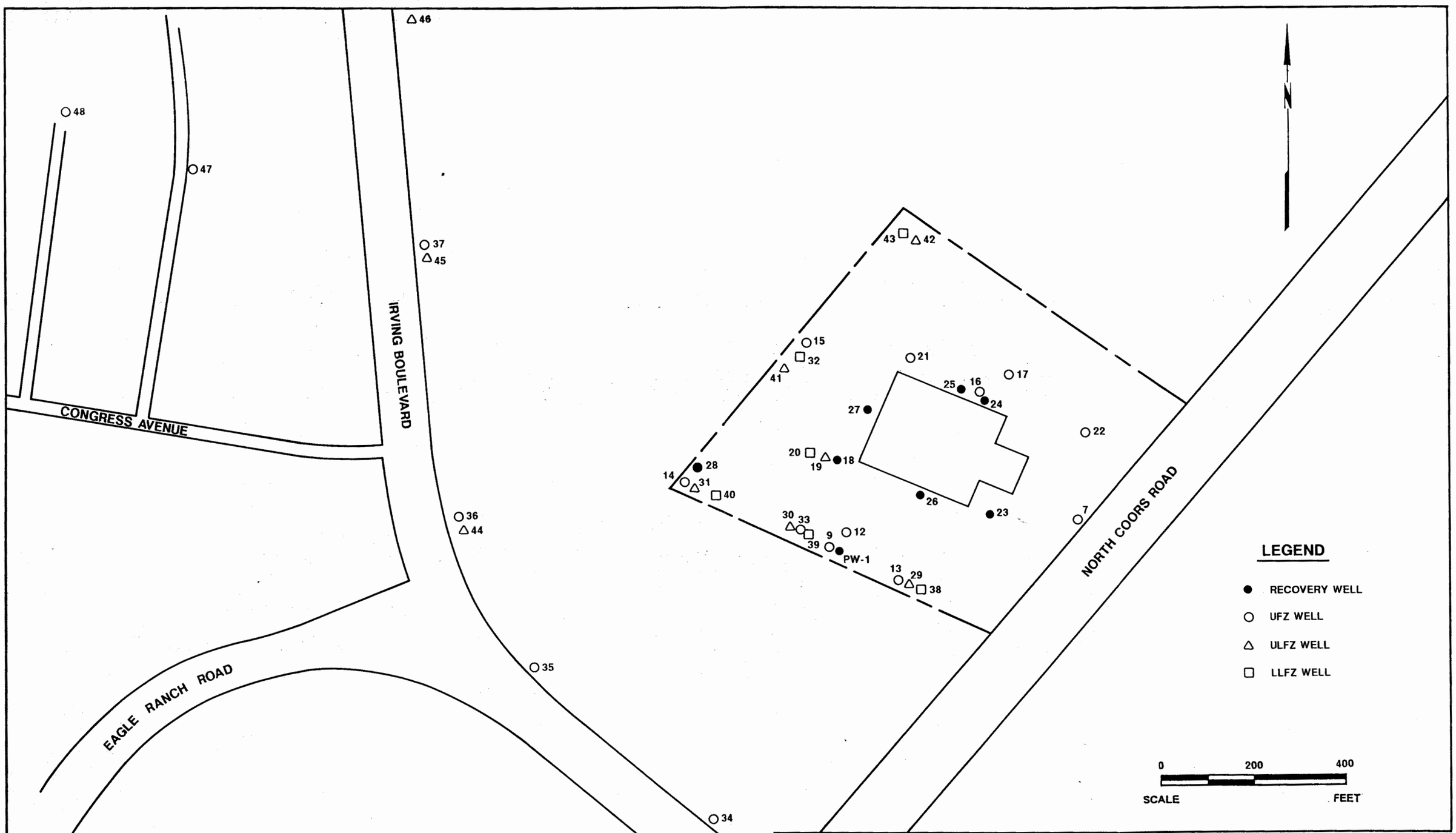
SPARTON TECHNOLOGY, INC.

Richard D. Mico
Vice President/General Manager

RDM:ejg
SPRT.039.12

Attachments (as stated)

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



Harding Lawson Associates
Engineers, Geologists & Geophysicists

WELL LOCATION PLAN

SPARTON TECHNOLOGY
ALBUQUERQUE, NEW MEXICO

PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
	6310,039.12				

ATTACHMENT 1

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

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
	Water Level Elevation - Feet Above MSL														
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

ATTACHMENT 2

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
avg	65	0.5	99.3	430	3.7	99.1	387	2.5	99.4	982	5.7	99.4

ATTACHMENT 3

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

SUMMARY OF GENERAL INORGANIC ANALYSES

SAMPLE ID	DATE SAMPLED	CHLORIDE mg/l (250)	FLUORIDE mg/l (1.6)	AMMONIA as N mg/l (---)	NITRATE as N mg/l (10)	SULFATE mg/l (600)	TOTAL KJELDAHL NITROGEN as N mg/l (---)
W-13	02/14/89	24	0.3	0.1	2.2	104	0.3
MW-13	03/13/89	25	0.4	< 0.1	2.6	100	< 0.1
W-14	02/15/89	91	0.2	< 0.1	18	124	0.4
MW-14	03/14/89	94	0.3	< 0.1	22	133	< 0.1
W-15	02/16/89	48	0.4	< 0.1	5.2	122	0.4
W-15	03/15/89	36	0.4	< 0.1	4.5	120	< 0.1
MW-29	02/15/89	26	0.3	< 0.1	2.0	107	0.2
W-29	03/13/89	25	0.3	< 0.1	1.9	106	< 0.1
MW-30	02/14/89	28	0.3	< 0.1	4.6	122	< 0.1
W-30	03/14/89	28	0.4	< 0.1	4.4	120	< 0.1
W-31	02/13/89	31	0.3	< 0.1	3.5	133	< 0.1
MW-31	03/15/89	31	0.3	< 0.1	3.3	126	< 0.1
W-32	02/16/89	107	< 0.1	< 0.1	0.7	127	0.3
MW-32	03/16/89	88	0.3	< 0.1	0.7	121	< 0.1
W-33	02/14/89	177	0.9	3.5	< 0.1	263	4.7
MW-33	03/14/89	176	1.1	6.2	< 0.1	261	6.5
MW-34	08/16/89	11	0.5	< 0.1	1.1	105	< 0.5
W-34	08/28/89	12	0.4	< 0.1	12	130	< 0.5
MW-34	08/28/89	12	0.4	< 0.1	12	130	< 0.5
W-35	08/15/89	24	0.6	< 0.1	68	204	< 0.5
MW-35	08/28/89	25	0.3	< 0.1	24	220	< 0.5

OTE : State Standards, where they exist, are shown in parentheses.

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

SUMMARY OF GENERAL INORGANIC ANALYSES

SAMPLE ID	DATE SAMPLED	CHLORIDE mg/l (250)	FLUORIDE mg/l (1.6)	AMMONIA as N mg/l (---)	NITRATE as N mg/l (10)	SULFATE mg/l (600)	TOTAL KJELDAHL NITROGEN as N mg/l (---)
W-36	08/15/89	19	0.4	< 0.1	22	171	< 0.5
MW-36	08/28/89	23	0.3	< 0.1	13	111	< 0.5
W-37	08/15/89	23	0.6	< 0.1	1.2	122	0.8
MW-37	08/28/89	21	0.9	< 0.1	1.5	140	< 0.5
MW-38	11/06/89	12	0.3	< 0.1	0.4	71	< 0.5
W-38	11/20/89	12	0.4	< 0.1	0.3	71	< 0.5
MW-39	11/06/89	25	0.3	< 0.1	0.3	106	< 0.5
W-39	11/20/89	21	0.3	< 0.1	< 0.1	93	< 0.5
MW-40	11/07/89	24	0.3	< 0.1	0.9	119	< 0.5
MW-40	11/21/89	24	0.3	< 0.1	0.8	120	< 0.5
W-41	11/07/89	54	0.2	< 0.1	3.2	128	< 0.5
MW-41	11/20/89	44	0.2	< 0.1	3.3	122	< 0.5

NOTE : State Standards, where they exist, are shown in parentheses.

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

SUMMARY OF METALS ANALYSES

mg/l

SAMPLE ID	DATE SAMPLED	ANTIMONY (---)	ARSENIC (0.1)	BARIUM (1)	BERYLLIUM (---)	BORON (0.75)	CADMIUM (0.01)	CHROMIUM (0.05)	COBALT (---)	COPPER (---)	LEAD (0.05)	MANGANESE (0.2)	MERCURY (0.002)	NICKEL (---)	SELENIUM (0.05)	SILVER (0.05)	THALLIUM (---)	TIN (---)	VANADIUM (---)	ZINC (---)
MW-13	02/14/89	< 0.05	< 0.003	0.067	< 0.001	0.78	< 0.005	< 0.01	< 0.01	< 0.006	0.003	0.19	< 0.0001	< 0.04	0.005	< 0.005	< 0.02	< 0.03	< 0.01	0.07
MW-13	03/13/89	< 0.05	< 0.006	0.054	< 0.001	0.64	< 0.005	< 0.01	< 0.01	0.008	< 0.002	0.15	< 0.0001	< 0.04	0.006	< 0.005	< 0.004	< 0.04	< 0.01	0.02
MW-14	02/15/89	< 0.05	< 0.003	0.23	< 0.001	0.95	< 0.005	0.75	< 0.01	< 0.006	< 0.002	< 0.005	< 0.0001	< 0.04	0.005	< 0.005	< 0.08	< 0.03	< 0.01	< 0.01
MW-14	03/14/89	< 0.05	< 0.003	0.17	< 0.001	1.2	< 0.005	0.90	< 0.01	< 0.006	< 0.002	0.008	< 0.0001	< 0.04	0.008	< 0.005	< 0.08	< 0.03	< 0.01	< 0.01
MW-15	02/16/89	< 0.05	0.006	0.11	< 0.001	0.12	< 0.005	< 0.01	< 0.01	< 0.006	< 0.004	< 0.005	< 0.0001	< 0.04	< 0.002	< 0.005	< 0.04	< 0.03	< 0.01	< 0.01
MW-15	03/15/89	< 0.05	0.007	0.097	< 0.001	0.12	0.007	< 0.01	< 0.01	< 0.006	< 0.002	< 0.005	< 0.0001	< 0.04	< 0.002	< 0.005	< 0.008	< 0.03	< 0.01	< 0.01
MW-29	02/15/89	< 0.05	0.006	0.18	< 0.001	0.13	< 0.005	< 0.01	< 0.01	< 0.006	< 0.004	0.81	< 0.0001	< 0.04	< 0.002	< 0.005	< 0.02	< 0.03	< 0.01	< 0.01
MW-29	03/13/89	< 0.05	0.008	0.16	< 0.001	0.13	< 0.005	< 0.01	< 0.01	0.019	< 0.002	0.74	< 0.0001	< 0.04	< 0.002	< 0.005	< 0.004	< 0.04	< 0.01	0.01
MW-30	02/14/89	< 0.05	0.005	0.079	< 0.001	0.20	< 0.005	0.09	< 0.01	< 0.006	< 0.004	0.15	< 0.0001	< 0.04	< 0.002	< 0.005	< 0.02	< 0.03	< 0.01	0.01
MW-30	03/14/89	< 0.05	0.004	0.086	< 0.001	0.18	< 0.005	0.06	< 0.01	< 0.006	< 0.002	0.21	< 0.0001	< 0.04	< 0.002	< 0.005	< 0.04	< 0.03	< 0.01	< 0.01
MW-31	02/13/89	< 0.05	< 0.006	0.065	< 0.001	0.17	< 0.005	< 0.01	< 0.001	< 0.006	< 0.002	0.017	< 0.0001	< 0.04	< 0.002	< 0.005	< 0.02	< 0.03	< 0.01	< 0.01
MW-31	03/15/89	< 0.05	< 0.003	0.057	< 0.001	0.16	0.006	< 0.01	< 0.01	< 0.006	< 0.002	0.011	< 0.0001	< 0.04	< 0.002	< 0.005	< 0.008	< 0.03	< 0.01	< 0.01
MW-32	02/16/89	< 0.05	0.004	0.18	< 0.001	0.51	< 0.005	0.02	< 0.01	< 0.006	< 0.004	1.3	0.0002	< 0.04	< 0.002	< 0.005	< 0.04	< 0.03	< 0.01	< 0.01
MW-32	03/16/89	< 0.05	< 0.003	0.15	< 0.001	0.46	0.006	0.03	< 0.01	< 0.006	< 0.002	1.1	< 0.0001	< 0.04	< 0.002	< 0.005	< 0.008	< 0.03	< 0.01	< 0.01
MW-33	02/14/89	< 0.05	0.004	0.062	< 0.001	7.7	< 0.005	0.14	0.01	< 0.006	< 0.002	2.4	< 0.0001	0.62	< 0.002	< 0.005	< 0.04	< 0.03	< 0.01	0.02
MW-33	03/14/89	< 0.05	0.004	0.061	< 0.001	7.1	< 0.005	< 0.01	0.01	< 0.006	< 0.002	2.3	< 0.0001	0.51	0.003	< 0.005	< 0.08	< 0.03	< 0.01	< 0.01
MW-34	08/16/89	< 0.05	0.014	3.0	0.005	0.13	< 0.005	0.55	0.05	0.08	0.062	8.5	< 0.0002	0.23	< 0.01	< 0.01	< 0.01	< 0.07	0.16	0.48
MW-34	08/28/89	< 0.05	< 0.005	0.28	< 0.002	0.16	< 0.005	0.09	< 0.01	0.02	0.007	1.4	< 0.0002	0.04	< 0.005	< 0.01	< 0.005	< 0.005	0.01	0.14
MW-35	08/15/89	< 0.05	0.010	0.64	< 0.002	0.22	< 0.005	0.25	0.02	0.05	0.033	3.3	< 0.0002	0.14	< 0.01	< 0.01	< 0.05	< 0.07	0.05	0.32
MW-35	08/28/89	< 0.05	< 0.005	0.15	< 0.002	0.23	< 0.005	0.02	< 0.01	0.01	0.005	0.42	0.0007	< 0.04	0.019	0.01	< 0.01	< 0.05	0.01	0.09
MW-36	08/15/89	< 0.05	0.031	1.2	0.008	0.21	< 0.005	0.26	0.02	0.07	0.37	3.9	< 0.0002	0.15	< 0.02	< 0.01	< 0.05	< 0.07	0.09	0.50

NOTE : State standards, where they exist, are shown in parentheses.

001434

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

SUMMARY OF METALS ANALYSES

mg/l

SAMPLE ID	DATE SAMPLED	ANTIMONY (---)	ARSENIC (0.1)	BARIUM (1)	BERYLLIUM (---)	BORON (0.75)	CADMIUM (0.01)	CHROMIUM (0.05)	COBALT (---)	COPPER (---)	LEAD (0.05)	MANGANESE (0.2)	MERCURY (0.002)	NICKEL (---)	SELENIUM (0.05)	SILVER (0.05)	THALLIUM (---)	TIN (---)	VANADIUM (---)	ZINC (---)
MW-36	08/28/89	< 0.05	< 0.005	0.10	< 0.002	0.20	< 0.005	0.07	< 0.01	< 0.01	0.009	0.07	< 0.0002	< 0.04	< 0.005	< 0.01	< 0.01	< 0.05	< 0.01	0.10
MW-37	08/15/89	< 0.05	0.034	0.54	0.007	0.23	< 0.005	0.23	0.01	0.06	0.15	2.0	< 0.0002	0.14	< 0.02	< 0.01	< 0.05	< 0.07	0.11	0.67
MW-37	08/28/89	< 0.05	0.012	0.03	< 0.002	0.17	0.006	0.05	< 0.01	< 0.01	< 0.01	0.05	< 0.0002	< 0.04	< 0.005	0.01	< 0.005	< 0.05	0.06	0.07
MW-38	11/06/89	< 0.05	< 0.005	0.13	< 0.002	0.13	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	0.27	< 0.0002	< 0.04	< 0.005	< 0.01	< 0.01	< 0.05	< 0.01	0.76
MW-38	11/20/89	< 0.05	< 0.005	0.12	< 0.002	0.11	< 0.005	< 0.01	< 0.01	< 0.01	< 0.005	0.42	< 0.0002	< 0.04	< 0.005	< 0.01	< 0.01	< 0.05	< 0.01	0.54
MW-39	11/06/89	< 0.05	< 0.005	0.14	< 0.002	0.12	< 0.005	< 0.01	< 0.01	< 0.01	< 0.01	0.38	< 0.0002	< 0.04	< 0.005	< 0.01	< 0.01	< 0.05	< 0.01	0.35
MW-39	11/20/89	< 0.05	< 0.005	0.14	< 0.002	0.12	< 0.005	< 0.01	< 0.01	< 0.01	< 0.005	0.64	< 0.0002	< 0.04	< 0.005	< 0.01	< 0.02	< 0.05	< 0.01	0.15
MW-40	11/07/89	< 0.05	< 0.01	0.12	< 0.002	0.14	< 0.005	< 0.01	< 0.01	< 0.01	< 0.005	0.02	< 0.0002	< 0.04	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	0.66
MW-40	11/21/89	< 0.05	< 0.01	0.12	< 0.002	0.15	< 0.005	< 0.01	< 0.01	< 0.01	< 0.005	0.01	< 0.0002	< 0.04	< 0.005	< 0.01	< 0.01	< 0.05	< 0.01	0.37
MW-41	11/07/89	< 0.05	< 0.005	0.06	< 0.002	0.14	< 0.005	0.02	< 0.01	< 0.01	< 0.005	0.13	< 0.0002	< 0.04	< 0.01	< 0.01	< 0.01	< 0.05	< 0.01	0.03
MW-41	11/20/89	< 0.05	< 0.005	0.06	< 0.002	0.14	< 0.005	0.02	< 0.01	< 0.01	< 0.005	0.14	< 0.0002	< 0.04	< 0.005	< 0.01	< 0.05	< 0.05	< 0.01	0.02

NOTE : State standards, where they exist, are shown in parentheses.

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

APPENDIX IX VOLATILE ORGANIC ANALYSES SUMMARY
Part 1 of 3

(all concentrations in micrograms per liter (ug/l))

SAMPLE ID	DATE SAMPLED	ACETONE (---)	ACETO-NITRILE (---)	ACROLEIN (---)	ACRYLO-NITRILE (---)	ALLYL CHLORIDE (---)	BENZENE (10)	BROMO-DICHLORO-METHANE (---)	BROMO-FORM (---)	BROMO-METHANE (---)	CARBON DISULFIDE (---)	CARBON TETRA-CHLORIDE (10)	CHLORO-BENZENE (---)	CHLORO-PRENE (---)	CHLORO-ETHANE (---)	CHLORO-DIBROMO-METHANE (---)	CHLORO-FORM (100)	CHLORO-METHANE (---)	1,2-DIBROMO-3-CHLORO-PROPANE (---)
MW-36	08/15/89	< 10	< 100	< 100	< 100	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 10	< 5.0
MW-36	08/28/89	< 10	< 100	< 100	< 100	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 10	< 5.0
MW-37	08/15/89	< 100	<1000	<1000	<1000	< 50	< 50	< 50	< 50	< 100	< 50	< 50	< 50	< 50	< 100	< 50	< 50	< 100	< 50
MW-37	08/28/89	< 100	<1000	<1000	<1000	< 50	< 50	< 50	< 50	< 100	< 50	< 50	< 50	< 50	< 100	< 50	< 50	< 100	< 50
MW-38	11/06/89	< 10	---	---	---	---	< 5	< 5	< 5	< 10	< 5	< 5	< 5	---	< 10	< 5	< 5	< 10	---
MW-38	11/20/89	< 10	---	---	---	---	< 5	< 5	< 5	< 10	< 5	< 5	< 5	---	< 10	< 5	< 5	< 10	---
MW-39	11/06/89	< 10	---	---	---	---	< 5	< 5	< 5	< 10	< 5	< 5	< 5	---	< 10	< 5	< 5	< 10	---
MW-39	11/20/89	< 10	---	---	---	---	< 5	< 5	< 5	< 10	< 5	< 5	< 5	---	< 10	< 5	< 5	< 10	---
MW-40	11/07/89	< 10	---	---	---	---	< 5	< 5	< 5	< 10	< 5	< 5	< 5	---	< 10	< 5	< 5	< 10	---
MW-40	11/21/89	< 10	---	---	---	---	< 5	< 5	< 5	< 10	< 5	< 5	< 5	---	< 10	< 5	< 5	< 10	---
MW-41	11/07/89	< 100	---	---	---	---	< 50	< 50	< 50	< 100	< 50	< 50	< 50	---	< 100	< 50	< 50	< 100	---
MW-41	11/20/89	< 100	---	---	---	---	< 50	< 50	< 50	< 100	< 50	< 50	< 50	---	< 100	< 50	< 50	< 100	---

NOTE : State standards, where they exist, are shown in parentheses.

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

APPENDIX IX VOLATILE ORGANIC ANALYSES SUMMARY
Part 1 of 3

(all concentrations in micrograms per liter (ug/l))

SAMPLE ID	DATE SAMPLED	ACETONE (---)	ACETO-NITRILE (---)	ACROLEIN (---)	ACRYLO-NITRILE (---)	ALLYL CHLORIDE (---)	BENZENE (10)	BROMO-DICHLORO-METHANE (---)	BROMO-FORM (---)	BROMO-METHANE (---)	CARBON DISULFIDE (---)	CARBON TETRA-CHLORIDE (10)	CHLORO-BENZENE (---)	CHLORO-PRENE (---)	CHLORO-ETHANE (---)	CHLORO-DIBROMO-METHANE (---)	CHLORO-FORM (100)	CHLORO-METHANE (---)	1,2-DIBROMO-3-CHLORO-PROPANE (---)
MW-13	02/14/89	< 75	< 300	< 300	< 300	< 15	< 15	< 15	< 15	< 30	< 15	< 15	< 15	< 15	< 30	< 15	< 15	< 30	< 15
MW-13	03/13/89	< 82	< 330	< 330	< 330	< 16	< 16	< 16	< 16	< 33	< 16	< 16	< 16	< 16	< 33	< 16	< 16	< 33	< 16
MW-14	02/15/89	< 250	<1000	<1000	<1000	< 50	< 50	< 50	< 50	< 100	< 50	< 50	< 50	< 50	< 100	< 50	< 50	< 100	< 50
MW-14	03/14/89	< 420	<1700	<1700	<1700	< 85	< 85	< 85	< 85	< 170	< 85	< 85	< 85	< 85	< 170	< 85	< 85	< 170	< 85
MW-15	02/16/89	< 42	< 170	< 170	< 170	< 8.5	< 8.5	< 8.5	< 8.5	< 17	< 8.5	< 8.5	< 8.5	< 8.5	< 17	< 8.5	< 8.5	< 17	< 8.5
MW-15	03/15/89	< 25	< 100	< 100	< 100	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 10	< 5.0
MW-29	02/22/89	< 25	< 100	< 100	< 100	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 10	< 5.0
MW-29	03/13/89	< 25	< 100	< 100	< 100	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 10	< 5.0
MW-30	02/14/89	< 50	< 200	< 200	< 200	< 10	< 10	< 10	< 10	< 20	< 10	< 10	< 10	< 10	< 20	< 10	< 10	< 20	< 10
MW-30	03/14/89	< 62	< 250	< 250	< 250	< 12	< 12	< 12	< 12	< 25	< 12	< 12	< 12	< 12	< 25	< 12	< 12	< 25	< 12
MW-31	02/13/89	< 25	< 100	< 100	< 100	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 10	< 5.0
MW-31	03/15/89	< 25	< 100	< 100	< 100	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 10	< 5.0
MW-32	02/16/89	< 2500	<10000	<10000	<10000	< 500	< 500	< 500	< 500	< 1000	< 500	< 500	< 500	< 500	< 1000	< 500	< 500	< 1000	< 500
MW-32	03/16/89	140	< 100	< 100	< 100	< 5.0	9.1	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	35	< 10	< 5.0
MW-33	02/14/89	<1200	<5000	<5000	<5000	< 250	< 250	< 250	< 250	< 500	< 250	< 250	< 250	< 250	< 500	< 250	< 250	< 500	< 250
MW-33	03/14/89	<1200	<5000	<5000	<5000	< 250	< 250	< 250	< 250	< 500	< 250	< 250	< 250	< 250	< 500	< 250	< 250	< 500	< 250
MW-34	08/16/89	< 10	< 100	< 100	< 100	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 10	< 5.0
MW-34	08/28/89	< 10	< 100	< 100	< 100	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 10	< 5.0
MW-35	08/15/89	< 10	< 100	< 100	< 100	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 10	< 5.0
MW-35	08/28/89	< 10	< 100	< 100	< 100	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 10	< 5.0

NOTE : State standards, where they exist, are shown in parentheses.

