SPARTON

SPARTON TECHNOLOGY

December 11, 1990

DEC 1990
RECEIVED
HAZARDOUS WASTE
PROGRAM

Technical Section (6H-CD)
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 Rood Facility located in Albuquerque, New Mexico, as required in Section IV.C of the Consent Order. This report summarizes activities during the month of November 1990.

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

2. The air stripper removal efficiencies continue to average over 99 percent for the measured indicator parameters. During the month 60,600 gallons of recovered groundwater were treated bringing the total volume treated to date to 1,378,000 gallons. Air stripper performance data is included in Attachment 2.

3. Full-suite analytical results from both the initial and confirmational samplings of MWs 58-64 were received during November. Copies of these results are included in Attachment 3.

4. We are revising and compiling the draft RFI report for submittal to EPA by December 17, 1990.

Report in magazine file

002485

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

This concludes our progress report for the month of November. If you have any questions, please contact the undersigned.

Very truly yours,

SPARTON TECHNOLOGY, INC.

for Richard D. Mico
Vice President/General Manager

Attachments: (as stated)

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

500.S15
12/11/90

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**Attachment 1**

**Bi-Weekly Water Level Measurements**

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

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

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

| DATE | MW-7 | MW-9 | MW-12 | MW-13 | MW-14 | MW-15 | MW-16 | MW-17 | MW-21 | MW-22 | MW-33 | MW-34 | MW-35 | MW-36 | MW-37 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01-09-90 | 4979.15 | 4975.85 | 4975.44 | 4976.68 | 4973.99 | 4976.85 | 4980.33 | 4980.33 | 4980.29 | 4979.55 | 4975.31 | 4975.89 | 4974.19 | 4973.12 | 4972.12 |
| 01-24-90 | 4978.98 | 4975.85 | 4975.48 | 4976.43 | 4973.90 | 4976.68 | 4980.25 | 4980.16 | 4980.08 | 4979.55 | 4975.14 | 4975.84 | 4974.04 | 4973.01 | 4972.10 |
| 02-07-90 | 4978.81 | 4975.77 | 4975.40 | 4976.35 | 4973.82 | 4976.52 | 4980.00 | 4980.12 | 4980.08 | 4979.38 | 4975.06 | 4975.60 | 4974.00 | 4972.92 | 4971.28 |
| 02-21-90 | 4978.81 | 4975.52 | 4975.32 | 4976.35 | 4973.65 | 4976.35 | 4979.92 | 4980.08 | 4980.00 | 4979.13 | 4975.06 | 4975.52 | 4973.88 | 4972.94 | 4971.99 |
| 03-07-90 | 4978.81 | 4975.43 | 4975.07 | 4976.26 | 4973.65 | 4976.18 | 4980.00 | 4980.91 | 4979.75 | 4979.13 | 4975.06 | 4975.90 | 4973.97 | 4972.92 | 4972.16 |
| 03-21-90 | 4978.81 | 4975.43 | 4975.07 | 4976.26 | 4973.65 | 4975.93 | 4979.92 | 4980.08 | 4979.75 | 4979.13 | 4975.06 | 4975.67 | 4973.97 | 4973.07 | 4972.13 |
| 04-05-90 | 4979.23 | 4976.10 | 4975.65 | 4976.76 | 4974.07 | 4976.27 | 4980.00 | 4980.08 | 4979.75 | 4979.55 | 4975.48 | 4975.77 | 4973.00 | 4973.20 | 4972.26 |
| 04-18-90 | 4979.48 | 4976.27 | 4975.82 | 4977.10 | 4974.07 | 4976.27 | 4980.00 | 4980.16 | 4979.83 | 4979.55 | 4975.48 | 4976.27 | 4973.75 | 4972.55 | 4972.28 |
| 05-02-90 | 4979.65 | 4976.27 | 4975.90 | 4977.18 | 4974.15 | 4976.60 | 4980.08 | 4980.41 | 4980.00 | 4979.88 | 4975.81 | 4976.74 | 4974.60 | 4973.40 | 4972.41 |
| 05-16-90 | 4979.65 | 4976.27 | 4975.90 | 4977.18 | 4974.15 | 4976.35 | 4980.00 | 4980.24 | 4980.08 | 4979.63 | 4975.48 | 4976.02 | 4974.52 | 4973.32 | 4972.35 |
| 05-30-90 | 4979.65 | 4976.27 | 4975.90 | 4977.18 | 4974.07 | 4976.35 | 4980.00 | 4980.41 | 4980.08 | 4979.88 | 4975.56 | 4976.76 | 4974.60 | 4973.36 | 4972.31 |
| 06-13-90 | 4979.90 | 4976.68 | 4976.23 | 4977.51 | 4974.40 | 4976.60 | 4980.42 | 4980.49 | 4975.57 | 4979.97 | 4975.89 | 4976.98 | 4974.69 | 4973.39 | 4972.29 |
| 06-27-90 | 4980.06 | 4976.68 | 4976.32 | 4977.60 | 4974.49 | 4976.68 | 4980.42 | 4980.49 | 4980.08 | 4980.13 | 4975.89 | 4977.20 | 4974.86 | 4973.50 | 4972.35 |
| 07-10-90 | 4980.48 | 4976.77 | 4976.32 | 4977.93 | 4974.49 | 4976.77 | 4980.50 | 4980.49 | 4980.17 | 4980.38 | 4975.89 | 4977.40 | 4975.03 | 4973.61 | 4972.39 |
| 07-24-90 | 4980.15 | 4976.68 | 4976.23 | 4977.51 | 4974.32 | 4976.68 | 4980.67 | 4980.49 | 4980.42 | 4980.05 | 4975.81 | 4977.00 | 4974.86 | 4973.57 | 4972.37 |
| 08-08-90 | 4980.48 | 4977.10 | 4976.73 | 4978.01 | 4974.82 | 4977.02 | 4980.67 | 4980.58 | 4980.50 | 4980.47 | 4975.89 | 4977.82 | 4975.11 | 4973.68 | 4972.46 |
| 08-24-90 | 4980.90 | 4977.10 | 4976.73 | 4978.35 | 4974.82 | 4977.10 | 4981.17 | 4980.99 | 4980.75 | 4980.80 | 4975.89 | 4977.47 | 4975.19 | 4973.75 | 4972.06 |
| 09-06-90 | 4980.90 | 4976.85 | 4976.32 | 4977.60 | 4974.49 | 4977.10 | 4981.00 | 4980.91 | 4980.83 | 4980.47 | 4975.89 | 4977.18 | 4974.99 | 4973.60 | 4972.40 |
| 09-19-90 | 4980.48 | 4976.77 | 4976.32 | 4977.60 | 4974.49 | 4977.10 | 4981.17 | 4980.91 | 4980.83 | 4980.47 | 4975.89 | 4977.32 | 4975.30 | 4973.67 | 4972.43 |
| 10-05-90 | 4980.98 | 4977.35 | 4976.82 | 4978.43 | 4975.15 | 4977.18 | 4981.25 | 4981.33 | 4980.92 | 4980.97 | 4976.23 | 4977.74 | 4975.35 | 4973.96 | 4972.64 |
| 10-17-90 | 4980.90 | 4977.35 | 4976.73 | 4978.35 | 4974.90 | 4977.27 | 4981.25 | 4981.24 | 4980.92 | 4980.97 | 4976.31 | 4977.57 | 4975.35 | 4973.85 | 4972.52 |
| 10-31-90 | 4980.98 | 4977.52 | 4977.15 | 4978.43 | 4975.24 | 4977.43 | 4981.25 | 4981.33 | 4980.92 | 4981.13 | 4976.39 | 4978.17 | 4975.52 | 4974.03 | 4972.68 |
| 11-13-90 | 4980.98 | 4977.52 | 4976.90 | 4978.43 | 4975.15 | 4977.52 | 4981.25 | 4981.33 | 4980.92 | 4981.13 | 4976.31 | 4977.91 | 4975.52 | 4974.05 | 4972.74 |
| 11-28-90 | 4980.48 | 4977.10 | 4976.65 | 4978.01 | 4974.90 | 4977.43 | 4981.25 | 4981.33 | 4980.83 | 4980.80 | 4975.98 | 4977.35 | 4975.21 | 4973.79 | 4972.51 |

**Attachment 2**

**Air Stripper Performance Data**

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

GROUNDWATER RECOVERY SYSTEM
VOLUME TREATED
MONTH OF NOVEMBER 1990

| DATE | BEGIN READING | END READING | GALLONS | CUMULATIVE GALLONS |
|---|---|---|---|---|
| | | | | 1,317,400 |
| 11-01-90 | 512300 | 514300 | 2000 | 1,319,400 |
| 11-04-90 | 514300 | 520500 | 6200 | 1,325,600 |
| 11-05-90 | 520500 | 523100 | 2600 | 1,328,200 |
| 11-06-90 | 523100 | 525500 | 2400 | 1,330,600 |
| 11-07-90 | 525500 | 527400 | 1900 | 1,332,500 |
| 11-08-90 | 527400 | 529600 | 2200 | 1,334,700 |
| 11-11-90 | 529600 | 536400 | 6800 | 1,341,500 |
| 11-12-90 | 536400 | 538600 | 2200 | 1,343,700 |
| 11-13-90 | 538600 | 540800 | 2200 | 1,345,900 |
| 11-14-90 | 540800 | 542800 | 2000 | 1,347,900 |
| 11-15-90 | 542800 | 544700 | 1900 | 1,349,800 |
| 11-18-90 | 544700 | 551100 | 6400 | 1,356,200 |
| 11-19-90 | 551100 | 553300 | 2200 | 1,358,400 |
| 11-20-90 | 553300 | 555400 | 2100 | 1,360,500 |
| 11-25-90 | 555400 | 565500 | 10100 | 1,370,600 |
| 11-26-90 | 565500 | 567500 | 2000 | 1,372,600 |
| 11-27-90 | 567500 | 569300 | 1800 | 1,374,400 |
| 11-28-90 | 569300 | 571100 | 1800 | 1,376,200 |
| 11-29-90 | 571100 | 572900 | 1800 | 1,378,000 |
| | | | 60,600 | |

AIR STRIPPER PERFORMANCE

Sparton Technology, Inc.
Albuquerque, New Mexico

( all concentrations in micrograms per liter (ppb) )

| DATE SAMPLED | 1,1-Dichloroethylene INFLUENT | 1,1-Dichloroethylene EFFLUENT | 1,1-Dichloroethylene PERCENT REDUCTION | Methylene Chloride INFLUENT | Methylene Chloride EFFLUENT | Methylene Chloride PERCENT REDUCTION | 1,1,1-Trichloroethane INFLUENT | 1,1,1-Trichloroethane EFFLUENT | 1,1,1-Trichloroethane PERCENT REDUCTION | Trichloroethylene INFLUENT | Trichloroethylene EFFLUENT | Trichloroethylene PERCENT REDUCTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12/12/88 | 21 | 0.32 | 98.5 | 293 | 5.4 | 98.2 | 95 | 1.9 | 98.0 | 328 | 6.3 | 98.1 |
| 12/14/88 | 170 | 1.1 | 99.4 | 2,230 | 26.5 | 98.8 | 1,090 | 9.7 | 99.1 | 2,490 | 22.4 | 99.1 |
| 12/19/88 | 87 | 0.4 | 99.5 | 1,320 | 13.6 | 99.0 | 862 | 6.0 | 99.3 | 2,200 | 14.8 | 99.3 |
| 12/27/88 | 89 | 0.5 | 99.4 | 1,250 | 2.4 | 99.8 | 648 | 3.3 | 99.5 | 1,300 | 7.2 | 99.4 |
| 01/06/89 | 64 | 0.2 | 99.7 | 581 | 3.3 | 99.4 | 340 | 1.7 | 99.5 | 712 | 4.1 | 99.4 |
| 01/23/89 | 82 | 0.2 | 99.8 | 545 | 7.4 | 98.6 | 571 | 2.6 | 99.5 | 1,220 | 7.5 | 99.4 |
| 02/02/89 | 83 | 0.3 | 99.6 | 514 | 0.1 | 100.0 | 389 | 2.2 | 99.4 | 1,550 | 8.6 | 99.4 |
| 03/06/89 | 107 | 1.5 | 98.6 | 38 | 0.4 | 98.9 | 708 | 11.0 | 98.4 | 1,300 | 21.0 | 98.4 |
| 04/03/89 | 79 | 1 | 98.7 | 87 | 1 | 98.9 | 371 | 1 | 99.7 | 880 | 1.5 | 99.8 |
| 05/01/89 | 94 | 1 | 98.9 | 14 | 1 | 92.9 | 243 | 1 | 99.6 | 632 | 1 | 99.8 |
| 06/05/89 | 28 | 1 | 96.4 | 148 | 1 | 99.3 | 198 | 1 | 99.5 | 685 | 1 | 99.9 |
| 07/05/89 | 20 | 0.1 | 99.5 | 2.4 | 0.1 | 95.8 | 154 | 0.1 | 99.9 | 452 | 0.14 | 100.0 |
| 08/07/89 | 27 | 0.1 | 99.6 | 2.4 | 0.1 | 95.8 | 152 | 0.18 | 99.9 | 477 | 0.19 | 100.0 |
| 09/05/89 | 53 | 0.1 | 99.8 | 8.5 | 0.1 | 98.8 | 310 | 0.1 | 100.0 | 785 | 0.2 | 100.0 |
| 10/02/89 | 62 | 0.1 | 99.8 | 2.6 | 0.1 | 96.2 | 286 | 0.1 | 100.0 | 905 | 0.1 | 100.0 |
| 11/06/89 | 20.9 | 0.1 | 99.5 | 140 | 0.26 | 99.8 | 87.5 | 0.1 | 99.9 | 392 | 0.25 | 99.9 |
| 12/04/89 | 23.0 | 0.1 | 99.6 | 131 | 0.2 | 99.8 | 71 | 0.1 | 99.9 | 378 | 0.4 | 99.9 |
| 01/08/90 | 19.7 | 0.1 | 99.5 | 140 | 0.41 | 99.7 | 90.3 | 0.18 | 99.8 | 359 | 0.91 | 99.7 |
| 02/05/90 | 34.0 | 0.1 | 99.7 | 44 | 0.22 | 99.5 | 250 | 0.47 | 99.8 | 670 | 1.8 | 99.7 |
| 03/05/90 | 45.0 | 0.1 | 99.8 | 35 | 0.2 | 99.4 | 240 | 0.19 | 99.9 | 780 | 0.91 | 99.9 |
| 04/02/90 | 64.0 | 0.1 | 99.8 | 10 | 0.4 | 96.0 | 310 | 0.1 | 100.0 | 1300 | 0.32 | 100.0 |
| 05/07/90 | 43.0 | 0.1 | 99.8 | 8.7 | 0.1 | 98.9 | 190 | 0.1 | 99.9 | 720 | 0.18 | 100.0 |
| 06/04/90 | 70.0 | 0.1 | 99.9 | 1 | 0.1 | 90.0 | 180 | 0.1 | 99.9 | 820 | 0.1 | 100.0 |
| 07-02-90 | 30.0 | 0.1 | 99.7 | 1 | 1.0 | 0.0 | 140 | 0.1 | 99.9 | 625 | 0.1 | 100.0 |
| 08-06-90 | 40.0 | 0.1 | 99.8 | 21 | 0.1 | 99.5 | 140 | 0.1 | 99.9 | 550 | 0.59 | 99.9 |
| 09-10-90 | 44.0 | 0.1 | 99.8 | 5.9 | 0.1 | 98.3 | 150 | 0.1 | 99.9 | 800 | 1.0 | 99.9 |
| 10-01-90 | 93.0 | 1.0 | 98.9 | 6.7 | 1.0 | 85.1 | 290 | 1.0 | 99.7 | 1200 | 1.0 | 99.9 |
| 11-05-90 | 64.0 | 1.0 | 98.4 | < 10 | 1.0 | --- | 200 | 1.0 | 99.5 | 1200 | 1.0 | 99.9 |
| avgs | 59.2 | 0.4 | 99.3 | 271 | 2.4 | 99.1 | 313 | 1.6 | 99.5 | 918 | 3.7 | 99.6 |

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**Attachment 3**

**Analytical Results**

Rocky Mountain
Analytical Laboratory

Enseco
A CORNING Company

November 8, 1990

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

Dear Mr. Samala:

Enclosed is the report for eight aqueous samples received at Enseco-Rocky Mountain Analytical Laboratory on October 5 and 6, 1990.

Included with the report is a quality control summary.

Please call if you have any questions.

Sincerely,

Joel E. Holtz
Program Administrator

Reviewed by:

Roger A. Freeze II for
Sue Dalla
Manager
Program Administration

JEH/SD/st
Enclosures

RMAL #011691

002494

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 INC.

ENSECO-RMAL NO. 011691

NOVEMBER 8, 1990

Reviewed by: Joel E. Holtz

Sue Dalla

002495

Enseco Incorporated
4955 Yarrow Street
Arvada, Colorado 80002

## 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

Nitrate was determined by the difference between nitrate plus nitrite and nitrite. Holding times were met for both analyses; therefore, the holding time for nitrate was also met. Please note that the nitrate plus nitrite analysis date is reported for the nitrate analyses.

## 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
A Corning Company

# SAMPLE DESCRIPTION INFORMATION
for
Sparton Technology Inc.

| Lab ID | Client ID | Matrix | Sampled Date | Sampled Time | Received Date |
|---|---|---|---|---|---|
| 011691-0001-SA | MW-62 | AQUEOUS | 04 OCT 90 | 09:15 | 05 OCT 90 |
| 011691-0002-SA | MW-61 | AQUEOUS | 04 OCT 90 | 11:40 | 05 OCT 90 |
| 011691-0003-SA | MW-63 | AQUEOUS | 04 OCT 90 | 11:55 | 05 OCT 90 |
| 011691-0004-SA | MW-60 | AQUEOUS | 04 OCT 90 | 13:30 | 05 OCT 90 |
| 011691-0005-SA | MW-59 | AQUEOUS | 04 OCT 90 | 14:30 | 05 OCT 90 |
| 011691-0006-SA | FIELD BLANK | AQUEOUS | 04 OCT 90 | 14:15 | 05 OCT 90 |
| 011691-0007-SA | TRIP BLANK | AQUEOUS | 04 OCT 90 | | 05 OCT 90 |
| 011691-0008-SA | MW-58 | AQUEOUS | 05 OCT 90 | 11:00 | 06 OCT 90 |

Enseco
A Corning Company

# ANALYTICAL TEST REQUESTS
for
Sparton Technology Inc.

| Lab ID: 011691 | Group Code | Analysis Description | Custom Test? |
|---|---|---|---|
| 0001 - 0008 | A | Volatile Organics | N |
| | | Appendix IX List | N |
| | | Screen - Volatile Organics | N |
| | | ICP Metals (Total) | Y |
| | | Prep - Total Metals, ICP | N |
| | | Arsenic, Furnace AA (Total) | N |
| | | Prep - Total Metals, Furnace AA | N |
| | | Lead, Furnace AA (Total) | N |
| | | Selenium, Furnace AA (Total) | N |
| | | Thallium, Furnace AA (Total) | N |
| | | Mercury, Cold Vapor AA (Total) | N |
| | | Prep - Mercury, Cold Vapor AA (Total) | N |
| | | Ammonia | N |
| | | Sulfate, Ion Chromatography | N |
| | | Chloride, Ion Chromatography | N |
| | | Fluoride, Electrode | N |
| | | Total Kjeldahl Nitrogen (TKN) | N |
| | | Nitrate, as Nitrogen | 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, May, 1989.

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

Enseco
A Corning Company

Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-62
Lab ID: 011691-0001-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: 08 OCT 90 Analyzed: 10 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| Acetone | ND | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | 6.8 | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Deneen Miller Approved By: Jeff Lowry

Enseco
A Corning Company

Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-62
Lab ID: 011691-0001-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: 08 OCT 90 Analyzed: 10 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10 |
| Styrene | ND | ug/L | 5.0 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 5.0 |
| Tetrachloroethene | ND | ug/L | 5.0 |
| Toluene | ND | ug/L | 5.0 |
| 1,1,1-Trichloroethane | 11 | ug/L | 5.0 |
| 1,1,2-Trichloroethane | ND | ug/L | 5.0 |
| Trichloroethene | ND | ug/L | 5.0 |
| Trichlorofluoromethane | ND | ug/L | 5.0 |
| 1,2,3-Trichloropropane | ND | ug/L | 5.0 |
| Vinyl acetate | ND | ug/L | 10 |
| Vinyl chloride | ND | ug/L | 10 |
| Xylenes (total) | ND | ug/L | 5.0 |

| Surrogate | Recovery | | |
|---|---|---|---|
| Toluene-d8 | 106 | % | -- |
| 4-Bromofluorobenzene | 101 | % | -- |
| 1,2-Dichloroethane-d4 | 111 | % | -- |

ND = Not detected
NA = Not applicable

Reported By: Deneen Miller Approved By: Jeff Lowry

Enseco
A Corning Company

Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-61
Lab ID: 011691-0002-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: 08 OCT 90 Analyzed: 10 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| Acetone | ND | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | ND | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Deneen Miller Approved By: Jeff Lowry

Enseco
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Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-61
Lab ID: 011691-0002-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: 08 OCT 90 Analyzed: 10 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10 |
| Styrene | ND | ug/L | 5.0 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 5.0 |
| Tetrachloroethene | ND | ug/L | 5.0 |
| Toluene | ND | ug/L | 5.0 |
| 1,1,1-Trichloroethane | ND | ug/L | 5.0 |
| 1,1,2-Trichloroethane | ND | ug/L | 5.0 |
| Trichloroethene | ND | ug/L | 5.0 |
| Trichlorofluoromethane | ND | ug/L | 5.0 |
| 1,2,3-Trichloropropane | ND | ug/L | 5.0 |
| Vinyl acetate | ND | ug/L | 10 |
| Vinyl chloride | ND | ug/L | 10 |
| Xylenes (total) | ND | ug/L | 5.0 |

| Surrogate | Recovery | | |
|---|---|---|---|
| Toluene-d8 | 105 | % | -- |
| 4-Bromofluorobenzene | 99 | % | -- |
| 1,2-Dichloroethane-d4 | 110 | % | -- |

ND = Not detected
NA = Not applicable

Reported By: Deneen Miller Approved By: Jeff Lowry

Enseco
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Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-63
Lab ID: 011691-0003-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: 08 OCT 90 Analyzed: 10 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| Acetone | ND | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | ND | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Deneen Miller Approved By: Jeff Lowry

Enseco
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# Volatile Organics
## Appendix IX List
## Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-63
Lab ID: 011691-0003-SA
Matrix: AQUEOUS
Authorized: 05 OCT 90

Sampled: 04 OCT 90
Prepared: 08 OCT 90

Received: 05 OCT 90
Analyzed: 10 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10 |
| Styrene | ND | ug/L | 5.0 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 5.0 |
| Tetrachloroethene | ND | ug/L | 5.0 |
| Toluene | ND | ug/L | 5.0 |
| 1,1,1-Trichloroethane | ND | ug/L | 5.0 |
| 1,1,2-Trichloroethane | ND | ug/L | 5.0 |
| Trichloroethene | ND | ug/L | 5.0 |
| Trichlorofluoromethane | ND | ug/L | 5.0 |
| 1,2,3-Trichloropropane | ND | ug/L | 5.0 |
| Vinyl acetate | ND | ug/L | 10 |
| Vinyl chloride | ND | ug/L | 10 |
| Xylenes (total) | ND | ug/L | 5.0 |

| Surrogate | Recovery | | |
|---|---|---|---|
| Toluene-d8 | 107 | % | -- |
| 4-Bromofluorobenzene | 100 | % | -- |
| 1,2-Dichloroethane-d4 | 112 | % | -- |

ND = Not detected
NA = Not applicable

Reported By: Deneen Miller

Approved By: Jeff Lowry

Enseco
A Corning Company

# Volatile Organics
## Appendix IX List
## Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-60
Lab ID: 011691-0004-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: 08 OCT 90 Analyzed: 10 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| Acetone | ND | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | ND | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Deneen Miller Approved By: Jeff Lowry

Enseco
A Corning Company

Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-60
Lab ID: 011691-0004-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: 08 OCT 90 Analyzed: 10 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10 |
| Styrene | ND | ug/L | 5.0 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 5.0 |
| Tetrachloroethene | ND | ug/L | 5.0 |
| Toluene | ND | ug/L | 5.0 |
| 1,1,1-Trichloroethane | ND | ug/L | 5.0 |
| 1,1,2-Trichloroethane | ND | ug/L | 5.0 |
| Trichloroethene | ND | ug/L | 5.0 |
| Trichlorofluoromethane | ND | ug/L | 5.0 |
| 1,2,3-Trichloropropane | ND | ug/L | 5.0 |
| Vinyl acetate | ND | ug/L | 10 |
| Vinyl chloride | ND | ug/L | 10 |
| Xylenes (total) | ND | ug/L | 5.0 |

| Surrogate | Recovery | | |
|---|---|---|---|
| Toluene-d8 | 105 | % | -- |
| 4-Bromofluorobenzene | 97 | % | -- |
| 1,2-Dichloroethane-d4 | 110 | % | -- |

ND = Not detected
NA = Not applicable

Reported By: Deneen Miller Approved By: Jeff Lowry

Enseco
A Corning Company

Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-59
Lab ID: 011691-0005-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: 08 OCT 90 Analyzed: 10 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| Acetone | ND | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | ND | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Deneen Miller Approved By: Jeff Lowry

Enseco
A Corning Company

Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: FIELD BLANK
Lab ID: 011691-0006-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: 08 OCT 90 Analyzed: 08 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| Acetone | ND | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | ND | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Deneen Miller Approved By: Jeff Lowry

Enseco
A Corning Company

Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: FIELD BLANK
Lab ID: 011691-0006-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: 08 OCT 90 Analyzed: 08 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10 |
| Styrene | ND | ug/L | 5.0 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 5.0 |
| Tetrachloroethene | ND | ug/L | 5.0 |
| Toluene | ND | ug/L | 5.0 |
| 1,1,1-Trichloroethane | ND | ug/L | 5.0 |
| 1,1,2-Trichloroethane | ND | ug/L | 5.0 |
| Trichloroethene | ND | ug/L | 5.0 |
| Trichlorofluoromethane | ND | ug/L | 5.0 |
| 1,2,3-Trichloropropane | ND | ug/L | 5.0 |
| Vinyl acetate | ND | ug/L | 10 |
| Vinyl chloride | ND | ug/L | 10 |
| Xylenes (total) | ND | ug/L | 5.0 |

| Surrogate | Recovery | | |
|---|---|---|---|
| Toluene-d8 | 103 | % | -- |
| 4-Bromofluorobenzene | 101 | % | -- |
| 1,2-Dichloroethane-d4 | 103 | % | -- |

ND = Not detected
NA = Not applicable

Reported By: Deneen Miller Approved By: Jeff Lowry

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Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: TRIP BLANK
Lab ID: 011691-0007-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: 08 OCT 90 Analyzed: 08 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| Acetone | ND | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | ND | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Deneen Miller Approved By: Jeff Lowry

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Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: TRIP BLANK
Lab ID: 011691-0007-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: 08 OCT 90 Analyzed: 08 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10 |
| Styrene | ND | ug/L | 5.0 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 5.0 |
| Tetrachloroethene | ND | ug/L | 5.0 |
| Toluene | ND | ug/L | 5.0 |
| 1,1,1-Trichloroethane | ND | ug/L | 5.0 |
| 1,1,2-Trichloroethane | ND | ug/L | 5.0 |
| Trichloroethene | ND | ug/L | 5.0 |
| Trichlorofluoromethane | ND | ug/L | 5.0 |
| 1,2,3-Trichloropropane | ND | ug/L | 5.0 |
| Vinyl acetate | ND | ug/L | 10 |
| Vinyl chloride | ND | ug/L | 10 |
| Xylenes (total) | ND | ug/L | 5.0 |

| Surrogate | Recovery | | |
|---|---|---|---|
| Toluene-d8 | 106 | % | -- |
| 4-Bromofluorobenzene | 100 | % | -- |
| 1,2-Dichloroethane-d4 | 103 | % | -- |

ND = Not detected
NA = Not applicable

Reported By: Deneen Miller Approved By: Jeff Lowry

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Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-58
Lab ID: 011691-0008-SA
Matrix: AQUEOUS Sampled: 05 OCT 90 Received: 06 OCT 90
Authorized: 05 OCT 90 Prepared: 08 OCT 90 Analyzed: 13 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| Acetone | ND | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | ND | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Michael Blades Approved By: Jeff Lowry

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Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-58
Lab ID: 011691-0008-SA
Matrix: AQUEOUS Sampled: 05 OCT 90 Received: 06 OCT 90
Authorized: 05 OCT 90 Prepared: 08 OCT 90 Analyzed: 13 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10 |
| Styrene | ND | ug/L | 5.0 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 5.0 |
| Tetrachloroethene | ND | ug/L | 5.0 |
| Toluene | ND | ug/L | 5.0 |
| 1,1,1-Trichloroethane | ND | ug/L | 5.0 |
| 1,1,2-Trichloroethane | ND | ug/L | 5.0 |
| Trichloroethene | 22 | ug/L | 5.0 |
| Trichlorofluoromethane | ND | ug/L | 5.0 |
| 1,2,3-Trichloropropane | ND | ug/L | 5.0 |
| Vinyl acetate | ND | ug/L | 10 |
| Vinyl chloride | ND | ug/L | 10 |
| Xylenes (total) | ND | ug/L | 5.0 |

| Surrogate | Recovery | | |
|---|---|---|---|
| Toluene-d8 | 103 | % | -- |
| 4-Bromofluorobenzene | 102 | % | -- |
| 1,2-Dichloroethane-d4 | 98 | % | -- |

ND = Not detected
NA = Not applicable

Reported By: Michael Blades Approved By: Jeff Lowry

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# Metals

## Total Metals

Client Name: Sparton Technology Inc.
Client ID: MW-62
Lab ID: 011691-0001-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Antimony | ND | mg/L | 0.060 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Arsenic | ND | mg/L | 0.0050 | 7060 | 18 OCT 90 | 29 OCT 90 |
| Barium | 0.069 | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Beryllium | ND | mg/L | 0.0020 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Boron | 0.14 | mg/L | 0.10 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Cadmium | ND | mg/L | 0.0050 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Chromium | 0.012 | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Cobalt | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Copper | ND | mg/L | 0.020 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Lead | ND | mg/L | 0.0050 | 7421 | 18 OCT 90 | 29 OCT 90 |
| Manganese | 0.11 | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Mercury | ND | mg/L | 0.00020 | 7470 | 26 OCT 90 | 26 OCT 90 |
| Nickel | ND | mg/L | 0.040 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Selenium | ND | mg/L | 0.0050 | 7740 | 18 OCT 90 | 29 OCT 90 |
| Silver | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Thallium | ND | mg/L | 0.0050 | 7841 | 18 OCT 90 | 29 OCT 90 |
| Tin | ND | mg/L | 0.10 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Vanadium | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Zinc | ND | mg/L | 0.020 | 6010 | 18 OCT 90 | 21 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Sandra Jones Approved By: Mary Grehl

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# Metals

## Total Metals

Client Name: Sparton Technology Inc.
Client ID: MW-61
Lab ID: 011691-0002-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Antimony | ND | mg/L | 0.060 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Arsenic | 0.012 | mg/L | 0.0050 | 7060 | 18 OCT 90 | 29 OCT 90 |
| Barium | 0.058 | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Beryllium | ND | mg/L | 0.0020 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Boron | 0.11 | mg/L | 0.10 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Cadmium | ND | mg/L | 0.0050 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Chromium | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Cobalt | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Copper | ND | mg/L | 0.020 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Lead | ND | mg/L | 0.0050 | 7421 | 18 OCT 90 | 29 OCT 90 |
| Manganese | 0.013 | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Mercury | ND | mg/L | 0.00020 | 7470 | 26 OCT 90 | 26 OCT 90 |
| Nickel | ND | mg/L | 0.040 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Selenium | ND | mg/L | 0.0050 | 7740 | 18 OCT 90 | 29 OCT 90 |
| Silver | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Thallium | ND | mg/L | 0.0050 | 7841 | 18 OCT 90 | 29 OCT 90 |
| Tin | ND | mg/L | 0.10 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Vanadium | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Zinc | 0.020 | mg/L | 0.020 | 6010 | 18 OCT 90 | 21 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Sandra Jones Approved By: Mary Grehl

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# Metals

## Total Metals

Client Name: Sparton Technology Inc.
Client ID: MW-63
Lab ID: 011691-0003-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Antimony | ND | mg/L | 0.060 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Arsenic | 0.0050 | mg/L | 0.0050 | 7060 | 18 OCT 90 | 29 OCT 90 |
| Barium | 0.077 | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Beryllium | ND | mg/L | 0.0020 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Boron | 0.12 | mg/L | 0.10 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Cadmium | ND | mg/L | 0.0050 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Chromium | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Cobalt | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Copper | ND | mg/L | 0.020 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Lead | ND | mg/L | 0.0050 | 7421 | 18 OCT 90 | 29 OCT 90 |
| Manganese | 0.049 | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Mercury | ND | mg/L | 0.00020 | 7470 | 26 OCT 90 | 26 OCT 90 |
| Nickel | ND | mg/L | 0.040 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Selenium | ND | mg/L | 0.0050 | 7740 | 18 OCT 90 | 29 OCT 90 |
| Silver | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Thallium | ND | mg/L | 0.0050 | 7841 | 18 OCT 90 | 29 OCT 90 |
| Tin | ND | mg/L | 0.10 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Vanadium | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Zinc | 0.026 | mg/L | 0.020 | 6010 | 18 OCT 90 | 21 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Sandra Jones Approved By: Mary Grehl

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# Metals

## Total Metals

Client Name: Sparton Technology Inc.
Client ID: MW-60
Lab ID: 011691-0004-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Antimony | ND | mg/L | 0.060 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Arsenic | ND | mg/L | 0.0050 | 7060 | 18 OCT 90 | 29 OCT 90 |
| Barium | 0.067 | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Beryllium | ND | mg/L | 0.0020 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Boron | 0.15 | mg/L | 0.10 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Cadmium | ND | mg/L | 0.0050 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Chromium | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Cobalt | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Copper | ND | mg/L | 0.020 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Lead | 0.0072 | mg/L | 0.0050 | 7421 | 18 OCT 90 | 29 OCT 90 |
| Manganese | 0.029 | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Mercury | ND | mg/L | 0.00020 | 7470 | 26 OCT 90 | 26 OCT 90 |
| Nickel | ND | mg/L | 0.040 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Selenium | ND | mg/L | 0.0050 | 7740 | 18 OCT 90 | 29 OCT 90 |
| Silver | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Thallium | ND | mg/L | 0.0050 | 7841 | 18 OCT 90 | 29 OCT 90 |
| Tin | ND | mg/L | 0.10 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Vanadium | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Zinc | 0.090 | mg/L | 0.020 | 6010 | 18 OCT 90 | 21 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Sandra Jones Approved By: Mary Grehl

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# Metals

## Total Metals

Client Name: Sparton Technology Inc.
Client ID: MW-59
Lab ID: 011691-0005-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Antimony | ND | mg/L | 0.060 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Arsenic | ND | mg/L | 0.0050 | 7060 | 18 OCT 90 | 29 OCT 90 |
| Barium | 0.086 | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Beryllium | ND | mg/L | 0.0020 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Boron | 0.12 | mg/L | 0.10 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Cadmium | ND | mg/L | 0.0050 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Chromium | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Cobalt | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Copper | ND | mg/L | 0.020 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Lead | ND | mg/L | 0.0050 | 7421 | 18 OCT 90 | 29 OCT 90 |
| Manganese | 0.014 | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Mercury | ND | mg/L | 0.00020 | 7470 | 26 OCT 90 | 26 OCT 90 |
| Nickel | ND | mg/L | 0.040 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Selenium | ND | mg/L | 0.0050 | 7740 | 18 OCT 90 | 29 OCT 90 |
| Silver | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Thallium | ND | mg/L | 0.0050 | 7841 | 18 OCT 90 | 29 OCT 90 |
| Tin | ND | mg/L | 0.10 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Vanadium | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Zinc | ND | mg/L | 0.020 | 6010 | 18 OCT 90 | 21 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Sandra Jones Approved By: Mary Grehl