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

APPENDIX IX VOLATILE ORGANIC ANALYSES SUMMARY
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(all concentrations in micrograms per liter (ug/l))

SAMPLE ID	DATE SAMPLED	1,2-DIBROMO-METHANE (---)	DIBROMO-METHANE (---)	TRANS-1,4-DICHLORO-2-BUTENE (---)	DICHLORO-DI-FLOURO-METHANE (---)	1,1-DI-CHLORO-ETHANE (25)	1,2-DI-CHLORO-ETHANE (10)	TRANS-1,2-DICHLORO-ETHENE (---)	1,1-DI-CHLORO-ETHENE (5)	METHYLENE CHLORIDE (100)	1,2-DI-CHLORO PROPANE (---)	CIS-1,3-DI-CHLORO-PROPENE (---)	TRANS-1,3-DI-CHLORO-PROPENE (---)	1,4-DIOXANE (---)	ETHYL BENZENE (750)	ETHYL CYANIDE (---)	2-HEXANONE (100)	IODO-METHANE (---)	ISOBUTYL ALCOHOL (---)
MW-13	02/14/89	< 15	< 15	< 15	< 30	< 15	< 15	< 15	47	< 75	< 15	< 15	< 15	< 300	< 15	< 15	< 30	< 15	< 300
MW-13	03/13/89	< 16	< 16	< 16	< 33	< 16	< 16	< 16	48	< 82	< 16	< 16	< 16	< 330	< 16	< 16	< 33	< 16	< 330
MW-14	02/15/89	< 50	< 50	< 50	< 100	< 50	< 50	< 50	< 50	< 250	< 50	< 50	< 50	<1000	< 50	< 50	< 100	< 50	<1000
MW-14	03/14/89	< 85	< 85	< 85	< 170	< 85	< 85	< 85	150	< 420	< 85	< 85	< 85	<1700	< 85	< 85	< 170	< 85	<1700
MW-15	02/16/89	< 8.5	< 8.5	< 8.5	< 17	< 8.5	< 8.5	< 8.5	10	< 42	< 8.5	< 8.5	< 8.5	< 170	< 8.5	< 8.5	< 17	< 8.5	< 170
MW-15	03/15/89	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	11	< 25	< 5.0	< 5.0	< 5.0	< 100	< 5.0	< 5.0	< 10	< 5.0	< 100
MW-29	02/22/89	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 100	< 5.0	< 5.0	< 10	< 5.0	< 100
MW-29	03/13/89	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 100	< 5.0	< 5.0	< 10	< 5.0	< 100
MW-30	02/14/89	< 10	< 10	< 10	< 20	< 10	< 10	< 10	19	100	< 10	< 10	< 10	< 200	< 10	< 10	< 20	< 10	< 200
MW-30	03/14/89	< 12	< 12	< 12	< 25	< 12	< 12	< 12	19	110	< 12	< 12	< 12	< 250	< 12	< 12	< 25	< 12	< 250
MW-31	02/13/89	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 100	< 5.0	< 5.0	< 10	< 5.0	< 100
MW-31	03/15/89	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 25	< 5.0	< 5.0	< 5.0	< 100	< 5.0	< 5.0	< 10	< 5.0	< 100
MW-32	02/16/89	< 500	< 500	< 500	< 1000	< 500	< 500	< 500	< 500	12000	< 500	< 500	< 500	<10000	< 500	< 500	< 1000	< 500	<10000
MW-32	03/16/89	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	340	8600	< 5.0	< 5.0	< 5.0	< 100	< 5.0	< 5.0	< 10	< 5.0	< 100
MW-33	02/14/89	< 250	< 250	< 250	< 500	< 250	< 250	< 250	750	<1200	< 250	< 250	< 250	<5000	< 250	< 250	< 500	< 250	<5000
MW-33	03/14/89	< 250	< 250	< 250	< 500	< 250	< 250	< 250	730	<1200	< 250	< 250	< 250	<5000	< 250	< 250	< 500	< 250	<5000
MW-34	08/16/89	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	6.6	< 5.0	< 5.0	< 5.0	< 100	< 5.0	< 5.0	< 10	< 5.0	< 100
MW-34	08/28/89	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 100	< 5.0	< 5.0	< 10	< 5.0	< 100
MW-35	08/15/89	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	5.9	< 5.0	< 5.0	< 5.0	< 100	< 5.0	< 5.0	< 10	< 5.0	< 100
MW-35	08/28/89	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 100	< 5.0	< 5.0	< 10	< 5.0	< 100

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

APPENDIX IX VOLATILE ORGANIC ANALYSES SUMMARY
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(all concentrations in micrograms per liter (ug/l))

SAMPLE ID	DATE SAMPLED	1,2-DIBROMO-METHANE (---)	DIBROMO-METHANE (---)	TRANS-1,4-DICHLORO-2-BUTENE (---)	DICHLORO-DI-FLOURO-METHANE (---)	1,1-DI-CHLORO-ETHANE (25)	1,2-DI-CHLORO-ETHANE (10)	TRANS-1,2-DICHLORO-ETHENE (---)	1,1-DI-CHLORO-ETHENE (5)	METHYLENE CHLORIDE (100)	1,2-DI-CHLORO PROPANE (---)	CIS-1,3-DI-CHLORO-PROPENE (---)	TRANS-1,3-DI-CHLORO-PROPENE (---)	1,4-DIOXANE (---)	ETHYL BENZENE (750)	ETHYL CYANIDE (---)	2-HEXANONE (100)	IODO-METHANE (---)	ISOBUTYL ALCOHOL (---)
MW-36	08/15/89	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	5.3	< 5.0	< 5.0	< 5.0	< 100	< 5.0	< 5.0	< 10	< 5.0	< 100
MW-36	08/28/89	< 5.0	< 5.0	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 100	< 5.0	< 5.0	< 10	< 5.0	< 100
MW-37	08/15/89	< 50	< 50	< 50	< 100	< 50	< 50	< 50	< 50	61	< 50	< 50	< 50	<1000	< 50	< 50	< 100	< 50	<1000
MW-37	08/28/89	< 50	< 50	< 50	< 100	< 50	< 50	< 50	67	< 50	< 50	< 50	< 50	<1000	< 50	< 50	< 100	< 50	<1000
MW-38	11/06/89	---	---	---	---	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	---	< 5	---	< 10	---	---
MW-38	11/20/89	---	---	---	---	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	---	< 5	---	< 10	---	---
MW-39	11/06/89	---	---	---	---	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	---	< 5	---	< 10	---	---
MW-39	11/20/89	---	---	---	---	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	---	< 5	---	< 10	---	---
MW-40	11/07/89	---	---	---	---	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	---	< 5	---	< 10	---	---
MW-40	11/21/89	---	---	---	---	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	---	< 5	---	< 10	---	---
MW-41	11/07/89	---	---	---	---	< 50	< 50	< 50	150	< 50	< 50	< 50	< 50	---	< 50	---	< 100	---	---
MW-41	11/20/89	---	---	---	---	< 50	< 50	< 50	110	< 50	< 50	< 50	< 50	---	< 50	---	< 100	---	---

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

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Part 3 of 3

(all concentrations in micrograms per liter (ug/l))

SAMPLE ID	DATE SAMPLED	METH-ACRYLO-NITRILE (---)	METHYL ETHYL KETONE (---)	4-METHYL-2-PENTANONE (---)	STYRENE (---)	1,1,1,2-TETRA-CHLORO-ETHANE (---)	1,1,2,2-TETRA-CHLORO-ETHANE (10)	TETRA-CHLORO-ETHENE (20)	TOLUENE (750)	1,1,1-TRI-CHLORO-ETHANE (60)	1,1,2-TRI-CHLORO-ETHANE (10)	TRI-CHLORO-ETHENE (100)	TRI-CHLORO-FLUORO-METHANE (---)	1,2,3-TRI-CHLORO-PROPANE (---)	VINYL ACETATE (---)	VINYL CHLORIDE (1)	TOTAL XYLENES (620)
MW-13	02/14/89	< 15	< 75	< 30	< 15	< 15	< 15	< 15	< 15	250	< 15	610	< 15	< 15	< 30	< 30	< 15
MW-13	03/13/89	< 16	< 82	< 33	< 16	< 16	< 16	< 16	< 16	220	< 16	650	< 16	< 16	< 33	< 33	< 16
MW-14	02/15/89	< 50	< 250	< 100	< 50	< 50	< 50	< 50	< 50	< 50	< 50	1100	< 50	< 50	< 100	< 100	< 50
MW-14	03/14/89	< 85	< 420	< 170	< 85	< 85	< 85	< 85	< 85	150	< 85	3700	< 85	< 85	< 170	< 170	< 85
MW-15	02/16/89	< 8.5	< 42	< 17	< 8.5	< 8.5	< 8.5	< 8.5	< 8.5	80	< 8.5	210	< 8.5	< 8.5	< 17	< 17	< 8.5
MW-15	03/15/89	< 5.0	< 25	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	75	< 5.0	210	< 5.0	< 5.0	< 10	< 10	< 5.0
MW-29	02/22/89	< 5.0	< 25	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.7	< 5.0	< 5.0	< 10	< 10	< 5.0
MW-29	03/13/89	< 5.0	< 25	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.4	< 5.0	< 5.0	< 10	< 10	< 5.0
MW-30	02/14/89	< 10	< 50	< 20	< 10	< 10	< 10	< 10	< 10	11	< 10	320	< 10	< 10	< 20	< 20	< 10
MW-30	03/14/89	< 12	< 62	< 25	< 12	< 12	< 12	< 12	< 12	< 12	< 12	320	< 12	< 12	< 25	< 25	< 12
MW-31	02/13/89	< 5.0	< 25	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	120	< 5.0	< 5.0	< 10	< 10	< 5.0
MW-31	03/15/89	< 5.0	< 25	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	120	< 5.0	< 5.0	< 10	< 10	< 5.0
MW-32	02/16/89	< 500	< 2500	< 1000	< 500	< 500	< 500	< 500	< 500	< 500	< 500	4800	< 500	< 500	< 1000	< 1000	< 500
MW-32	03/16/89	< 5.0	< 25	< 10	< 5.0	< 5.0	< 5.0	20	33	300	< 5.0	3400	< 5.0	< 5.0	< 10	< 10	9.6
MW-33	02/14/89	< 250	<1200	< 500	< 250	< 250	< 250	< 250	< 250	2500	< 250	7500	< 250	< 250	< 500	< 500	< 250
MW-33	03/14/89	< 250	<1200	< 500	< 250	< 250	< 250	< 250	< 250	2500	< 250	7000	< 250	< 250	< 500	< 500	< 250
MW-34	08/16/89	< 5.0	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 5.0
MW-34	08/28/89	< 5.0	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 5.0
MW-35	08/15/89	< 5.0	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 5.0
MW-35	08/28/89	< 5.0	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10	< 5.0

NOTE : State standards, where they exist, are shown in parentheses.

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

APPENDIX IX VOLATILE ORGANIC ANALYSES SUMMARY
Part 3 of 3

(all concentrations in micrograms per liter (ug/l))

SAMPLE ID	DATE SAMPLED	METH-ACRYLO-NITRILE (---)	METHYL ETHYL KETONE (---)	4-METHYL-2-PENTANONE (---)	STYRENE (---)	1,1,1,2-TETRA-CHLORO-ETHANE (---)	1,1,2,2-TETRA-CHLORO-ETHANE (10)	TETRA-CHLORO-ETHENE (20)	TOLUENE (750)	1,1,1-TRI-CHLORO-ETHANE (60)	1,1,2-TRI-CHLORO-ETHANE (10)	TRI-CHLORO-ETHENE (100)	TRI-CHLORO-FLUORO-METHANE (---)	1,2,3-TRI-CHLORO-PROPANE (---)	VINYL ACETATE (---)	VINYL CHLORIDE (1)	TOTAL XYLENES (620)
MW-36	08/15/89	< 5.0	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	7.9	< 5.0	< 5.0	< 10	< 10	< 5.0
MW-36	08/28/89	< 5.0	< 10	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	11	< 5.0	< 5.0	< 10	< 10	< 5.0
MW-37	08/15/89	< 50	< 100	< 100	< 50	< 50	< 50	< 50	< 50	< 50	< 50	1100	< 50	< 50	< 100	< 100	< 50
MW-37	08/28/89	< 50	< 100	< 100	< 50	< 50	< 50	< 50	< 50	< 50	< 50	1800	< 50	< 50	< 100	< 100	< 50
MW-38	11/06/89	---	< 10	< 10	< 5	---	< 5	< 5	< 5	< 5	< 5	< 5	---	---	< 10	< 10	< 5
MW-38	11/20/89	---	< 10	< 10	< 5	---	< 5	< 5	< 5	< 5	< 5	< 5	---	---	< 10	< 10	< 5
MW-39	11/06/89	---	< 10	< 10	< 5	---	< 5	< 5	5.3	< 5	< 5	< 5	---	---	< 10	< 10	< 5
MW-39	11/20/89	---	< 10	< 10	< 5	---	< 5	< 5	< 5	< 5	< 5	< 5	---	---	< 10	< 10	< 5
MW-40	11/07/89	---	< 10	< 10	< 5	---	< 5	< 5	< 5	< 5	< 5	< 5	---	---	< 10	< 10	< 5
MW-40	11/21/89	---	< 10	< 10	< 5	---	< 5	< 5	< 5	< 5	< 5	< 5	---	---	< 10	< 10	< 5
MW-41	11/07/89	---	< 100	< 100	< 50	---	< 50	< 50	< 50	310	< 50	1100	---	---	< 100	< 100	< 50
MW-41	11/20/89	---	< 100	< 100	< 50	---	< 50	< 50	< 50	290	< 50	960	---	---	< 100	< 100	< 50

NOTE : State standards, where they exist, are shown in parentheses.

Enseco

December 15, 1989

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

Dear Mr. Samala:

Enclosed is the report for two aqueous samples received at Rocky Mountain Analytical Laboratory on November 7, 1989.

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

Sincerely,

Ramona Power
Data Control

Enclosures

cc: Joel Holtz, PA

RMAL #007379

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.

SAMPLE DESCRIPTION INFORMATION
for
Sparton Technology Inc.

Lab ID	Client ID	Matrix	Sampled Date	Sampled Time	Received Date
007379-0001-SA	MW-39	AQUEOUS	06 NOV 89	11:25	07 NOV 89
007379-0002-SA	MW-38	AQUEOUS	06 NOV 89	14:20	07 NOV 89

ANALYTICAL TEST REQUESTS
for
Sparton Technology Inc.

Lab ID: 007379	Group Code	Analysis Description	Custom Test?
0001 - 0002	A	Nitrate, as Nitrogen	N
		Ammonia	N
		Total Kjeldahl Nitrogen (TKN)	N
		Chloride, Ion Chromatography	N
		Sulfate, Ion Chromatography	N
		Fluoride, Electrode	N
		HSL Volatile Organics	N
		Prep-Volatile Organics by GC/MS	N
		Arsenic, Furnace AA (Total)	N
		Prep - Total Metals, Furnace AA	N
		Thallium, Furnace AA (Total)	N
		Selenium, Furnace AA (Total)	N
		Lead, Furnace AA (Total)	N
		Mercury, Cold Vapor AA (Total)	N
		Prep - Mercury, Cold Vapor AA (Total)	N
		ICP Metals (Total)	Y
		Prep - Total Metals, ICP	N

Enseco

HSL Volatile Organics

Method 624

Client Name: Sparton Technology Inc.
Client ID: MW-39
Lab ID: 007379-0001-SA Enseco ID: 1059276
Matrix: AQUEOUS Sampled: 06 NOV 89 Received: 07 NOV 89
Authorized: 07 NOV 89 Prepared: 09 NOV 89 Analyzed: 13 NOV 89

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene (cis/trans)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Chlorodibromomethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	5.3	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0
Toluene-d8	96.9	%	--
4-Bromofluorobenzene	86.1	%	--
1,2-Dichloroethane-d4	99.5	%	--

ND = Not detected
NA = Not applicable

Reported By: Keith Beauvais Approved By: Jeff Lowry

Enseco

HSL Volatile Organics

Method 624

Client Name: Sparton Technology Inc.
Client ID: MW-38
Lab ID: 007379-0002-SA Enseco ID: 1059277
Matrix: AQUEOUS Sampled: 06 NOV 89 Received: 07 NOV 89
Authorized: 07 NOV 89 Prepared: 09 NOV 89 Analyzed: 14 NOV 89

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene (cis/trans)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Chlorodibromomethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0
Toluene-d8	96.2	%	--
4-Bromofluorobenzene	100	%	--
1,2-Dichloroethane-d4	90.4	%	--

ND = Not detected
NA = Not applicable

Reported By: Keith Beauvais Approved By: Jeff Lowry

Enseco

Metals

Total Metals

Client Name: Sparton Technology Inc.
Client ID: MW-39
Lab ID: 007379-0001-SA Enseco ID: 1059276
Matrix: AQUEOUS Sampled: 06 NOV 89 Received: 07 NOV 89
Authorized: 07 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Antimony	ND	mg/L	0.05	200.7	04 DEC 89	05 DEC 89
Arsenic	ND	mg/L	0.005	206.2	04 DEC 89	05 DEC 89
Barium	0.14	mg/L	0.01	200.7	04 DEC 89	05 DEC 89
Beryllium	ND	mg/L	0.002	200.7	04 DEC 89	05 DEC 89
Boron	0.12	mg/L	0.02	200.7	04 DEC 89	05 DEC 89
Cadmium	ND	mg/L	0.005	200.7	04 DEC 89	05 DEC 89
Chromium	ND	mg/L	0.01	200.7	04 DEC 89	05 DEC 89
Cobalt	ND	mg/L	0.01	200.7	04 DEC 89	05 DEC 89
Copper	ND	mg/L	0.01	200.7	04 DEC 89	05 DEC 89
Lead	ND	mg/L	0.01	239.2	04 DEC 89	05 DEC 89
Manganese	0.38	mg/L	0.01	200.7	04 DEC 89	05 DEC 89
Mercury	ND	mg/L	0.0002	245.1	01 DEC 89	01 DEC 89
Nickel	ND	mg/L	0.04	200.7	04 DEC 89	05 DEC 89
Selenium	ND	mg/L	0.005	270.2	04 DEC 89	05 DEC 89
Silver	ND	mg/L	0.01	200.7	04 DEC 89	05 DEC 89
Thallium	ND	mg/L	0.01	279.2	04 DEC 89	11 DEC 89
Tin	ND	mg/L	0.05	200.7	04 DEC 89	05 DEC 89
Vanadium	ND	mg/L	0.01	200.7	04 DEC 89	05 DEC 89
Zinc	0.35	mg/L	0.01	200.7	04 DEC 89	05 DEC 89

ND = Not detected
NA = Not applicable

Reported By: David Patterson Approved By: Kimberly Conroy

Enseco

Metals

Total Metals

Client Name: Sparton Technology Inc.
Client ID: MW-38
Lab ID: 007379-0002-SA Enseco ID: 1059277
Matrix: AQUEOUS Sampled: 06 NOV 89 Received: 07 NOV 89
Authorized: 07 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Antimony	ND	mg/L	0.05	200.7	04 DEC 89	05 DEC 89
Arsenic	ND	mg/L	0.005	206.2	04 DEC 89	05 DEC 89
Barium	0.13	mg/L	0.01	200.7	04 DEC 89	05 DEC 89
Beryllium	ND	mg/L	0.002	200.7	04 DEC 89	05 DEC 89
Boron	0.13	mg/L	0.02	200.7	04 DEC 89	05 DEC 89
Cadmium	ND	mg/L	0.005	200.7	04 DEC 89	05 DEC 89
Chromium	ND	mg/L	0.01	200.7	04 DEC 89	05 DEC 89
Cobalt	ND	mg/L	0.01	200.7	04 DEC 89	05 DEC 89
Copper	ND	mg/L	0.01	200.7	04 DEC 89	05 DEC 89
Lead	ND	mg/L	0.01	239.2	04 DEC 89	05 DEC 89
Manganese	0.27	mg/L	0.01	200.7	04 DEC 89	05 DEC 89
Mercury	ND	mg/L	0.0002	245.1	01 DEC 89	01 DEC 89
Nickel	ND	mg/L	0.04	200.7	04 DEC 89	05 DEC 89
Selenium	ND	mg/L	0.005	270.2	04 DEC 89	05 DEC 89
Silver	ND	mg/L	0.01	200.7	04 DEC 89	05 DEC 89
Thallium	ND	mg/L	0.01	279.2	04 DEC 89	11 DEC 89
Tin	ND	mg/L	0.05	200.7	04 DEC 89	05 DEC 89
Vanadium	ND	mg/L	0.01	200.7	04 DEC 89	05 DEC 89
Zinc	0.76	mg/L	0.01	200.7	04 DEC 89	05 DEC 89

ND = Not detected
NA = Not applicable

Reported By: David Patterson Approved By: Kimberly Conroy

Enseco

General Inorganics

Client Name: Sparton Technology Inc.
Client ID: MW-39
Lab ID: 007379-0001-SA Enseco ID: 1059276
Matrix: AQUEOUS Sampled: 06 NOV 89 Received: 07 NOV 89
Authorized: 07 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chloride	25	mg/L	3	300.0	NA	19 NOV 89
Fluoride	0.3	mg/L	0.1	340.2	NA	28 NOV 89
Ammonia as N	ND	mg/L	0.1	350.1	NA	10 NOV 89
Nitrate as N	0.3	mg/L	0.1	353.2	NA	10 NOV 89
Sulfate	106	mg/L	5	300.0	NA	19 NOV 89
Total Kjeldahl Nitrogen as N	ND	mg/L	0.5	351.2	NA	21 NOV 89

ND = Not detected
NA = Not applicable

Reported By: Janice Collins Approved By: Tammy Bailey

Enseco

General Inorganics

Client Name: Sparton Technology Inc.
Client ID: MW-38
Lab ID: 007379-0002-SA Enseco ID: 1059277
Matrix: AQUEOUS Sampled: 06 NOV 89 Received: 07 NOV 89
Authorized: 07 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chloride	12	mg/L	3	300.0	NA	19 NOV 89
Fluoride	0.3	mg/L	0.1	340.2	NA	28 NOV 89
Ammonia as N	ND	mg/L	0.1	350.1	NA	10 NOV 89
Nitrate as N	0.4	mg/L	0.1	353.2	NA	10 NOV 89
Sulfate	71	mg/L	5	300.0	NA	19 NOV 89
Total Kjeldahl Nitrogen as N	ND	mg/L	0.5	351.2	NA	21 NOV 89

ND = Not detected
NA = Not applicable

Reported By: Janice Collins Approved By: Tammy Bailey

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)
007379-0001-SA	AQUEOUS	624-A	09 NOV 89-L	12 NOV 89-L
007379-0002-SA	AQUEOUS	624-A	09 NOV 89-L	14 NOV 89-L

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: 09 NOV 89-L								
Concentration Units: ug/L								
1,1-Dichloroethene	50	48.2	49.7	49.0	98	61-145	3.1	14
Trichloroethene	50	47.6	46.5	47.0	94	71-120	2.3	14
Benzene	50	54.6	55.1	54.8	110	76-127	0.9	11
Toluene	50	50.4	49.6	50.0	100	76-125	1.6	13
Chlorobenzene	50	48.1	47.5	47.8	96	75-130	1.3	13

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

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: 09 NOV 89-L QC Run: 12 NOV 89-L				
Concentration Units: ug/L				
1,2-Dichloroethane-d4	50.0	50.1	100	76-114
4-Bromofluorobenzene	50.0	45.7	91	86-115
Toluene-d8	50.0	49.6	99	88-110
Category: 624-A				
Matrix: AQUEOUS				
QC Lot: 09 NOV 89-L QC Run: 14 NOV 89-L				
Concentration Units: ug/L				
1,2-Dichloroethane-d4	50.0	54.5	109	76-114
4-Bromofluorobenzene	50.0	53.1	106	86-115
Toluene-d8	50.0	50.2	100	88-110

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

METHOD BLANK REPORT
Volatile Organics by GC/MS

Test: 624-HSL-AP
Matrix: AQUEOUS
QC Lot: 09 NOV 89-L QC Run: 12 NOV 89-L

Analyte	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	12	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene (cis/trans)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Chlorodibromomethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

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

Test: 624-HSL-AP
Matrix: AQUEOUS
QC Lot: 09 NOV 89-L QC Run: 14 NOV 89-L

Analyte	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene (cis/trans)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Chlorodibromomethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

QC LOT ASSIGNMENT REPORT
Metals Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
007379-0001-SA	AQUEOUS	AS-FAA-AT	04 DEC 89-A	04 DEC 89-A
007379-0001-SA	AQUEOUS	TL-FAA-AT	04 DEC 89-A	04 DEC 89-A
007379-0001-SA	AQUEOUS	SE-FAA-AT	04 DEC 89-A	04 DEC 89-A
007379-0001-SA	AQUEOUS	PB-FAA-AT	04 DEC 89-A	04 DEC 89-A
007379-0001-SA	AQUEOUS	HG-CVAA-AT	01 DEC 89-A	01 DEC 89-A
007379-0001-SA	AQUEOUS	ICP-AT	04 DEC 89-A	04 DEC 89-A
007379-0002-SA	AQUEOUS	AS-FAA-AT	04 DEC 89-A	04 DEC 89-A
007379-0002-SA	AQUEOUS	TL-FAA-AT	04 DEC 89-A	04 DEC 89-A
007379-0002-SA	AQUEOUS	SE-FAA-AT	04 DEC 89-A	04 DEC 89-A
007379-0002-SA	AQUEOUS	PB-FAA-AT	04 DEC 89-A	04 DEC 89-A
007379-0002-SA	AQUEOUS	HG-CVAA-AT	01 DEC 89-A	01 DEC 89-A
007379-0002-SA	AQUEOUS	ICP-AT	04 DEC 89-A	04 DEC 89-A

DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Limits	Precision (RPD) DCS	Precision Limit
Category: AS-FAA-AT Matrix: AQUEOUS QC Lot: 04 DEC 89-A Concentration Units: mg/L								
Arsenic	0.04	0.034	0.034	0.034	85	75-125	0.0	20
Category: TL-FAA-AT Matrix: AQUEOUS QC Lot: 04 DEC 89-A Concentration Units: mg/L								
Thallium	0.05	0.044	0.040	0.042	84	75-125	9.5	20
Category: SE-FAA-AT Matrix: AQUEOUS QC Lot: 04 DEC 89-A Concentration Units: mg/L								
Selenium	0.01	0.011	0.010	0.010	105	75-125	9.5	20
Category: PB-FAA-AT Matrix: AQUEOUS QC Lot: 04 DEC 89-A Concentration Units: mg/L								
Lead	0.02	0.020	0.018	0.019	95	75-125	11	20
Category: HG-CVAA-AT Matrix: AQUEOUS QC Lot: 01 DEC 89-A Concentration Units: mg/L								
Mercury	0.0010	0.00108	0.00109	0.00108	109	75-125	0.9	20

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

DUPLICATE CONTROL SAMPLE REPORT
Metals 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: ICP-AT								
Matrix: AQUEOUS								
QC Lot: 04 DEC 89-A								
Concentration Units: mg/L								
Aluminum	2.0	1.94	1.93	1.94	97	75-125	0.5	20
Antimony	0.5	0.48	0.47	0.48	95	75-125	2.1	20
Arsenic	0.5	0.45	0.46	0.46	91	75-125	2.2	20
Barium	2.0	1.92	1.91	1.92	96	75-125	0.5	20
Beryllium	0.05	0.048	0.048	0.048	96	75-125	0.0	20
Cadmium	0.05	0.043	0.051	0.047	94	75-125	17	20
Calcium	100	91.0	92.2	91.6	92	75-125	1.3	20
Chromium	0.2	0.18	0.18	0.18	90	75-125	0.0	20
Cobalt	0.5	0.44	0.46	0.45	90	75-125	4.4	20
Copper	0.25	0.23	0.23	0.23	92	75-125	0.0	20
Iron	1.0	0.93	0.92	0.92	93	75-125	1.1	20
Lead	0.5	0.44	0.45	0.44	89	75-125	2.2	20
Magnesium	50	46.8	46.8	46.8	94	75-125	0.0	20
Manganese	0.5	0.47	0.47	0.47	94	75-125	0.0	20
Nickel	0.5	0.46	0.46	0.46	92	75-125	0.0	20
Potassium	100	90.3	89.4	89.8	90	75-125	1.0	20
Silver	0.05	0.041	0.039	0.040	80	75-125	5.0	20
Sodium	100	85.0	82.3	83.6	84	75-125	3.2	20
Vanadium	0.5	0.46	0.46	0.46	92	75-125	0.0	20
Zinc	0.5	0.48	0.49	0.48	97	75-125	2.1	20

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

METHOD BLANK REPORT
Metals Analysis and Preparation

Analyte	Result	Units	Reporting Limit
Test: AS-FAA-AT Matrix: AQUEOUS QC Lot: 04 DEC 89-A QC Run: 04 DEC 89-A			
Arsenic	ND	mg/L	0.005
Test: TL-FAA-AT Matrix: AQUEOUS QC Lot: 04 DEC 89-A QC Run: 04 DEC 89-A			
Thallium	ND	mg/L	0.005
Test: SE-FAA-AT Matrix: AQUEOUS QC Lot: 04 DEC 89-A QC Run: 04 DEC 89-A			
Selenium	ND	mg/L	0.005
Test: PB-FAA-AT Matrix: AQUEOUS QC Lot: 04 DEC 89-A QC Run: 04 DEC 89-A			
Lead	ND	mg/L	0.005
Test: HG-CVAA-AT Matrix: AQUEOUS QC Lot: 01 DEC 89-A QC Run: 01 DEC 89-A			
Mercury	ND	mg/L	0.0002
Test: ICP-AT Matrix: AQUEOUS QC Lot: 04 DEC 89-A QC Run: 04 DEC 89-A			
Antimony	ND	mg/L	0.05
Barium	ND	mg/L	0.01
Beryllium	ND	mg/L	0.002
Boron	ND	mg/L	0.02
Cadmium	ND	mg/L	0.005
Chromium	ND	mg/L	0.01

METHOD BLANK REPORT
Metals Analysis and Preparation (cont.)