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# Metals

## Total Metals

Client Name: Sparton Technology Inc.
Client ID: FIELD BLANK
Lab ID: 011691-0006-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Antimony | ND | mg/L | 0.060 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Arsenic | ND | mg/L | 0.0050 | 7060 | 18 OCT 90 | 29 OCT 90 |
| Barium | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Beryllium | ND | mg/L | 0.0020 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Boron | ND | mg/L | 0.10 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Cadmium | ND | mg/L | 0.0050 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Chromium | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Cobalt | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Copper | 0.042 | mg/L | 0.020 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Lead | ND | mg/L | 0.0050 | 7421 | 18 OCT 90 | 29 OCT 90 |
| Manganese | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Mercury | ND | mg/L | 0.00020 | 7470 | 26 OCT 90 | 26 OCT 90 |
| Nickel | ND | mg/L | 0.040 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Selenium | ND | mg/L | 0.0050 | 7740 | 18 OCT 90 | 29 OCT 90 |
| Silver | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Thallium | ND | mg/L | 0.0050 | 7841 | 18 OCT 90 | 29 OCT 90 |
| Tin | ND | mg/L | 0.10 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Vanadium | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Zinc | 0.029 | mg/L | 0.020 | 6010 | 18 OCT 90 | 21 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Sandra Jones Approved By: Mary Grehl

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# Metals

## Total Metals

Client Name: Sparton Technology Inc.
Client ID: TRIP BLANK
Lab ID: 011691-0007-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Antimony | ND | mg/L | 0.060 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Arsenic | ND | mg/L | 0.0050 | 7060 | 18 OCT 90 | 29 OCT 90 |
| Barium | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Beryllium | ND | mg/L | 0.0020 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Boron | ND | mg/L | 0.10 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Cadmium | ND | mg/L | 0.0050 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Chromium | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Cobalt | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Copper | ND | mg/L | 0.020 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Lead | ND | mg/L | 0.010 | 7421 | 18 OCT 90 | 29 OCT 90 |
| Manganese | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Mercury | ND | mg/L | 0.00020 | 7470 | 26 OCT 90 | 26 OCT 90 |
| Nickel | ND | mg/L | 0.040 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Selenium | ND | mg/L | 0.0050 | 7740 | 18 OCT 90 | 29 OCT 90 |
| Silver | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Thallium | ND | mg/L | 0.0050 | 7841 | 18 OCT 90 | 29 OCT 90 |
| Tin | ND | mg/L | 0.10 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Vanadium | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Zinc | ND | mg/L | 0.020 | 6010 | 18 OCT 90 | 21 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Sandra Jones Approved By: Mary Grehl

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# Metals

## Total Metals

Client Name: Sparton Technology Inc.
Client ID: MW-58
Lab ID: 011691-0008-SA
Matrix: AQUEOUS Sampled: 05 OCT 90 Received: 06 OCT 90
Authorized: 05 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Antimony | ND | mg/L | 0.060 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Arsenic | ND | mg/L | 0.0050 | 7060 | 18 OCT 90 | 29 OCT 90 |
| Barium | 0.081 | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Beryllium | ND | mg/L | 0.0020 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Boron | ND | mg/L | 0.10 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Cadmium | ND | mg/L | 0.0050 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Chromium | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Cobalt | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Copper | ND | mg/L | 0.020 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Lead | ND | mg/L | 0.0050 | 7421 | 18 OCT 90 | 29 OCT 90 |
| Manganese | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Mercury | ND | mg/L | 0.00020 | 7470 | 26 OCT 90 | 26 OCT 90 |
| Nickel | ND | mg/L | 0.040 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Selenium | ND | mg/L | 0.0050 | 7740 | 18 OCT 90 | 29 OCT 90 |
| Silver | ND | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Thallium | ND | mg/L | 0.0050 | 7841 | 18 OCT 90 | 29 OCT 90 |
| Tin | ND | mg/L | 0.10 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Vanadium | 0.011 | mg/L | 0.010 | 6010 | 18 OCT 90 | 21 OCT 90 |
| Zinc | ND | mg/L | 0.020 | 6010 | 18 OCT 90 | 21 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Sandra Jones Approved By: Mary Grehl

Enseco
A Corning Company

# General Inorganics

Client Name: Sparton Technology Inc.
Client ID: MW-62
Lab ID: 011691-0001-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Chloride | 7.8 | mg/L | 3.0 | 300.0 | NA | 13 OCT 90 |
| Fluoride | 0.23 | mg/L | 0.10 | 340.2 | NA | 15 OCT 90 |
| Ammonia as N | ND | mg/L | 0.10 | 350.1 | NA | 17 OCT 90 |
| Nitrate as N | 0.49 | mg/L | 0.10 | 353.2 | NA | 23 OCT 90 |
| Sulfate | 84.2 | mg/L | 5.0 | 300.0 | NA | 13 OCT 90 |
| Total Kjeldahl Nitrogen as N | ND | mg/L | 0.50 | 351.2 | NA | 18 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Blake Besser Approved By: John Laferty

Enseco
A Corning Company

# General Inorganics

Client Name: Sparton Technology Inc.
Client ID: MW-61
Lab ID: 011691-0002-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Chloride | 21.0 | mg/L | 3.0 | 300.0 | NA | 13 OCT 90 |
| Fluoride | 0.27 | mg/L | 0.10 | 340.2 | NA | 15 OCT 90 |
| Ammonia as N | ND | mg/L | 0.10 | 350.1 | NA | 17 OCT 90 |
| Nitrate as N | 2.5 | mg/L | 0.20 | 353.2 | NA | 23 OCT 90 |
| Sulfate | 115 | mg/L | 5.0 | 300.0 | NA | 13 OCT 90 |
| Total Kjeldahl Nitrogen as N | ND | mg/L | 0.50 | 351.2 | NA | 18 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Blake Besser Approved By: John Laferty

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A Corning Company

# General Inorganics

Client Name: Sparton Technology Inc.
Client ID: MW-63
Lab ID: 011691-0003-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Chloride | 15.2 | mg/L | 3.0 | 300.0 | NA | 13 OCT 90 |
| Fluoride | 0.26 | mg/L | 0.10 | 340.2 | NA | 15 OCT 90 |
| Ammonia as N | ND | mg/L | 0.10 | 350.1 | NA | 17 OCT 90 |
| Nitrate as N | 2.8 | mg/L | 0.20 | 353.2 | NA | 23 OCT 90 |
| Sulfate | 117 | mg/L | 5.0 | 300.0 | NA | 13 OCT 90 |
| Total Kjeldahl Nitrogen as N | ND | mg/L | 0.50 | 351.2 | NA | 18 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Blake Besser Approved By: John Laferty

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A Corning Company

# General Inorganics

Client Name: Sparton Technology Inc.
Client ID: MW-60
Lab ID: 011691-0004-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Chloride | 18.4 | mg/L | 3.0 | 300.0 | NA | 13 OCT 90 |
| Fluoride | 0.47 | mg/L | 0.10 | 340.2 | NA | 15 OCT 90 |
| Ammonia as N | ND | mg/L | 0.10 | 350.1 | NA | 17 OCT 90 |
| Nitrate as N | 1.5 | mg/L | 0.10 | 353.2 | NA | 23 OCT 90 |
| Sulfate | 95.2 | mg/L | 5.0 | 300.0 | NA | 13 OCT 90 |
| Total Kjeldahl Nitrogen as N | 3.9 | mg/L | 0.50 | 351.2 | NA | 18 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Blake Besser Approved By: John Laferty

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A Corning Company

# General Inorganics

Client Name: Sparton Technology Inc.
Client ID: MW-59
Lab ID: 011691-0005-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Chloride | 18.7 | mg/L | 3.0 | 300.0 | NA | 13 OCT 90 |
| Fluoride | 0.27 | mg/L | 0.10 | 340.2 | NA | 15 OCT 90 |
| Ammonia as N | ND | mg/L | 0.10 | 350.1 | NA | 17 OCT 90 |
| Nitrate as N | 3.9 | mg/L | 0.50 | 353.2 | NA | 23 OCT 90 |
| Sulfate | 106 | mg/L | 5.0 | 300.0 | NA | 13 OCT 90 |
| Total Kjeldahl Nitrogen as N | ND | mg/L | 0.50 | 351.2 | NA | 18 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Blake Besser Approved By: John Laferty

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A Corning Company

# General Inorganics

Client Name: Sparton Technology Inc.
Client ID: FIELD BLANK
Lab ID: 011691-0006-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Chloride | ND | mg/L | 3.0 | 300.0 | NA | 13 OCT 90 |
| Fluoride | ND | mg/L | 0.10 | 340.2 | NA | 15 OCT 90 |
| Ammonia as N | ND | mg/L | 0.10 | 350.1 | NA | 17 OCT 90 |
| Nitrate as N | ND | mg/L | 0.10 | 353.2 | NA | 23 OCT 90 |
| Sulfate | ND | mg/L | 5.0 | 300.0 | NA | 13 OCT 90 |
| Total Kjeldahl Nitrogen as N | ND | mg/L | 0.50 | 351.2 | NA | 18 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Blake Besser Approved By: John Laferty

Enseco
A Corning Company

# General Inorganics

Client Name: Sparton Technology Inc.
Client ID: TRIP BLANK
Lab ID: 011691-0007-SA
Matrix: AQUEOUS Sampled: 04 OCT 90 Received: 05 OCT 90
Authorized: 05 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Chloride | ND | mg/L | 3.0 | 300.0 | NA | 13 OCT 90 |
| Fluoride | ND | mg/L | 0.10 | 340.2 | NA | 15 OCT 90 |
| Ammonia as N | ND | mg/L | 0.10 | 350.1 | NA | 17 OCT 90 |
| Nitrate as N | ND | mg/L | 0.10 | 353.2 | NA | 23 OCT 90 |
| Sulfate | ND | mg/L | 5.0 | 300.0 | NA | 13 OCT 90 |
| Total Kjeldahl Nitrogen as N | ND | mg/L | 0.50 | 351.2 | NA | 18 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Blake Besser Approved By: John Laferty

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A Corning Company

# General Inorganics

Client Name: Sparton Technology Inc.
Client ID: MW-58
Lab ID: 011691-0008-SA
Matrix: AQUEOUS Sampled: 05 OCT 90 Received: 06 OCT 90
Authorized: 05 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Chloride | 19.0 | mg/L | 3.0 | 300.0 | NA | 13 OCT 90 |
| Fluoride | 0.33 | mg/L | 0.10 | 340.2 | NA | 15 OCT 90 |
| Ammonia as N | 0.11 | mg/L | 0.10 | 350.1 | NA | 17 OCT 90 |
| Nitrate as N | 2.4 | mg/L | 0.20 | 353.2 | NA | 23 OCT 90 |
| Sulfate | 87.9 | mg/L | 5.0 | 300.0 | NA | 13 OCT 90 |
| Total Kjeldahl Nitrogen as N | ND | mg/L | 0.50 | 351.2 | NA | 18 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Blake Besser Approved By: John Laferty

## 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.

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QC LOT ASSIGNMENT REPORT
Volatile Organics by GC/MS

| Laboratory Sample Number | QC Matrix | QC Category | QC Lot Number (DCS) | QC Run Number (SCS/BLANK) |
|---|---|---|---|---|
| 011691-0001-SA | AQUEOUS | 624-A | 04 OCT 90-D | 10 OCT 90-D |
| 011691-0002-SA | AQUEOUS | 624-A | 04 OCT 90-D | 10 OCT 90-D |
| 011691-0003-SA | AQUEOUS | 624-A | 04 OCT 90-D | 10 OCT 90-D |
| 011691-0004-SA | AQUEOUS | 624-A | 04 OCT 90-D | 10 OCT 90-D |
| 011691-0005-SA | AQUEOUS | 624-A | 04 OCT 90-D | 10 OCT 90-D |
| 011691-0006-SA | AQUEOUS | 624-A | 24 SEP 90-D | 08 OCT 90-D |
| 011691-0007-SA | AQUEOUS | 624-A | 04 OCT 90-D | 08 OCT 90-D |
| 011691-0008-SA | AQUEOUS | 624-A | 11 OCT 90-H | 13 OCT 90-H |

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DUPLICATE CONTROL SAMPLE REPORT
Volatile Organics by GC/MS

| Analyte | Concentration Spiked | Measured DCS1 | Measured DCS2 | Measured AVG | Accuracy Average(%) DCS | Accuracy Limits | Precisio (RPD) DCS | Limi |
|---|---|---|---|---|---|---|---|---|
| Category: 624-A<br>Matrix: AQUEOUS<br>QC Lot: 04 OCT 90-D<br>Concentration Units: ug/L | | | | | | | | |
| 1,1-Dichloroethene | 50 | 60.0 | 60.9 | 60.4 | 121 | 61-145 | 1.5 | 1 |
| Trichloroethene | 50 | 54.7 | 54.1 | 54.4 | 109 | 71-120 | 1.1 | 1 |
| Benzene | 50 | 59.0 | 57.6 | 58.3 | 117 | 76-127 | 2.4 | 1 |
| Toluene | 50 | 54.4 | 53.9 | 54.2 | 108 | 76-125 | 0.9 | 1 |
| Chlorobenzene | 50 | 56.9 | 56.6 | 56.8 | 114 | 75-130 | 0.5 | 1 |
| Category: 624-A<br>Matrix: AQUEOUS<br>QC Lot: 24 SEP 90-D<br>Concentration Units: ug/L | | | | | | | | |
| 1,1-Dichloroethene | 50 | 48.2 | 49.2 | 48.7 | 97 | 61-145 | 2.1 | 1 |
| Trichloroethene | 50 | 53.8 | 55.1 | 54.4 | 109 | 71-120 | 2.4 | 1 |
| Benzene | 50 | 59.1 | 62.0 | 60.6 | 121 | 76-127 | 4.8 | 1 |
| Toluene | 50 | 59.7 | 61.5 | 60.6 | 121 | 76-125 | 3.0 | 1 |
| Chlorobenzene | 50 | 60.9 | 61.6 | 61.2 | 123 | 75-130 | 1.1 | 1 |
| Category: 624-A<br>Matrix: AQUEOUS<br>QC Lot: 11 OCT 90-H<br>Concentration Units: ug/L | | | | | | | | |
| 1,1-Dichloroethene | 50 | 50.7 | 52.7 | 51.7 | 103 | 61-145 | 3.9 | 1 |
| Trichloroethene | 50 | 50.4 | 54.8 | 52.6 | 105 | 71-120 | 8.4 | 1 |
| Benzene | 50 | 48.2 | 53.2 | 50.7 | 101 | 76-127 | 9.9 | 1 |
| Toluene | 50 | 45.4 | 48.9 | 47.2 | 94 | 76-125 | 7.4 | 1 |
| Chlorobenzene | 50 | 48.8 | 54.1 | 51.4 | 103 | 75-130 | 10 | 1 |

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

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SINGLE CONTROL SAMPLE REPORT
Volatile Organics by GC/MS

| Analyte | Concentration Spiked | Concentration Measured | Accuracy(%) SCS | Accuracy(%) Limits |
|---|---|---|---|---|
| Category: 624-A | | | | |
| Matrix: AQUEOUS | | | | |
| QC Lot: 04 OCT 90-D QC Run: 10 OCT 90-D | | | | |
| Concentration Units: ug/L | | | | |
| 1,2-Dichloroethane-d4 | 50.0 | 55.3 | 111 | 76-114 |
| 4-Bromofluorobenzene | 50.0 | 52.2 | 104 | 86-115 |
| Toluene-d8 | 50.0 | 54.1 | 108 | 88-110 |
| Category: 624-A | | | | |
| Matrix: AQUEOUS | | | | |
| QC Lot: 24 SEP 90-D QC Run: 08 OCT 90-D | | | | |
| Concentration Units: ug/L | | | | |
| 1,2-Dichloroethane-d4 | 50.0 | 50.9 | 102 | 76-114 |
| 4-Bromofluorobenzene | 50.0 | 50.5 | 101 | 86-115 |
| Toluene-d8 | 50.0 | 49.8 | 100 | 88-110 |
| Category: 624-A | | | | |
| Matrix: AQUEOUS | | | | |
| QC Lot: 04 OCT 90-D QC Run: 08 OCT 90-D | | | | |
| Concentration Units: ug/L | | | | |
| 1,2-Dichloroethane-d4 | 50.0 | 50.9 | 102 | 76-114 |
| 4-Bromofluorobenzene | 50.0 | 50.5 | 101 | 86-115 |
| Toluene-d8 | 50.0 | 49.8 | 100 | 88-110 |
| Category: 624-A | | | | |
| Matrix: AQUEOUS | | | | |
| QC Lot: 11 OCT 90-H QC Run: 13 OCT 90-H | | | | |
| Concentration Units: ug/L | | | | |
| 1,2-Dichloroethane-d4 | 50.0 | 49.5 | 99 | 76-114 |
| 4-Bromofluorobenzene | 50.0 | 50.4 | 101 | 86-115 |
| Toluene-d8 | 50.0 | 50.9 | 102 | 88-110 |

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

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METHOD BLANK REPORT
Volatile Organics by GC/MS

Test: 8240CP-AP9-AP
Matrix: AQUEOUS
QC Lot: 04 OCT 90-D QC Run: 10 OCT 90-D

| Analyte | Result | Units | Reporting Limit |
|---|---|---|---|
| Acetone | ND | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | ND | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |

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

| Analyte | Result | Units | Reporting Limit |
|---|---|---|---|
| Test: 8240CP-AP9-AP | | | |
| Matrix: AQUEOUS | | | |
| QC Lot: 04 OCT 90-D QC Run: 10 OCT 90-D | | | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10 |
| Styrene | ND | ug/L | 5.0 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 5.0 |
| Tetrachloroethene | ND | ug/L | 5.0 |
| Toluene | ND | ug/L | 5.0 |
| 1,1,1-Trichloroethane | ND | ug/L | 5.0 |
| 1,1,2-Trichloroethane | ND | ug/L | 5.0 |
| Trichloroethene | ND | ug/L | 5.0 |
| Trichlorofluoromethane | ND | ug/L | 5.0 |
| 1,2,3-Trichloropropane | ND | ug/L | 5.0 |
| Vinyl acetate | ND | ug/L | 10 |
| Vinyl chloride | ND | ug/L | 10 |
| Xylenes (total) | ND | ug/L | 5.0 |
| Test: 8240CP-AP9-AP | | | |
| Matrix: AQUEOUS | | | |
| QC Lot: 24 SEP 90-D QC Run: 08 OCT 90-D | | | |
| Acetone | ND | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |

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

Test: 8240CP-AP9-AP
Matrix: AQUEOUS
QC Lot: 24 SEP 90-D QC Run: 08 OCT 90-D

| Analyte | Result | Units | Reporting Limit |
|---|---|---|---|
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | ND | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10 |
| Styrene | ND | ug/L | 5.0 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 5.0 |
| Tetrachloroethene | ND | ug/L | 5.0 |
| Toluene | ND | ug/L | 5.0 |
| 1,1,1-Trichloroethane | ND | ug/L | 5.0 |
| 1,1,2-Trichloroethane | ND | ug/L | 5.0 |
| Trichloroethene | ND | ug/L | 5.0 |
| Trichlorofluoromethane | ND | ug/L | 5.0 |
| 1,2,3-Trichloropropane | ND | ug/L | 5.0 |
| Vinyl acetate | ND | ug/L | 10 |
| Vinyl chloride | ND | ug/L | 10 |
| Xylenes (total) | ND | ug/L | 5.0 |

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

Test: 8240CP-AP9-AP
Matrix: AQUEOUS
QC Lot: 04 OCT 90-D QC Run: 08 OCT 90-D

| Analyte | Result | Units | Reporting Limit |
|---|---|---|---|
| Acetone | ND | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | ND | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |

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

| Analyte | Result | Units | Reporting Limit |
|---|---|---|---|
| Test: 8240CP-AP9-AP | | | |
| Matrix: AQUEOUS | | | |
| QC Lot: 04 OCT 90-D QC Run: 08 OCT 90-D | | | |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10 |
| Styrene | ND | ug/L | 5.0 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 5.0 |
| Tetrachloroethene | ND | ug/L | 5.0 |
| Toluene | ND | ug/L | 5.0 |
| 1,1,1-Trichloroethane | ND | ug/L | 5.0 |
| 1,1,2-Trichloroethane | ND | ug/L | 5.0 |
| Trichloroethene | ND | ug/L | 5.0 |
| Trichlorofluoromethane | ND | ug/L | 5.0 |
| 1,2,3-Trichloropropane | ND | ug/L | 5.0 |
| Vinyl acetate | ND | ug/L | 10 |
| Vinyl chloride | ND | ug/L | 10 |
| Xylenes (total) | ND | ug/L | 5.0 |
| Test: 8240CP-AP9-AP | | | |
| Matrix: AQUEOUS | | | |
| QC Lot: 11 OCT 90-H QC Run: 13 OCT 90-H | | | |
| Acetone | ND | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |

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

Test: 8240CP-AP9-AP
Matrix: AQUEOUS
QC Lot: 11 OCT 90-H QC Run: 13 OCT 90-H

| Analyte | Result | Units | Reporting Limit |
|---|---|---|---|
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | ND | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10 |
| Styrene | ND | ug/L | 5.0 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 5.0 |
| Tetrachloroethene | ND | ug/L | 5.0 |
| Toluene | ND | ug/L | 5.0 |
| 1,1,1-Trichloroethane | ND | ug/L | 5.0 |
| 1,1,2-Trichloroethane | ND | ug/L | 5.0 |
| Trichloroethene | ND | ug/L | 5.0 |
| Trichlorofluoromethane | ND | ug/L | 5.0 |
| 1,2,3-Trichloropropane | ND | ug/L | 5.0 |
| Vinyl acetate | ND | ug/L | 10 |
| Vinyl chloride | ND | ug/L | 10 |
| Xylenes (total) | ND | ug/L | 5.0 |

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QC LOT ASSIGNMENT REPORT
Metals Analysis and Preparation

| Laboratory Sample Number | QC Matrix | QC Category | QC Lot Number (DCS) | QC Run Number (SCS/BLANK) |
|---|---|---|---|---|
| 011691-0001-SA | AQUEOUS | ICP-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0001-SA | AQUEOUS | AS-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0001-SA | AQUEOUS | PB-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0001-SA | AQUEOUS | SE-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0001-SA | AQUEOUS | TL-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0001-SA | AQUEOUS | HG-CVAA-AT | 26 OCT 90-A | 26 OCT 90-A |
| 011691-0002-SA | AQUEOUS | ICP-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0002-SA | AQUEOUS | AS-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0002-SA | AQUEOUS | PB-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0002-SA | AQUEOUS | SE-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0002-SA | AQUEOUS | TL-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0002-SA | AQUEOUS | HG-CVAA-AT | 26 OCT 90-A | 26 OCT 90-A |
| 011691-0003-SA | AQUEOUS | ICP-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0003-SA | AQUEOUS | AS-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0003-SA | AQUEOUS | PB-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0003-SA | AQUEOUS | SE-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0003-SA | AQUEOUS | TL-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0003-SA | AQUEOUS | HG-CVAA-AT | 26 OCT 90-A | 26 OCT 90-A |
| 011691-0004-SA | AQUEOUS | ICP-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0004-SA | AQUEOUS | AS-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0004-SA | AQUEOUS | PB-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0004-SA | AQUEOUS | SE-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0004-SA | AQUEOUS | TL-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0004-SA | AQUEOUS | HG-CVAA-AT | 26 OCT 90-A | 26 OCT 90-A |
| 011691-0005-SA | AQUEOUS | ICP-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0005-SA | AQUEOUS | AS-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0005-SA | AQUEOUS | PB-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0005-SA | AQUEOUS | SE-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0005-SA | AQUEOUS | TL-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0005-SA | AQUEOUS | HG-CVAA-AT | 26 OCT 90-A | 26 OCT 90-A |
| 011691-0006-SA | AQUEOUS | ICP-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0006-SA | AQUEOUS | AS-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0006-SA | AQUEOUS | PB-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0006-SA | AQUEOUS | SE-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0006-SA | AQUEOUS | TL-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0006-SA | AQUEOUS | HG-CVAA-AT | 26 OCT 90-A | 26 OCT 90-A |
| 011691-0007-SA | AQUEOUS | ICP-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0007-SA | AQUEOUS | AS-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0007-SA | AQUEOUS | PB-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0007-SA | AQUEOUS | SE-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0007-SA | AQUEOUS | TL-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0007-SA | AQUEOUS | HG-CVAA-AT | 26 OCT 90-A | 26 OCT 90-A |
| 011691-0008-SA | AQUEOUS | ICP-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0008-SA | AQUEOUS | AS-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0008-SA | AQUEOUS | PB-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0008-SA | AQUEOUS | SE-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |
| 011691-0008-SA | AQUEOUS | TL-FAA-AT | 18 OCT 90-C | 18 OCT 90-C |

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QC LOT ASSIGNMENT REPORT
Metals Analysis and Preparation (cont.)

| Laboratory Sample Number | QC Matrix | QC Category | QC Lot Number (DCS) | QC Run Number (SCS/BLANK) |
|---|---|---|---|---|
| 011691-0008-SA | AQUEOUS | HG-CVAA-AT | 26 OCT 90-A | 26 OCT 90-A |

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DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation

| Analyte | Concentration Spiked | Measured DCS1 | Measured DCS2 | Measured AVG | Accuracy Average(%) DCS | Accuracy Limits | Precis (RPD) DCS Li |
|---|---|---|---|---|---|---|---|
| Category: ICP-AT<br>Matrix: AQUEOUS<br>QC Lot: 18 OCT 90-C<br>Concentration Units: mg/L | | | | | | | |
| Aluminum | 2.0 | 2.09 | 2.11 | 2.10 | 105 | 75-125 | 0.9 |
| Antimony | 0.5 | 0.495 | 0.489 | 0.492 | 98 | 75-125 | 1.3 |
| Arsenic | 0.5 | 0.508 | 0.508 | 0.508 | 102 | 75-125 | 0.0 |
| Barium | 2.0 | 1.92 | 1.94 | 1.93 | 97 | 75-125 | 0.7 |
| Beryllium | 0.05 | 0.0483 | 0.0481 | 0.0482 | 96 | 75-125 | 0.5 |
| Cadmium | 0.05 | 0.0522 | 0.0490 | 0.0506 | 101 | 75-125 | 6.1 |
| Calcium | 100 | 110 | 107 | 109 | 109 | 75-125 | 2.4 |
| Chromium | 0.2 | 0.212 | 0.209 | 0.211 | 105 | 75-125 | 1.5 |
| Cobalt | 0.5 | 0.473 | 0.479 | 0.476 | 95 | 75-125 | 1.3 |
| Copper | 0.25 | 0.268 | 0.268 | 0.268 | 107 | 75-125 | 0.3 |
| Iron | 1.0 | 1.12 | 1.13 | 1.13 | 113 | 75-125 | 1.2 |
| Lead | 0.5 | 0.545 | 0.553 | 0.549 | 110 | 75-125 | 1.4 |
| Magnesium | 50 | 53.7 | 52.6 | 53.2 | 106 | 75-125 | 2.0 |
| Manganese | 0.5 | 0.478 | 0.482 | 0.480 | 96 | 75-125 | 0.8 |
| Nickel | 0.5 | 0.523 | 0.530 | 0.526 | 105 | 75-125 | 1.4 |
| Potassium | 50 | 50.2 | 50.1 | 50.2 | 100 | 75-125 | 0.0 |
| Silver | 0.05 | 0.0531 | 0.0514 | 0.0522 | 104 | 75-125 | 3.3 |
| Sodium | 100 | 110 | 112 | 111 | 111 | 75-125 | 1.1 |
| Vanadium | 0.5 | 0.552 | 0.556 | 0.554 | 111 | 75-125 | 0.7 |
| Zinc | 0.5 | 0.546 | 0.549 | 0.547 | 109 | 75-125 | 0.6 |
| Category: AS-FAA-AT<br>Matrix: AQUEOUS<br>QC Lot: 18 OCT 90-C<br>Concentration Units: mg/L | | | | | | | |
| Arsenic | 0.04 | 0.0385 | 0.0406 | 0.0396 | 99 | 75-125 | 5.3 |
| Category: PB-FAA-AT<br>Matrix: AQUEOUS<br>QC Lot: 18 OCT 90-C<br>Concentration Units: mg/L | | | | | | | |
| Lead | 0.02 | 0.0234 | 0.0240 | 0.0237 | 119 | 75-125 | 2.5 |

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

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

| Analyte | Concentration Spiked | Measured DCS1 | Measured DCS2 | Measured AVG | Accuracy Average(%) DCS | Accuracy Limits | Precisi (RPD) DCS Lin |
|---|---|---|---|---|---|---|---|
| Category: SE-FAA-AT<br>Matrix: AQUEOUS<br>QC Lot: 18 OCT 90-C<br>Concentration Units: mg/L | | | | | | | |
| Selenium | 0.01 | 0.0121 | 0.0123 | 0.0122 | 122 | 75-125 | 1.6 |
| Category: TL-FAA-AT<br>Matrix: AQUEOUS<br>QC Lot: 18 OCT 90-C<br>Concentration Units: mg/L | | | | | | | |
| Thallium | 0.05 | 0.0542 | 0.0507 | 0.0524 | 105 | 75-125 | 6.7 |
| Category: HG-CVAA-AT<br>Matrix: AQUEOUS<br>QC Lot: 26 OCT 90-A<br>Concentration Units: mg/L | | | | | | | |
| Mercury | 0.0010 | 0.00112 | 0.00114 | 0.00113 | 113 | 75-125 | 1.8 |

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

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METHOD BLANK REPORT
Metals Analysis and Preparation

| Analyte | Result | Units | Reporting Limit |
|---|---|---|---|
| **Test: ICP-AT** | | | |
| **Matrix: AQUEOUS** | | | |
| **QC Lot: 18 OCT 90-C QC Run: 18 OCT 90-C** | | | |
| Antimony | ND | mg/L | 0.060 |
| Barium | ND | mg/L | 0.010 |
| Beryllium | ND | mg/L | 0.0020 |
| Boron | ND | mg/L | 0.10 |
| Cadmium | ND | mg/L | 0.0050 |
| Chromium | ND | mg/L | 0.010 |
| Cobalt | ND | mg/L | 0.010 |
| Copper | ND | mg/L | 0.020 |
| Manganese | ND | mg/L | 0.010 |
| Nickel | ND | mg/L | 0.040 |
| Silver | ND | mg/L | 0.010 |
| Tin | ND | mg/L | 0.10 |
| Vanadium | ND | mg/L | 0.010 |
| Zinc | ND | mg/L | 0.020 |
| **Test: AS-FAA-AT** | | | |
| **Matrix: AQUEOUS** | | | |
| **QC Lot: 18 OCT 90-C QC Run: 18 OCT 90-C** | | | |
| Arsenic | ND | mg/L | 0.0050 |
| **Test: PB-FAA-AT** | | | |
| **Matrix: AQUEOUS** | | | |
| **QC Lot: 18 OCT 90-C QC Run: 18 OCT 90-C** | | | |
| Lead | ND | mg/L | 0.0050 |
| **Test: SE-FAA-AT** | | | |
| **Matrix: AQUEOUS** | | | |
| **QC Lot: 18 OCT 90-C QC Run: 18 OCT 90-C** | | | |
| Selenium | ND | mg/L | 0.0050 |

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METHOD BLANK REPORT
Metals Analysis and Preparation (cont.)

| Analyte | Result | Units | Reporting Limit |
|---|---|---|---|
| Test: TL-FAA-AT | | | |
| Matrix: AQUEOUS | | | |
| QC Lot: 18 OCT 90-C QC Run: 18 OCT 90-C | | | |
| Thallium | ND | mg/L | 0.0050 |
| Test: HG-CVAA-AT | | | |
| Matrix: AQUEOUS | | | |
| QC Lot: 26 OCT 90-A QC Run: 26 OCT 90-A | | | |
| Mercury | ND | mg/L | 0.00020 |

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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) |
|---|---|---|---|---|
| 011691-0001-SA | AQUEOUS | NH3-A | 17 OCT 90-A | - |
| 011691-0001-SA | AQUEOUS | SO4-IC-A | 13 OCT 90-O | - |
| 011691-0001-SA | AQUEOUS | CL-IC-A | 13 OCT 90-O | - |
| 011691-0001-SA | AQUEOUS | F-A | 15 OCT 90-B | - |
| 011691-0001-SA | AQUEOUS | TKN-A | 17 OCT 90-A | 17 OCT 90-A |
| 011691-0001-SA | AQUEOUS | NO3-A | 23 OCT 90-A | - |
| 011691-0002-SA | AQUEOUS | NH3-A | 17 OCT 90-A | - |
| 011691-0002-SA | AQUEOUS | SO4-IC-A | 13 OCT 90-O | - |
| 011691-0002-SA | AQUEOUS | CL-IC-A | 13 OCT 90-O | - |
| 011691-0002-SA | AQUEOUS | F-A | 15 OCT 90-B | - |
| 011691-0002-SA | AQUEOUS | TKN-A | 17 OCT 90-A | 17 OCT 90-A |
| 011691-0002-SA | AQUEOUS | NO3-A | 23 OCT 90-A | - |
| 011691-0003-SA | AQUEOUS | NH3-A | 17 OCT 90-A | - |
| 011691-0003-SA | AQUEOUS | SO4-IC-A | 13 OCT 90-O | - |
| 011691-0003-SA | AQUEOUS | CL-IC-A | 13 OCT 90-O | - |
| 011691-0003-SA | AQUEOUS | F-A | 15 OCT 90-B | - |
| 011691-0003-SA | AQUEOUS | TKN-A | 17 OCT 90-A | 17 OCT 90-A |
| 011691-0003-SA | AQUEOUS | NO3-A | 23 OCT 90-A | - |
| 011691-0004-SA | AQUEOUS | NH3-A | 17 OCT 90-A | - |
| 011691-0004-SA | AQUEOUS | SO4-IC-A | 13 OCT 90-O | - |
| 011691-0004-SA | AQUEOUS | CL-IC-A | 13 OCT 90-O | - |
| 011691-0004-SA | AQUEOUS | F-A | 15 OCT 90-B | - |
| 011691-0004-SA | AQUEOUS | TKN-A | 17 OCT 90-A | 17 OCT 90-A |
| 011691-0004-SA | AQUEOUS | NO3-A | 23 OCT 90-A | - |
| 011691-0005-SA | AQUEOUS | NH3-A | 17 OCT 90-A | - |
| 011691-0005-SA | AQUEOUS | SO4-IC-A | 13 OCT 90-O | - |
| 011691-0005-SA | AQUEOUS | CL-IC-A | 13 OCT 90-O | - |
| 011691-0005-SA | AQUEOUS | F-A | 15 OCT 90-B | - |
| 011691-0005-SA | AQUEOUS | TKN-A | 17 OCT 90-A | 17 OCT 90-A |
| 011691-0005-SA | AQUEOUS | NO3-A | 23 OCT 90-A | - |
| 011691-0006-SA | AQUEOUS | NH3-A | 17 OCT 90-A | - |
| 011691-0006-SA | AQUEOUS | SO4-IC-A | 13 OCT 90-O | - |
| 011691-0006-SA | AQUEOUS | CL-IC-A | 13 OCT 90-O | - |
| 011691-0006-SA | AQUEOUS | F-A | 15 OCT 90-B | - |
| 011691-0006-SA | AQUEOUS | TKN-A | 17 OCT 90-A | 17 OCT 90-A |
| 011691-0006-SA | AQUEOUS | NO3-A | 23 OCT 90-A | - |
| 011691-0007-SA | AQUEOUS | NH3-A | 17 OCT 90-A | - |
| 011691-0007-SA | AQUEOUS | SO4-IC-A | 13 OCT 90-O | - |
| 011691-0007-SA | AQUEOUS | CL-IC-A | 13 OCT 90-O | - |
| 011691-0007-SA | AQUEOUS | F-A | 15 OCT 90-B | - |
| 011691-0007-SA | AQUEOUS | TKN-A | 17 OCT 90-A | 17 OCT 90-A |
| 011691-0007-SA | AQUEOUS | NO3-A | 23 OCT 90-A | - |
| 011691-0008-SA | AQUEOUS | NH3-A | 17 OCT 90-B | - |
| 011691-0008-SA | AQUEOUS | SO4-IC-A | 13 OCT 90-O | - |
| 011691-0008-SA | AQUEOUS | CL-IC-A | 13 OCT 90-O | - |
| 011691-0008-SA | AQUEOUS | F-A | 15 OCT 90-B | - |
| 011691-0008-SA | AQUEOUS | TKN-A | 17 OCT 90-A | 17 OCT 90-A |

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QC LOT ASSIGNMENT REPORT
Wet Chemistry Analysis and Preparation (cont.)

| Laboratory Sample Number | QC Matrix | QC Category | QC Lot Number (DCS) | QC Run Number (SCS/BLANK) |
|---|---|---|---|---|
| 011691-0008-SA | AQUEOUS | NO3-A | 23 OCT 90-A | - |