Analyte	Result	Units	Reporting Limit
Test: ICP-AT			
Matrix: AQUEOUS			
QC Lot: 04 DEC 89-A QC Run: 04 DEC 89-A			
Cobalt	ND	mg/L	0.01
Copper	ND	mg/L	0.01
Manganese	ND	mg/L	0.01
Nickel	ND	mg/L	0.04
Silver	ND	mg/L	0.01
Tin	ND	mg/L	0.05
Vanadium	ND	mg/L	0.01
Zinc	ND	mg/L	0.01

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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)
007379-0001-SA	AQUEOUS	NO3-A	10 NOV 89-C	-
007379-0001-SA	AQUEOUS	NH3-A	10 NOV 89-A	-
007379-0001-SA	AQUEOUS	TKN-A	20 NOV 89-A	20 NOV 89-A
007379-0001-SA	AQUEOUS	CL-IC-A	19 NOV 89-M	-
007379-0001-SA	AQUEOUS	SO4-IC-A	19 NOV 89-M	-
007379-0001-SA	AQUEOUS	F-A	28 NOV 89-A	-
007379-0002-SA	AQUEOUS	NO3-A	10 NOV 89-C	-
007379-0002-SA	AQUEOUS	NH3-A	10 NOV 89-A	-
007379-0002-SA	AQUEOUS	TKN-A	20 NOV 89-A	20 NOV 89-A
007379-0002-SA	AQUEOUS	CL-IC-A	19 NOV 89-M	-
007379-0002-SA	AQUEOUS	SO4-IC-A	19 NOV 89-M	-
007379-0002-SA	AQUEOUS	F-A	28 NOV 89-A	-

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: NO3-A Matrix: AQUEOUS QC Lot: 10 NOV 89-C Concentration Units: mg/L								
Nitrate as N	5.4	5.41	5.36	5.38	100	91-109	0.9	10
Category: NH3-A Matrix: AQUEOUS QC Lot: 10 NOV 89-A Concentration Units: mg/L								
Ammonia as N	8.0	7.78	7.83	7.80	98	93-107	0.6	10
Category: TKN-A Matrix: AQUEOUS QC Lot: 20 NOV 89-A Concentration Units: mg/L								
Total Kjeldahl Nitrogen as N	4.6	4.20	4.12	4.16	90	78-122	1.9	20
Category: CL-IC-A Matrix: AQUEOUS QC Lot: 19 NOV 89-M Concentration Units: mg/L								
Chloride	100	99.6	101	100	100	92-108	1.4	20
Category: SO4-IC-A Matrix: AQUEOUS QC Lot: 19 NOV 89-M Concentration Units: mg/L								
Sulfate	200	201	205	203	102	93-107	2.0	20

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: F-A								
Matrix: AQUEOUS								
QC Lot: 28 NOV 89-A								
Concentration Units: mg/L								
Fluoride	6.7	7.08	7.10	7.09	106	88-112	0.3	15

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: 20 NOV 89-A QC Run: 20 NOV 89-A			
Total Kjeldahl Nitrogen as N	ND	mg/L	0.5

Rocky Mountain
Analytical Laboratory

Enseco

December 15, 1989

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 November 8, 1989.

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

Sincerely,

Ramona Power
Data Control

Enclosures

cc: Joel Holtz, PA

RMAL #007399

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.

For samples 007399-0003 and 0004 zinc was detected at the reporting limit of 0.01 mg/L.

SAMPLE DESCRIPTION INFORMATION
for
Sparton Technology Inc.

Lab ID	Client ID	Matrix	Sampled Date	Sampled Time	Received Date
007399-0001-SA	MW-40	AQUEOUS	07 NOV 89	11:48	08 NOV 89
007399-0002-SA	MW-41	AQUEOUS	07 NOV 89	09:45	08 NOV 89
007399-0003-SA	FIELD BLANK	AQUEOUS	07 NOV 89	12:08	08 NOV 89
007399-0004-SA	TRIP BLANK	AQUEOUS	07 NOV 89	13:00	08 NOV 89

ANALYTICAL TEST REQUESTS
for
Sparton Technology Inc.

Lab ID: 007399	Group Code	Analysis Description	Custom Test?
0001 - 0004	A	Nitrate, as Nitrogen	N
		Ammonia	N
		Total Kjeldahl Nitrogen (TKN)	N
		Chloride, Ion Chromatography	N
		Sulfate, Ion Chromatography	N
		Fluoride, Electrode	N
		HSL Volatile Organics	N
		Prep-Volatile Organics by GC/MS	N
		Arsenic, Furnace AA (Total)	N
		Prep - Total Metals, Furnace AA	N
		Thallium, Furnace AA (Total)	N
		Selenium, Furnace AA (Total)	N
		Lead, Furnace AA (Total)	N
		Mercury, Cold Vapor AA (Total)	N
		Prep - Mercury, Cold Vapor AA (Total)	N
		ICP Metals (Total)	Y
		Prep - Total Metals, ICP	N

HSL Volatile Organics

Method 624

Client Name: Sparton Technology Inc.
Client ID: MW-40
Lab ID: 007399-0001-SA Enseco ID: 1059315
Matrix: AQUEOUS Sampled: 07 NOV 89 Received: 08 NOV 89
Authorized: 08 NOV 89 Prepared: 09 NOV 89 Analyzed: 16 NOV 89

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene (cis/trans)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Chlorodibromomethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0
Toluene-d8	99.3	%	--
4-Bromofluorobenzene	103	%	--
1,2-Dichloroethane-d4	104	%	--

ND = Not detected
NA = Not applicable

Reported By: Steve Siegel Approved By: Jeff Lowry

Enseco

HSL Volatile Organics

Method 624

Client Name: Sparton Technology Inc.
Client ID: MW-41
Lab ID: 007399-0002-SA Enseco ID: 1059316
Matrix: AQUEOUS Sampled: 07 NOV 89 Received: 08 NOV 89
Authorized: 08 NOV 89 Prepared: 09 NOV 89 Analyzed: 16 NOV 89

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	100
Bromomethane	ND	ug/L	100
Vinyl chloride	ND	ug/L	100
Chloroethane	ND	ug/L	100
Methylene chloride	ND	ug/L	50
Acetone	ND	ug/L	100
Carbon disulfide	ND	ug/L	50
1,1-Dichloroethene	150	ug/L	50
1,1-Dichloroethane	ND	ug/L	50
1,2-Dichloroethene (cis/trans)	ND	ug/L	50
Chloroform	ND	ug/L	50
1,2-Dichloroethane	ND	ug/L	50
2-Butanone	ND	ug/L	100
1,1,1-Trichloroethane	310	ug/L	50
Carbon tetrachloride	ND	ug/L	50
Vinyl acetate	ND	ug/L	100
Bromodichloromethane	ND	ug/L	50
1,2-Dichloropropane	ND	ug/L	50
trans-1,3-Dichloropropene	ND	ug/L	50
Trichloroethene	1100	ug/L	50
Chlorodibromomethane	ND	ug/L	50
1,1,2-Trichloroethane	ND	ug/L	50
Benzene	ND	ug/L	50
cis-1,3-Dichloropropene	ND	ug/L	50
2-Chloroethyl vinyl ether	ND	ug/L	100
Bromoform	ND	ug/L	50
4-Methyl-2-pentanone	ND	ug/L	100
2-Hexanone	ND	ug/L	100
1,1,2,2-Tetrachloroethane	ND	ug/L	50
Tetrachloroethene	ND	ug/L	50
Toluene	ND	ug/L	50
Chlorobenzene	ND	ug/L	50
Ethylbenzene	ND	ug/L	50
Styrene	ND	ug/L	50
Xylenes (total)	ND	ug/L	50
Toluene-d8	101	%	--
4-Bromofluorobenzene	106	%	--
1,2-Dichloroethane-d4	103	%	--

ND = Not detected
NA = Not applicable

Reported By: Steve Siegel Approved By: Jeff Lowry

Enseco

HSL Volatile Organics

Method 624

Client Name: Sparton Technology Inc.
Client ID: FIELD BLANK
Lab ID: 007399-0003-SA Enseco ID: 1059317
Matrix: AQUEOUS Sampled: 07 NOV 89 Received: 08 NOV 89
Authorized: 08 NOV 89 Prepared: 09 NOV 89 Analyzed: 15 NOV 89

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene (cis/trans)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Chlorodibromomethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0
Toluene-d8	98.4	%	--
4-Bromofluorobenzene	96.2	%	--
1,2-Dichloroethane-d4	98.8	%	--

ND = Not detected
NA = Not applicable

Reported By: Steve Siegel Approved By: Jeff Lowry

Enseco

HSL Volatile Organics

Method 624

Client Name: Sparton Technology Inc.
Client ID: TRIP BLANK
Lab ID: 007399-0004-SA Enseco ID: 1059318
Matrix: AQUEOUS Sampled: 07 NOV 89 Received: 08 NOV 89
Authorized: 08 NOV 89 Prepared: 09 NOV 89 Analyzed: 15 NOV 89

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene (cis/trans)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Chlorodibromomethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0
Toluene-d8	97.9	%	--
4-Bromofluorobenzene	94.8	%	--
1,2-Dichloroethane-d4	99.2	%	--

ND = Not detected
NA = Not applicable

Reported By: Steve Siegel Approved By: Jeff Lowry

Enseco

Metals

Total Metals

Client Name: Sparton Technology Inc.
Client ID: MW-40
Lab ID: 007399-0001-SA Enseco ID: 1059315
Matrix: AQUEOUS Sampled: 07 NOV 89 Received: 08 NOV 89
Authorized: 08 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Antimony	ND	mg/L	0.05	200.7	05 DEC 89	08 DEC 89
Arsenic	ND	mg/L	0.01	206.2	05 DEC 89	08 DEC 89
Barium	0.12	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Beryllium	ND	mg/L	0.002	200.7	05 DEC 89	08 DEC 89
Boron	0.14	mg/L	0.02	200.7	05 DEC 89	08 DEC 89
Cadmium	ND	mg/L	0.005	200.7	05 DEC 89	08 DEC 89
Chromium	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Cobalt	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Copper	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Lead	ND	mg/L	0.005	239.2	05 DEC 89	08 DEC 89
Manganese	0.02	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Mercury	ND	mg/L	0.0002	245.1	01 DEC 89	01 DEC 89
Nickel	ND	mg/L	0.04	200.7	05 DEC 89	08 DEC 89
Selenium	ND	mg/L	0.01	270.2	05 DEC 89	08 DEC 89
Silver	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Thallium	ND	mg/L	0.01	279.2	05 DEC 89	11 DEC 89
Tin	ND	mg/L	0.05	200.7	05 DEC 89	08 DEC 89
Vanadium	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Zinc	0.66	mg/L	0.01	200.7	05 DEC 89	08 DEC 89

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Toni Lusk

Enseco

Metals

Total Metals

Client Name: Sparton Technology Inc.
Client ID: MW-41
Lab ID: 007399-0002-SA Enseco ID: 1059316
Matrix: AQUEOUS Sampled: 07 NOV 89 Received: 08 NOV 89
Authorized: 08 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Antimony	ND	mg/L	0.05	200.7	05 DEC 89	08 DEC 89
Arsenic	ND	mg/L	0.005	206.2	05 DEC 89	08 DEC 89
Barium	0.06	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Beryllium	ND	mg/L	0.002	200.7	05 DEC 89	08 DEC 89
Boron	0.14	mg/L	0.02	200.7	05 DEC 89	08 DEC 89
Cadmium	ND	mg/L	0.005	200.7	05 DEC 89	08 DEC 89
Chromium	0.02	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Cobalt	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Copper	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Lead	ND	mg/L	0.005	239.2	05 DEC 89	08 DEC 89
Manganese	0.13	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Mercury	ND	mg/L	0.0002	245.1	01 DEC 89	01 DEC 89
Nickel	ND	mg/L	0.04	200.7	05 DEC 89	08 DEC 89
Selenium	ND	mg/L	0.01	270.2	05 DEC 89	08 DEC 89
Silver	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Thallium	ND	mg/L	0.01	279.2	05 DEC 89	11 DEC 89
Tin	ND	mg/L	0.05	200.7	05 DEC 89	08 DEC 89
Vanadium	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Zinc	0.03	mg/L	0.01	200.7	05 DEC 89	08 DEC 89

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Toni Lusk

Enseco

Metals

Total Metals

Client Name: Sparton Technology Inc.
Client ID: FIELD BLANK
Lab ID: 007399-0003-SA Enseco ID: 1059317
Matrix: AQUEOUS Sampled: 07 NOV 89 Received: 08 NOV 89
Authorized: 08 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Antimony	ND	mg/L	0.05	200.7	05 DEC 89	08 DEC 89
Arsenic	ND	mg/L	0.005	206.2	05 DEC 89	08 DEC 89
Barium	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Beryllium	ND	mg/L	0.002	200.7	05 DEC 89	08 DEC 89
Boron	ND	mg/L	0.02	200.7	05 DEC 89	08 DEC 89
Cadmium	ND	mg/L	0.005	200.7	05 DEC 89	08 DEC 89
Chromium	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Cobalt	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Copper	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Lead	ND	mg/L	0.005	239.2	05 DEC 89	08 DEC 89
Manganese	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Mercury	ND	mg/L	0.0002	245.1	01 DEC 89	01 DEC 89
Nickel	ND	mg/L	0.04	200.7	05 DEC 89	08 DEC 89
Selenium	ND	mg/L	0.01	270.2	05 DEC 89	08 DEC 89
Silver	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Thallium	ND	mg/L	0.01	279.2	05 DEC 89	11 DEC 89
Tin	ND	mg/L	0.05	200.7	05 DEC 89	08 DEC 89
Vanadium	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Zinc	0.01	mg/L	0.01	200.7	05 DEC 89	08 DEC 89

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Toni Lusk

Enseco

Metals

Total Metals

Client Name: Sparton Technology Inc.
Client ID: TRIP BLANK
Lab ID: 007399-0004-SA Enseco ID: 1059318
Matrix: AQUEOUS Sampled: 07 NOV 89 Received: 08 NOV 89
Authorized: 08 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Antimony	ND	mg/L	0.05	200.7	05 DEC 89	08 DEC 89
Arsenic	ND	mg/L	0.005	206.2	05 DEC 89	08 DEC 89
Barium	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Beryllium	ND	mg/L	0.002	200.7	05 DEC 89	08 DEC 89
Boron	ND	mg/L	0.02	200.7	05 DEC 89	08 DEC 89
Cadmium	ND	mg/L	0.005	200.7	05 DEC 89	08 DEC 89
Chromium	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Cobalt	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Copper	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Lead	ND	mg/L	0.005	239.2	05 DEC 89	08 DEC 89
Manganese	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Mercury	ND	mg/L	0.0002	245.1	01 DEC 89	01 DEC 89
Nickel	ND	mg/L	0.04	200.7	05 DEC 89	08 DEC 89
Selenium	ND	mg/L	0.01	270.2	05 DEC 89	08 DEC 89
Silver	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Thallium	ND	mg/L	0.01	279.2	05 DEC 89	11 DEC 89
Tin	ND	mg/L	0.05	200.7	05 DEC 89	08 DEC 89
Vanadium	ND	mg/L	0.01	200.7	05 DEC 89	08 DEC 89
Zinc	0.01	mg/L	0.01	200.7	05 DEC 89	08 DEC 89

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Toni Lusk

Enseco

General Inorganics

Client Name: Sparton Technology Inc.
Client ID: MW-40
Lab ID: 007399-0001-SA Enseco ID: 1059315
Matrix: AQUEOUS Sampled: 07 NOV 89 Received: 08 NOV 89
Authorized: 08 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chloride	24	mg/L	3	300.0	NA	19 NOV 89
Fluoride	0.3	mg/L	0.1	340.2	NA	28 NOV 89
Ammonia as N	ND	mg/L	0.1	350.1	NA	10 NOV 89
Nitrate as N	0.9	mg/L	0.1	353.2	NA	10 NOV 89
Sulfate	119	mg/L	5	300.0	NA	19 NOV 89
Total Kjeldahl Nitrogen as N	ND	mg/L	0.5	351.2	NA	29 NOV 89

ND = Not detected
NA = Not applicable

Reported By: Cheryl Jones Approved By: Mary Grehl

Enseco

General Inorganics

Client Name: Sparton Technology Inc.
Client ID: MW-41
Lab ID: 007399-0002-SA Enseco ID: 1059316
Matrix: AQUEOUS Sampled: 07 NOV 89 Received: 08 NOV 89
Authorized: 08 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chloride	54	mg/L	3	300.0	NA	19 NOV 89
Fluoride	0.2	mg/L	0.1	340.2	NA	28 NOV 89
Ammonia as N	ND	mg/L	0.1	350.1	NA	10 NOV 89
Nitrate as N	3.2	mg/L	0.1	353.2	NA	10 NOV 89
Sulfate	128	mg/L	5	300.0	NA	19 NOV 89
Total Kjeldahl Nitrogen as N	ND	mg/L	0.5	351.2	NA	29 NOV 89

ND = Not detected
NA = Not applicable

Reported By: Cheryl Jones Approved By: Mary Grehl

Enseco

General Inorganics

Client Name: Sparton Technology Inc.
Client ID: FIELD BLANK
Lab ID: 007399-0003-SA Enseco ID: 1059317
Matrix: AQUEOUS Sampled: 07 NOV 89 Received: 08 NOV 89
Authorized: 08 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chloride	ND	mg/L	3	300.0	NA	19 NOV 89
Fluoride	ND	mg/L	0.1	340.2	NA	28 NOV 89
Ammonia as N	ND	mg/L	0.1	350.1	NA	10 NOV 89
Nitrate as N	ND	mg/L	0.1	353.2	NA	10 NOV 89
Sulfate	ND	mg/L	5	300.0	NA	19 NOV 89
Total Kjeldahl Nitrogen as N	ND	mg/L	0.5	351.2	NA	29 NOV 89

ND = Not detected
NA = Not applicable

Reported By: Cheryl Jones Approved By: Mary Grehl

Enseco

General Inorganics

Client Name: Sparton Technology Inc.
Client ID: TRIP BLANK
Lab ID: 007399-0004-SA Enseco ID: 1059318
Matrix: AQUEOUS Sampled: 07 NOV 89 Received: 08 NOV 89
Authorized: 08 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chloride	ND	mg/L	3	300.0	NA	19 NOV 89
Fluoride	ND	mg/L	0.1	340.2	NA	28 NOV 89
Ammonia as N	ND	mg/L	0.1	350.1	NA	10 NOV 89
Nitrate as N	ND	mg/L	0.1	353.2	NA	10 NOV 89
Sulfate	ND	mg/L	5	300.0	NA	19 NOV 89
Total Kjeldahl Nitrogen as N	ND	mg/L	0.5	351.2	NA	29 NOV 89

ND = Not detected
NA = Not applicable

Reported By: Cheryl Jones Approved By: Mary Grehl

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)
007399-0001-SA	AQUEOUS	624-A	16 NOV 89-B	16 NOV 89-B
007399-0002-SA	AQUEOUS	624-A	16 NOV 89-B	16 NOV 89-B
007399-0003-SA	AQUEOUS	624-A	09 NOV 89-B	15 NOV 89-B
007399-0004-SA	AQUEOUS	624-A	09 NOV 89-B	15 NOV 89-B

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: 16 NOV 89-B Concentration Units: ug/L								
1,1-Dichloroethene	50	63.0	66.1	64.6	129	61-145	4.8	14
Trichloroethene	50	51.2	50.0	50.6	101	71-120	2.4	14
Benzene	50	59.4	59.7	59.6	119	76-127	0.5	11
Toluene	50	54.0	51.8	52.9	106	76-125	4.2	13
Chlorobenzene	50	52.8	49.4	51.1	102	75-130	6.7	13
Category: 624-A Matrix: AQUEOUS QC Lot: 09 NOV 89-B Concentration Units: ug/L								
1,1-Dichloroethene	50	42.2	40.3	41.2	83	61-145	4.6	14
Trichloroethene	50	45.5	44.7	45.1	90	71-120	1.8	14
Benzene	50	56.0	51.7	53.8	108	76-127	8.0	11
Toluene	50	55.3	52.5	53.9	108	76-125	5.2	13
Chlorobenzene	50	52.0	52.4	52.2	104	75-130	0.8	13

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

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: 16 NOV 89-B QC Run: 16 NOV 89-B				
Concentration Units: ug/L				
1,2-Dichloroethane-d4	50.0	49.8	100	76-114
4-Bromofluorobenzene	50.0	50.6	101	86-115
Toluene-d8	50.0	47.8	96	88-110
Category: 624-A				
Matrix: AQUEOUS				
QC Lot: 09 NOV 89-B QC Run: 15 NOV 89-B				
Concentration Units: ug/L				
1,2-Dichloroethane-d4	50.0	46.7	93	76-114
4-Bromofluorobenzene	50.0	46.9	94	86-115
Toluene-d8	50.0	49.0	98	88-110

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

METHOD BLANK REPORT
Volatile Organics by GC/MS

Test: 624-HSL-AP
Matrix: AQUEOUS
QC Lot: 16 NOV 89-B QC Run: 16 NOV 89-B

Analyte	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene (cis/trans)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Chlorodibromomethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

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

Test: 624-HSL-AP
Matrix: AQUEOUS
QC Lot: 09 NOV 89-B QC Run: 15 NOV 89-B

Analyte	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene (cis/trans)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Chlorodibromomethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

QC LOT ASSIGNMENT REPORT
Metals Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
007399-0001-SA	AQUEOUS	AS-FAA-AT	05 DEC 89-A	05 DEC 89-A
007399-0001-SA	AQUEOUS	TL-FAA-AT	05 DEC 89-A	05 DEC 89-A
007399-0001-SA	AQUEOUS	SE-FAA-AT	05 DEC 89-A	05 DEC 89-A
007399-0001-SA	AQUEOUS	PB-FAA-AT	05 DEC 89-A	05 DEC 89-A
007399-0001-SA	AQUEOUS	HG-CVAA-AT	01 DEC 89-B	01 DEC 89-B
007399-0001-SA	AQUEOUS	ICP-AT	05 DEC 89-A	05 DEC 89-A
007399-0002-SA	AQUEOUS	AS-FAA-AT	05 DEC 89-A	05 DEC 89-A
007399-0002-SA	AQUEOUS	TL-FAA-AT	05 DEC 89-A	05 DEC 89-A
007399-0002-SA	AQUEOUS	SE-FAA-AT	05 DEC 89-A	05 DEC 89-A
007399-0002-SA	AQUEOUS	PB-FAA-AT	05 DEC 89-A	05 DEC 89-A
007399-0002-SA	AQUEOUS	HG-CVAA-AT	01 DEC 89-B	01 DEC 89-B
007399-0002-SA	AQUEOUS	ICP-AT	05 DEC 89-A	05 DEC 89-A
007399-0003-SA	AQUEOUS	AS-FAA-AT	05 DEC 89-A	05 DEC 89-A
007399-0003-SA	AQUEOUS	TL-FAA-AT	05 DEC 89-A	05 DEC 89-A
007399-0003-SA	AQUEOUS	SE-FAA-AT	05 DEC 89-A	05 DEC 89-A
007399-0003-SA	AQUEOUS	PB-FAA-AT	05 DEC 89-A	05 DEC 89-A
007399-0003-SA	AQUEOUS	HG-CVAA-AT	01 DEC 89-B	01 DEC 89-B
007399-0003-SA	AQUEOUS	ICP-AT	05 DEC 89-A	05 DEC 89-A
007399-0004-SA	AQUEOUS	AS-FAA-AT	05 DEC 89-A	05 DEC 89-A
007399-0004-SA	AQUEOUS	TL-FAA-AT	05 DEC 89-A	05 DEC 89-A
007399-0004-SA	AQUEOUS	SE-FAA-AT	05 DEC 89-A	05 DEC 89-A
007399-0004-SA	AQUEOUS	PB-FAA-AT	05 DEC 89-A	05 DEC 89-A
007399-0004-SA	AQUEOUS	HG-CVAA-AT	01 DEC 89-B	01 DEC 89-B
007399-0004-SA	AQUEOUS	ICP-AT	05 DEC 89-A	05 DEC 89-A

DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Limits	Precision (RPD) DCS	Precision Limit
Category: AS-FAA-AT Matrix: AQUEOUS QC Lot: 05 DEC 89-A Concentration Units: mg/L								
Arsenic	0.04	0.036	0.037	0.036	91	75-125	2.7	20
Category: TL-FAA-AT Matrix: AQUEOUS QC Lot: 05 DEC 89-A Concentration Units: mg/L								
Thallium	0.05	0.050	0.048	0.049	98	75-125	4.1	20
Category: SE-FAA-AT Matrix: AQUEOUS QC Lot: 05 DEC 89-A Concentration Units: mg/L								
Selenium	0.01	0.011	0.010	0.011	106	75-125	2.8	20
Category: PB-FAA-AT Matrix: AQUEOUS QC Lot: 05 DEC 89-A Concentration Units: mg/L								
Lead	0.02	0.019	0.019	0.019	95	75-125	0.0	20
Category: HG-CVAA-AT Matrix: AQUEOUS QC Lot: 01 DEC 89-B Concentration Units: mg/L								
Mercury	0.0010	0.00107	0.00109	0.00108	108	75-125	1.9	20

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

DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation (cont.)