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DUPLICATE CONTROL SAMPLE REPORT
Wet Chemistry Analysis and Preparation

| Analyte | Concentration Spiked | Measured DCS1 | Measured DCS2 | Measured AVG | Accuracy Average(%) DCS | Accuracy Average(%) Limits | Precisi (RPD) DCS Lim |
|---|---|---|---|---|---|---|---|
| Category: NH3-A<br>Matrix: AQUEOUS<br>QC Lot: 17 OCT 90-A<br>Concentration Units: mg/L | | | | | | | |
| Ammonia as N | 9.1 | 8.68 | 8.68 | 8.68 | 95 | 93-107 | 0.0 |
| Category: SO4-IC-A<br>Matrix: AQUEOUS<br>QC Lot: 13 OCT 90-O<br>Concentration Units: mg/L | | | | | | | |
| Sulfate | 200 | 202 | 204 | 203 | 102 | 93-107 | 1.0 |
| Category: CL-IC-A<br>Matrix: AQUEOUS<br>QC Lot: 13 OCT 90-O<br>Concentration Units: mg/L | | | | | | | |
| Chloride | 100 | 99.5 | 100 | 99.8 | 100 | 92-108 | 0.5 |
| Category: F-A<br>Matrix: AQUEOUS<br>QC Lot: 15 OCT 90-B<br>Concentration Units: mg/L | | | | | | | |
| Fluoride | 4.1 | 3.75 | 3.89 | 3.82 | 93 | 88-112 | 3.7 |
| Category: TKN-A<br>Matrix: AQUEOUS<br>QC Lot: 17 OCT 90-A<br>Concentration Units: mg/L | | | | | | | |
| Total Kjeldahl Nitrogen as N | 3.7 | 3.65 | 3.74 | 3.70 | 100 | 78-122 | 2.4 |

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

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

| Analyte | Concentration Spiked | Measured DCS1 | Measured DCS2 | Measured AVG | Accuracy Average(%) DCS | Accuracy Limits | Precis (RPD) DCS Li |
|---|---|---|---|---|---|---|---|
| Category: NO3-A<br>Matrix: AQUEOUS<br>QC Lot: 23 OCT 90-A<br>Concentration Units: mg/L | | | | | | | |
| Nitrate as N | 2.8 | 2.90 | 2.88 | 2.89 | 103 | 91-109 | 0.7 |
| Category: NH3-A<br>Matrix: AQUEOUS<br>QC Lot: 17 OCT 90-B<br>Concentration Units: mg/L | | | | | | | |
| Ammonia as N | 9.1 | 8.76 | 8.66 | 8.71 | 96 | 93-107 | 1.1 |

Calculations are performed before rounding to avoid round-off errors in calculated result:

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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: 17 OCT 90-A QC Run: 17 OCT 90-A | | | |
| Total Kjeldahl Nitrogen as N | ND | mg/L | 0.50 |

Rocky Mountain
Analytical Laboratory

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November 12, 1990

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

Dear Mr. Samala:

Enclosed is the report for one aqueous sample received at Enseco-Rocky Mountain Analytical Laboratory on October 9, 1990.

Included with the report is a quality control summary.

Please call if you have any questions.

Sincerely,

Joel E. Holtz
Program Administrator

Reviewed by:

Sue Dalla
Manager
Program Administration

JEH/SD/dmh
Enclosures

RMAL #011746

002555

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. 011746

NOVEMBER 12, 1990

Reviewed by: Joel E. Holtz

Sue Dalla

002556

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.

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SAMPLE DESCRIPTION INFORMATION
for
Sparton Technology Inc.

| Lab ID | Client ID | Matrix | Sampled Date | Sampled Time | Received Date |
|---|---|---|---|---|---|
| 011746-0001-SA | MW-64 | AQUEOUS | 08 OCT 90 | | 09 OCT 90 |

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# ANALYTICAL TEST REQUESTS
for
Sparton Technology Inc.

| Lab ID: 011746 | Group Code | Analysis Description | Custom Test? |
|---|---|---|---|
| 0001 | A | Volatile Organics | Y |
| | | Appendix IX List | Y |
| | | Screen - Volatile Organics | N |
| | | ICP Metals (Total) | Y |
| | | Prep - Total Metals, ICP | N |
| | | Arsenic, Furnace AA (Total) | N |
| | | Prep - Total Metals, Furnace AA | N |
| | | Lead, Furnace AA (Total) | N |
| | | Selenium, Furnace AA (Total) | N |
| | | Thallium, Furnace AA (Total) | N |
| | | Mercury, Cold Vapor AA (Total) | N |
| | | Prep - Mercury, Cold Vapor AA (Total) | N |
| | | Ammonia | N |
| | | Sulfate, Ion Chromatography | N |
| | | Chloride, Ion Chromatography | N |
| | | Fluoride, Electrode | N |
| | | Total Kjeldahl Nitrogen (TKN) | N |
| | | Nitrate, as Nitrogen | 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, May, 1989.

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

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# Volatile Organics
## Appendix IX List
## Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-64
Lab ID: 011746-0001-SA
Matrix: AQUEOUS Sampled: 08 OCT 90 Received: 09 OCT 90
Authorized: 09 OCT 90 Prepared: 15 OCT 90 Analyzed: 18 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| Acetone | ND | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | ND | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Stephanie Boehnke Approved By: Jeff Lowry

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Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: MW-64
Lab ID: 011746-0001-SA
Matrix: AQUEOUS Sampled: 08 OCT 90 Received: 09 OCT 90
Authorized: 09 OCT 90 Prepared: 15 OCT 90 Analyzed: 18 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10 |
| Styrene | ND | ug/L | 5.0 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 5.0 |
| Tetrachloroethene | ND | ug/L | 5.0 |
| Toluene | ND | ug/L | 5.0 |
| 1,1,1-Trichloroethane | ND | ug/L | 5.0 |
| 1,1,2-Trichloroethane | ND | ug/L | 5.0 |
| Trichloroethene | ND | ug/L | 5.0 |
| Trichlorofluoromethane | ND | ug/L | 5.0 |
| 1,2,3-Trichloropropane | ND | ug/L | 5.0 |
| Vinyl acetate | ND | ug/L | 10 |
| Vinyl chloride | ND | ug/L | 10 |
| Xylenes (total) | ND | ug/L | 5.0 |

| Surrogate | Recovery | | |
|---|---|---|---|
| Toluene-d8 | 100 | % | -- |
| 4-Bromofluorobenzene | 96 | % | -- |
| 1,2-Dichloroethane-d4 | 104 | % | -- |

ND = Not detected
NA = Not applicable

Reported By: Stephanie Boehnke Approved By: Jeff Lowry

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# Metals

## Total Metals

Client Name: Sparton Technology Inc.
Client ID: MW-64
Lab ID: 011746-0001-SA
Matrix: AQUEOUS Sampled: 08 OCT 90 Received: 09 OCT 90
Authorized: 09 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Antimony | ND | mg/L | 0.060 | 6010 | 24 OCT 90 | 30 OCT 90 |
| Arsenic | ND | mg/L | 0.0050 | 7060 | 24 OCT 90 | 01 NOV 90 |
| Barium | 0.080 | mg/L | 0.010 | 6010 | 24 OCT 90 | 30 OCT 90 |
| Beryllium | ND | mg/L | 0.0020 | 6010 | 24 OCT 90 | 30 OCT 90 |
| Boron | 0.12 | mg/L | 0.10 | 6010 | 24 OCT 90 | 30 OCT 90 |
| Cadmium | ND | mg/L | 0.0050 | 6010 | 24 OCT 90 | 30 OCT 90 |
| Chromium | ND | mg/L | 0.010 | 6010 | 24 OCT 90 | 30 OCT 90 |
| Cobalt | ND | mg/L | 0.010 | 6010 | 24 OCT 90 | 30 OCT 90 |
| Copper | ND | mg/L | 0.020 | 6010 | 24 OCT 90 | 30 OCT 90 |
| Lead | 0.0053 | mg/L | 0.0050 | 7421 | 24 OCT 90 | 01 NOV 90 |
| Manganese | 0.024 | mg/L | 0.010 | 6010 | 24 OCT 90 | 30 OCT 90 |
| Mercury | ND | mg/L | 0.00020 | 7470 | 30 OCT 90 | 31 OCT 90 |
| Nickel | ND | mg/L | 0.040 | 6010 | 24 OCT 90 | 30 OCT 90 |
| Selenium | ND | mg/L | 0.0050 | 7740 | 24 OCT 90 | 01 NOV 90 |
| Silver | ND | mg/L | 0.010 | 6010 | 24 OCT 90 | 30 OCT 90 |
| Thallium | ND | mg/L | 0.0050 | 7841 | 24 OCT 90 | 01 NOV 90 |
| Tin | ND | mg/L | 0.10 | 6010 | 24 OCT 90 | 30 OCT 90 |
| Vanadium | ND | mg/L | 0.010 | 6010 | 24 OCT 90 | 30 OCT 90 |
| Zinc | ND | mg/L | 0.020 | 6010 | 24 OCT 90 | 30 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: David Patterson Approved By: Dave Roberts

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# General Inorganics

Client Name: Sparton Technology Inc.
Client ID: MW-64
Lab ID: 011746-0001-SA
Matrix: AQUEOUS Sampled: 08 OCT 90 Received: 09 OCT 90
Authorized: 09 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Chloride | 19.6 | mg/L | 3.0 | 300.0 | NA | 14 OCT 90 |
| Fluoride | 0.25 | mg/L | 0.10 | 340.2 | NA | 15 OCT 90 |
| Ammonia as N | ND | mg/L | 0.10 | 350.1 | NA | 31 OCT 90 |
| Nitrate as N | 3.3 | mg/L | 0.20 | 353.2 | NA | 24 OCT 90 |
| Sulfate | 122 | mg/L | 5.0 | 300.0 | NA | 14 OCT 90 |
| Total Kjeldahl Nitrogen as N | ND | mg/L | 0.50 | 351.2 | NA | 18 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Blake Besser Approved By: Mary Grehl

## 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.

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QC LOT ASSIGNMENT REPORT
Volatile Organics by GC/MS

| Laboratory Sample Number | QC Matrix | QC Category | QC Lot Number (DCS) | QC Run Number (SCS/BLANK) |
|---|---|---|---|---|
| 011746-0001-SA | AQUEOUS | 624-A | 08 OCT 90-B | 18 OCT 90-B |

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DUPLICATE CONTROL SAMPLE REPORT
Volatile Organics by GC/MS

| Analyte | Concentration Spiked | Measured DCS1 | Measured DCS2 | Measured AVG | Accuracy Average(%) DCS | Accuracy Limits | Precisic (RPD) DCS | Limi |
|---|---|---|---|---|---|---|---|---|
| Category: 624-A | | | | | | | | |
| Matrix: AQUEOUS | | | | | | | | |
| QC Lot: 08 OCT 90-B | | | | | | | | |
| Concentration Units: ug/L | | | | | | | | |
| 1,1-Dichloroethene | 50 | 53.0 | 49.9 | 51.4 | 103 | 61-145 | 6.0 | 1 |
| Trichloroethene | 50 | 52.1 | 50.8 | 51.4 | 103 | 71-120 | 2.5 | 1 |
| Benzene | 50 | 53.2 | 50.8 | 52.0 | 104 | 76-127 | 4.6 | 1 |
| Toluene | 50 | 48.4 | 48.7 | 48.6 | 97 | 76-125 | 0.6 | 1 |
| Chlorobenzene | 50 | 48.7 | 50.8 | 49.8 | 100 | 75-130 | 4.2 | 1 |

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

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SINGLE CONTROL SAMPLE REPORT
Volatile Organics by GC/MS

| Analyte | Concentration Spiked | Concentration Measured | Accuracy(%) SCS | Accuracy(%) Limits |
|---|---|---|---|---|
| Category: 624-A | | | | |
| Matrix: AQUEOUS | | | | |
| QC Lot: 08 OCT 90-B QC Run: 18 OCT 90-B | | | | |
| Concentration Units: ug/L | | | | |
| 1,2-Dichloroethane-d4 | 50.0 | 48.4 | 97 | 76-114 |
| 4-Bromofluorobenzene | 50.0 | 48.7 | 97 | 86-115 |
| Toluene-d8 | 50.0 | 48.7 | 97 | 88-110 |

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

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METHOD BLANK REPORT
Volatile Organics by GC/MS

Test: 8240CP-AP9-AP
Matrix: AQUEOUS
QC Lot: 08 OCT 90-B QC Run: 18 OCT 90-B

| Analyte | Result | Units | Reporting Limit |
|---|---|---|---|
| Acetone | 12 | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | ND | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |

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

Test: 8240CP-AP9-AP
Matrix: AQUEOUS
QC Lot: 08 OCT 90-B QC Run: 18 OCT 90-B

| Analyte | Result | Units | Reporting Limit |
|---|---|---|---|
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10 |
| Styrene | ND | ug/L | 5.0 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 5.0 |
| Tetrachloroethene | ND | ug/L | 5.0 |
| Toluene | ND | ug/L | 5.0 |
| 1,1,1-Trichloroethane | ND | ug/L | 5.0 |
| 1,1,2-Trichloroethane | ND | ug/L | 5.0 |
| Trichloroethene | ND | ug/L | 5.0 |
| Trichlorofluoromethane | ND | ug/L | 5.0 |
| 1,2,3-Trichloropropane | ND | ug/L | 5.0 |
| Vinyl acetate | ND | ug/L | 10 |
| Vinyl chloride | ND | ug/L | 10 |
| Xylenes (total) | ND | ug/L | 5.0 |

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QC LOT ASSIGNMENT REPORT
Metals Analysis and Preparation

| Laboratory Sample Number | QC Matrix | QC Category | QC Lot Number (DCS) | QC Run Number (SCS/BLANK) |
|---|---|---|---|---|
| 011746-0001-SA | AQUEOUS | ICP-AT | 24 OCT 90-B | 24 OCT 90-B |
| 011746-0001-SA | AQUEOUS | AS-FAA-AT | 24 OCT 90-A | 24 OCT 90-A |
| 011746-0001-SA | AQUEOUS | PB-FAA-AT | 24 OCT 90-A | 24 OCT 90-A |
| 011746-0001-SA | AQUEOUS | SE-FAA-AT | 24 OCT 90-A | 24 OCT 90-A |
| 011746-0001-SA | AQUEOUS | TL-FAA-AT | 24 OCT 90-A | 24 OCT 90-A |
| 011746-0001-SA | AQUEOUS | HG-CVAA-AT | 30 OCT 90-A | 30 OCT 90-A |

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DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation

| Analyte | Concentration Spiked | Measured DCS1 | Measured DCS2 | Measured AVG | Accuracy Average(%) DCS | Accuracy Average(%) Limits | Precis (RPD) DCS Li |
|---|---|---|---|---|---|---|---|
| Category: ICP-AT | | | | | | | |
| Matrix: AQUEOUS | | | | | | | |
| QC Lot: 24 OCT 90-B | | | | | | | |
| Concentration Units: mg/L | | | | | | | |
| Aluminum | 2.0 | 2.00 | 1.98 | 1.99 | 100 | 75-125 | 1.3 |
| Antimony | 0.5 | 0.518 | 0.506 | 0.512 | 102 | 75-125 | 2.5 |
| Arsenic | 0.5 | 0.468 | 0.483 | 0.475 | 95 | 75-125 | 3.2 |
| Barium | 2.0 | 2.02 | 2.01 | 2.01 | 101 | 75-125 | 0.4 |
| Beryllium | 0.05 | 0.0516 | 0.0503 | 0.0510 | 102 | 75-125 | 2.4 |
| Cadmium | 0.05 | 0.0451 | 0.0450 | 0.0450 | 90 | 75-125 | 0.2 |
| Calcium | 100 | 102 | 97.0 | 99.3 | 99 | 75-125 | 4.7 |
| Chromium | 0.2 | 0.208 | 0.205 | 0.207 | 103 | 75-125 | 1.4 |
| Cobalt | 0.5 | 0.494 | 0.506 | 0.500 | 100 | 75-125 | 2.4 |
| Copper | 0.25 | 0.248 | 0.253 | 0.250 | 100 | 75-125 | 2.0 |
| Iron | 1.0 | 1.03 | 1.03 | 1.03 | 103 | 75-125 | 0.7 |
| Lead | 0.5 | 0.479 | 0.492 | 0.485 | 97 | 75-125 | 2.5 |
| Magnesium | 50 | 49.4 | 47.1 | 48.3 | 97 | 75-125 | 4.9 |
| Manganese | 0.5 | 0.500 | 0.506 | 0.503 | 101 | 75-125 | 1.2 |
| Nickel | 0.5 | 0.497 | 0.503 | 0.500 | 100 | 75-125 | 1.2 |
| Potassium | 50 | 50.4 | 48.0 | 49.2 | 98 | 75-125 | 4.8 |
| Silver | 0.05 | 0.0570 | 0.0553 | 0.0561 | 112 | 75-125 | 3.0 |
| Sodium | 100 | 102 | 97.8 | 99.9 | 100 | 75-125 | 4.3 |
| Vanadium | 0.5 | 0.514 | 0.512 | 0.513 | 103 | 75-125 | 0.2 |
| Zinc | 0.5 | 0.481 | 0.498 | 0.490 | 98 | 75-125 | 3.5 |
| Category: AS-FAA-AT | | | | | | | |
| Matrix: AQUEOUS | | | | | | | |
| QC Lot: 24 OCT 90-A | | | | | | | |
| Concentration Units: mg/L | | | | | | | |
| Arsenic | 0.04 | 0.0380 | 0.0387 | 0.0384 | 96 | 75-125 | 1.8 |
| Category: PB-FAA-AT | | | | | | | |
| Matrix: AQUEOUS | | | | | | | |
| QC Lot: 24 OCT 90-A | | | | | | | |
| Concentration Units: mg/L | | | | | | | |
| Lead | 0.02 | 0.0226 | 0.0216 | 0.0221 | 111 | 75-125 | 4.5 |

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

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

| Analyte | Concentration Spiked | Measured DCS1 | Measured DCS2 | Measured AVG | Accuracy Average(%) DCS | Accuracy Limits | Precis (RPD) DCS | Li |
|---|---|---|---|---|---|---|---|---|
| Category: SE-FAA-AT<br>Matrix: AQUEOUS<br>QC Lot: 24 OCT 90-A<br>Concentration Units: mg/L | | | | | | | | |
| Selenium | 0.01 | 0.0106 | 0.0106 | 0.0106 | 106 | 75-125 | 0.0 | |
| Category: TL-FAA-AT<br>Matrix: AQUEOUS<br>QC Lot: 24 OCT 90-A<br>Concentration Units: mg/L | | | | | | | | |
| Thallium | 0.05 | 0.0501 | 0.0538 | 0.0520 | 104 | 75-125 | 7.1 | |
| Category: HG-CVAA-AT<br>Matrix: AQUEOUS<br>QC Lot: 30 OCT 90-A<br>Concentration Units: mg/L | | | | | | | | |
| Mercury | 0.0010 | 0.00116 | 0.00118 | 0.00117 | 117 | 75-125 | 1.7 | |