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Limits	Precision (RPD) DCS	Limit
Category: ICP-AT								
Matrix: AQUEOUS								
QC Lot: 05 DEC 89-A								
Concentration Units: mg/L								
Aluminum	2.0	1.96	1.95	1.96	98	75-125	0.5	20
Antimony	0.5	0.46	0.46	0.46	92	75-125	0.0	20
Arsenic	0.5	0.51	0.49	0.50	100	75-125	4.0	20
Barium	2.0	1.97	1.95	1.96	98	75-125	1.0	20
Beryllium	0.05	0.051	0.050	0.050	101	75-125	2.0	20
Cadmium	0.05	0.046	0.046	0.046	92	75-125	0.0	20
Calcium	100	91.0	90.1	90.6	91	75-125	1.0	20
Chromium	0.2	0.20	0.20	0.20	100	75-125	0.0	20
Cobalt	0.5	0.48	0.48	0.48	96	75-125	0.0	20
Copper	0.25	0.25	0.25	0.25	100	75-125	0.0	20
Iron	1.0	0.98	0.97	0.98	98	75-125	1.0	20
Lead	0.5	0.48	0.47	0.48	95	75-125	2.1	20
Magnesium	50	46.6	46.6	46.6	93	75-125	0.0	20
Manganese	0.5	0.49	0.48	0.48	97	75-125	2.1	20
Nickel	0.5	0.50	0.49	0.50	99	75-125	2.0	20
Potassium	100	91.0	92.8	91.9	92	75-125	2.0	20
Silver	0.05	0.049	0.045	0.047	94	75-125	8.5	20
Sodium	100	85.3	85.3	85.3	85	75-125	0.0	20
Vanadium	0.5	0.48	0.47	0.48	95	75-125	2.1	20
Zinc	0.5	0.52	0.51	0.52	103	75-125	1.9	20

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

METHOD BLANK REPORT
Metals Analysis and Preparation

Analyte	Result	Units	Reporting Limit
Test: AS-FAA-AT Matrix: AQUEOUS QC Lot: 05 DEC 89-A QC Run: 05 DEC 89-A			
Arsenic	ND	mg/L	0.005
Test: TL-FAA-AT Matrix: AQUEOUS QC Lot: 05 DEC 89-A QC Run: 05 DEC 89-A			
Thallium	ND	mg/L	0.005
Test: SE-FAA-AT Matrix: AQUEOUS QC Lot: 05 DEC 89-A QC Run: 05 DEC 89-A			
Selenium	ND	mg/L	0.005
Test: PB-FAA-AT Matrix: AQUEOUS QC Lot: 05 DEC 89-A QC Run: 05 DEC 89-A			
Lead	ND	mg/L	0.005
Test: HG-CVAA-AT Matrix: AQUEOUS QC Lot: 01 DEC 89-B QC Run: 01 DEC 89-B			
Mercury	ND	mg/L	0.0002
Test: ICP-AT Matrix: AQUEOUS QC Lot: 05 DEC 89-A QC Run: 05 DEC 89-A			
Antimony	ND	mg/L	0.05
Barium	ND	mg/L	0.01
Beryllium	ND	mg/L	0.002
Boron	ND	mg/L	0.02
Cadmium	ND	mg/L	0.005
Chromium	ND	mg/L	0.01

METHOD BLANK REPORT
Metals Analysis and Preparation (cont.)

Analyte	Result	Units	Reporting Limit
Test: ICP-AT			
Matrix: AQUEOUS			
QC Lot: 05 DEC 89-A QC Run: 05 DEC 89-A			
Cobalt	ND	mg/L	0.01
Copper	ND	mg/L	0.01
Manganese	ND	mg/L	0.01
Nickel	ND	mg/L	0.04
Silver	ND	mg/L	0.01
Tin	ND	mg/L	0.05
Vanadium	ND	mg/L	0.01
Zinc	ND	mg/L	0.01

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)
007399-0001-SA	AQUEOUS	NO3-A	10 NOV 89-C	-
007399-0001-SA	AQUEOUS	NH3-A	10 NOV 89-A	-
007399-0001-SA	AQUEOUS	TKN-A	28 NOV 89-A	28 NOV 89-A
007399-0001-SA	AQUEOUS	CL-IC-A	19 NOV 89-M	-
007399-0001-SA	AQUEOUS	SO4-IC-A	19 NOV 89-M	-
007399-0001-SA	AQUEOUS	F-A	28 NOV 89-A	-
007399-0002-SA	AQUEOUS	NO3-A	10 NOV 89-C	-
007399-0002-SA	AQUEOUS	NH3-A	10 NOV 89-A	-
007399-0002-SA	AQUEOUS	TKN-A	28 NOV 89-A	28 NOV 89-A
007399-0002-SA	AQUEOUS	CL-IC-A	19 NOV 89-M	-
007399-0002-SA	AQUEOUS	SO4-IC-A	19 NOV 89-M	-
007399-0002-SA	AQUEOUS	F-A	28 NOV 89-A	-
007399-0003-SA	AQUEOUS	NO3-A	10 NOV 89-C	-
007399-0003-SA	AQUEOUS	NH3-A	10 NOV 89-A	-
007399-0003-SA	AQUEOUS	TKN-A	28 NOV 89-A	28 NOV 89-A
007399-0003-SA	AQUEOUS	CL-IC-A	19 NOV 89-M	-
007399-0003-SA	AQUEOUS	SO4-IC-A	19 NOV 89-M	-
007399-0003-SA	AQUEOUS	F-A	28 NOV 89-A	-
007399-0004-SA	AQUEOUS	NO3-A	10 NOV 89-C	-
007399-0004-SA	AQUEOUS	NH3-A	10 NOV 89-A	-
007399-0004-SA	AQUEOUS	TKN-A	28 NOV 89-A	28 NOV 89-A
007399-0004-SA	AQUEOUS	CL-IC-A	19 NOV 89-M	-
007399-0004-SA	AQUEOUS	SO4-IC-A	19 NOV 89-M	-
007399-0004-SA	AQUEOUS	F-A	28 NOV 89-A	-

DUPLICATE CONTROL SAMPLE REPORT
Wet Chemistry Analysis and Preparation

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Limits	Precision (RPD) DCS	Precision Limit
Category: NO3-A Matrix: AQUEOUS QC Lot: 10 NOV 89-C Concentration Units: mg/L								
Nitrate as N	5.4	5.41	5.36	5.38	100	91-109	0.9	10
Category: NH3-A Matrix: AQUEOUS QC Lot: 10 NOV 89-A Concentration Units: mg/L								
Ammonia as N	8.0	7.78	7.83	7.80	98	93-107	0.6	10
Category: TKN-A Matrix: AQUEOUS QC Lot: 28 NOV 89-A Concentration Units: mg/L								
Total Kjeldahl Nitrogen as N	5.2	5.66	5.64	5.65	109	78-122	0.3	20
Category: CL-IC-A Matrix: AQUEOUS QC Lot: 19 NOV 89-M Concentration Units: mg/L								
Chloride	100	99.6	101	100	100	92-108	1.4	20
Category: SO4-IC-A Matrix: AQUEOUS QC Lot: 19 NOV 89-M Concentration Units: mg/L								
Sulfate	200	201	205	203	102	93-107	2.0	20

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: F-A								
Matrix: AQUEOUS								
QC Lot: 28 NOV 89-A								
Concentration Units: mg/L								
Fluoride	6.7	7.08	7.10	7.09	106	88-112	0.3	15

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

METHOD BLANK REPORT
Wet Chemistry Analysis and Preparation

Analyte	Result	Units	Reporting Limit
Test: TKN-TEC-A			
Matrix: AQUEOUS			
QC Lot: 28 NOV 89-A QC Run: 28 NOV 89-A			
Total Kjeldahl Nitrogen as N	ND	mg/L	0.5

Rocky Mountain
Analytical Laboratory

Enseco

December 11, 1989

Mr. Ven Samala
Sparton Technology
9621 Coors Road NW
Albuquerque, NM 87114

Dear Mr. Samala:

Enclosed is the report for three aqueous samples we received at Enseco-Rocky Mountain Analytical Laboratory on November 21, 1989.

Included with the report is a quality control summary.

Please call if you have any questions.

Sincerely,

Joel E. Holtz
Program Administrator

Reviewed by:

Jeanne B. Howbert
Technical Manager

JEH/JBH/kas
Enclosures

RMAL #007566

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

Rocky Mountain
Analytical Laboratory

Enseco

ANALYTICAL RESULTS
FOR
SPARTON TECHNOLOGY
ENSECO-RMAL NO. 007566

DECEMBER 11, 1989

Reviewed by: Joel E. Holtz

Joel E. Holtz

Jeanne B. Howbert

Jeanne B. Howbert

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

Introduction

This report presents the analytical results as well as supporting information to aid in the evaluation and interpretation of the data and is arranged in the following order:

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

Consistent with directives in the CLP protocol in SW-846 and other EPA methods, all GC/MS analyses were performed so that the maximum concentration of sample was analyzed. Some samples required dilutions to avoid saturation of the detector, to achieve linearity for a specific target compound or to reduce matrix interferences. As stated in Section 7.5.4 of Method 8270, 7.4.1.16 of Method 8240 and Exhibit E of the CLP protocol these dilutions must be performed. The reporting limits for these samples are therefore proportionate to the dilution required. Surrogate compounds may not be measurable in samples which have been diluted.

Sample Description Information

The Sample Description Information lists all of 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.

SAMPLE DESCRIPTION INFORMATION
for
Sparton Technology Inc.

Lab ID	Client ID	Matrix	Sampled Date	Sampled Time	Received Date
007566-0001-SA	MW-38	AQUEOUS	20 NOV 89	12:20	21 NOV 89
007566-0002-SA	MW-39	AQUEOUS	20 NOV 89	10:05	21 NOV 89
007566-0003-SA	MW-41	AQUEOUS	20 NOV 89	13:52	21 NOV 89

Enseco

ANALYTICAL TEST REQUESTS
for
Sparton Technology Inc.

Lab ID: 007566	Group Code	Analysis Description	Custom Test?
0001 - 0003	A	Nitrate, as Nitrogen	N
		Ammonia	N
		Total Kjeldahl Nitrogen (TKN)	N
		Chloride, Ion Chromatography	N
		Sulfate, Ion Chromatography	N
		Fluoride, Electrode	N
		HSL Volatile Organics	N
		Prep-Volatile Organics by GC/MS	N
		Arsenic, Furnace AA (Total)	N
		Prep - Total Metals, Furnace AA	N
		Thallium, Furnace AA (Total)	N
		Selenium, Furnace AA (Total)	N
		Lead, Furnace AA (Total)	N
		Mercury, Cold Vapor AA (Total)	N
		Prep - Mercury, Cold Vapor AA (Total)	N
		ICP Metals (Total)	Y
		Prep - Total Metals, ICP	N

Analytical Results

The analytical results for this project are presented in the following data tables. Each data table includes sample identification information, and when available and appropriate, dates sampled, received, authorized, prepared and analyzed. The authorization data is the date when the project was defined by the client such that laboratory work could begin.

Data sheets contain a listing of the parameters measured in each test, the analytical results 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.

The results from the Standard Enseco QA/QC Program, which generates data which are independent of matrix effects, is provided subsequently.

Enseco

HSL Volatile Organics

Method 624

Client Name: Sparton Technology Inc.
Client ID: MW-38
Lab ID: 007566-0001-SA Enseco ID: 1060617
Matrix: AQUEOUS Sampled: 20 NOV 89 Received: 21 NOV 89
Authorized: 21 NOV 89 Prepared: 27 NOV 89 Analyzed: 30 NOV 89

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene (cis/trans)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Chlorodibromomethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0
Toluene-d8	103	%	--
4-Bromofluorobenzene	96.6	%	--
1,2-Dichloroethane-d4	104	%	--

ND = Not detected
NA = Not applicable

Reported By: Tim Miller Approved By: Jeff Lowry

Enseco

HSL Volatile Organics

Method 624

Client Name: Sparton Technology Inc.
Client ID: MW-39
Lab ID: 007566-0002-SA Enseco ID: 1060619
Matrix: AQUEOUS Sampled: 20 NOV 89 Received: 21 NOV 89
Authorized: 21 NOV 89 Prepared: 27 NOV 89 Analyzed: 30 NOV 89

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene (cis/trans)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Chlorodibromomethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0
Toluene-d8	104	%	--
4-Bromofluorobenzene	96.2	%	--
1,2-Dichloroethane-d4	107	%	--

ND = Not detected
NA = Not applicable

Reported By: Tim Miller Approved By: Jeff Lowry

Enseco

HSL Volatile Organics

Method 624

Client Name: Sparton Technology Inc.
Client ID: MW-41
Lab ID: 007566-0003-SA Enseco ID: 1060621
Matrix: AQUEOUS Sampled: 20 NOV 89 Received: 21 NOV 89
Authorized: 21 NOV 89 Prepared: 27 NOV 89 Analyzed: 30 NOV 89

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	100
Bromomethane	ND	ug/L	100
Vinyl chloride	ND	ug/L	100
Chloroethane	ND	ug/L	100
Methylene chloride	ND	ug/L	50
Acetone	ND	ug/L	100
Carbon disulfide	ND	ug/L	50
1,1-Dichloroethene	110	ug/L	50
1,1-Dichloroethane	ND	ug/L	50
1,2-Dichloroethene (cis/trans)	ND	ug/L	50
Chloroform	ND	ug/L	50
1,2-Dichloroethane	ND	ug/L	50
2-Butanone	ND	ug/L	100
1,1,1-Trichloroethane	290	ug/L	50
Carbon tetrachloride	ND	ug/L	50
Vinyl acetate	ND	ug/L	100
Bromodichloromethane	ND	ug/L	50
1,2-Dichloropropane	ND	ug/L	50
trans-1,3-Dichloropropene	ND	ug/L	50
Trichloroethene	960	ug/L	50
Chlorodibromomethane	ND	ug/L	50
1,1,2-Trichloroethane	ND	ug/L	50
Benzene	ND	ug/L	50
cis-1,3-Dichloropropene	ND	ug/L	50
2-Chloroethyl vinyl ether	ND	ug/L	100
Bromoform	ND	ug/L	50
4-Methyl-2-pentanone	ND	ug/L	100
2-Hexanone	ND	ug/L	100
1,1,2,2-Tetrachloroethane	ND	ug/L	50
Tetrachloroethene	ND	ug/L	50
Toluene	ND	ug/L	50
Chlorobenzene	ND	ug/L	50
Ethylbenzene	ND	ug/L	50
Styrene	ND	ug/L	50
Xylenes (total)	ND	ug/L	50
Toluene-d8	102	%	--
4-Bromofluorobenzene	95.2	%	--
1,2-Dichloroethane-d4	105	%	--

ND = Not detected
NA = Not applicable

Reported By: Tim Miller Approved By: Jeff Lowry

Enseco

Metals

Total Metals

Client Name: Sparton Technology Inc.
Client ID: MW-38
Lab ID: 007566-0001-SA Enseco ID: 1060617
Matrix: AQUEOUS Sampled: 20 NOV 89 Received: 21 NOV 89
Authorized: 21 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Antimony	ND	mg/L	0.05	200.7	28 NOV 89	29 NOV 89
Arsenic	ND	mg/L	0.005	206.2	28 NOV 89	29 NOV 89
Barium	0.12	mg/L	0.01	200.7	28 NOV 89	29 NOV 89
Beryllium	ND	mg/L	0.002	200.7	28 NOV 89	29 NOV 89
Boron	0.11	mg/L	0.02	200.7	28 NOV 89	29 NOV 89
Cadmium	ND	mg/L	0.005	200.7	28 NOV 89	29 NOV 89
Chromium	ND	mg/L	0.01	200.7	28 NOV 89	29 NOV 89
Cobalt	ND	mg/L	0.01	200.7	28 NOV 89	29 NOV 89
Copper	ND	mg/L	0.01	200.7	28 NOV 89	29 NOV 89
Lead	ND	mg/L	0.005	239.2	28 NOV 89	29 NOV 89
Manganese	0.42	mg/L	0.01	200.7	28 NOV 89	29 NOV 89
Mercury	ND	mg/L	0.0002	245.1	01 DEC 89	01 DEC 89
Nickel	ND	mg/L	0.04	200.7	28 NOV 89	29 NOV 89
Selenium	ND	mg/L	0.005	270.2	28 NOV 89	29 NOV 89
Silver	ND	mg/L	0.01	200.7	28 NOV 89	29 NOV 89
Thallium	ND	mg/L	0.01	279.2	28 NOV 89	29 NOV 89
Tin	ND	mg/L	0.05	200.7	28 NOV 89	29 NOV 89
Vanadium	ND	mg/L	0.01	200.7	28 NOV 89	29 NOV 89
Zinc	0.54	mg/L	0.01	200.7	28 NOV 89	29 NOV 89

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Tammy Bailey

Enseco

Metals

Total Metals

Client Name: Sparton Technology Inc.
Client ID: MW-39
Lab ID: 007566-0002-SA Enseco ID: 1060619
Matrix: AQUEOUS Sampled: 20 NOV 89 Received: 21 NOV 89
Authorized: 21 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Antimony	ND	mg/L	0.05	200.7	28 NOV 89	29 NOV 89
Arsenic	ND	mg/L	0.005	206.2	28 NOV 89	29 NOV 89
Barium	0.14	mg/L	0.01	200.7	28 NOV 89	29 NOV 89
Beryllium	ND	mg/L	0.002	200.7	28 NOV 89	29 NOV 89
Boron	0.12	mg/L	0.02	200.7	28 NOV 89	29 NOV 89
Cadmium	ND	mg/L	0.005	200.7	28 NOV 89	29 NOV 89
Chromium	ND	mg/L	0.01	200.7	28 NOV 89	29 NOV 89
Cobalt	ND	mg/L	0.01	200.7	28 NOV 89	29 NOV 89
Copper	ND	mg/L	0.01	200.7	28 NOV 89	29 NOV 89
Lead	ND	mg/L	0.005	239.2	28 NOV 89	29 NOV 89
Manganese	0.64	mg/L	0.01	200.7	28 NOV 89	29 NOV 89
Mercury	ND	mg/L	0.0002	245.1	01 DEC 89	01 DEC 89
Nickel	ND	mg/L	0.04	200.7	28 NOV 89	29 NOV 89
Selenium	ND	mg/L	0.005	270.2	28 NOV 89	29 NOV 89
Silver	ND	mg/L	0.01	200.7	28 NOV 89	29 NOV 89
Thallium	ND	mg/L	0.02	279.2	28 NOV 89	29 NOV 89
Tin	ND	mg/L	0.05	200.7	28 NOV 89	29 NOV 89
Vanadium	ND	mg/L	0.01	200.7	28 NOV 89	29 NOV 89
Zinc	0.15	mg/L	0.01	200.7	28 NOV 89	29 NOV 89

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Tammy Bailey

Enseco

Metals

Total Metals

Client Name: Sparton Technology Inc.
Client ID: MW-41
Lab ID: 007566-0003-SA Enseco ID: 1060621
Matrix: AQUEOUS Sampled: 20 NOV 89 Received: 21 NOV 89
Authorized: 21 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Antimony	ND	mg/L	0.05	200.7	28 NOV 89	29 NOV 89
Arsenic	ND	mg/L	0.005	206.2	28 NOV 89	29 NOV 89
Barium	0.06	mg/L	0.01	200.7	28 NOV 89	29 NOV 89
Beryllium	ND	mg/L	0.002	200.7	28 NOV 89	29 NOV 89
Boron	0.14	mg/L	0.02	200.7	28 NOV 89	29 NOV 89
Cadmium	ND	mg/L	0.005	200.7	28 NOV 89	29 NOV 89
Chromium	0.02	mg/L	0.01	200.7	28 NOV 89	29 NOV 89
Cobalt	ND	mg/L	0.01	200.7	28 NOV 89	29 NOV 89
Copper	ND	mg/L	0.01	200.7	28 NOV 89	29 NOV 89
Lead	ND	mg/L	0.005	239.2	28 NOV 89	29 NOV 89
Manganese	0.14	mg/L	0.01	200.7	28 NOV 89	29 NOV 89
Mercury	ND	mg/L	0.0002	245.1	01 DEC 89	01 DEC 89
Nickel	ND	mg/L	0.04	200.7	28 NOV 89	29 NOV 89
Selenium	ND	mg/L	0.005	270.2	28 NOV 89	29 NOV 89
Silver	ND	mg/L	0.01	200.7	28 NOV 89	29 NOV 89
Thallium	ND	mg/L	0.05	279.2	28 NOV 89	29 NOV 89
Tin	ND	mg/L	0.05	200.7	28 NOV 89	29 NOV 89
Vanadium	ND	mg/L	0.01	200.7	28 NOV 89	29 NOV 89
Zinc	0.02	mg/L	0.01	200.7	28 NOV 89	29 NOV 89

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Tammy Bailey

Enseco

General Inorganics

Client Name: Sparton Technology Inc.
Client ID: MW-38
Lab ID: 007566-0001-SA Enseco ID: 1060617
Matrix: AQUEOUS Sampled: 20 NOV 89 Received: 21 NOV 89
Authorized: 21 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chloride	12	mg/L	3	300.0	NA	28 NOV 89
Fluoride	0.4	mg/L	0.1	340.2	NA	28 NOV 89
Ammonia as N	ND	mg/L	0.1	350.1	NA	29 NOV 89
Nitrate as N	0.3	mg/L	0.1	353.2	NA	28 NOV 89
Sulfate	71	mg/L	5	300.0	NA	28 NOV 89
Total Kjeldahl Nitrogen as N	ND	mg/L	0.5	351.2	NA	29 NOV 89

ND = Not detected
NA = Not applicable

Reported By: Cheryl Jones Approved By: Tammy Bailey

Enseco

General Inorganics

Client Name: Sparton Technology Inc.
Client ID: MW-39
Lab ID: 007566-0002-SA Enseco ID: 1060619
Matrix: AQUEOUS Sampled: 20 NOV 89 Received: 21 NOV 89
Authorized: 21 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chloride	21	mg/L	3	300.0	NA	28 NOV 89
Fluoride	0.3	mg/L	0.1	340.2	NA	28 NOV 89
Ammonia as N	ND	mg/L	0.1	350.1	NA	29 NOV 89
Nitrate as N	ND	mg/L	0.1	353.2	NA	28 NOV 89
Sulfate	93	mg/L	5	300.0	NA	28 NOV 89
Total Kjeldahl Nitrogen as N	ND	mg/L	0.5	351.2	NA	29 NOV 89

ND = Not detected
NA = Not applicable

Reported By: Cheryl Jones Approved By: Tammy Bailey

Enseco

General Inorganics

Client Name: Sparton Technology Inc.
Client ID: MW-41
Lab ID: 007566-0003-SA Enseco ID: 1060621
Matrix: AQUEOUS Sampled: 20 NOV 89 Received: 21 NOV 89
Authorized: 21 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chloride	44	mg/L	3	300.0	NA	28 NOV 89
Fluoride	0.2	mg/L	0.1	340.2	NA	28 NOV 89
Ammonia as N	ND	mg/L	0.1	350.1	NA	29 NOV 89
Nitrate as N	3.3	mg/L	0.1	353.2	NA	28 NOV 89
Sulfate	122	mg/L	5	300.0	NA	28 NOV 89
Total Kjeldahl Nitrogen as N	ND	mg/L	0.5	351.2	NA	29 NOV 89

ND = Not detected
NA = Not applicable

Reported By: Cheryl Jones Approved By: Tammy Bailey

Quality Control Results

The Enseco laboratories operate under a vigorous QA/QC program designed to ensure the generation of scientifically valid, legally defensible data by monitoring every aspect of laboratory operations. Routine QA/QC procedures include the use of approved methodologies, independent verification of analytical standards, use of duplicate Laboratory Control Samples to assess the precision and accuracy of the methodology on a routine basis, and a rigorous system of data review.