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

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METHOD BLANK REPORT
Metals Analysis and Preparation

| Analyte | Result | Units | Reporting Limit |
|---|---|---|---|
| **Test: ICP-AT** | | | |
| **Matrix: AQUEOUS** | | | |
| **QC Lot: 24 OCT 90-B QC Run: 24 OCT 90-B** | | | |
| Antimony | ND | mg/L | 0.060 |
| Barium | ND | mg/L | 0.010 |
| Beryllium | ND | mg/L | 0.0020 |
| Boron | ND | mg/L | 0.10 |
| Cadmium | ND | mg/L | 0.0050 |
| Chromium | ND | mg/L | 0.010 |
| Cobalt | ND | mg/L | 0.010 |
| Copper | ND | mg/L | 0.020 |
| Manganese | ND | mg/L | 0.010 |
| Nickel | ND | mg/L | 0.040 |
| Silver | ND | mg/L | 0.010 |
| Tin | ND | mg/L | 0.10 |
| Vanadium | ND | mg/L | 0.010 |
| Zinc | ND | mg/L | 0.020 |
| **Test: AS-FAA-AT** | | | |
| **Matrix: AQUEOUS** | | | |
| **QC Lot: 24 OCT 90-A QC Run: 24 OCT 90-A** | | | |
| Arsenic | ND | mg/L | 0.0050 |
| **Test: PB-FAA-AT** | | | |
| **Matrix: AQUEOUS** | | | |
| **QC Lot: 24 OCT 90-A QC Run: 24 OCT 90-A** | | | |
| Lead | ND | mg/L | 0.0050 |
| **Test: SE-FAA-AT** | | | |
| **Matrix: AQUEOUS** | | | |
| **QC Lot: 24 OCT 90-A QC Run: 24 OCT 90-A** | | | |
| Selenium | ND | mg/L | 0.0050 |

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METHOD BLANK REPORT
Metals Analysis and Preparation (cont.)

| Analyte | Result | Units | Reporting Limit |
|---|---|---|---|
| Test: TL-FAA-AT<br>Matrix: AQUEOUS<br>QC Lot: 24 OCT 90-A QC Run: 24 OCT 90-A | | | |
| Thallium | ND | mg/L | 0.0050 |
| Test: HG-CVAA-AT<br>Matrix: AQUEOUS<br>QC Lot: 30 OCT 90-A QC Run: 30 OCT 90-A | | | |
| Mercury | ND | mg/L | 0.00020 |

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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) |
|---|---|---|---|---|
| 011746-0001-SA | AQUEOUS | NH3-A | 31 OCT 90-A | - |
| 011746-0001-SA | AQUEOUS | SO4-IC-A | 14 OCT 90-P | - |
| 011746-0001-SA | AQUEOUS | CL-IC-A | 14 OCT 90-Q | - |
| 011746-0001-SA | AQUEOUS | F-A | 15 OCT 90-B | - |
| 011746-0001-SA | AQUEOUS | TKN-A | 17 OCT 90-A | 17 OCT 90-A |
| 011746-0001-SA | AQUEOUS | NO3-A | 24 OCT 90-A | - |

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DUPLICATE CONTROL SAMPLE REPORT
Wet Chemistry Analysis and Preparation

| Analyte | Concentration Spiked | Measured DCS1 | Measured DCS2 | AVG | Accuracy Average(%) DCS | Accuracy Limits | Precis (RPD) DCS Li |
|---|---|---|---|---|---|---|---|
| Category: NH3-A<br>Matrix: AQUEOUS<br>QC Lot: 31 OCT 90-A<br>Concentration Units: mg/L | | | | | | | |
| Ammonia as N | 9.1 | 8.73 | 8.70 | 8.72 | 96 | 93-107 | 0.3 |
| Category: SO4-IC-A<br>Matrix: AQUEOUS<br>QC Lot: 14 OCT 90-P<br>Concentration Units: mg/L | | | | | | | |
| Sulfate | 200 | 206 | 206 | 206 | 103 | 93-107 | 0.0 |
| Category: CL-IC-A<br>Matrix: AQUEOUS<br>QC Lot: 14 OCT 90-Q<br>Concentration Units: mg/L | | | | | | | |
| Chloride | 100 | 103 | 104 | 104 | 104 | 92-108 | 1.0 |
| Category: F-A<br>Matrix: AQUEOUS<br>QC Lot: 15 OCT 90-B<br>Concentration Units: mg/L | | | | | | | |
| Fluoride | 4.1 | 3.75 | 3.89 | 3.82 | 93 | 88-112 | 3.7 |
| Category: TKN-A<br>Matrix: AQUEOUS<br>QC Lot: 17 OCT 90-A<br>Concentration Units: mg/L | | | | | | | |
| Total Kjeldahl Nitrogen as N | 3.7 | 3.65 | 3.74 | 3.70 | 100 | 78-122 | 2.4 |

Calculations are performed before rounding to avoid round-off errors in calculated result:

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

| Analyte | Concentration Spiked | Measured DCS1 | Measured DCS2 | Measured AVG | Accuracy Average(%) DCS | Accuracy Limits | Precis (RPD) DCS | Li |
|---|---|---|---|---|---|---|---|---|
| Category: NO3-A | | | | | | | | |
| Matrix: AQUEOUS | | | | | | | | |
| QC Lot: 24 OCT 90-A | | | | | | | | |
| Concentration Units: mg/L | | | | | | | | |
| Nitrate as N | 2.8 | 2.69 | 2.84 | 2.76 | 99 | 91-109 | 5.4 | |

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

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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: 17 OCT 90-A QC Run: 17 OCT 90-A | | | |
| Total Kjeldahl Nitrogen as N | ND | mg/L | 0.50 |

Rocky Mountain
Analytical Laboratory

Enseco
A CORNING Company

November 20, 1990

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

Dear Mr. Samala:

Enclosed is the report for nine aqueous samples received at Enseco-Rocky Mountain Analytical Laboratory on October 16, 1990.

Included with the report is a quality control summary.

Please call if you have any questions.

Sincerely,

Joel E. Holtz
Program Administrator

Reviewed by:

Susan Wyatt for
Sue Dalla
Manager
Program Administration

JEH/SD/dmh
Enclosures

RMAL #011836



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 INC.
# ENSECO-RMAL NO. 011836

NOVEMBER 20, 1990

Reviewed by: Joel E. Holtz

Susan Wyatt for
Sue Dalla

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.

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# SAMPLE DESCRIPTION INFORMATION
for
Sparton Technology Inc.

| Lab ID | Client ID | Matrix | Sampled Date | Sampled Time | Received Date |
|---|---|---|---|---|---|
| 011836-0001-SA | Groundwater from MW-59 | AQUEOUS | 15 OCT 90 | 08:50 | 16 OCT 90 |
| 011836-0002-SA | Groundwater from MW-63 | AQUEOUS | 15 OCT 90 | 08:55 | 16 OCT 90 |
| 011836-0003-SA | Groundwater from MW-62 | AQUEOUS | 15 OCT 90 | 09:40 | 16 OCT 90 |
| 011836-0004-SA | Groundwater from MW-60 | AQUEOUS | 15 OCT 90 | 11:22 | 16 OCT 90 |
| 011836-0005-SA | Groundwater from MW-61 | AQUEOUS | 15 OCT 90 | 12:30 | 16 OCT 90 |
| 011836-0006-SA | Groundwater from MW-58 | AQUEOUS | 15 OCT 90 | 13:50 | 16 OCT 90 |
| 011836-0007-SA | Groundwater from MW-64 | AQUEOUS | 15 OCT 90 | 13:45 | 16 OCT 90 |
| 011836-0008-SA | Field blank | AQUEOUS | 15 OCT 90 | 12:45 | 16 OCT 90 |
| 011836-0009-SA | Trip blank | AQUEOUS | 15 OCT 90 | | 16 OCT 90 |

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# ANALYTICAL TEST REQUESTS
for
Sparton Technology Inc.

| Lab ID: 011836 | Group Code | Analysis Description | Custom Test? |
|---|---|---|---|
| 0001 - 0009 | A | Volatile Organics | Y |
| | | Appendix IX List | Y |
| | | Screen - Volatile Organics | N |
| | | ICP Metals (Total) | Y |
| | | Prep - Total Metals, ICP | N |
| | | Arsenic, Furnace AA (Total) | N |
| | | Prep - Total Metals, Furnace AA | N |
| | | Lead, Furnace AA (Total) | N |
| | | Selenium, Furnace AA (Total) | N |
| | | Thallium, Furnace AA (Total) | N |
| | | Mercury, Cold Vapor AA (Total) | N |
| | | Prep - Mercury, Cold Vapor AA (Total) | N |
| | | Ammonia | N |
| | | Sulfate, Ion Chromatography | N |
| | | Chloride, Ion Chromatography | N |
| | | Fluoride, Electrode | N |
| | | Total Kjeldahl Nitrogen (TKN) | N |
| | | Nitrate, as Nitrogen | 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, May, 1989.

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

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Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-59
Lab ID: 011836-0001-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: 18 OCT 90 Analyzed: 21 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| Acetone | ND | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | ND | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Jeff Lowry

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A Corning Company

Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-59
Lab ID: 011836-0001-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: 18 OCT 90 Analyzed: 21 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10 |
| Styrene | ND | ug/L | 5.0 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 5.0 |
| Tetrachloroethene | ND | ug/L | 5.0 |
| Toluene | ND | ug/L | 5.0 |
| 1,1,1-Trichloroethane | ND | ug/L | 5.0 |
| 1,1,2-Trichloroethane | ND | ug/L | 5.0 |
| Trichloroethene | ND | ug/L | 5.0 |
| Trichlorofluoromethane | ND | ug/L | 5.0 |
| 1,2,3-Trichloropropane | ND | ug/L | 5.0 |
| Vinyl acetate | ND | ug/L | 10 |
| Vinyl chloride | ND | ug/L | 10 |
| Xylenes (total) | ND | ug/L | 5.0 |

| Surrogate | Recovery | | |
|---|---|---|---|
| Toluene-d8 | 96 | % | -- |
| 4-Bromofluorobenzene | 97 | % | -- |
| 1,2-Dichloroethane-d4 | 94 | % | -- |

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Jeff Lowry

Enseco
A Corning Company

Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-63
Lab ID: 011836-0002-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: 18 OCT 90 Analyzed: 21 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| Acetone | ND | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | ND | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Jeff Lowry

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A Corning Company

Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-63
Lab ID: 011836-0002-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: 18 OCT 90 Analyzed: 21 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10 |
| Styrene | ND | ug/L | 5.0 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 5.0 |
| Tetrachloroethene | ND | ug/L | 5.0 |
| Toluene | ND | ug/L | 5.0 |
| 1,1,1-Trichloroethane | ND | ug/L | 5.0 |
| 1,1,2-Trichloroethane | ND | ug/L | 5.0 |
| Trichloroethene | ND | ug/L | 5.0 |
| Trichlorofluoromethane | ND | ug/L | 5.0 |
| 1,2,3-Trichloropropane | ND | ug/L | 5.0 |
| Vinyl acetate | ND | ug/L | 10 |
| Vinyl chloride | ND | ug/L | 10 |
| Xylenes (total) | ND | ug/L | 5.0 |

| Surrogate | Recovery | | |
|---|---|---|---|
| Toluene-d8 | 95 | % | -- |
| 4-Bromofluorobenzene | 97 | % | -- |
| 1,2-Dichloroethane-d4 | 91 | % | -- |

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Jeff Lowry

Enseco
A Corning Company

Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-62
Lab ID: 011836-0003-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: 18 OCT 90 Analyzed: 21 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| Acetone | ND | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | 7.2 | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Jeff Lowry

Enseco
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Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-62
Lab ID: 011836-0003-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: 18 OCT 90 Analyzed: 21 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10 |
| Styrene | ND | ug/L | 5.0 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 5.0 |
| Tetrachloroethene | ND | ug/L | 5.0 |
| Toluene | ND | ug/L | 5.0 |
| 1,1,1-Trichloroethane | 12 | ug/L | 5.0 |
| 1,1,2-Trichloroethane | ND | ug/L | 5.0 |
| Trichloroethene | ND | ug/L | 5.0 |
| Trichlorofluoromethane | ND | ug/L | 5.0 |
| 1,2,3-Trichloropropane | ND | ug/L | 5.0 |
| Vinyl acetate | ND | ug/L | 10 |
| Vinyl chloride | ND | ug/L | 10 |
| Xylenes (total) | ND | ug/L | 5.0 |

| Surrogate | Recovery | | |
|---|---|---|---|
| Toluene-d8 | 98 | % | -- |
| 4-Bromofluorobenzene | 97 | % | -- |
| 1,2-Dichloroethane-d4 | 93 | % | -- |

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Jeff Lowry

Enseco
A Corning Company

Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-60
Lab ID: 011836-0004-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: 18 OCT 90 Analyzed: 21 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| Acetone | ND | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | ND | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Jeff Lowry

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Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-60
Lab ID: 011836-0004-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: 18 OCT 90 Analyzed: 21 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10 |
| Styrene | ND | ug/L | 5.0 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 5.0 |
| Tetrachloroethene | ND | ug/L | 5.0 |
| Toluene | ND | ug/L | 5.0 |
| 1,1,1-Trichloroethane | ND | ug/L | 5.0 |
| 1,1,2-Trichloroethane | ND | ug/L | 5.0 |
| Trichloroethene | ND | ug/L | 5.0 |
| Trichlorofluoromethane | ND | ug/L | 5.0 |
| 1,2,3-Trichloropropane | ND | ug/L | 5.0 |
| Vinyl acetate | ND | ug/L | 10 |
| Vinyl chloride | ND | ug/L | 10 |
| Xylenes (total) | ND | ug/L | 5.0 |

| Surrogate | Recovery | | |
|---|---|---|---|
| Toluene-d8 | 100 | % | -- |
| 4-Bromofluorobenzene | 97 | % | -- |
| 1,2-Dichloroethane-d4 | 86 | % | -- |

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Jeff Lowry

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# Volatile Organics
## Appendix IX List
## Method 8240

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-61
Lab ID: 011836-0005-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: 18 OCT 90 Analyzed: 21 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| Acetone | ND | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | ND | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Jeff Lowry

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Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-61
Lab ID: 011836-0005-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: 18 OCT 90 Analyzed: 21 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10 |
| Styrene | ND | ug/L | 5.0 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 5.0 |
| Tetrachloroethene | ND | ug/L | 5.0 |
| Toluene | ND | ug/L | 5.0 |
| 1,1,1-Trichloroethane | ND | ug/L | 5.0 |
| 1,1,2-Trichloroethane | ND | ug/L | 5.0 |
| Trichloroethene | ND | ug/L | 5.0 |
| Trichlorofluoromethane | ND | ug/L | 5.0 |
| 1,2,3-Trichloropropane | ND | ug/L | 5.0 |
| Vinyl acetate | ND | ug/L | 10 |
| Vinyl chloride | ND | ug/L | 10 |
| Xylenes (total) | ND | ug/L | 5.0 |

| Surrogate | Recovery | | |
|---|---|---|---|
| Toluene-d8 | 100 | % | -- |
| 4-Bromofluorobenzene | 95 | % | -- |
| 1,2-Dichloroethane-d4 | 94 | % | -- |

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Jeff Lowry

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Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-58
Lab ID: 011836-0006-SA
Matrix: AQUEOUS
Authorized: 16 OCT 90

Sampled: 15 OCT 90
Prepared: 18 OCT 90

Received: 16 OCT 90
Analyzed: 21 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| Acetone | ND | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | ND | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson

Approved By: Jeff Lowry

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Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-58
Lab ID: 011836-0006-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: 18 OCT 90 Analyzed: 21 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10 |
| Styrene | ND | ug/L | 5.0 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 5.0 |
| Tetrachloroethene | ND | ug/L | 5.0 |
| Toluene | ND | ug/L | 5.0 |
| 1,1,1-Trichloroethane | ND | ug/L | 5.0 |
| 1,1,2-Trichloroethane | ND | ug/L | 5.0 |
| Trichloroethene | 22 | ug/L | 5.0 |
| Trichlorofluoromethane | ND | ug/L | 5.0 |
| 1,2,3-Trichloropropane | ND | ug/L | 5.0 |
| Vinyl acetate | ND | ug/L | 10 |
| Vinyl chloride | ND | ug/L | 10 |
| Xylenes (total) | ND | ug/L | 5.0 |

| Surrogate | Recovery | | |
|---|---|---|---|
| Toluene-d8 | 100 | % | -- |
| 4-Bromofluorobenzene | 97 | % | -- |
| 1,2-Dichloroethane-d4 | 94 | % | -- |

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Jeff Lowry

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Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-64
Lab ID: 011836-0007-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: 18 OCT 90 Analyzed: 21 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| Acetone | ND | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | ND | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Jeff Lowry

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Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: Field blank
Lab ID: 011836-0008-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: 18 OCT 90 Analyzed: 21 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10 |
| Styrene | ND | ug/L | 5.0 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 5.0 |
| Tetrachloroethene | ND | ug/L | 5.0 |
| Toluene | ND | ug/L | 5.0 |
| 1,1,1-Trichloroethane | ND | ug/L | 5.0 |
| 1,1,2-Trichloroethane | ND | ug/L | 5.0 |
| Trichloroethene | ND | ug/L | 5.0 |
| Trichlorofluoromethane | ND | ug/L | 5.0 |
| 1,2,3-Trichloropropane | ND | ug/L | 5.0 |
| Vinyl acetate | ND | ug/L | 10 |
| Vinyl chloride | ND | ug/L | 10 |
| Xylenes (total) | ND | ug/L | 5.0 |
| **Surrogate** | **Recovery** | | |
| Toluene-d8 | 97 | % | -- |
| 4-Bromofluorobenzene | 91 | % | -- |
| 1,2-Dichloroethane-d4 | 90 | % | -- |

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Jeff Lowry

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# Volatile Organics
## Appendix IX List
## Method 8240