In addition, the Enseco laboratories maintain a comprehensive set of certifications from both state and federal governmental agencies which require frequent analyses of blind audit samples. Enseco - Rocky Mountain Analytical Laboratory is certified by the EPA under the EPA/CLP program for both Organic and Inorganic analyses, under the USATHAMA (U.S. Army) program, by the Army Corps of Engineers, and the states of Colorado, New Jersey, New York, Utah, and Florida, among others.

The standard laboratory QC package is designed to:

1) establish a strong, cost-effective QC program that ensures the generation of scientifically valid, legally defensible data

2) assess the laboratory's performance of the analytical method using control limits generated with a well-defined matrix

3) establish clear-cut guidelines for acceptability of analytical data so that QC decisions can be made immediately at the bench, and

4) provide a standard set of reportables which assures the client of the quality of his data.

The Enseco QC program is based upon monitoring the precision and accuracy of an analytical method by analyzing a set of Duplicate Control Samples (DCS) at frequent, well-defined intervals. Each DCS is a well-characterized matrix which is spiked with target compounds at 5-100 times the reporting limit, depending upon the methodology being monitored. The purpose of the DCS is not to duplicate the sample matrix, but rather to provide an interference-free, homogeneous matrix from which to gather data to establish control limits. These limits are used to determine whether data generated by the laboratory on any given day is in control.

Control limits for accuracy (percent recovery) are based on the average, historical percent recovery +/- 3 standard deviation units. Control limits for precision (relative percent difference) range from 0 (identical duplicate DCS results) to the average, historical relative percent difference + 3 standard deviation units. These control limits are fairly narrow based on the consistency of the matrix being monitored and are updated on a quarterly basis.

For each batch of samples analyzed, an additional control measure is taken in the form of a Single Control Sample (SCS). The SCS consists of a control matrix that is spiked with either representative target compounds or surrogate compounds appropriate to the method being used. An SCS is prepared for each sample lot for which the DCS pair are not analyzed.

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).

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

All samples analyzed concurrently by the same test are assigned the same QC lot number. Projects which contain numerous samples, analyzed over several days, may have multiple QC lot numbers associated with each test. The QC information which follows includes a listing of the QC lot numbers associated with each of the samples reported, DCS and SCS (where applicable) recoveries from the QC lots associated with the samples, and control limits for these lots. The QC data is reported by test code, in the order that the tests are reported in the analytical results section of this report.

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)
007566-0001-SA	AQUEOUS	624-A	21 NOV 89-H	30 NOV 89-H
007566-0002-SA	AQUEOUS	624-A	21 NOV 89-H	30 NOV 89-H
007566-0003-SA	AQUEOUS	624-A	21 NOV 89-H	30 NOV 89-H

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: 21 NOV 89-H								
Concentration Units: ug/L								
1,1-Dichloroethene	50	57.0	57.1	57.0	114	61-145	0.2	14
Trichloroethene	50	44.5	46.6	45.6	91	71-120	4.6	14
Benzene	50	52.0	52.6	52.3	105	76-127	1.1	11
Toluene	50	49.4	48.8	49.1	98	76-125	1.2	13
Chlorobenzene	50	48.1	46.9	47.5	95	75-130	2.5	13

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

Enseco

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: 21 NOV 89-H QC Run: 30 NOV 89-H				
Concentration Units: ug/L				
1,2-Dichloroethane-d4	50.0	49.9	100	76-114
4-Bromofluorobenzene	50.0	50.0	100	86-115
Toluene-d8	50.0	51.1	102	88-110

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

Enseco

METHOD BLANK REPORT
Volatile Organics by GC/MS

Test: 624-HSL-AP
Matrix: AQUEOUS
QC Lot: 21 NOV 89-H QC Run: 30 NOV 89-H

Analyte	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene (cis/trans)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Chlorodibromomethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

Enseco

QC LOT ASSIGNMENT REPORT
Metals Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
007566-0001-SA	AQUEOUS	AS-FAA-AT	28 NOV 89-K	28 NOV 89-K
007566-0001-SA	AQUEOUS	TL-FAA-AT	28 NOV 89-K	28 NOV 89-K
007566-0001-SA	AQUEOUS	SE-FAA-AT	28 NOV 89-K	28 NOV 89-K
007566-0001-SA	AQUEOUS	PB-FAA-AT	28 NOV 89-K	28 NOV 89-K
007566-0001-SA	AQUEOUS	HG-CVAA-AT	01 DEC 89-B	01 DEC 89-B
007566-0001-SA	AQUEOUS	ICP-AT	28 NOV 89-K	28 NOV 89-K
007566-0002-SA	AQUEOUS	AS-FAA-AT	28 NOV 89-K	28 NOV 89-K
007566-0002-SA	AQUEOUS	TL-FAA-AT	28 NOV 89-K	28 NOV 89-K
007566-0002-SA	AQUEOUS	SE-FAA-AT	28 NOV 89-K	28 NOV 89-K
007566-0002-SA	AQUEOUS	PB-FAA-AT	28 NOV 89-K	28 NOV 89-K
007566-0002-SA	AQUEOUS	HG-CVAA-AT	01 DEC 89-B	01 DEC 89-B
007566-0002-SA	AQUEOUS	ICP-AT	28 NOV 89-K	28 NOV 89-K
007566-0003-SA	AQUEOUS	AS-FAA-AT	28 NOV 89-K	28 NOV 89-K
007566-0003-SA	AQUEOUS	TL-FAA-AT	28 NOV 89-K	28 NOV 89-K
007566-0003-SA	AQUEOUS	SE-FAA-AT	28 NOV 89-K	28 NOV 89-K
007566-0003-SA	AQUEOUS	PB-FAA-AT	28 NOV 89-K	28 NOV 89-K
007566-0003-SA	AQUEOUS	HG-CVAA-AT	01 DEC 89-B	01 DEC 89-B
007566-0003-SA	AQUEOUS	ICP-AT	28 NOV 89-K	28 NOV 89-K

DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Limits	Precision (RPD) DCS	Limit
Category: AS-FAA-AT Matrix: AQUEOUS QC Lot: 28 NOV 89-K Concentration Units: mg/L								
Arsenic	0.04	0.029	0.032	0.030	76	75-125	9.8	20
Category: TL-FAA-AT Matrix: AQUEOUS QC Lot: 28 NOV 89-K Concentration Units: mg/L								
Thallium	0.05	0.049	0.047	0.048	96	75-125	4.2	20
Category: SE-FAA-AT Matrix: AQUEOUS QC Lot: 28 NOV 89-K Concentration Units: mg/L								
Selenium	0.01	0.010	0.011	0.010	105	75-125	9.5	20
Category: PB-FAA-AT Matrix: AQUEOUS QC Lot: 28 NOV 89-K Concentration Units: mg/L								
Lead	0.02	0.018	0.018	0.018	90	75-125	0.0	20
Category: HG-CVAA-AT Matrix: AQUEOUS QC Lot: 01 DEC 89-B Concentration Units: mg/L								
Mercury	0.0010	0.00107	0.00109	0.00108	108	75-125	1.9	20

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

DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation (cont.)

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Limits	Precision (RPD) DCS	Precision Limit
Category: ICP-AT								
Matrix: AQUEOUS								
QC Lot: 28 NOV 89-K								
Concentration Units: mg/L								
Aluminum	2.0	1.87	1.88	1.88	94	75-125	0.5	20
Antimony	0.5	0.47	0.47	0.47	94	75-125	0.0	20
Arsenic	0.5	0.45	0.44	0.44	89	75-125	2.2	20
Barium	2.0	1.87	1.85	1.86	93	75-125	1.1	20
Beryllium	0.05	0.047	0.047	0.047	94	75-125	0.0	20
Cadmium	0.05	0.044	0.046	0.045	90	75-125	4.4	20
Calcium	100	87.6	88.2	87.9	88	75-125	0.7	20
Chromium	0.2	0.19	0.19	0.19	95	75-125	0.0	20
Cobalt	0.5	0.44	0.44	0.44	88	75-125	0.0	20
Copper	0.25	0.23	0.23	0.23	92	75-125	0.0	20
Iron	1.0	0.91	0.91	0.91	91	75-125	0.0	20
Lead	0.5	0.45	0.43	0.44	88	75-125	4.5	20
Magnesium	50	45.0	45.7	45.4	91	75-125	1.5	20
Manganese	0.5	0.46	0.46	0.46	92	75-125	0.0	20
Nickel	0.5	0.45	0.45	0.45	90	75-125	0.0	20
Potassium	100	84.4	87.6	86.0	86	75-125	3.7	20
Silver	0.05	0.041	0.041	0.041	82	75-125	0.0	20
Sodium	100	79.4	82.6	81.0	81	75-125	4.0	20
Vanadium	0.5	0.44	0.44	0.44	88	75-125	0.0	20
Zinc	0.5	0.46	0.46	0.46	92	75-125	0.0	20

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

METHOD BLANK REPORT
Metals Analysis and Preparation

Analyte	Result	Units	Reporting Limit
Test: AS-FAA-AT			
Matrix: AQUEOUS			
QC Lot: 28 NOV 89-K QC Run: 28 NOV 89-K			
Arsenic	ND	mg/L	0.005
Test: TL-FAA-AT			
Matrix: AQUEOUS			
QC Lot: 28 NOV 89-K QC Run: 28 NOV 89-K			
Thallium	ND	mg/L	0.005
Test: SE-FAA-AT			
Matrix: AQUEOUS			
QC Lot: 28 NOV 89-K QC Run: 28 NOV 89-K			
Selenium	ND	mg/L	0.005
Test: PB-FAA-AT			
Matrix: AQUEOUS			
QC Lot: 28 NOV 89-K QC Run: 28 NOV 89-K			
Lead	ND	mg/L	0.005
Test: HG-CVAA-AT			
Matrix: AQUEOUS			
QC Lot: 01 DEC 89-B QC Run: 01 DEC 89-B			
Mercury	ND	mg/L	0.0002
Test: ICP-AT			
Matrix: AQUEOUS			
QC Lot: 28 NOV 89-K QC Run: 28 NOV 89-K			
Antimony	ND	mg/L	0.05
Barium	ND	mg/L	0.01
Beryllium	ND	mg/L	0.002
Boron	ND	mg/L	0.02
Cadmium	ND	mg/L	0.005
Chromium	ND	mg/L	0.01

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METHOD BLANK REPORT
Metals Analysis and Preparation (cont.)

Analyte	Result	Units	Reporting Limit
Test: ICP-AT			
Matrix: AQUEOUS			
QC Lot: 28 NOV 89-K QC Run: 28 NOV 89-K			
Cobalt	ND	mg/L	0.01
Copper	ND	mg/L	0.01
Manganese	ND	mg/L	0.01
Nickel	ND	mg/L	0.04
Silver	ND	mg/L	0.01
Tin	ND	mg/L	0.05
Vanadium	ND	mg/L	0.01
Zinc	ND	mg/L	0.01

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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)
007566-0001-SA	AQUEOUS	NO3-A	28 NOV 89-C	-
007566-0001-SA	AQUEOUS	NH3-A	29 NOV 89-A	-
007566-0001-SA	AQUEOUS	TKN-A	28 NOV 89-A	28 NOV 89-A
007566-0001-SA	AQUEOUS	CL-IC-A	28 NOV 89-N	-
007566-0001-SA	AQUEOUS	SO4-IC-A	28 NOV 89-M	-
007566-0001-SA	AQUEOUS	F-A	28 NOV 89-A	-
007566-0002-SA	AQUEOUS	NO3-A	28 NOV 89-C	-
007566-0002-SA	AQUEOUS	NH3-A	29 NOV 89-A	-
007566-0002-SA	AQUEOUS	TKN-A	28 NOV 89-A	28 NOV 89-A
007566-0002-SA	AQUEOUS	CL-IC-A	28 NOV 89-N	-
007566-0002-SA	AQUEOUS	SO4-IC-A	28 NOV 89-M	-
007566-0002-SA	AQUEOUS	F-A	28 NOV 89-A	-
007566-0003-SA	AQUEOUS	NO3-A	28 NOV 89-C	-
007566-0003-SA	AQUEOUS	NH3-A	29 NOV 89-A	-
007566-0003-SA	AQUEOUS	TKN-A	28 NOV 89-A	28 NOV 89-A
007566-0003-SA	AQUEOUS	CL-IC-A	28 NOV 89-N	-
007566-0003-SA	AQUEOUS	SO4-IC-A	28 NOV 89-M	-
007566-0003-SA	AQUEOUS	F-A	28 NOV 89-A	-

DUPLICATE CONTROL SAMPLE REPORT
Wet Chemistry Analysis and Preparation

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Limits	Precision (RPD) DCS	Limit
Category: NO3-A Matrix: AQUEOUS QC Lot: 28 NOV 89-C Concentration Units: mg/L								
Nitrate as N	5.4	5.77	5.60	5.68	105	91-109	3.0	1
Category: NH3-A Matrix: AQUEOUS QC Lot: 29 NOV 89-A Concentration Units: mg/L								
Ammonia as N	8.0	8.44	8.04	8.24	103	93-107	4.9	1
Category: TKN-A Matrix: AQUEOUS QC Lot: 28 NOV 89-A Concentration Units: mg/L								
Total Kjeldahl Nitrogen as N	5.2	5.66	5.64	5.65	109	78-122	0.3	2
Category: CL-IC-A Matrix: AQUEOUS QC Lot: 28 NOV 89-N Concentration Units: mg/L								
Chloride	100	104	103	104	104	92-108	1.0	2
Category: SO4-IC-A Matrix: AQUEOUS QC Lot: 28 NOV 89-M Concentration Units: mg/L								
Sulfate	200	203	208	206	103	93-107	2.4	2

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	Limit
Category: F-A								
Matrix: AQUEOUS								
QC Lot: 28 NOV 89-A								
Concentration Units: mg/L								
Fluoride	6.7	7.08	7.10	7.09	106	88-112	0.3	15

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

Enseco

METHOD BLANK REPORT
Wet Chemistry Analysis and Preparation

Analyte	Result	Units	Reporting Limit
Test: TKN-TEC-A			
Matrix: AQUEOUS			
QC Lot: 28 NOV 89-A QC Run: 28 NOV 89-A			
Total Kjeldahl Nitrogen as N	ND	mg/L	0.5

Rocky Mountain
Analytical Laboratory

Enseco

December 29, 1989

Mr. Ven Samala
Sparton Technology
9621 Coors Road, N.W.
Albuquerque, NM 87114

Dear Mr. Samala:

Enclosed is the report for three aqueous samples we received at Enseco-Rocky Mountain Analytical Laboratory on November 22, 1989.

Included with the report is a quality control summary.

Please call if you have any questions.

Sincerely,

Joel E. Holtz
Program Administrator

Reviewed by:

Jeanne B. Howbert
Technical Manager

JEH/JBH/heg
Enclosures

RMAL #007581

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

Rocky Mountain
Analytical Laboratory

Enseco

ANALYTICAL RESULTS

FOR

SPARTON TECHNOLOGY

ENSECO-RMAL NO. 007581

DECEMBER 29, 1989

Reviewed by: Joel E. Holtz

Jeanne B. Howbert

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

Introduction

This report presents the analytical results as well as supporting information to aid in the evaluation and interpretation of the data and is arranged in the following order:

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

Sample Description Information

The Sample Description Information lists all of 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.

Enseco

SAMPLE DESCRIPTION INFORMATION
for
Sparton Technology Inc.

Lab ID	Client ID	Matrix	Sampled Date	Sampled Time	Received Date
007581-0001-SA	MW-40	AQUEOUS	21 NOV 89	10:11	22 NOV 89
007581-0002-SA	FIELD BLANK	AQUEOUS	21 NOV 89	10:15	22 NOV 89
007581-0003-SA	TRIP BLANK	AQUEOUS	21 NOV 89		22 NOV 89

Enseco

ANALYTICAL TEST REQUESTS
for
Sparton Technology Inc.

Lab ID: 007581	Group Code	Analysis Description	Custom Test?
0001 - 0003	A	Nitrate, as Nitrogen	N
		Ammonia	N
		Total Kjeldahl Nitrogen (TKN)	N
		Chloride, Ion Chromatography	N
		Sulfate, Ion Chromatography	N
		Fluoride, Electrode	N
		HSL Volatile Organics	N
		Prep-Volatile Organics by GC/MS	N
		Arsenic, Furnace AA (Total)	N
		Prep - Total Metals, Furnace AA	N
		Thallium, Furnace AA (Total)	N
		Selenium, Furnace AA (Total)	N
		Lead, Furnace AA (Total)	N
		Mercury, Cold Vapor AA (Total)	N
		Prep - Mercury, Cold Vapor AA (Total)	N
		ICP Metals (Total)	Y
		Prep - Total Metals, ICP	N

Analytical Results

The analytical results for this project are presented in the following data tables. Each data table includes sample identification information, and when available and appropriate, dates sampled, received, authorized, prepared and analyzed. The authorization data is the date when the project was defined by the client such that laboratory work could begin.

Data sheets contain a listing of the parameters measured in each test, the analytical results 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.

The results from the Standard Enseco QA/QC Program, which generates data which are independent of matrix effects, is provided subsequently.

Enseco

HSL Volatile Organics

Method 624

Client Name: Sparton Technology Inc.
Client ID: MW-40
Lab ID: 007581-0001-SA Enseco ID: 1060746
Matrix: AQUEOUS Sampled: 21 NOV 89 Received: 22 NOV 89
Authorized: 22 NOV 89 Prepared: 27 NOV 89 Analyzed: 30 NOV 89

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene (cis/trans)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Chlorodibromomethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0
Toluene-d8	100	%	--
4-Bromofluorobenzene	98.1	%	--
1,2-Dichloroethane-d4	90.0	%	--

ND = Not detected
NA = Not applicable

Reported By: Monica Brinkman Approved By: Jeff Lowry

Enseco

HSL Volatile Organics

Method 624

Client Name: Sparton Technology Inc.
Client ID: FIELD BLANK
Lab ID: 007581-0002-SA Enseco ID: 1060747
Matrix: AQUEOUS Sampled: 21 NOV 89 Received: 22 NOV 89
Authorized: 22 NOV 89 Prepared: 27 NOV 89 Analyzed: 30 NOV 89

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	12	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene (cis/trans)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Chlorodibromomethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0
Toluene-d8	101	%	--
4-Bromofluorobenzene	99.5	%	--
1,2-Dichloroethane-d4	95.6	%	--

ND = Not detected
NA = Not applicable

Reported By: Monica Brinkman Approved By: Jeff Lowry

Enseco

HSL Volatile Organics

Method 624

Client Name: Sparton Technology Inc.
Client ID: TRIP BLANK
Lab ID: 007581-0003-SA Enseco ID: 1060749
Matrix: AQUEOUS Sampled: 21 NOV 89 Received: 22 NOV 89
Authorized: 22 NOV 89 Prepared: 27 NOV 89 Analyzed: 30 NOV 89

Parameter	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene (cis/trans)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Chlorodibromomethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0
Toluene-d8	97.0	%	--
4-Bromofluorobenzene	96.6	%	--
1,2-Dichloroethane-d4	92.0	%	--

ND = Not detected
NA = Not applicable

Reported By: Monica Brinkman Approved By: Jeff Lowry

Enseco

Metals

Total Metals

Client Name: Sparton Technology Inc.
Client ID: MW-40
Lab ID: 007581-0001-SA Enseco ID: 1060746
Matrix: AQUEOUS Sampled: 21 NOV 89 Received: 22 NOV 89
Authorized: 22 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Antimony	ND	mg/L	0.05	200.7	15 DEC 89	19 DEC 89
Arsenic	ND	mg/L	0.01	206.2	15 DEC 89	18 DEC 89
Barium	0.12	mg/L	0.01	200.7	15 DEC 89	19 DEC 89
Beryllium	ND	mg/L	0.002	200.7	15 DEC 89	19 DEC 89
Boron	0.15	mg/L	0.02	200.7	15 DEC 89	19 DEC 89
Cadmium	ND	mg/L	0.005	200.7	15 DEC 89	19 DEC 89
Chromium	ND	mg/L	0.01	200.7	15 DEC 89	19 DEC 89
Cobalt	ND	mg/L	0.01	200.7	15 DEC 89	19 DEC 89
Copper	ND	mg/L	0.01	200.7	15 DEC 89	19 DEC 89
Lead	ND	mg/L	0.005	239.2	15 DEC 89	18 DEC 89
Manganese	0.01	mg/L	0.01	200.7	15 DEC 89	19 DEC 89
Mercury	ND	mg/L	0.0002	245.1	06 DEC 89	08 DEC 89
Nickel	ND	mg/L	0.04	200.7	15 DEC 89	19 DEC 89
Selenium	ND	mg/L	0.005	270.2	15 DEC 89	18 DEC 89
Silver	ND	mg/L	0.01	200.7	15 DEC 89	19 DEC 89
Thallium	ND	mg/L	0.01	279.2	15 DEC 89	18 DEC 89
Tin	ND	mg/L	0.05	200.7	15 DEC 89	19 DEC 89
Vanadium	ND	mg/L	0.01	200.7	15 DEC 89	19 DEC 89
Zinc	0.37	mg/L	0.01	200.7	15 DEC 89	19 DEC 89

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Kimberly Conroy

Enseco

Metals

Total Metals

Client Name: Sparton Technology Inc.
Client ID: FIELD BLANK
Lab ID: 007581-0002-SA Enseco ID: 1060747
Matrix: AQUEOUS Sampled: 21 NOV 89 Received: 22 NOV 89
Authorized: 22 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Antimony	ND	mg/L	0.05	200.7	15 DEC 89	19 DEC 89
Arsenic	ND	mg/L	0.005	206.2	15 DEC 89	18 DEC 89
Barium	ND	mg/L	0.01	200.7	15 DEC 89	19 DEC 89
Beryllium	ND	mg/L	0.002	200.7	15 DEC 89	19 DEC 89
Boron	1.1	mg/L	0.02	200.7	15 DEC 89	19 DEC 89
Cadmium	ND	mg/L	0.005	200.7	15 DEC 89	19 DEC 89
Chromium	ND	mg/L	0.01	200.7	15 DEC 89	19 DEC 89
Cobalt	ND	mg/L	0.01	200.7	15 DEC 89	19 DEC 89
Copper	0.02	mg/L	0.01	200.7	15 DEC 89	19 DEC 89
Lead	ND	mg/L	0.005	239.2	15 DEC 89	18 DEC 89
Manganese	ND	mg/L	0.01	200.7	15 DEC 89	19 DEC 89
Mercury	ND	mg/L	0.0002	245.1	06 DEC 89	08 DEC 89
Nickel	ND	mg/L	0.04	200.7	15 DEC 89	19 DEC 89
Selenium	ND	mg/L	0.005	270.2	15 DEC 89	18 DEC 89
Silver	ND	mg/L	0.01	200.7	15 DEC 89	19 DEC 89
Thallium	ND	mg/L	0.005	279.2	15 DEC 89	18 DEC 89
Tin	ND	mg/L	0.05	200.7	15 DEC 89	19 DEC 89
Vanadium	ND	mg/L	0.01	200.7	15 DEC 89	19 DEC 89
Zinc	0.01	mg/L	0.01	200.7	15 DEC 89	19 DEC 89

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Kimberly Conroy

Enseco

Metals

Total Metals

Client Name: Sparton Technology Inc.
Client ID: TRIP BLANK
Lab ID: 007581-0003-SA Enseco ID: 1060749
Matrix: AQUEOUS Sampled: 21 NOV 89 Received: 22 NOV 89
Authorized: 22 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Antimony	ND	mg/L	0.05	200.7	15 DEC 89	19 DEC 89
Arsenic	ND	mg/L	0.005	206.2	15 DEC 89	18 DEC 89
Barium	ND	mg/L	0.01	200.7	15 DEC 89	19 DEC 89
Beryllium	ND	mg/L	0.002	200.7	15 DEC 89	19 DEC 89
Boron	0.02	mg/L	0.02	200.7	15 DEC 89	19 DEC 89
Cadmium	ND	mg/L	0.005	200.7	15 DEC 89	19 DEC 89
Chromium	ND	mg/L	0.01	200.7	15 DEC 89	19 DEC 89
Cobalt	ND	mg/L	0.01	200.7	15 DEC 89	19 DEC 89
Copper	ND	mg/L	0.01	200.7	15 DEC 89	19 DEC 89
Lead	ND	mg/L	0.005	239.2	15 DEC 89	18 DEC 89
Manganese	ND	mg/L	0.01	200.7	15 DEC 89	19 DEC 89
Mercury	ND	mg/L	0.0002	245.1	06 DEC 89	08 DEC 89
Nickel	ND	mg/L	0.04	200.7	15 DEC 89	19 DEC 89
Selenium	ND	mg/L	0.005	270.2	15 DEC 89	18 DEC 89
Silver	ND	mg/L	0.01	200.7	15 DEC 89	19 DEC 89
Thallium	ND	mg/L	0.005	279.2	15 DEC 89	18 DEC 89
Tin	ND	mg/L	0.05	200.7	15 DEC 89	19 DEC 89
Vanadium	ND	mg/L	0.01	200.7	15 DEC 89	19 DEC 89
Zinc	ND	mg/L	0.01	200.7	15 DEC 89	19 DEC 89

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Kimberly Conroy

Enseco

General Inorganics

Client Name: Sparton Technology Inc.
Client ID: MW-40
Lab ID: 007581-0001-SA Enseco ID: 1060746
Matrix: AQUEOUS Sampled: 21 NOV 89 Received: 22 NOV 89
Authorized: 22 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chloride	24	mg/L	3	300.0	NA	28 NOV 89
Fluoride	0.3	mg/L	0.1	340.2	NA	05 DEC 89
Ammonia as N	ND	mg/L	0.1	350.1	NA	29 NOV 89
Nitrate as N	0.8	mg/L	0.1	353.2	NA	28 NOV 89
Sulfate	120	mg/L	5	300.0	NA	28 NOV 89
Total Kjeldahl Nitrogen as N	ND	mg/L	0.5	351.2	NA	29 NOV 89

ND = Not detected
NA = Not applicable

Reported By: Cheryl Jones Approved By: Tammy Bailey

Enseco

General Inorganics

Client Name: Sparton Technology Inc.
Client ID: FIELD BLANK
Lab ID: 007581-0002-SA Enseco ID: 1060747
Matrix: AQUEOUS Sampled: 21 NOV 89 Received: 22 NOV 89
Authorized: 22 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chloride	ND	mg/L	3	300.0	NA	28 NOV 89
Fluoride	ND	mg/L	0.1	340.2	NA	05 DEC 89
Ammonia as N	ND	mg/L	0.1	350.1	NA	29 NOV 89
Nitrate as N	ND	mg/L	0.1	353.2	NA	28 NOV 89
Sulfate	ND	mg/L	5	300.0	NA	28 NOV 89
Total Kjeldahl Nitrogen as N	ND	mg/L	0.5	351.2	NA	29 NOV 89

ND = Not detected
NA = Not applicable

Reported By: Cheryl Jones Approved By: Tammy Bailey

Enseco

General Inorganics

Client Name: Sparton Technology Inc.
Client ID: TRIP BLANK
Lab ID: 007581-0003-SA Enseco ID: 1060749
Matrix: AQUEOUS Sampled: 21 NOV 89 Received: 22 NOV 89
Authorized: 22 NOV 89 Prepared: See Below Analyzed: See Below

Parameter	Result	Units	Reporting Limit	Analytical Method	Prepared Date	Analyzed Date
Chloride	ND	mg/L	3	300.0	NA	28 NOV 89
Fluoride	ND	mg/L	0.1	340.2	NA	05 DEC 89
Ammonia as N	0.4	mg/L	0.1	350.1	NA	29 NOV 89
Nitrate as N	ND	mg/L	0.1	353.2	NA	28 NOV 89
Sulfate	ND	mg/L	5	300.0	NA	28 NOV 89
Total Kjeldahl Nitrogen as N	ND	mg/L	0.5	351.2	NA	29 NOV 89

ND = Not detected
NA = Not applicable

Reported By: Cheryl Jones Approved By: Tammy Bailey

Quality Control Results

The Enseco laboratories operate under a vigorous QA/QC program designed to ensure the generation of scientifically valid, legally defensible data by monitoring every aspect of laboratory operations. Routine QA/QC procedures include the use of approved methodologies, independent verification of analytical standards, use of duplicate Laboratory Control Samples to assess the precision and accuracy of the methodology on a routine basis, and a rigorous system of data review.

In addition, the Enseco laboratories maintain a comprehensive set of certifications from both state and federal governmental agencies which require frequent analyses of blind audit samples. Enseco - Rocky Mountain Analytical Laboratory is certified by the EPA under the EPA/CLP program for both Organic and Inorganic analyses, under the USATHAMA (U.S. Army) program, by the Army Corps of Engineers, and the states of Colorado, New Jersey, New York, Utah, and Florida, among others.

The standard laboratory QC package is designed to:

1) establish a strong, cost-effective QC program that ensures the generation of scientifically valid, legally defensible data

2) assess the laboratory's performance of the analytical method using control limits generated with a well-defined matrix

3) establish clear-cut guidelines for acceptability of analytical data so that QC decisions can be made immediately at the bench, and

4) provide a standard set of reportables which assures the client of the quality of his data.

The Enseco QC program is based upon monitoring the precision and accuracy of an analytical method by analyzing a set of Duplicate Control Samples (DCS) at frequent, well-defined intervals. Each DCS is a well-characterized matrix which is spiked with target compounds at 5-100 times the reporting limit, depending upon the methodology being monitored. The purpose of the DCS is not to duplicate the sample matrix, but rather to provide an interference-free, homogeneous matrix from which to gather data to establish control limits. These limits are used to determine whether data generated by the laboratory on any given day is in control.

Control limits for accuracy (percent recovery) are based on the average, historical percent recovery +/- 3 standard deviation units. Control limits for precision (relative percent difference) range from 0 (identical duplicate DCS results) to the average, historical relative percent difference + 3 standard deviation units. These control limits are fairly narrow based on the consistency of the matrix being monitored and are updated on a quarterly basis.

For each batch of samples analyzed, an additional control measure is taken in the form of a Single Control Sample (SCS). The SCS consists of a control matrix that is spiked with either representative target compounds or surrogate compounds appropriate to the method being used. An SCS is prepared for each sample lot for which the DCS pair are not analyzed.

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).

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

All samples analyzed concurrently by the same test are assigned the same QC lot number. Projects which contain numerous samples, analyzed over several days, may have multiple QC lot numbers associated with each test. The QC information which follows includes a listing of the QC lot numbers associated with each of the samples reported, DCS and SCS (where applicable) recoveries from the QC lots associated with the samples, and control limits for these lots. The QC data is reported by test code, in the order that the tests are reported in the analytical results section of this report.

Enseco

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)
007581-0001-SA	AQUEOUS	624-A	20 NOV 89-L	30 NOV 89-L
007581-0002-SA	AQUEOUS	624-A	20 NOV 89-L	30 NOV 89-L
007581-0003-SA	AQUEOUS	624-A	20 NOV 89-L	30 NOV 89-L

Enseco

DUPLICATE CONTROL SAMPLE REPORT
Volatile Organics by GC/MS

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Limits	Precisio (RPD) DCS	Limi
Category: 624-A								
Matrix: AQUEOUS								
QC Lot: 20 NOV 89-L								
Concentration Units: ug/L								
1,1-Dichloroethene	50	64.7	63.6	64.2	128	61-145	1.7	1
Trichloroethene	50	48.7	51.4	50.0	100	71-120	5.4	1
Benzene	50	54.7	57.0	55.8	112	76-127	4.1	1
Toluene	50	47.3	48.7	48.0	96	76-125	2.9	1
Chlorobenzene	50	48.8	48.8	48.8	98	75-130	0.0	1

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

Enseco

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: 20 NOV 89-L QC Run: 30 NOV 89-L				
Concentration Units: ug/L				
1,2-Dichloroethane-d4	50.0	46.8	94	76-114
4-Bromofluorobenzene	50.0	49.9	100	86-115
Toluene-d8	50.0	51.6	103	88-110

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

Enseco

METHOD BLANK REPORT
Volatile Organics by GC/MS

Test: 624-HSL-AP
Matrix: AQUEOUS
QC Lot: 20 NOV 89-L QC Run: 30 NOV 89-L

Analyte	Result	Units	Reporting Limit
Chloromethane	ND	ug/L	10
Bromomethane	ND	ug/L	10
Vinyl chloride	ND	ug/L	10
Chloroethane	ND	ug/L	10
Methylene chloride	ND	ug/L	5.0
Acetone	ND	ug/L	10
Carbon disulfide	ND	ug/L	5.0
1,1-Dichloroethene	ND	ug/L	5.0
1,1-Dichloroethane	ND	ug/L	5.0
1,2-Dichloroethene (cis/trans)	ND	ug/L	5.0
Chloroform	ND	ug/L	5.0
1,2-Dichloroethane	ND	ug/L	5.0
2-Butanone	ND	ug/L	10
1,1,1-Trichloroethane	ND	ug/L	5.0
Carbon tetrachloride	ND	ug/L	5.0
Vinyl acetate	ND	ug/L	10
Bromodichloromethane	ND	ug/L	5.0
1,2-Dichloropropane	ND	ug/L	5.0
trans-1,3-Dichloropropene	ND	ug/L	5.0
Trichloroethene	ND	ug/L	5.0
Chlorodibromomethane	ND	ug/L	5.0
1,1,2-Trichloroethane	ND	ug/L	5.0
Benzene	ND	ug/L	5.0
cis-1,3-Dichloropropene	ND	ug/L	5.0
2-Chloroethyl vinyl ether	ND	ug/L	10
Bromoform	ND	ug/L	5.0
4-Methyl-2-pentanone	ND	ug/L	10
2-Hexanone	ND	ug/L	10
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0
Tetrachloroethene	ND	ug/L	5.0
Toluene	ND	ug/L	5.0
Chlorobenzene	ND	ug/L	5.0
Ethylbenzene	ND	ug/L	5.0
Styrene	ND	ug/L	5.0
Xylenes (total)	ND	ug/L	5.0

Enseco

QC LOT ASSIGNMENT REPORT
Metals Analysis and Preparation

Laboratory Sample Number	QC Matrix	QC Category	QC Lot Number (DCS)	QC Run Number (SCS/BLANK)
007581-0001-SA	AQUEOUS	AS-FAA-AT	15 DEC 89-A	15 DEC 89-A
007581-0001-SA	AQUEOUS	TL-FAA-AT	15 DEC 89-A	15 DEC 89-A
007581-0001-SA	AQUEOUS	SE-FAA-AT	15 DEC 89-A	15 DEC 89-A
007581-0001-SA	AQUEOUS	PB-FAA-AT	15 DEC 89-A	15 DEC 89-A
007581-0001-SA	AQUEOUS	HG-CVAA-AT	06 DEC 89-C	06 DEC 89-C
007581-0001-SA	AQUEOUS	ICP-AT	15 DEC 89-A	15 DEC 89-A
007581-0002-SA	AQUEOUS	AS-FAA-AT	15 DEC 89-A	15 DEC 89-A
007581-0002-SA	AQUEOUS	TL-FAA-AT	15 DEC 89-A	15 DEC 89-A
007581-0002-SA	AQUEOUS	SE-FAA-AT	15 DEC 89-A	15 DEC 89-A
007581-0002-SA	AQUEOUS	PB-FAA-AT	15 DEC 89-A	15 DEC 89-A
007581-0002-SA	AQUEOUS	HG-CVAA-AT	06 DEC 89-C	06 DEC 89-C
007581-0002-SA	AQUEOUS	ICP-AT	15 DEC 89-A	15 DEC 89-A
007581-0003-SA	AQUEOUS	AS-FAA-AT	15 DEC 89-A	15 DEC 89-A
007581-0003-SA	AQUEOUS	TL-FAA-AT	15 DEC 89-A	15 DEC 89-A
007581-0003-SA	AQUEOUS	SE-FAA-AT	15 DEC 89-A	15 DEC 89-A
007581-0003-SA	AQUEOUS	PB-FAA-AT	15 DEC 89-A	15 DEC 89-A
007581-0003-SA	AQUEOUS	HG-CVAA-AT	06 DEC 89-C	06 DEC 89-C
007581-0003-SA	AQUEOUS	ICP-AT	15 DEC 89-A	15 DEC 89-A

DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Limits	Precision (RPD) DCS	Precision Limi
Category: AS-FAA-AT Matrix: AQUEOUS QC Lot: 15 DEC 89-A Concentration Units: mg/L								
Arsenic	0.04	0.040	0.040	0.040	100	75-125	0.0	20
Category: TL-FAA-AT Matrix: AQUEOUS QC Lot: 15 DEC 89-A Concentration Units: mg/L								
Thallium	0.05	0.047	0.048	0.048	95	75-125	2.1	20
Category: SE-FAA-AT Matrix: AQUEOUS QC Lot: 15 DEC 89-A Concentration Units: mg/L								
Selenium	0.01	0.011	0.010	0.010	105	75-125	9.5	20
Category: PB-FAA-AT Matrix: AQUEOUS QC Lot: 15 DEC 89-A Concentration Units: mg/L								
Lead	0.020	0.018	0.019	0.019	93	75-125	1.6	20
Category: HG-CVAA-AT Matrix: AQUEOUS QC Lot: 06 DEC 89-C Concentration Units: mg/L								
Mercury	0.0010	0.00100	0.00102	0.00101	101	75-125	2.0	20

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

DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation (cont.)

Analyte	Concentration Spiked	Measured DCS1	Measured DCS2	Measured AVG	Accuracy Average(%) DCS	Accuracy Average(%) Limits	Precisio (RPD) DCS	Precisio (RPD) Limi
Category: ICP-AT								
Matrix: AQUEOUS								
QC Lot: 15 DEC 89-A								
Concentration Units: mg/L								
Aluminum	2.0	1.97	1.98	1.98	99	75-125	0.5	20
Antimony	0.5	0.49	0.48	0.48	97	75-125	2.1	20
Arsenic	0.5	0.48	0.50	0.49	98	75-125	4.1	20
Barium	2.0	1.79	1.80	1.80	90	75-125	0.6	20
Beryllium	0.05	0.049	0.049	0.049	98	75-125	0.0	20
Cadmium	0.05	0.048	0.049	0.048	97	75-125	2.1	20
Calcium	100	95.8	96.4	96.1	96	75-125	0.6	20
Chromium	0.2	0.20	0.20	0.20	100	75-125	0.0	20
Cobalt	0.5	0.48	0.48	0.48	96	75-125	0.0	20
Copper	0.25	0.25	0.25	0.25	100	75-125	0.0	20
Iron	1.0	0.98	0.97	0.98	98	75-125	1.0	20
Lead	0.5	0.48	0.49	0.48	97	75-125	2.1	20
Magnesium	50	49.2	49.6	49.4	99	75-125	0.8	20
Manganese	0.5	0.50	0.50	0.50	100	75-125	0.0	20
Nickel	0.5	0.50	0.50	0.50	100	75-125	0.0	20
Potassium	100	96.3	97.2	96.8	97	75-125	0.9	20
Silver	0.05	0.049	0.048	0.048	97	75-125	2.1	20
Sodium	100	88.8	89.3	89.0	89	75-125	0.6	20
Vanadium	0.5	0.47	0.48	0.48	95	75-125	2.1	20
Zinc	0.5	0.51	0.52	0.52	103	75-125	1.9	20

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

Enseco

METHOD BLANK REPORT
Metals Analysis and Preparation

Analyte	Result	Units	Reporting Limit
Test: AS-FAA-AT Matrix: AQUEOUS QC Lot: 15 DEC 89-A QC Run: 15 DEC 89-A			
Arsenic	ND	mg/L	0.005
Test: TL-FAA-AT Matrix: AQUEOUS QC Lot: 15 DEC 89-A QC Run: 15 DEC 89-A			
Thallium	ND	mg/L	0.005
Test: SE-FAA-AT Matrix: AQUEOUS QC Lot: 15 DEC 89-A QC Run: 15 DEC 89-A			
Selenium	ND	mg/L	0.005
Test: PB-FAA-AT Matrix: AQUEOUS QC Lot: 15 DEC 89-A QC Run: 15 DEC 89-A			
Lead	ND	mg/L	0.005
Test: HG-CVAA-AT Matrix: AQUEOUS QC Lot: 06 DEC 89-C QC Run: 06 DEC 89-C			
Mercury	ND	mg/L	0.0002
Test: ICP-AT Matrix: AQUEOUS QC Lot: 15 DEC 89-A QC Run: 15 DEC 89-A			
Antimony	ND	mg/L	0.05
Barium	ND	mg/L	0.01
Beryllium	ND	mg/L	0.002
Boron	ND	mg/L	0.02
Cadmium	ND	mg/L	0.005
Chromium	ND	mg/L	0.01

Enseco

METHOD BLANK REPORT
Metals Analysis and Preparation (cont.)

Test: ICP-AT
Matrix: AQUEOUS
QC Lot: 15 DEC 89-A QC Run: 15 DEC 89-A

Analyte	Result	Units	Reporting Limit
Cobalt	ND	mg/L	0.01
Copper	ND	mg/L	0.01
Manganese	ND	mg/L	0.01
Nickel	ND	mg/L	0.04
Silver	ND	mg/L	0.01
Tin	ND	mg/L	0.05
Vanadium	ND	mg/L	0.01
Zinc	ND	mg/L	0.01

Enseco

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)
007581-0001-SA	AQUEOUS	NO3-A	28 NOV 89-C	-
007581-0001-SA	AQUEOUS	NH3-A	29 NOV 89-A	-
007581-0001-SA	AQUEOUS	TKN-A	28 NOV 89-A	28 NOV 89-A
007581-0001-SA	AQUEOUS	CL-IC-A	28 NOV 89-M	-
007581-0001-SA	AQUEOUS	SO4-IC-A	28 NOV 89-M	-
007581-0001-SA	AQUEOUS	F-A	05 DEC 89-A	-
007581-0002-SA	AQUEOUS	NO3-A	28 NOV 89-C	-
007581-0002-SA	AQUEOUS	NH3-A	29 NOV 89-A	-
007581-0002-SA	AQUEOUS	TKN-A	28 NOV 89-A	28 NOV 89-A
007581-0002-SA	AQUEOUS	CL-IC-A	28 NOV 89-M	-
007581-0002-SA	AQUEOUS	SO4-IC-A	28 NOV 89-M	-
007581-0002-SA	AQUEOUS	F-A	05 DEC 89-A	-
007581-0003-SA	AQUEOUS	NO3-A	28 NOV 89-C	-
007581-0003-SA	AQUEOUS	NH3-A	29 NOV 89-A	-
007581-0003-SA	AQUEOUS	TKN-A	28 NOV 89-A	28 NOV 89-A
007581-0003-SA	AQUEOUS	CL-IC-A	28 NOV 89-M	-
007581-0003-SA	AQUEOUS	SO4-IC-A	28 NOV 89-M	-
007581-0003-SA	AQUEOUS	F-A	05 DEC 89-A	-

Enseco

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: NO3-A Matrix: AQUEOUS QC Lot: 28 NOV 89-C Concentration Units: mg/L								
Nitrate as N	5.4	5.77	5.60	5.68	105	91-109	3.0	10
Category: NH3-A Matrix: AQUEOUS QC Lot: 29 NOV 89-A Concentration Units: mg/L								
Ammonia as N	8.0	8.44	8.04	8.24	103	93-107	4.9	10
Category: TKN-A Matrix: AQUEOUS QC Lot: 28 NOV 89-A Concentration Units: mg/L								
Total Kjeldahl Nitrogen as N	5.2	5.66	5.64	5.65	109	78-122	0.3	20
Category: CL-IC-A Matrix: AQUEOUS QC Lot: 28 NOV 89-M Concentration Units: mg/L								
Chloride	100	101	104	102	103	92-108	2.9	20
Category: SO4-IC-A Matrix: AQUEOUS QC Lot: 28 NOV 89-M Concentration Units: mg/L								
Sulfate	200	203	208	206	103	93-107	2.4	20

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: F-A								
Matrix: AQUEOUS								
QC Lot: 05 DEC 89-A								
Concentration Units: mg/L								
Fluoride	6.7	6.64	6.67	6.66	99	88-112	0.4	15

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

Enseco

METHOD BLANK REPORT
Wet Chemistry Analysis and Preparation

Analyte	Result	Units	Reporting Limit
Test: TKN-TEC-A			
Matrix: AQUEOUS			
QC Lot: 28 NOV 89-A QC Run: 28 NOV 89-A			
Total Kjeldahl Nitrogen as N	ND	mg/L	0.5

ATTACHMENT 4

SPARTON TECHNOLOGY, INC.
COORS ROAD FACILITY
GROUNDWATER MONITORING RESULTS
PART 1 of 3

[---------- mg/l ----------]

YEAR	QUARTER NO.	pH units (6-9)	SPECIFIC CONDUC-TANCE umhos/cm	CHLORIDE (250)	NITRATE + NITRITE AS N (10.0)	SULFATE (600)	TOTAL ORGANIC CARBON	TOTAL ORGANIC HALOGEN as Cl	TOTAL KJELDAHL NITROGEN as N	HEXA-VALENT CHROMIUM	TRI-VALENT CHROMIUM	AMMONIA NITROGEN as N	BORON	TOTAL CHROMIUM (0.05)	MANGANESE (0.2)	NICKEL
********** WELL NO. 09 (UPPER FLOW ZONE) *********																
1983	4	7.36	2320	400	< 0.1	340	29	---	---	---	---	< 0.1	---	---	3.4	---
1984	4	6.70	2350	---	< 0.1	372	14	21	1.7	< 0.01	< 0.01	---	13	< 0.01	1.9	0.19
1985	1	7.00	2040	---	---	---	6.1	15	---	---	---	---	---	---	---	---
1985	2	7.31	1770	---	---	---	7.2	9.1	---	---	---	---	---	---	---	---
1985	3	6.92	1590	210	< 0.1	300	4.6	6.9	0.9	< 0.01	< 0.01	---	7.9	< 0.005	1.1	0.11
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	6.96	1340	---	---	---	20	6.7	---	---	---	---	---	---	---	---
1986	2	7.02	1380	---	---	---	3	5	---	---	---	---	---	---	---	---
1986	3	7.46	1480	---	---	---	3.1	6.3	---	---	---	---	---	---	---	---
1986	4	7.71	1470	138	< 0.1	226	1.4	5.08	5.1	< 0.01	< 0.01	---	5.5	< 0.005	---	0.081
1987	1	8.03	1440	---	---	---	3	3.2	---	---	---	---	---	---	---	---
1987	2	7.66	1370	---	---	---	2.1	4.0	---	---	---	---	---	---	---	---
1987	3	7.87	1300	116	< 0.1	203	2	4.4	2.6	< 0.01	< 0.01	2.2	4	< 0.01	0.24	0.06
1987	4	7.39	1220	---	---	---	2.8	2.6	---	---	---	---	---	---	---	---
1988	1	8.29	1210	---	---	---	1.7	2.5	---	---	---	---	---	---	---	---
1988	2	7.26	1130	---	---	---	2.7	3.6	---	---	---	---	---	---	---	---
1988	3	7.30	1040	66	< 0.1	182	3.8	2.870	1.7	< 0.01	0.01	1.1	3.5	0.01	1.3	< 0.04
1988	4	7.60	1080	---	---	---	1.9	2.580	---	---	---	---	---	---	---	---
1989	1	7.10	1080	---	---	---	1.5	5.180	---	---	---	---	---	---	---	---
1989	2	7.50	981	---	---	---	0.7	2.110	---	---	---	---	---	---	---	---
1989	3	7.70	992	69	< 0.1	225	1.8	2.390	1.5	< 0.01	< 0.01	---	2.9	< 0.01	0.11	< 0.04
1989	4	7.5	962	---	---	---	3.2	1.99	---	---	---	---	---	---	---	---

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3) --- = NOT TESTED.