Client Name: Sparton Technology Inc.
Client ID: Trip blank
Lab ID: 011836-0009-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: 18 OCT 90 Analyzed: 21 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| Acetone | ND | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | ND | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |

(continued on following page)

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Jeff Lowry

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Volatile Organics
Appendix IX List
Method 8240

Client Name: Sparton Technology Inc.
Client ID: Trip blank
Lab ID: 011836-0009-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: 18 OCT 90 Analyzed: 21 OCT 90

| Parameter | Result | Units | Reporting Limit |
|---|---|---|---|
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10 |
| Styrene | ND | ug/L | 5.0 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 5.0 |
| Tetrachloroethene | ND | ug/L | 5.0 |
| Toluene | ND | ug/L | 5.0 |
| 1,1,1-Trichloroethane | ND | ug/L | 5.0 |
| 1,1,2-Trichloroethane | ND | ug/L | 5.0 |
| Trichloroethene | ND | ug/L | 5.0 |
| Trichlorofluoromethane | ND | ug/L | 5.0 |
| 1,2,3-Trichloropropane | ND | ug/L | 5.0 |
| Vinyl acetate | ND | ug/L | 10 |
| Vinyl chloride | ND | ug/L | 10 |
| Xylenes (total) | ND | ug/L | 5.0 |

| Surrogate | Recovery | | |
|---|---|---|---|
| Toluene-d8 | 100 | % | -- |
| 4-Bromofluorobenzene | 94 | % | -- |
| 1,2-Dichloroethane-d4 | 90 | % | -- |

ND = Not detected
NA = Not applicable

Reported By: Bryan Anderson Approved By: Jeff Lowry

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# Metals

## Total Metals

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-63
Lab ID: 011836-0002-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Antimony | ND | mg/L | 0.060 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Arsenic | 0.0075 | mg/L | 0.0050 | 7060 | 12 NOV 90 | 13 NOV 90 |
| Barium | 0.057 | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Beryllium | ND | mg/L | 0.0020 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Boron | 0.11 | mg/L | 0.10 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Cadmium | ND | mg/L | 0.0050 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Chromium | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Cobalt | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Copper | ND | mg/L | 0.020 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Lead | ND | mg/L | 0.0050 | 7421 | 12 NOV 90 | 13 NOV 90 |
| Manganese | 0.026 | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Mercury | ND | mg/L | 0.00020 | 7470 | 05 NOV 90 | 06 NOV 90 |
| Nickel | ND | mg/L | 0.040 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Selenium | ND | mg/L | 0.0050 | 7740 | 12 NOV 90 | 13 NOV 90 |
| Silver | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Thallium | ND | mg/L | 0.050 | 7841 | 12 NOV 90 | 13 NOV 90 |
| Tin | ND | mg/L | 0.10 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Vanadium | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Zinc | ND | mg/L | 0.025 | 6010 | 13 NOV 90 | 15 NOV 90 |

ND = Not detected
NA = Not applicable

Reported By: Sandra Jones Approved By: John Laferty

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# Metals

## Total Metals

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-62
Lab ID: 011836-0003-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Antimony | ND | mg/L | 0.060 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Arsenic | ND | mg/L | 0.010 | 7060 | 12 NOV 90 | 13 NOV 90 |
| Barium | 0.071 | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Beryllium | ND | mg/L | 0.0020 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Boron | 0.13 | mg/L | 0.10 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Cadmium | ND | mg/L | 0.0050 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Chromium | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Cobalt | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Copper | ND | mg/L | 0.020 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Lead | ND | mg/L | 0.0050 | 7421 | 12 NOV 90 | 13 NOV 90 |
| Manganese | 0.074 | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Mercury | ND | mg/L | 0.00020 | 7470 | 05 NOV 90 | 06 NOV 90 |
| Nickel | ND | mg/L | 0.040 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Selenium | ND | mg/L | 0.0050 | 7740 | 12 NOV 90 | 13 NOV 90 |
| Silver | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Thallium | ND | mg/L | 0.10 | 7841 | 12 NOV 90 | 13 NOV 90 |
| Tin | ND | mg/L | 0.10 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Vanadium | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Zinc | ND | mg/L | 0.025 | 6010 | 13 NOV 90 | 15 NOV 90 |

ND = Not detected
NA = Not applicable

Reported By: Sandra Jones Approved By: John Laferty

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# Metals

## Total Metals

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-60
Lab ID: 011836-0004-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Antimony | ND | mg/L | 0.060 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Arsenic | ND | mg/L | 0.010 | 7060 | 12 NOV 90 | 13 NOV 90 |
| Barium | 0.068 | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Beryllium | ND | mg/L | 0.0020 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Boron | ND | mg/L | 0.10 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Cadmium | ND | mg/L | 0.0050 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Chromium | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Cobalt | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Copper | ND | mg/L | 0.020 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Lead | ND | mg/L | 0.010 | 7421 | 12 NOV 90 | 13 NOV 90 |
| Manganese | 0.029 | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Mercury | ND | mg/L | 0.00020 | 7470 | 05 NOV 90 | 06 NOV 90 |
| Nickel | ND | mg/L | 0.040 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Selenium | ND | mg/L | 0.0050 | 7740 | 12 NOV 90 | 13 NOV 90 |
| Silver | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Thallium | ND | mg/L | 0.010 | 7841 | 12 NOV 90 | 13 NOV 90 |
| Tin | ND | mg/L | 0.10 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Vanadium | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Zinc | 0.042 | mg/L | 0.025 | 6010 | 13 NOV 90 | 15 NOV 90 |

ND = Not detected
NA = Not applicable

Reported By: Sandra Jones Approved By: John Laferty

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# Metals

## Total Metals

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-61
Lab ID: 011836-0005-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Antimony | ND | mg/L | 0.060 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Arsenic | ND | mg/L | 0.010 | 7060 | 12 NOV 90 | 13 NOV 90 |
| Barium | 0.051 | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Beryllium | ND | mg/L | 0.0020 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Boron | 0.10 | mg/L | 0.10 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Cadmium | ND | mg/L | 0.0050 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Chromium | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Cobalt | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Copper | ND | mg/L | 0.020 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Lead | ND | mg/L | 0.0050 | 7421 | 12 NOV 90 | 13 NOV 90 |
| Manganese | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Mercury | ND | mg/L | 0.00020 | 7470 | 05 NOV 90 | 06 NOV 90 |
| Nickel | ND | mg/L | 0.040 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Selenium | ND | mg/L | 0.0050 | 7740 | 12 NOV 90 | 13 NOV 90 |
| Silver | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Thallium | ND | mg/L | 0.050 | 7841 | 12 NOV 90 | 13 NOV 90 |
| Tin | ND | mg/L | 0.10 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Vanadium | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Zinc | ND | mg/L | 0.025 | 6010 | 13 NOV 90 | 15 NOV 90 |

ND = Not detected
NA = Not applicable

Reported By: Sandra Jones Approved By: John Laferty

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# Metals

## Total Metals

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-58
Lab ID: 011836-0006-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Antimony | ND | mg/L | 0.060 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Arsenic | ND | mg/L | 0.010 | 7060 | 12 NOV 90 | 13 NOV 90 |
| Barium | 0.058 | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Beryllium | ND | mg/L | 0.0020 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Boron | ND | mg/L | 0.10 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Cadmium | ND | mg/L | 0.0050 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Chromium | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Cobalt | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Copper | ND | mg/L | 0.020 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Lead | ND | mg/L | 0.010 | 7421 | 12 NOV 90 | 13 NOV 90 |
| Manganese | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Mercury | ND | mg/L | 0.00020 | 7470 | 05 NOV 90 | 06 NOV 90 |
| Nickel | ND | mg/L | 0.040 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Selenium | ND | mg/L | 0.010 | 7740 | 12 NOV 90 | 13 NOV 90 |
| Silver | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Thallium | ND | mg/L | 0.0050 | 7841 | 12 NOV 90 | 13 NOV 90 |
| Tin | ND | mg/L | 0.10 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Vanadium | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Zinc | ND | mg/L | 0.025 | 6010 | 13 NOV 90 | 15 NOV 90 |

ND = Not detected
NA = Not applicable

Reported By: Sandra Jones Approved By: John Laferty

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# Metals

## Total Metals

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-64
Lab ID: 011836-0007-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Antimony | ND | mg/L | 0.060 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Arsenic | ND | mg/L | 0.010 | 7060 | 12 NOV 90 | 13 NOV 90 |
| Barium | 0.076 | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Beryllium | ND | mg/L | 0.0020 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Boron | 0.11 | mg/L | 0.10 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Cadmium | ND | mg/L | 0.0050 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Chromium | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Cobalt | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Copper | ND | mg/L | 0.020 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Lead | ND | mg/L | 0.0050 | 7421 | 12 NOV 90 | 13 NOV 90 |
| Manganese | 0.029 | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Mercury | ND | mg/L | 0.00020 | 7470 | 05 NOV 90 | 06 NOV 90 |
| Nickel | ND | mg/L | 0.040 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Selenium | ND | mg/L | 0.0050 | 7740 | 12 NOV 90 | 13 NOV 90 |
| Silver | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Thallium | ND | mg/L | 0.0050 | 7841 | 12 NOV 90 | 13 NOV 90 |
| Tin | ND | mg/L | 0.10 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Vanadium | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Zinc | ND | mg/L | 0.025 | 6010 | 13 NOV 90 | 15 NOV 90 |

ND = Not detected
NA = Not applicable

Reported By: Sandra Jones Approved By: John Laferty

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# Metals

## Total Metals

Client Name: Sparton Technology Inc.
Client ID: Field blank
Lab ID: 011836-0008-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Antimony | ND | mg/L | 0.060 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Arsenic | ND | mg/L | 0.010 | 7060 | 12 NOV 90 | 13 NOV 90 |
| Barium | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Beryllium | ND | mg/L | 0.0020 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Boron | 0.12 | mg/L | 0.10 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Cadmium | ND | mg/L | 0.0050 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Chromium | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Cobalt | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Copper | ND | mg/L | 0.020 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Lead | ND | mg/L | 0.010 | 7421 | 12 NOV 90 | 13 NOV 90 |
| Manganese | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Mercury | ND | mg/L | 0.00020 | 7470 | 05 NOV 90 | 06 NOV 90 |
| Nickel | 0.069 | mg/L | 0.040 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Selenium | ND | mg/L | 0.0050 | 7740 | 12 NOV 90 | 13 NOV 90 |
| Silver | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Thallium | ND | mg/L | 0.0050 | 7841 | 12 NOV 90 | 13 NOV 90 |
| Tin | ND | mg/L | 0.10 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Vanadium | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Zinc | ND | mg/L | 0.025 | 6010 | 13 NOV 90 | 15 NOV 90 |

ND = Not detected
NA = Not applicable

Reported By: Sandra Jones Approved By: John Laferty

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# Metals

## Total Metals

Client Name: Sparton Technology Inc.
Client ID: Trip blank
Lab ID: 011836-0009-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Antimony | ND | mg/L | 0.060 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Arsenic | ND | mg/L | 0.010 | 7060 | 12 NOV 90 | 13 NOV 90 |
| Barium | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Beryllium | ND | mg/L | 0.0020 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Boron | ND | mg/L | 0.10 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Cadmium | ND | mg/L | 0.0050 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Chromium | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Cobalt | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Copper | ND | mg/L | 0.020 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Lead | ND | mg/L | 0.010 | 7421 | 12 NOV 90 | 13 NOV 90 |
| Manganese | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Mercury | ND | mg/L | 0.00020 | 7470 | 05 NOV 90 | 06 NOV 90 |
| Nickel | ND | mg/L | 0.040 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Selenium | ND | mg/L | 0.0050 | 7740 | 12 NOV 90 | 13 NOV 90 |
| Silver | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Thallium | ND | mg/L | 0.0050 | 7841 | 12 NOV 90 | 13 NOV 90 |
| Tin | ND | mg/L | 0.10 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Vanadium | ND | mg/L | 0.010 | 6010 | 13 NOV 90 | 15 NOV 90 |
| Zinc | ND | mg/L | 0.025 | 6010 | 13 NOV 90 | 15 NOV 90 |

ND = Not detected
NA = Not applicable

Reported By: Sandra Jones Approved By: John Laferty

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# General Inorganics

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-59
Lab ID: 011836-0001-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Chloride | 18.4 | mg/L | 3.0 | 300.0 | NA | 18 OCT 90 |
| Fluoride | 0.25 | mg/L | 0.10 | 340.2 | NA | 08 NOV 90 |
| Ammonia as N | ND | mg/L | 0.10 | 350.1 | NA | 31 OCT 90 |
| Nitrate as N | 3.1 | mg/L | 0.20 | 353.2 | NA | 24 OCT 90 |
| Sulfate | 106 | mg/L | 5.0 | 300.0 | NA | 18 OCT 90 |
| Total Kjeldahl Nitrogen as N | ND | mg/L | 0.50 | 351.2 | NA | 18 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Blake Besser Approved By: Will Pratt

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# General Inorganics

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-63
Lab ID: 011836-0002-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Chloride | 15.7 | mg/L | 3.0 | 300.0 | NA | 18 OCT 90 |
| Fluoride | 0.29 | mg/L | 0.10 | 340.2 | NA | 08 NOV 90 |
| Ammonia as N | ND | mg/L | 0.10 | 350.1 | NA | 31 OCT 90 |
| Nitrate as N | 2.7 | mg/L | 0.10 | 353.2 | NA | 24 OCT 90 |
| Sulfate | 119 | mg/L | 5.0 | 300.0 | NA | 18 OCT 90 |
| Total Kjeldahl Nitrogen as N | ND | mg/L | 0.50 | 351.2 | NA | 18 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Blake Besser Approved By: Will Pratt

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# General Inorganics

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-62
Lab ID: 011836-0003-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Chloride | 8.1 | mg/L | 3.0 | 300.0 | NA | 18 OCT 90 |
| Fluoride | 0.22 | mg/L | 0.10 | 340.2 | NA | 08 NOV 90 |
| Ammonia as N | ND | mg/L | 0.10 | 350.1 | NA | 31 OCT 90 |
| Nitrate as N | 2.6 | mg/L | 0.10 | 353.2 | NA | 24 OCT 90 |
| Sulfate | 88.5 | mg/L | 5.0 | 300.0 | NA | 18 OCT 90 |
| Total Kjeldahl Nitrogen as N | ND | mg/L | 0.50 | 351.2 | NA | 18 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Blake Besser Approved By: Will Pratt

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# General Inorganics

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-60
Lab ID: 011836-0004-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Chloride | 19.6 | mg/L | 3.0 | 300.0 | NA | 18 OCT 90 |
| Fluoride | 0.47 | mg/L | 0.10 | 340.2 | NA | 08 NOV 90 |
| Ammonia as N | ND | mg/L | 0.10 | 350.1 | NA | 31 OCT 90 |
| Nitrate as N | 1.4 | mg/L | 0.10 | 353.2 | NA | 24 OCT 90 |
| Sulfate | 96.9 | mg/L | 5.0 | 300.0 | NA | 18 OCT 90 |
| Total Kjeldahl Nitrogen as N | ND | mg/L | 0.50 | 351.2 | NA | 18 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Blake Besser Approved By: Will Pratt

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# General Inorganics

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-61
Lab ID: 011836-0005-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Chloride | 21.6 | mg/L | 3.0 | 300.0 | NA | 18 OCT 90 |
| Fluoride | 0.35 | mg/L | 0.10 | 340.2 | NA | 08 NOV 90 |
| Ammonia as N | ND | mg/L | 0.10 | 350.1 | NA | 31 OCT 90 |
| Nitrate as N | 1.8 | mg/L | 0.10 | 353.2 | NA | 24 OCT 90 |
| Sulfate | 120 | mg/L | 5.0 | 300.0 | NA | 18 OCT 90 |
| Total Kjeldahl Nitrogen as N | ND | mg/L | 0.50 | 351.2 | NA | 18 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Blake Besser Approved By: Will Pratt

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# General Inorganics

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-58
Lab ID: 011836-0006-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Chloride | 19.9 | mg/L | 3.0 | 300.0 | NA | 18 OCT 90 |
| Fluoride | 0.36 | mg/L | 0.10 | 340.2 | NA | 08 NOV 90 |
| Ammonia as N | ND | mg/L | 0.10 | 350.1 | NA | 31 OCT 90 |
| Nitrate as N | 2.4 | mg/L | 0.10 | 353.2 | NA | 24 OCT 90 |
| Sulfate | 93.8 | mg/L | 5.0 | 300.0 | NA | 18 OCT 90 |
| Total Kjeldahl Nitrogen as N | ND | mg/L | 0.50 | 351.2 | NA | 18 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Blake Besser Approved By: Will Pratt

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# General Inorganics

Client Name: Sparton Technology Inc.
Client ID: Groundwater from MW-64
Lab ID: 011836-0007-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Chloride | 20.2 | mg/L | 3.0 | 300.0 | NA | 18 OCT 90 |
| Fluoride | 0.29 | mg/L | 0.10 | 340.2 | NA | 08 NOV 90 |
| Ammonia as N | ND | mg/L | 0.10 | 350.1 | NA | 31 OCT 90 |
| Nitrate as N | 3.2 | mg/L | 0.20 | 353.2 | NA | 24 OCT 90 |
| Sulfate | 126 | mg/L | 5.0 | 300.0 | NA | 18 OCT 90 |
| Total Kjeldahl Nitrogen as N | ND | mg/L | 0.50 | 351.2 | NA | 18 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Blake Besser Approved By: Will Pratt

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A Corning Company

# General Inorganics

Client Name: Sparton Technology Inc.
Client ID: Field blank
Lab ID: 011836-0008-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Chloride | ND | mg/L | 3.0 | 300.0 | NA | 18 OCT 90 |
| Fluoride | ND | mg/L | 0.10 | 340.2 | NA | 08 NOV 90 |
| Ammonia as N | ND | mg/L | 0.10 | 350.1 | NA | 31 OCT 90 |
| Nitrate as N | ND | mg/L | 0.10 | 353.2 | NA | 24 OCT 90 |
| Sulfate | ND | mg/L | 5.0 | 300.0 | NA | 18 OCT 90 |
| Total Kjeldahl Nitrogen as N | ND | mg/L | 0.50 | 351.2 | NA | 18 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Blake Besser Approved By: Will Pratt

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# General Inorganics

Client Name: Sparton Technology Inc.
Client ID: Trip blank
Lab ID: 011836-0009-SA
Matrix: AQUEOUS Sampled: 15 OCT 90 Received: 16 OCT 90
Authorized: 16 OCT 90 Prepared: See Below Analyzed: See Below

| Parameter | Result | Units | Reporting Limit | Analytical Method | Prepared Date | Analyzed Date |
|---|---|---|---|---|---|---|
| Chloride | ND | mg/L | 3.0 | 300.0 | NA | 18 OCT 90 |
| Fluoride | ND | mg/L | 0.10 | 340.2 | NA | 08 NOV 90 |
| Ammonia as N | ND | mg/L | 0.10 | 350.1 | NA | 31 OCT 90 |
| Nitrate as N | ND | mg/L | 0.10 | 353.2 | NA | 24 OCT 90 |
| Sulfate | ND | mg/L | 5.0 | 300.0 | NA | 18 OCT 90 |
| Total Kjeldahl Nitrogen as N | ND | mg/L | 0.50 | 351.2 | NA | 18 OCT 90 |

ND = Not detected
NA = Not applicable

Reported By: Blake Besser Approved By: Will Pratt

## 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).

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

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.