SPARTON TECHNOLOGY, INC.
COORS ROAD FACILITY
GROUNDWATER MONITORING RESULTS
PART 1 of 3

[---------- mg/l ----------]

YEAR	QUARTER NO.	pH units (6-9)	SPECIFIC CONDUC-TANCE umhos/cm	CHLORIDE (250)	NITRATE + NITRITE AS N (10.0)	SULFATE (600)	TOTAL ORGANIC CARBON	TOTAL ORGANIC HALOGEN as Cl	TOTAL KJELDAHL NITROGEN as N	HEXA-VALENT CHROMIUM	TRI-VALENT CHROMIUM	AMMONIA NITROGEN as N	BORON	TOTAL CHROMIUM (0.05)	MANGANESE (0.2)	NICKEL
********** WELL NO. 14 (UPPER FLOW ZONE) *********																
1983	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1984	4	7.61	1290	---	1	192	5.9	3.7	1	0.6	---	---	2	0.58	0.76	0.04
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	4	7.76	1200	34	3.1	175	3.8	2.3	< 0.1	1.1	< 0.01	---	1.8	1.1	---	0.03
1987	1	7.89	1190	---	---	---	2.6	3.5	---	---	---	---	---	---	---	---
1987	2	7.43	995	---	---	---	1.7	0.53	---	---	---	---	---	---	---	---
1987	3	7.58	877	64	2.7	132	2.7	1	0.1	0.41	0.54	< 0.1	0.82	0.95	0.017	< 0.04
1987	4	7.52	991	---	---	---	0.8	1.7	---	---	---	---	---	---	---	---
1988	1	12.17	5000	---	---	---	3.1	2.6	---	---	---	---	---	---	---	---
1988	2	7.40	3030	---	---	---	3.2	3.8	---	---	---	---	---	---	---	---
1988	3	11.90	3410	97	10	66	3.5	3.500	< 0.1	0.70	< 0.01	< 0.1	0.30	0.55	0.014	< 0.04
1988	4	12.40	2950	---	---	---	2.5	1.870	---	---	---	---	---	---	---	---
1989	1	11.70	3700	---	---	---	2.5	2.420	---	---	---	---	---	---	---	---
1989	2	10.50	934	---	---	---	1.6	1.800	---	---	---	---	---	---	---	---
1989	3	11.00	1010	92	23	172	2.4	2.170	< 0.5	1.0	< 0.01	---	1.2	0.96	< 0.01	< 0.04
1989	4	11.5	1400	---	---	---	2.0	1.270	---	---	---	---	---	---	---	---

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SPARTON TECHNOLOGY, INC.
COORS ROAD FACILITY
GROUNDWATER MONITORING RESULTS
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[---------- mg/l ----------]

YEAR	QUARTER NO.	pH units (6-9)	SPECIFIC CONDUC-TANCE umhos/cm	CHLORIDE (250)	NITRATE + NITRITE AS N (10.0)	SULFATE (600)	TOTAL ORGANIC CARBON	TOTAL ORGANIC HALOGEN as Cl	TOTAL KJELDAHL NITROGEN as N	HEXA-VALENT CHROMIUM	TRI-VALENT CHROMIUM	AMMONIA NITROGEN as N	BORON	TOTAL CHROMIUM (0.05)	MANGANESE (0.2)	NICKEL
********** WELL NO. 15 (UPPER FLOW ZONE) *********																
1983	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1984	4	7.68	885	---	4.4	146	2.7	1.1	0.5	< 0.01	---	---	0.16	< 0.005	0.06	< 0.01
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	4	7.99	853	53	5.6	126	1.3	1.1	< 0.1	< 0.01	< 0.01	---	0.13	< 0.005	---	< 0.01
1987	1	8.32	801	---	---	---	1.3	0.42	---	---	---	---	---	---	---	---
1987	2	7.60	764	---	---	---	1.1	0.43	---	---	---	---	---	---	---	---
1987	3	8.01	812	41	4.7	135	2.4	0.49	< 0.1	< 0.01	< 0.01	< 0.1	0.14	< 0.01	< 0.005	< 0.04
1987	4	7.65	790	---	---	---	0.9	0.45	---	---	---	---	---	---	---	---
1988	1	8.20	819	---	---	---	1.1	0.29	---	---	---	---	---	---	---	---
1988	2	7.78	871	---	---	---	27	0.28	---	---	---	---	---	---	---	---
1988	3	7.70	827	63	6.2	122	2.5	0.290	< 0.1	< 0.01	< 0.01	< 0.1	0.12	< 0.01	0.034	< 0.04
1988	4	8.30	808	---	---	---	1.6	0.170	---	---	---	---	---	---	---	---
1989	1	7.70	874	---	---	---	1.2	0.925	---	---	---	---	---	---	---	---
1989	2	7.60	656	---	---	---	0.5	0.220	---	---	---	---	---	---	---	---
1989	3	7.70	652	32	4.7	114	1.2	0.270	< 0.5	< 0.01	< 0.01	---	0.15	< 0.01	< 0.01	< 0.04
1989	4	7.90	710	---	---	---	1.0	0.180	---	---	---	---	---	---	---	---

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3) --- = NOT TESTED.

SPARTON TECHNOLOGY, INC.
COORS ROAD FACILITY
GROUNDWATER MONITORING RESULTS
PART 1 of 3

[---------- mg/l ----------]

YEAR	QUARTER NO.	pH units (6-9)	SPECIFIC CONDUC-TANCE umhos/cm	CHLORIDE (250)	NITRATE + NITRITE AS N (10.0)	SULFATE (600)	TOTAL ORGANIC CARBON	TOTAL ORGANIC HALOGEN as Cl	TOTAL KJELDAHL NITROGEN as N	HEXA-VALENT CHROMIUM	TRI-VALENT CHROMIUM	AMMONIA NITROGEN as N	BORON	TOTAL CHROMIUM (0.05)	MANGANESE (0.2)	NICKEL
********** WELL NO. 16 (UPPER FLOW ZONE) *********																
1983	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1984	4	7.17	5300	---	< 0.1	2180	54	15	310	< 0.01	---	---	14	0.75	17	0.4
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	3	7.30	2930	---	---	---	140	23.3	---	---	---	---	---	---	---	---
1986	4	7.02	4920	364	1.4	1610	25	29.3	390	< 0.02	< 0.02	---	18	0.017	---	0.35
1987	1	7.61	4530	---	---	---	0.019	31	---	---	---	---	---	---	---	---
1987	2	7.15	4040	---	---	---	14	27	---	---	---	---	---	---	---	---
1987	3	7.24	3330	231	3.5	1370	14	27	250	< 0.01	< 0.01	230	12	< 0.01	4.1	0.25
1987	4	7.27	3700	---	---	---	17	25	---	---	---	---	---	---	---	---
1988	1	7.52	3800	---	---	---	10	15	---	---	---	---	---	---	---	---
1988	2	7.70	611	---	---	---	13	27	---	---	---	---	---	---	---	---
1988	3	7.30	2510	239	6.6	500	19	29.8	107	< 0.01	0.04	90	9.1	0.04	1.6	0.23
1988	4	7.50	2340	---	---	---	6.4	18.200	---	---	---	---	---	---	---	---
1989	1	7.20	1740	---	---	---	4.4	7.960	---	---	---	---	---	---	---	---
1989	2	7.40	1370	---	---	---	8.1	15.300	---	---	---	---	---	---	---	---
1989	3	7.70	1420	85	1.2	193	4.2	20.500	86	0.03	0.02	---	3.0	0.05	0.46	0.06
1989	4	7.4	1700	---	---	---	5.8	16.7	---	---	---	---	---	---	---	---

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SPARTON TECHNOLOGY, INC.
COORS ROAD FACILITY
GROUNDWATER MONITORING RESULTS
PART 1 of 3

YEAR	QUARTER NO.	pH units (6-9)	SPECIFIC CONDUC-TANCE umhos/cm	CHLORIDE (250)	NITRATE + NITRITE AS N (10.0)	SULFATE (600)	TOTAL ORGANIC CARBON	TOTAL ORGANIC HALOGEN as Cl	TOTAL KJELDAHL NITROGEN as N	HEXA-VALENT CHROMIUM	TRI-VALENT CHROMIUM	AMMONIA NITROGEN as N	BORON	TOTAL CHROMIUM (0.05)	MANGANESE (0.2)	NICKEL
				[				mg/l								]
********** WELL NO. 19 (LOWER FLOW ZONE) *********																
1983	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1984	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	4	7.20	934	58	2.2	145	1.1	3.4	< 0.1	< 0.01	0.043	---	0.3	0.043	---	0.01
1987	1	8.18	915	---	---	---	1.7	2.6	---	---	---	---	---	---	---	---
1987	2	7.40	884	---	---	---	1.2	1.1	---	---	---	---	---	---	---	---
1987	3	7.45	842	54	0.9	110	1.9	2.7	0.2	0.02	0.01	< 0.1	0.33	0.03	0.11	< 0.04
1987	4	7.48	870	---	---	---	2	2.7	---	---	---	---	---	---	---	---
1988	1	7.56	946	---	---	---	1	1.6	---	---	---	---	---	---	---	---
1988	2	7.71	902	---	---	---	1.7	2.7	---	---	---	---	---	---	---	---
1988	3	7.50	869	65	1.1	131	3.4	3.830	0.4	0.02	< 0.01	< 0.1	0.33	0.02	0.11	< 0.04
1988	4	7.60	753	---	---	---	1.3	1.920	---	---	---	---	---	---	---	---
1989	1	7.10	856	---	---	---	1.2	1.920	---	---	---	---	---	---	---	---
1989	2	7.70	732	---	---	---	1.1	2.070	---	---	---	---	---	---	---	---
1989	3	7.70	745	44	2.0	130	1.4	2.890	< 5.0	< 0.01	0.02	---	0.05	0.02	0.04	< 0.04
1989	4	7.5	689	---	---	---	1.5	1.64	---	---	---	---	---	---	---	---

NOTES : 1) WHERE STATE STANDARDS EXIST, THEY ARE SHOWN IN PARENTHESES IMMEDIATELY BELOW THE CHEMICAL NAME.
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3) --- = NOT TESTED.

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SPARTON TECHNOLOGY, INC.
COORS ROAD FACILITY
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[---------- mg/l ----------]

YEAR	QUARTER NO.	pH units (6-9)	SPECIFIC CONDUC-TANCE umhos/cm	CHLORIDE (250)	NITRATE + NITRITE AS N (10.0)	SULFATE (600)	TOTAL ORGANIC CARBON	TOTAL ORGANIC HALOGEN as Cl	TOTAL KJELDAHL NITROGEN as N	HEXA-VALENT CHROMIUM	TRI-VALENT CHROMIUM	AMMONIA NITROGEN as N	BORON	TOTAL CHROMIUM (0.05)	MANGANESE (0.2)	NICKEL
********** WELL NO. 20 (LOWER FLOW ZONE) *********																
1983	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1984	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	4	7.48	804	30	0.3	144	1.3	0.19	< 0.1	< 0.01	< 0.01	---	0.15	< 0.005	---	< 0.01
1987	1	8.33	789	---	---	---	2.7	0.02	---	---	---	---	---	---	---	---
1987	2	7.63	770	---	---	---	1.5	0.43	---	---	---	---	---	---	---	---
1987	3	7.76	687	27	0.5	11	1.8	0.04	0.1	< 0.01	< 0.01	< 0.1	0.16	< 0.01	0.35	< 0.04
1987	4	7.74	720	---	---	---	1.9	< 0.005	---	---	---	---	---	---	---	---
1988	1	7.77	784	---	---	---	1.1	0.02	---	---	---	---	---	---	---	---
1988	2	7.76	753	---	---	---	1.5	0.023	---	---	---	---	---	---	---	---
1988	3	7.70	704	24	0.4	116	2.6	0.026	< 0.1	< 0.01	< 0.01	< 0.1	0.13	< 0.01	0.31	< 0.04
1988	4	7.80	721	---	---	---	1.6	< 0.02	---	---	---	---	---	---	---	---
1989	1	7.40	695	---	---	---	1.5	0.027	---	---	---	---	---	---	---	---
1989	2	7.60	638	---	---	---	0.9	0.015	---	---	---	---	---	---	---	---
1989	3	7.90	717	23	1.0	110	1.7	0.043	< 0.5	< 0.01	< 0.01	---	0.05	< 0.01	< 0.01	< 0.04
1989	4	8.1	654	---	---	---	1.5	< 0.030	---	---	---	---	---	---	---	---

NOTES : 1) WHERE STATE STANDARDS EXIST, THEY ARE SHOWN IN PARENTHESES IMMEDIATELY BELOW THE CHEMICAL NAME.
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3) --- = NOT TESTED.

SPARTON TECHNOLOGY, INC.
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[---------- mg/l ----------]

YEAR	QUARTER NO.	pH units (6-9)	SPECIFIC CONDUC-TANCE umhos/cm	CHLORIDE (250)	NITRATE + NITRITE AS N (10.0)	SULFATE (600)	TOTAL ORGANIC CARBON	TOTAL ORGANIC HALOGEN as Cl	TOTAL KJELDAHL NITROGEN as N	HEXA-VALENT CHROMIUM	TRI-VALENT CHROMIUM	AMMONIA NITROGEN as N	BORON	TOTAL CHROMIUM (0.05)	MANGANESE (0.2)	NICKEL
********** WELL NO. 21 (UPPER FLOW ZONE) *********																
1983	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1984	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	4	7.26	796	30	2.2	141	1	3.5	< 0.1	< 0.01	< 0.01	---	0.12	0.006	---	< 0.01
1987	1	8.05	753	---	---	---	1.1	1.8	---	---	---	---	---	---	---	---
1987	2	7.56	744	---	---	---	0.9	1.4	---	---	---	---	---	---	---	---
1987	3	7.80	746	19	2.8	106	3.2	1.9	< 0.1	< 0.01	< 0.01	0.1	0.14	< 0.01	0.15	< 0.04
1987	4	7.61	753	---	---	---	0.2	1.9	---	---	---	---	---	---	---	---
1988	1	7.67	729	---	---	---	0.9	1.4	---	---	---	---	---	---	---	---
1988	2	7.65	749	---	---	---	0.7	1.3	---	---	---	---	---	---	---	---
1988	3	7.60	666	22	2.6	110	2.1	0.910	< 0.1	< 0.01	< 0.01	< 0.1	0.12	< 0.01	0.14	< 0.04
1988	4	7.80	682	---	---	---	1.1	1.300	---	---	---	---	---	---	---	---
1989	1	7.50	670	---	---	---	0.7	0.202	---	---	---	---	---	---	---	---
1989	2	7.60	585	---	---	---	0.9	0.680	---	---	---	---	---	---	---	---
1989	3	7.90	587	23	2.7	104	1.4	0.150	< 0.5	< 0.01	0.01	---	0.14	0.01	0.19	< 0.04
1989	4	7.7	665	---	---	---	1.3	1.58	---	---	---	---	---	---	---	---

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3) --- = NOT TESTED.

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[---------- mg/l ----------]

YEAR	QUARTER NO.	pH units (6-9)	SPECIFIC CONDUC-TANCE umhos/cm	CHLORIDE (250)	NITRATE + NITRITE AS N (10.0)	SULFATE (600)	TOTAL ORGANIC CARBON	TOTAL ORGANIC HALOGEN as Cl	TOTAL KJELDAHL NITROGEN as N	HEXA-VALENT CHROMIUM	TRI-VALENT CHROMIUM	AMMONIA NITROGEN as N	BORON	TOTAL CHROMIUM (0.05)	MANGANESE (0.2)	NICKEL
********** WELL NO. 22 (UPPER FLOW ZONE) *********																
1983	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1984	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	4	7.79	741	30	2.1	114	1.6	0.773	0.1	< 0.01	< 0.01	---	0.17	< 0.005	---	0.01
1987	1	8.26	743	---	---	---	2.6	0.68	---	---	---	---	---	---	---	---
1987	2	7.71	736	---	---	---	1	0.44	---	---	---	---	---	---	---	---
1987	3	7.69	678	31	2.4	89	3	0.22	0.2	< 0.01	< 0.01	< 0.1	0.16	< 0.01	0.2	< 0.04
1987	4	7.75	718	---	---	---	1.2	0.37	---	---	---	---	---	---	---	---
1988	1	7.83	783	---	---	---	0.9	0.43	---	---	---	---	---	---	---	---
1988	2	7.65	750	---	---	---	1.3	0.36	---	---	---	---	---	---	---	---
1988	3	7.70	702	30	2.9	96	1.7	0.310	0.3	< 0.01	0.04	< 0.1	0.33	0.04	1.9	0.08
1988	4	7.90	673	---	---	---	1.8	0.250	---	---	---	---	---	---	---	---
1989	1	7.50	653	---	---	---	1.1	0.323	---	---	---	---	---	---	---	---
1989	2	7.70	604	---	---	---	1.3	0.230	---	---	---	---	---	---	---	---
1989	3	7.90	615	25	4.0	92	1.4	0.034	< 0.5	< 0.01	0.01	---	0.17	0.01	0.03	< 0.04
1989	4	7.8	650	---	---	---	1.5	0.265	---	---	---	---	---	---	---	---

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3) --- = NOT TESTED.

SPARTON TECHNOLOGY, INC.
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[ug/l]

YEAR	QUARTER NO.	Acrolein	Acrylo-nitrile	Benzene	Bis-(chloro-methyl) ether	Bromo-form	Carbon tetra-chloride (10)	Chloro-benzene	Chloro-dibromo methane	Chloro-ethane	2-Chloro-ethyl-vinyl-ether	Chloro-form (100)	Dichloro-bromo-methane	Di-chloro-difluoro-methane	1,1-Di-chloro-ethane (25)	1,2-Di-chloro-ethane (10)	1,1-Di-chloro-ethylene (5)	1,2-Di-chloro propane	1,3-Di-chloro-propylene
********** WELL NO. 09 (UPPER FLOW ZONE) **********																			
1983	4	< 100	< 100	20	< 5	< 5	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 10	130	< 5	2500	< 5	< 5
1984	4	< 100	< 100	16	< 5	< 5	< 5	< 5	< 5	< 10	< 5	57	< 5	< 10	120	< 5	1200	< 5	< 5
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	---	---	7	---	< 5	< 5	< 5	< 5	< 5	< 10	28	< 5	---	35	< 5	1300	< 5	< 5
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1300	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1200	---	---
1986	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	740	---	---
1986	4	< 3600	< 3600	< 180	---	< 180	< 180	< 180	< 180	< 360	< 180	< 180	< 180	---	< 180	< 180	400	< 180	< 180
1987	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	310	---	---
1987	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	260	---	---
1987	3	---	---	< 250	---	< 250	< 250	< 250	< 250	< 500	< 500	< 250	< 250	---	< 250	< 250	600	< 250	< 250
1987	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	590	---	---
1988	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	490	---	---
1988	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	350	---	---
1988	3	---	---	< 180	---	< 180	< 180	< 180	< 180	< 350	< 350	< 180	< 180	---	< 180	< 180	660	< 180	< 180
1988	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	410	---	---
1989	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	340	---	---
1989	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	320	---	---
1989	3	< 2500	< 2500	< 120	---	< 120	< 120	< 120	< 120	< 250	---	< 120	< 120	< 250	< 120	< 120	220	< 120	< 120
1989	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	200	---	---

NOTES : 1) WHERE STATE STANDARDS EXIST, THEY ARE SHOWN IN PARENTHESES IMMEDIATELY BELOW THE CHEMICAL NAME.
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3) --- = NOT TESTED.

SPARTON TECHNOLOGY, INC.
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ug/l

YEAR	QUARTER NO.	Acrolein	Acrylo-nitrile	Benzene	Bis-(chloro-methyl) ether	Bromo-form	Carbon tetra-chloride (10)	Chloro-benzene	Chloro-dibromo methane	Chloro-ethane	2-Chloro-ethyl-vinyl-ether	Chloro-form (100)	Dichloro-bromo-methane	Di-chloro-difluoro-methane	1,1-Di-chloro-ethane (25)	1,2-Di-chloro-ethane (10)	1,1-Di-chloro-ethylene (5)	1,2-Di-chloro propane	1,3-Di-chloro-propylene
********** WELL NO. 14 (UPPER FLOW ZONE) **********																			
1983	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1984	4	< 100	< 100	9	< 5	< 5	< 5	< 5	< 5	< 10	< 5	34	< 5	< 10	17	< 5	1000	< 5	< 5
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	4	< 100	< 100	< 5	---	< 5	< 5	< 5	< 5	< 10	< 5	< 5	< 5	---	< 5	< 5	310	< 5	5
1987	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	230	---	---
1987	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	65	---	---
1987	3	---	---	< 120	---	< 50	< 50	< 50	< 120	< 250	< 250	< 120	< 120	---	< 120	< 120	< 120	< 120	< 120
1987	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	130	---	---
1988	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 250	---	---
1988	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 500	---	---
1988	3	---	---	< 250	---	< 250	< 250	< 250	< 250	< 500	< 500	< 250	< 250	---	< 250	< 250	< 250	< 250	< 250
1988	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 250	---	---
1989	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	120	---	---
1989	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	190	---	---
1989	3	< 2500	< 2500	< 120	---	< 120	< 120	< 120	< 120	< 250	---	< 120	< 120	< 250	< 120	< 120	160	< 120	< 120
1989	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	94	---	---

NOTES : 1) WHERE STATE STANDARDS EXIST, THEY ARE SHOWN IN PARENTHESES IMMEDIATELY BELOW THE CHEMICAL NAME.
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3) --- = NOT TESTED.

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SPARTON TECHNOLOGY, INC.
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[ug/l]

YEAR	QUARTER NO.	Acrolein	Acrylo-nitrile	Benzene	Bis-(chloro-methyl) ether	Bromo-form	Carbon tetra-chloride (10)	Chloro-benzene	Chloro-dibromo methane	Chloro-ethane	2-Chloro-ethyl-vinyl-ether	Chloro-form (100)	Dichloro-bromo-methane	Di-chloro-difluoro-methane	1,1-Di-chloro-ethane (25)	1,2-Di-chloro-ethane (10)	1,1-Di-chloro-ethylene (5)	1,2-Di-chloro propane	1,3-Di-chloro-propylene
********** WELL NO. 15 (UPPER FLOW ZONE) **********																			
1983	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1984	4	< 100	< 100	< 5	< 5	< 5	< 5	< 5	< 5	< 10	< 5	< 5	< 5	< 10	< 5	< 5	85	< 5	< 5
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	4	< 600	< 600	< 30	---	< 30	< 30	< 30	< 30	< 60	< 30	< 30	< 30	---	< 30	< 30	46	< 30	< 30
1987	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 100	---	---
1987	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	21	---	---
1987	3	---	---	< 25	---	< 25	< 25	< 25	< 25	< 50	< 50	< 25	< 25	---	< 25	< 25	30	< 25	< 25
1987	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	28	---	---
1988	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	16	---	---
1988	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 10	---	---
1988	3	---	---	< 15	---	< 15	< 15	< 15	< 15	< 30	< 30	< 15	< 15	---	< 15	< 15	< 15	< 15	< 15
1988	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 10	---	---
1989	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6.9	---	---
1989	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 10	---	---
1989	3	< 200	< 200	< 10	---	< 10	< 10	< 10	< 10	< 20	---	< 10	< 10	< 20	< 10	< 10	11	< 10	< 10
1989	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 50	---	---

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SPARTON TECHNOLOGY, INC.
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GROUNDWATER MONITORING RESULTS
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[ug/l]

YEAR	QUARTER NO.	Acrolein	Acrylo-nitrile	Benzene	Bis-(chloro-methyl) ether	Bromo-form	Carbon tetra-chloride (10)	Chloro-benzene	Chloro-dibromo methane	Chloro-ethane	2-Chloro-ethyl-vinyl-ether	Chloro-form (100)	Dichloro-bromo-methane	Di-chloro-difluoro-methane	1,1-Di-chloro-ethane (25)	1,2-Di-chloro-ethane (10)	1,1-Di-chloro-ethylene (5)	1,2-Di-chloro propane	1,3-Di-chloro-propylene
********** WELL NO. 16 (UPPER FLOW ZONE) **********																			
1983	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1984	4	< 100	< 100	58	< 5	< 5	< 5	16	< 5	45	< 5	25	< 5	< 10	3200	< 5	3100	< 5	< 5
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2200	---	---
1986	4	< 25000	< 25000	< 1300	---	< 1300	< 1300	< 1300	< 1300	< 2500	< 1300	< 1300	< 1300	---	< 1300	< 1300	3500	< 1300	< 1300
1987	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2200	---	---
1987	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1900	---	---
1987	3	---	---	< 1200	---	< 1200	< 1200	< 1200	< 1200	< 2500	< 2500	< 1200	< 1200	---	< 1200	< 1200	2200	< 1200	< 1200
1987	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1600	---	---
1988	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1400	---	---
1988	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1400	---	---
1988	3	---	---	< 1600	---	< 1600	< 1600	< 1600	< 1600	< 3100	< 3100	< 1600	< 1600	---	< 1600	< 1600	1900	< 1600	< 1600
1988	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1600	---	---
1989	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1200	---	---
1989	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1000	---	---
1989	3	< 5000	< 5000	< 250	---	< 250	< 250	< 250	< 250	< 500	---	< 250	< 250	< 500	< 250	< 250	960	< 250	< 250
1989	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 1200	---	---

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SPARTON TECHNOLOGY, INC.
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[ug/l]

YEAR	QUARTER NO.	Acrolein	Acrylo-nitrile	Benzene	Bis-(chloro-methyl) ether	Bromo-form	Carbon tetra-chloride (10)	Chloro-benzene	Chloro-dibromo methane	Chloro-ethane	2-Chloro-ethyl-vinyl-ether	Chloro-form (100)	Dichloro-bromo-methane	Di-chloro-difluoro-methane	1,1-Di-chloro-ethane (25)	1,2-Di-chloro-ethane (10)	1,1-Di-chloro-ethylene (5)	1,2-Di-chloro propane	1,3-Di-chloro-propylene
********** WELL NO. 19 (LOWER FLOW ZONE) **********																			
1983	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1984	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	4	< 4000	< 4000	< 200	---	< 200	< 200	< 200	< 200	< 400	< 200	< 200	< 200	---	< 200	< 200	320	< 200	< 200
1987	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	200	---	---
1987	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	190	---	---
1987	3	---	---	< 250	---	< 250	< 250	< 250	< 250	< 500	< 500	< 250	< 250	---	< 250	< 250	360	< 250	< 250
1987	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	330	---	---
1988	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	260	---	---
1988	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 5	---	---
1988	3	---	---	< 180	---	< 180	< 180	< 180	< 180	< 350	< 350	< 180	< 180	---	< 180	< 180	790	< 180	< 180
1988	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	310	---	---
1989	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	370	---	---
1989	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	410	---	---
1989	3	< 2500	< 2500	< 120	---	< 120	< 120	< 120	< 120	< 250	---	< 120	< 120	< 250	< 120	< 120	300	< 120	< 120
1989	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	150	---	---

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SPARTON TECHNOLOGY, INC.
COORS ROAD FACILITY
GROUNDWATER MONITORING RESULTS
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[ug/l]

YEAR	QUARTER NO.	Acrolein	Acrylo-nitrile	Benzene	Bis-(chloro-methyl) ether	Bromo-form	Carbon tetra-chloride (10)	Chloro-benzene	Chloro-dibromo methane	Chloro-ethane	2-Chloro-ethyl-vinyl-ether	Chloro-form (100)	Dichloro-bromo-methane	Di-chloro-difluoro-methane	1,1-Di-chloro-ethane (25)	1,2-Di-chloro-ethane (10)	1,1-Di-chloro-ethylene (5)	1,2-Di-chloro propane	1,3-Di-chloro-propylene
********** WELL NO. 20 (LOWER FLOW ZONE) **********																			
1983	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1984	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	4	< 100	< 100	< 5	---	< 5	< 5	< 5	< 5	< 10	< 5	< 5	< 5	---	< 5	< 5	< 5	< 5	< 5
1987	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 1	---	---
1987	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.8	---	---
1987	3	---	---	< 5	---	< 5	< 5	< 5	< 5	< 10	< 10	< 5	< 5	---	< 5	< 5	< 5	< 5	< 5
1987	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 5	---	---
1988	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 5	---	---
1988	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 5	---	---
1988	3	---	---	< 5	---	< 5	< 5	< 5	< 5	< 10	< 10	< 5	< 5	---	< 5	< 5	< 5	< 5	< 5
1988	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 5	---	---
1989	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 5	---	---
1989	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 5	---	---
1989	3	< 100	< 100	< 5	---	< 5	< 5	< 5	< 5	< 10	---	< 5	< 5	< 10	< 5	< 5	< 5	< 5	< 5
1989	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 5	---	---

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SPARTON TECHNOLOGY, INC.
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[ug/l]

YEAR	QUARTER NO.	Acrolein	Acrylo-nitrile	Benzene	Bis-(chloro-methyl) ether	Bromo-form	Carbon tetra-chloride (10)	Chloro-benzene	Chloro-dibromo methane	Chloro-ethane	2-Chloro-ethyl-vinyl-ether	Chloro-form (100)	Dichloro-bromo-methane	Di-chloro-difluoro-methane	1,1-Di-chloro-ethane (25)	1,2-Di-chloro-ethane (10)	1,1-Di-chloro-ethylene (5)	1,2-Di-chloro propane	1,3-Di-chloro-propylene
********** WELL NO. 21 (UPPER FLOW ZONE) **********																			
1983	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1984	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	4	< 4000	< 4000	< 200	---	< 200	< 200	< 200	< 200	< 400	< 200	< 200	< 200	---	< 200	< 200	300	< 200	< 200
1987	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	130	---	---
1987	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	84	---	---
1987	3	---	---	< 100	---	< 100	< 100	< 100	< 100	< 200	< 200	< 100	< 100	---	< 100	< 100	250	< 100	< 100
1987	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	200	---	---
1988	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	150	---	---
1988	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	88	---	---
1988	3	---	---	< 5	---	< 5	< 5	< 5	< 5	< 10	< 10	< 5	< 5	---	< 5	< 5	100	< 5	< 5
1988	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	140	---	---
1989	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	71	---	---
1989	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 50	---	---
1989	3	< 500	< 500	< 25	---	< 25	< 25	< 25	< 25	< 50	---	< 25	< 25	< 50	< 25	< 25	37	< 25	< 25
1989	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 120	---	---

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[ug/l]

YEAR	QUARTER NO.	Acrolein	Acrylo-nitrile	Benzene	Bis-(chloro-methyl) ether	Bromo-form	Carbon tetra-chloride (10)	Chloro-benzene	Chloro-dibromo methane	Chloro-ethane	2-Chloro-ethyl-vinyl-ether	Chloro-form (100)	Dichloro-bromo-methane	Di-chloro-difluoro-methane	1,1-Di-chloro-ethane (25)	1,2-Di-chloro-ethane (10)	1,1-Di-chloro-ethylene (5)	1,2-Di-chloro propane	1,3-Di-chloro-propylene
********** WELL NO. 22 (UPPER FLOW ZONE) **********																			
1983	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1984	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	4	< 800	< 800	< 40	---	< 40	< 40	< 40	< 40	< 80	< 40	< 40	< 40	---	< 40	< 40	200	< 40	< 40
1987	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	110	---	---
1987	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	100	---	---
1987	3	---	---	< 25	---	< 25	< 25	< 25	< 25	< 50	< 50	< 25	< 25	---	< 25	< 25	78	< 25	< 25
1987	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	120	---	---
1988	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	98	---	---
1988	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	67	---	---
1988	3	---	---	< 5	---	< 5	< 5	< 5	< 5	< 10	< 10	< 5	< 5	---	< 5	< 5	110	< 5	< 5
1988	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	62	---	---
1989	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	50	---	---
1989	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	42	---	---
1989	3	< 200	< 200	< 10	---	< 10	< 10	< 10	< 10	< 20	---	< 10	< 10	< 20	< 10	< 10	38	< 10	< 10
1989	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	49	---	---

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SPARTON TECHNOLOGY, INC.
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[ug/l]

YEAR	QUARTER NO.	Ethyl-benzene	Methyl-bromide	Methyl-chloride	Methylene Chloride (100)	1,1,2,2-Tetra-chloro-ethane	Tetra-chloro-ethylene (20)	Toluene (750)	1,2-trans-Dichloro-ethylene	1,1,1-Tri-chloro-ethane (60)	1,1,2-Tri-chloro-ethane (10)	Tri-chloro-ethylene (100)	Tri-chloro-fluoro-methane	Vinyl chloride (1)	Acetone	Tri-chloro-tri-fluoro-ethane	2-Hexanone	Di-methyl benzene (620)	Methyl ethyl ketone
															[Non-Priority Pollutants]				
********** WELL NO. 09 (UPPER FLOW ZONE) **********																			
1983	4	13	< 10	< 10	9100	< 5	54	1200	< 5	15000	< 5	21000	< 10	< 10	2300	< 5	170	< 5	< 10
1984	4	13	< 10	< 10	5200	< 5	60	290	11	6900	110	9600	< 10	< 10	33	200	< 10	---	---
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	< 5	< 10	< 10	1200	< 5	28	23	< 5	6300	49	7300	---	< 10	---	---	---	---	---
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	6100	---	---	---	---	---	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	8300	---	---	---	---	---	---	---
1986	3	---	---	---	---	---	---	---	---	---	---	5000	---	---	---	---	---	---	---
1986	4	< 180	< 360	< 360	< 360	< 180	< 180	< 180	< 180	2700	< 180	5000	---	< 360	---	---	---	---	---
1987	1	---	---	---	---	---	---	---	---	---	---	4500	---	---	---	---	---	---	---
1987	2	---	---	---	---	---	---	---	---	---	---	3600	---	---	---	---	---	---	---
1987	3	< 250	< 500	< 500	< 1200	< 250	< 250	< 250	< 250	3300	< 250	6400	---	< 500	< 1200	---	< 500	< 250	< 1200
1987	4	---	---	---	---	---	---	---	---	---	---	7100	---	---	---	---	---	---	---
1988	1	---	---	---	---	---	---	---	---	---	---	5500	---	---	---	---	---	---	---
1988	2	---	---	---	---	---	---	---	---	---	---	4800	---	---	---	---	---	---	---
1988	3	< 180	< 350	< 350	< 880	< 180	< 180	< 180	< 180	1800	< 180	3300	---	< 350	< 880	---	< 350	< 180	< 880
1988	4	---	---	---	---	---	---	---	---	---	---	4200	---	---	---	---	---	---	---
1989	1	---	---	---	---	---	---	---	---	---	---	4000	---	---	---	---	---	---	---
1989	2	---	---	---	---	---	---	---	---	---	---	4400	---	---	---	---	---	---	---
1989	3	< 120	< 250	< 250	< 120	< 120	< 120	< 120	< 120	910	< 120	2500	< 120	< 250	< 250	---	< 250	< 120	< 250
1989	4	---	---	---	---	---	---	---	---	---	---	2300	---	---	---	---	---	---	---

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3) --- = NOT TESTED

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SPARTON TECHNOLOGY, INC.
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[ug/l]

YEAR	QUARTER NO.	Ethyl-benzene	Methyl-bromide	Methyl-chloride	Methylene Chloride (100)	1,1,2,2-Tetra-chloro-ethane	Tetra-chloro-ethylene (20)	Toluene (750)	1,2-trans-Dichloro-ethylene	1,1,1-Tri-chloro-ethane (60)	1,1,2-Tri-chloro-ethane (10)	Tri-chloro-ethylene (100)	Tri-chloro-fluoro-methane	Vinyl chloride (1)	Acetone	Tri-chloro-tri-fluoro-ethane	2-Hexanone	Di-methyl benzene (620)	Methyl ethyl ketone
															[Non-Priority Polluntants]				
********** WELL NO. 14 (UPPER FLOW ZONE) **********																			
1983	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1984	4	< 5	< 10	< 10	3600	< 5	25	6	< 5	4100	< 5	12000	< 10	< 10	< 10	9	< 10	---	---
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	4	< 5	< 10	< 10	< 10	< 5	< 5	< 5	< 5	630	< 5	4900	---	< 10	---	---	---	---	---
1987	1	---	---	---	---	---	---	---	---	---	---	5000	---	---	---	---	---	---	---
1987	2	---	---	---	---	---	---	---	---	---	---	1800	---	---	---	---	---	---	---
1987	3	< 120	< 250	< 250	< 620	< 120	< 120	< 120	< 120	170	< 120	2100	---	< 250	< 620	---	< 250	< 120	< 620
1987	4	---	---	---	---	---	---	---	---	---	---	2700	---	---	---	---	---	---	---
1988	1	---	---	---	---	---	---	---	---	---	---	6200	---	---	---	---	---	---	---
1988	2	---	---	---	---	---	---	---	---	---	---	5000	---	---	---	---	---	---	---
1988	3	< 250	< 500	< 500	< 1200	< 250	< 250	< 250	< 250	< 250	< 250	5200	---	< 500	< 1200	---	< 500	< 250	< 1200
1988	4	---	---	---	---	---	---	---	---	---	---	5600	---	---	---	---	---	---	---
1989	1	---	---	---	---	---	---	---	---	---	---	3300	---	---	---	---	---	---	---
1989	2	---	---	---	---	---	---	---	---	---	---	4900	---	---	---	---	---	---	---
1989	3	< 120	< 250	< 250	< 120	< 120	< 120	< 120	< 120	130	< 120	3000	< 120	< 250	< 250	---	< 250	< 120	< 250
1989	4	---	---	---	---	---	---	---	---	---	---	2200	---	---	---	---	---	---	---

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3) --- = NOT TESTED

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[ug/l]

YEAR	QUARTER NO.	Ethylbenzene	Methylbromide	Methylchloride	Methylene Chloride (100)	1,1,2,2-Tetrachloroethane	Tetrachloroethylene (20)	Toluene (750)	1,2-trans-Dichloroethylene	1,1,1-Trichloroethane (60)	1,1,2-Trichloroethane (10)	Trichloroethylene (100)	Trichlorofluoromethane	Vinyl chloride (1)	Acetone	Trichlorotrifluoroethane	2-Hexanone	Dimethylbenzene (620)	Methyl ethyl ketone
															[Non-Priority Pollutants]				
********** WELL NO. 15 (UPPER FLOW ZONE) **********																			
1983	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1984	4	< 5	< 10	< 10	11	< 5	34	< 5	< 5	2200	< 5	4400	< 10	< 10	< 10	48	< 10	---	---
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	4	< 30	< 60	< 60	< 60	< 30	< 30	< 30	< 30	390	< 30	940	---	< 60	---	---	---	---	---
1987	1	---	---	---	---	---	---	---	---	---	---	630	---	---	---	---	---	---	---
1987	2	---	---	---	---	---	---	---	---	---	---	580	---	---	---	---	---	---	---
1987	3	< 25	< 50	< 50	< 120	< 25	< 25	< 25	< 25	250	< 25	650	---	< 50	< 120	---	< 50	< 25	< 120
1987	4	---	---	---	---	---	---	---	---	---	---	480	---	---	---	---	---	---	---
1988	1	---	---	---	---	---	---	---	---	---	---	370	---	---	---	---	---	---	---
1988	2	---	---	---	---	---	---	---	---	---	---	< 10	---	---	---	---	---	---	---
1988	3	< 15	< 30	< 30	< 75	< 15	< 15	< 15	< 15	150	< 15	380	---	< 30	< 75	---	< 30	< 15	< 75
1988	4	---	---	---	---	---	---	---	---	---	---	250	---	---	---	---	---	---	---
1989	1	---	---	---	---	---	---	---	---	---	---	180	---	---	---	---	---	---	---
1989	2	---	---	---	---	---	---	---	---	---	---	200	---	---	---	---	---	---	---
1989	3	< 10	< 20	< 20	< 10	< 10	< 10	< 10	< 10	77	< 10	200	< 10	< 20	< 20	---	< 20	< 10	< 20
1989	4	---	---	---	---	---	---	---	---	---	---	260	---	---	---	---	---	---	---

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SPARTON TECHNOLOGY, INC.
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GROUNDWATER MONITORING RESULTS
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[---------- ug/l ----------]

YEAR	QUARTER NO.	Ethyl-benzene	Methyl-bromide	Methyl-chloride	Methylene Chloride (100)	1,1,2,2-Tetra-chloro-ethane	Tetra-chloro-ethylene (20)	Toluene (750)	1,2-trans-Dichloro-ethylene	1,1,1-Tri-chloro-ethane (60)	1,1,2-Tri-chloro-ethane (10)	Tri-chloro-ethylene (100)	Tri-chloro-fluoro-methane	Vinyl chloride (1)	Acetone	Tri-chloro-tri-fluoro-ethane	2-Hexanone	Di-methyl benzene (620)	Methyl ethyl ketone
															[---------- Non-Priority Polluntants -----]				
********** WELL NO. 16 (UPPER FLOW ZONE) **********																			
1983	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1984	4	63	< 10	70	49000	< 5	140	1600	200	5500	< 5	37000	< 10	< 10	17000	73	< 10	---	---
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	3	---	---	---	---	---	---	---	---	---	---	20000	---	---	---	---	---	---	---
1986	4	< 1300	< 2500	< 2500	16000	< 1300	< 1300	< 1300	< 1300	30000	< 1300	36000	---	< 2500	---	---	---	---	---
1987	1	---	---	---	---	---	---	---	---	---	---	21000	---	---	---	---	---	---	---
1987	2	---	---	---	---	---	---	---	---	---	---	23000	---	---	---	---	---	---	---
1987	3	< 1200	< 2500	< 2500	< 6200	< 1200	< 1200	< 1200	< 1200	21000	< 1200	25000	---	< 2500	< 6200	---	< 2500	< 1200	< 6200
1987	4	---	---	---	---	---	---	---	---	---	---	28000	---	---	---	---	---	---	---
1988	1	---	---	---	---	---	---	---	---	---	---	26000	---	---	---	---	---	---	---
1988	2	---	---	---	---	---	---	---	---	---	---	25000	---	---	---	---	---	---	---
1988	3	< 1600	< 3100	< 3100	< 7800	< 1600	< 1600	< 1600	< 1600	24000	< 1600	26000	---	< 3100	< 7800	---	< 3100	< 1600	< 7800
1988	4	---	---	---	---	---	---	---	---	---	---	22000	---	---	---	---	---	---	---
1989	1	---	---	---	---	---	---	---	---	---	---	16000	---	---	---	---	---	---	---
1989	2	---	---	---	---	---	---	---	---	---	---	14000	---	---	---	---	---	---	---
1989	3	< 250	< 500	< 500	1100	< 250	< 250	< 250	< 250	10000	< 250	13000	< 250	< 500	< 500	---	< 500	< 250	< 500
1989	4	---	---	---	---	---	---	---	---	---	---	16000	---	---	---	---	---	---	---

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SPARTON TECHNOLOGY, INC.
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GROUNDWATER MONITORING RESULTS
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[ug/l]

YEAR	QUARTER NO.	Ethylbenzene	Methylbromide	Methylchloride	Methylene Chloride (100)	1,1,2,2-Tetrachloroethane	Tetrachloroethylene (20)	Toluene (750)	1,2-trans-Dichloroethylene	1,1,1-Trichloroethane (60)	1,1,2-Trichloroethane (10)	Trichloroethylene (100)	Trichlorofluoromethane	Vinyl chloride (1)	Non-Priority Polluntants: Acetone	Trichlorotrifluoroethane	2-Hexanone	Dimethylbenzene (620)	Methyl ethyl ketone
********** WELL NO. 19 (LOWER FLOW ZONE) **********																			
1983	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1984	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	4	< 200	< 400	< 400	5000	< 200	< 200	< 200	< 200	280	< 200	3600	---	< 400	---	---	---	---	---
1987	1	---	---	---	---	---	---	---	---	---	---	2700	---	---	---	---	---	---	---
1987	2	---	---	---	---	---	---	---	---	---	---	2900	---	---	---	---	---	---	---
1987	3	< 250	< 500	< 500	3100	< 250	< 250	< 250	< 250	340	< 250	4600	---	< 500	< 1200	---	< 500	< 250	< 1200
1987	4	---	---	---	---	---	---	---	---	---	---	3400	---	---	---	---	---	---	---
1988	1	---	---	---	---	---	---	---	---	---	---	2900	---	---	---	---	---	---	---
1988	2	---	---	---	---	---	---	---	---	---	---	< 5	---	---	---	---	---	---	---
1988	3	< 180	< 350	< 350	2700	< 180	< 180	< 180	< 180	180	< 180	1800	---	< 350	< 880	---	< 350	< 180	< 880
1988	4	---	---	---	---	---	---	---	---	---	---	3600	---	---	---	---	---	---	---
1989	1	---	---	---	---	---	---	---	---	---	---	3200	---	---	---	---	---	---	---
1989	2	---	---	---	---	---	---	---	---	---	---	3700	---	---	---	---	---	---	---
1989	3	< 120	< 250	< 250	1800	< 120	< 120	< 120	< 120	180	< 120	2400	< 120	< 250	< 250	---	< 250	< 120	< 250
1989	4	---	---	---	---	---	---	---	---	---	---	1500	---	---	---	---	---	---	---

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SPARTON TECHNOLOGY, INC.
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[ug/l]

YEAR	QUARTER NO.	Ethyl-benzene	Methyl-bromide	Methyl-chloride	Methylene Chloride (100)	1,1,2,2-Tetra-chloro-ethane	Tetra-chloro-ethylene (20)	Toluene (750)	1,2-trans-Dichloro-ethylene	1,1,1-Tri-chloro-ethane (60)	1,1,2-Tri-chloro-ethane (10)	Tri-chloro-ethylene (100)	Tri-chloro-fluoro-methane	Vinyl chloride (1)	Acetone	Tri-chloro-tri-fluoro-ethane	2-Hexanone	Di-methyl benzene (620)	Methyl ethyl ketone
															[Non-Priority Pollutants]				
********** WELL NO. 20 (LOWER FLOW ZONE) **********																			
1983	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1984	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	4	< 5	< 10	< 10	< 10	< 5	< 5	< 5	< 5	< 5	< 5	17	---	< 10	---	---	---	---	---
1987	1	---	---	---	---	---	---	---	---	---	---	12	---	---	---	---	---	---	---
1987	2	---	---	---	---	---	---	---	---	---	---	32	---	---	---	---	---	---	---
1987	3	< 5	< 10	< 10	< 25	< 5	< 5	< 5	< 5	< 5	< 5	35	---	< 10	< 25	---	< 10	< 5	< 25
1987	4	---	---	---	---	---	---	---	---	---	---	25	---	---	---	---	---	---	---
1988	1	---	---	---	---	---	---	---	---	---	---	10	---	---	---	---	---	---	---
1988	2	---	---	---	---	---	---	---	---	---	---	28	---	---	---	---	---	---	---
1988	3	< 5	< 10	< 10	< 25	< 5	< 5	< 5	< 5	< 5	< 5	19	---	< 10	< 25	---	< 10	< 5	< 25
1988	4	---	---	---	---	---	---	---	---	---	---	15	---	---	---	---	---	---	---
1989	1	---	---	---	---	---	---	---	---	---	---	12	---	---	---	---	---	---	---
1989	2	---	---	---	---	---	---	---	---	---	---	14	---	---	---	---	---	---	---
1989	3	< 5	< 10	< 10	< 5	< 5	< 5	< 5	< 5	< 5	< 5	20	< 5	< 10	< 10	---	< 10	< 5	< 10
1989	4	---	---	---	---	---	---	---	---	---	---	< 5	---	---	---	---	---	---	---

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SPARTON TECHNOLOGY, INC.
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[---------- ug/l ----------]

YEAR	QUARTER NO.	Ethyl-benzene	Methyl-bromide	Methyl-chloride	Methylene Chloride (100)	1,1,2,2-Tetra-chloro-ethane	Tetra-chloro-ethylene (20)	Toluene (750)	1,2-trans-Dichloro-ethylene	1,1,1-Tri-chloro-ethane (60)	1,1,2-Tri-chloro-ethane (10)	Tri-chloro-ethylene (100)	Tri-chloro-fluoro-methane	Vinyl chloride (1)	Acetone	Tri-chloro-tri-fluoro-ethane	2-Hexanone	Di-methyl benzene (620)	Methyl ethyl ketone
															[---------- Non-Priority Pollutants -----]				
********** WELL NO. 21 (UPPER FLOW ZONE) **********																			
1983	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1984	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	4	< 200	< 400	< 400	< 400	< 200	< 200	< 200	< 200	3300	< 200	2300	---	< 400	---	---	---	---	---
1987	1	---	---	---	---	---	---	---	---	---	---	1700	---	---	---	---	---	---	---
1987	2	---	---	---	---	---	---	---	---	---	---	1400	---	---	---	---	---	---	---
1987	3	< 100	< 200	< 200	< 500	< 100	< 100	< 100	< 100	2800	< 100	2100	---	< 200	< 500	---	< 200	< 100	< 500
1987	4	---	---	---	---	---	---	---	---	---	---	2000	---	---	---	---	---	---	---
1988	1	---	---	---	---	---	---	---	---	---	---	1800	---	---	---	---	---	---	---
1988	2	---	---	---	---	---	---	---	---	---	---	1100	---	---	---	---	---	---	---
1988	3	< 5	< 10	< 10	< 25	< 5	< 5	< 5	< 5	1900	< 5	1500	---	< 10	< 25	---	< 10	< 5	< 25
1988	4	---	---	---	---	---	---	---	---	---	---	1300	---	---	---	---	---	---	---
1989	1	---	---	---	---	---	---	---	---	---	---	900	---	---	---	---	---	---	---
1989	2	---	---	---	---	---	---	---	---	---	---	520	---	---	---	---	---	---	---
1989	3	< 25	< 50	< 50	< 25	< 25	< 25	< 25	< 25	450	< 25	460	< 25	< 50	< 50	---	< 50	< 25	< 50
1989	4	---	---	---	---	---	---	---	---	---	---	1100	---	---	---	---	---	---	---

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SPARTON TECHNOLOGY, INC.
COORS ROAD FACILITY
GROUNDWATER MONITORING RESULTS
PART 3 of 3

[ug/l]

YEAR	QUARTER NO.	Ethyl-benzene	Methyl-bromide	Methyl-chloride	Methylene Chloride (100)	1,1,2,2-Tetra-chloro-ethane	Tetra-chloro-ethylene (20)	Toluene (750)	1,2-trans-Dichloro-ethylene	1,1,1-Tri-chloro-ethane (60)	1,1,2-Tri-chloro-ethane (10)	Tri-chloro-ethylene (100)	Tri-chloro-fluoro-methane	Vinyl chloride (1)	Acetone	Tri-chloro-tri-fluoro-ethane	2-Hexanone	Di-methyl benzene (620)	Methyl ethyl ketone
															[Non-Priority Pollutants]				
********** WELL NO. 22 (UPPER FLOW ZONE) **********																			
1983	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1984	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1985	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1986	4	< 40	< 80	< 80	< 80	< 40	< 40	< 40	< 40	950	< 40	230	---	< 80	---	---	---	---	---
1987	1	---	---	---	---	---	---	---	---	---	---	170	---	---	---	---	---	---	---
1987	2	---	---	---	---	---	---	---	---	---	---	270	---	---	---	---	---	---	---
1987	3	< 25	< 50	< 50	< 120	< 25	< 25	< 25	< 25	510	< 25	370	---	< 50	< 120	---	< 50	< 25	< 120
1987	4	---	---	---	---	---	---	---	---	---	---	240	---	---	---	---	---	---	---
1988	1	---	---	---	---	---	---	---	---	---	---	150	---	---	---	---	---	---	---
1988	2	---	---	---	---	---	---	---	---	---	---	230	---	---	---	---	---	---	---
1988	3	< 5	< 10	< 10	< 25	< 5	< 5	< 5	< 5	140	< 5	63	---	< 10	< 25	---	< 10	< 5	< 25
1988	4	---	---	---	---	---	---	---	---	---	---	120	---	---	---	---	---	---	---
1989	1	---	---	---	---	---	---	---	---	---	---	110	---	---	---	---	---	---	---
1989	2	---	---	---	---	---	---	---	---	---	---	150	---	---	---	---	---	---	---
1989	3	< 10	< 20	< 20	< 10	< 10	< 10	< 10	< 10	190	< 10	120	< 10	< 20	< 20	---	< 20	< 10	< 20
1989	4	---	---	---	---	---	---	---	---	---	---	91	---	---	---	---	---	---	---

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