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QC LOT ASSIGNMENT REPORT
Volatile Organics by GC/MS

| Laboratory Sample Number | QC Matrix | QC Category | QC Lot Number (DCS) | QC Run Number (SCS/BLANK) |
|---|---|---|---|---|
| 011836-0001-SA | AQUEOUS | 624-A | 21 OCT 90-F | 21 OCT 90-F |
| 011836-0002-SA | AQUEOUS | 624-A | 21 OCT 90-F | 21 OCT 90-F |
| 011836-0003-SA | AQUEOUS | 624-A | 21 OCT 90-F | 21 OCT 90-F |
| 011836-0004-SA | AQUEOUS | 624-A | 21 OCT 90-F | 21 OCT 90-F |
| 011836-0005-SA | AQUEOUS | 624-A | 21 OCT 90-F | 21 OCT 90-F |
| 011836-0006-SA | AQUEOUS | 624-A | 21 OCT 90-F | 21 OCT 90-F |
| 011836-0007-SA | AQUEOUS | 624-A | 21 OCT 90-F | 21 OCT 90-F |
| 011836-0008-SA | AQUEOUS | 624-A | 21 OCT 90-F | 21 OCT 90-F |
| 011836-0009-SA | AQUEOUS | 624-A | 21 OCT 90-F | 21 OCT 90-F |

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DUPLICATE CONTROL SAMPLE REPORT
Volatile Organics by GC/MS

| Analyte | Concentration Spiked | Measured DCS1 | Measured DCS2 | Measured AVG | Accuracy Average(%) DCS | Accuracy Average(%) Limits | Precision (RPD) DCS | Precision (RPD) Limit |
|---|---|---|---|---|---|---|---|---|
| Category: 624-A | | | | | | | | |
| Matrix: AQUEOUS | | | | | | | | |
| QC Lot: 21 OCT 90-F | | | | | | | | |
| Concentration Units: ug/L | | | | | | | | |
| 1,1-Dichloroethene | 50 | 56.1 | 45.4 | 50.8 | 102 | 61-145 | 21 | 14 |
| Trichloroethene | 50 | 56.2 | 53.1 | 54.6 | 109 | 71-120 | 5.7 | 14 |
| Benzene | 50 | 49.4 | 48.5 | 49.0 | 98 | 76-127 | 1.8 | 11 |
| Toluene | 50 | 47.4 | 47.2 | 47.3 | 95 | 76-125 | 0.4 | 13 |
| Chlorobenzene | 50 | 50.8 | 48.9 | 49.8 | 100 | 75-130 | 3.8 | 13 |

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

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SINGLE CONTROL SAMPLE REPORT
Volatile Organics by GC/MS

| Analyte | Concentration Spiked | Concentration Measured | Accuracy(%) SCS | Accuracy(%) Limits |
|---|---|---|---|---|
| Category: 624-A | | | | |
| Matrix: AQUEOUS | | | | |
| QC Lot: 21 OCT 90-F QC Run: 21 OCT 90-F | | | | |
| Concentration Units: ug/L | | | | |
| 1,2-Dichloroethane-d4 | 50.0 | 45.5 | 91 | 76-114 |
| 4-Bromofluorobenzene | 50.0 | 48.8 | 98 | 86-115 |
| Toluene-d8 | 50.0 | 48.8 | 98 | 88-110 |

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

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METHOD BLANK REPORT
Volatile Organics by GC/MS

Test: 8240CP-AP9-AP
Matrix: AQUEOUS
QC Lot: 21 OCT 90-F QC Run: 21 OCT 90-F

| Analyte | Result | Units | Reporting Limit |
|---|---|---|---|
| Acetone | ND | ug/L | 10 |
| Acetonitrile | ND | ug/L | 200 |
| Acrolein | ND | ug/L | 100 |
| Acrylonitrile | ND | ug/L | 100 |
| Allyl chloride | ND | ug/L | 10 |
| Benzene | ND | ug/L | 5.0 |
| Bromodichloromethane | ND | ug/L | 5.0 |
| Bromoform | ND | ug/L | 5.0 |
| Bromomethane | ND | ug/L | 10 |
| Carbon disulfide | ND | ug/L | 5.0 |
| Carbon tetrachloride | ND | ug/L | 5.0 |
| Chlorobenzene | ND | ug/L | 5.0 |
| Chloroprene | ND | ug/L | 5.0 |
| Chloroethane | ND | ug/L | 10 |
| Dibromochloromethane | ND | ug/L | 5.0 |
| Chloroform | ND | ug/L | 5.0 |
| Chloromethane | ND | ug/L | 10 |
| 1,2-Dibromo-3-chloro-propane (DBCP) | ND | ug/L | 10 |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 10 |
| Dibromomethane | ND | ug/L | 5.0 |
| trans-1,4-Dichloro-2-butene | ND | ug/L | 5.0 |
| Dichlorodifluoromethane | ND | ug/L | 20 |
| 1,1-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethane | ND | ug/L | 5.0 |
| 1,2-Dichloroethene (total) | ND | ug/L | 5.0 |
| 1,1-Dichloroethene | ND | ug/L | 5.0 |
| Methylene chloride | ND | ug/L | 5.0 |
| 1,2-Dichloropropane | ND | ug/L | 5.0 |
| cis-1,3-Dichloropropene | ND | ug/L | 5.0 |
| trans-1,3-Dichloropropene | ND | ug/L | 5.0 |
| 1,4-Dioxane | ND | ug/L | 500 |
| Ethylbenzene | ND | ug/L | 5.0 |
| Propionitrile | ND | ug/L | 5.0 |
| 2-Hexanone | ND | ug/L | 10 |
| Iodomethane | ND | ug/L | 5.0 |
| Isobutanol | ND | ug/L | 200 |
| Methacrylonitrile | ND | ug/L | 5.0 |
| 2-Butanone (MEK) | ND | ug/L | 10 |

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

Test: 8240CP-AP9-AP
Matrix: AQUEOUS
QC Lot: 21 OCT 90-F QC Run: 21 OCT 90-F

| Analyte | Result | Units | Reporting Limit |
|---|---|---|---|
| 4-Methyl-2-pentanone (MIBK) | ND | ug/L | 10 |
| Styrene | ND | ug/L | 5.0 |
| 1,1,1,2-Tetrachloroethane | ND | ug/L | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | ug/L | 5.0 |
| Tetrachloroethene | ND | ug/L | 5.0 |
| Toluene | ND | ug/L | 5.0 |
| 1,1,1-Trichloroethane | ND | ug/L | 5.0 |
| 1,1,2-Trichloroethane | ND | ug/L | 5.0 |
| Trichloroethene | ND | ug/L | 5.0 |
| Trichlorofluoromethane | ND | ug/L | 5.0 |
| 1,2,3-Trichloropropane | ND | ug/L | 5.0 |
| Vinyl acetate | ND | ug/L | 10 |
| Vinyl chloride | ND | ug/L | 10 |
| Xylenes (total) | ND | ug/L | 5.0 |

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QC LOT ASSIGNMENT REPORT
Metals Analysis and Preparation (cont.)

| Laboratory Sample Number | QC Matrix | QC Category | QC Lot Number (DCS) | QC Run Number (SCS/BLANK) |
|---|---|---|---|---|
| 011836-0008-SA | AQUEOUS | HG-CVAA-AT | 05 NOV 90-G | 05 NOV 90-G |
| 011836-0009-SA | AQUEOUS | ICP-AT | 13 NOV 90-R | 13 NOV 90-R |
| 011836-0009-SA | AQUEOUS | AS-FAA-AT | 12 NOV 90-A | 12 NOV 90-A |
| 011836-0009-SA | AQUEOUS | PB-FAA-AT | 12 NOV 90-A | 12 NOV 90-A |
| 011836-0009-SA | AQUEOUS | SE-FAA-AT | 12 NOV 90-A | 12 NOV 90-A |
| 011836-0009-SA | AQUEOUS | TL-FAA-AT | 12 NOV 90-A | 12 NOV 90-A |
| 011836-0009-SA | AQUEOUS | HG-CVAA-AT | 05 NOV 90-H | 05 NOV 90-H |

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DUPLICATE CONTROL SAMPLE REPORT
Metals Analysis and Preparation

| Analyte | Concentration Spiked | Measured DCS1 | Measured DCS2 | Measured AVG | Accuracy Average(%) DCS | Accuracy Limits | Precisio (RPD) DCS | Limi |
|---|---|---|---|---|---|---|---|---|
| Category: ICP-AT | | | | | | | | |
| Matrix: AQUEOUS | | | | | | | | |
| QC Lot: 13 NOV 90-R | | | | | | | | |
| Concentration Units: mg/L | | | | | | | | |
| Aluminum | 2.0 | 2.00 | 1.87 | 1.93 | 97 | 75-125 | 6.6 | 2( |
| Antimony | 0.5 | 0.461 | 0.430 | 0.445 | 89 | 75-125 | 7.0 | 2( |
| Arsenic | 0.5 | 0.475 | 0.436 | 0.456 | 91 | 75-125 | 8.4 | 2( |
| Barium | 2.0 | 1.92 | 1.80 | 1.86 | 93 | 75-125 | 6.5 | 2( |
| Beryllium | 0.05 | 0.0493 | 0.0501 | 0.0497 | 99 | 75-125 | 1.7 | 2( |
| Cadmium | 0.05 | 0.0448 | 0.0372 | 0.0410 | 82 | 75-125 | 19 | 2( |
| Calcium | 100 | 101 | 94.0 | 97.3 | 97 | 75-125 | 6.9 | 2( |
| Chromium | 0.2 | 0.186 | 0.173 | 0.180 | 90 | 75-125 | 7.3 | 2( |
| Cobalt | 0.5 | 0.463 | 0.435 | 0.449 | 90 | 75-125 | 6.2 | 2( |
| Copper | 0.25 | 0.246 | 0.238 | 0.242 | 97 | 75-125 | 3.2 | 2( |
| Iron | 1.0 | 1.04 | 0.971 | 1.01 | 101 | 75-125 | 7.1 | 2( |
| Lead | 0.5 | 0.464 | 0.439 | 0.451 | 90 | 75-125 | 5.6 | 2( |
| Magnesium | 50 | 50.5 | 47.0 | 48.8 | 98 | 75-125 | 7.1 | 2( |
| Manganese | 0.5 | 0.477 | 0.452 | 0.464 | 93 | 75-125 | 5.3 | 2( |
| Nickel | 0.5 | 0.471 | 0.444 | 0.457 | 91 | 75-125 | 6.0 | 2( |
| Potassium | 50 | 52.4 | 46.9 | 49.6 | 99 | 75-125 | 11 | 2( |
| Silver | 0.05 | 0.0479 | 0.0421 | 0.0450 | 90 | 75-125 | 13 | 2( |
| Sodium | 100 | 105 | 96.0 | 101 | 101 | 75-125 | 9.1 | 2( |
| Vanadium | 0.5 | 0.503 | 0.478 | 0.491 | 98 | 75-125 | 4.9 | 2( |
| Zinc | 0.5 | 0.466 | 0.439 | 0.452 | 90 | 75-125 | 6.0 | 2( |
| Category: AS-FAA-AT | | | | | | | | |
| Matrix: AQUEOUS | | | | | | | | |
| QC Lot: 12 NOV 90-A | | | | | | | | |
| Concentration Units: mg/L | | | | | | | | |
| Arsenic | 0.04 | 0.0425 | 0.0418 | 0.0422 | 105 | 75-125 | 1.7 | 2( |
| Category: PB-FAA-AT | | | | | | | | |
| Matrix: AQUEOUS | | | | | | | | |
| QC Lot: 12 NOV 90-A | | | | | | | | |
| Concentration Units: mg/L | | | | | | | | |
| Lead | 0.02 | 0.0221 | 0.0212 | 0.0216 | 108 | 75-125 | 4.2 | 20 |

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

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

| Analyte | Concentration Spiked | Measured DCS1 | Measured DCS2 | Measured AVG | Accuracy Average(%) DCS | Accuracy Limits | Precisio (RPD) DCS | Limi |
|---|---|---|---|---|---|---|---|---|
| Category: SE-FAA-AT<br>Matrix: AQUEOUS<br>QC Lot: 12 NOV 90-A<br>Concentration Units: mg/L | | | | | | | | |
| Selenium | 0.01 | 0.0102 | 0.0107 | 0.0104 | 105 | 75-125 | 4.8 | 2( |
| Category: TL-FAA-AT<br>Matrix: AQUEOUS<br>QC Lot: 12 NOV 90-A<br>Concentration Units: mg/L | | | | | | | | |
| Thallium | 0.05 | 0.0526 | 0.0537 | 0.0532 | 106 | 75-125 | 2.1 | 2( |
| Category: HG-CVAA-AT<br>Matrix: AQUEOUS<br>QC Lot: 05 NOV 90-G<br>Concentration Units: mg/L | | | | | | | | |
| Mercury | 0.0010 | 0.00105 | 0.00109 | 0.00107 | 107 | 75-125 | 3.7 | 2( |
| Category: HG-CVAA-AT<br>Matrix: AQUEOUS<br>QC Lot: 05 NOV 90-H<br>Concentration Units: mg/L | | | | | | | | |
| Mercury | 0.0010 | 0.00103 | 0.00103 | 0.00103 | 103 | 75-125 | 0.0 | 2( |

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

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METHOD BLANK REPORT
Metals Analysis and Preparation

| Analyte | Result | Units | Reporting Limit |
|---|---|---|---|
| **Test: ICP-AT** | | | |
| **Matrix: AQUEOUS** | | | |
| **QC Lot: 13 NOV 90-R QC Run: 13 NOV 90-R** | | | |
| Antimony | ND | mg/L | 0.060 |
| Barium | ND | mg/L | 0.010 |
| Beryllium | ND | mg/L | 0.0020 |
| Boron | ND | mg/L | 0.10 |
| Cadmium | ND | mg/L | 0.0050 |
| Chromium | ND | mg/L | 0.010 |
| Cobalt | ND | mg/L | 0.010 |
| Copper | ND | mg/L | 0.020 |
| Manganese | ND | mg/L | 0.010 |
| Nickel | ND | mg/L | 0.040 |
| Silver | ND | mg/L | 0.010 |
| Tin | ND | mg/L | 0.10 |
| Vanadium | ND | mg/L | 0.010 |
| Zinc | 0.024 | mg/L | 0.020 |
| **Test: AS-FAA-AT** | | | |
| **Matrix: AQUEOUS** | | | |
| **QC Lot: 12 NOV 90-A QC Run: 12 NOV 90-A** | | | |
| Arsenic | ND | mg/L | 0.0050 |
| **Test: PB-FAA-AT** | | | |
| **Matrix: AQUEOUS** | | | |
| **QC Lot: 12 NOV 90-A QC Run: 12 NOV 90-A** | | | |
| Lead | ND | mg/L | 0.0050 |
| **Test: SE-FAA-AT** | | | |
| **Matrix: AQUEOUS** | | | |
| **QC Lot: 12 NOV 90-A QC Run: 12 NOV 90-A** | | | |
| Selenium | ND | mg/L | 0.0050 |

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METHOD BLANK REPORT
Metals Analysis and Preparation (cont.)

| Analyte | Result | Units | Reporting Limit |
|---|---|---|---|
| Test: TL-FAA-AT | | | |
| Matrix: AQUEOUS | | | |
| QC Lot: 12 NOV 90-A QC Run: 12 NOV 90-A | | | |
| Thallium | ND | mg/L | 0.0050 |
| Test: HG-CVAA-AT | | | |
| Matrix: AQUEOUS | | | |
| QC Lot: 05 NOV 90-G QC Run: 05 NOV 90-G | | | |
| Mercury | ND | mg/L | 0.00020 |
| Test: HG-CVAA-AT | | | |
| Matrix: AQUEOUS | | | |
| QC Lot: 05 NOV 90-H QC Run: 05 NOV 90-H | | | |
| Mercury | ND | mg/L | 0.00020 |

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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) |
|---|---|---|---|---|
| 011836-0001-SA | AQUEOUS | NH3-A | 31 OCT 90-A | - |
| 011836-0001-SA | AQUEOUS | SO4-IC-A | 18 OCT 90-N | - |
| 011836-0001-SA | AQUEOUS | CL-IC-A | 18 OCT 90-N | - |
| 011836-0001-SA | AQUEOUS | F-A | 08 NOV 90-A | - |
| 011836-0001-SA | AQUEOUS | TKN-A | 17 OCT 90-A | 17 OCT 90-A |
| 011836-0001-SA | AQUEOUS | NO3-A | 24 OCT 90-B | - |
| 011836-0002-SA | AQUEOUS | NH3-A | 31 OCT 90-A | - |
| 011836-0002-SA | AQUEOUS | SO4-IC-A | 18 OCT 90-N | - |
| 011836-0002-SA | AQUEOUS | CL-IC-A | 18 OCT 90-N | - |
| 011836-0002-SA | AQUEOUS | F-A | 08 NOV 90-A | - |
| 011836-0002-SA | AQUEOUS | TKN-A | 17 OCT 90-A | 17 OCT 90-A |
| 011836-0002-SA | AQUEOUS | NO3-A | 24 OCT 90-B | - |
| 011836-0003-SA | AQUEOUS | NH3-A | 31 OCT 90-B | - |
| 011836-0003-SA | AQUEOUS | SO4-IC-A | 18 OCT 90-N | - |
| 011836-0003-SA | AQUEOUS | CL-IC-A | 18 OCT 90-N | - |
| 011836-0003-SA | AQUEOUS | F-A | 08 NOV 90-A | - |
| 011836-0003-SA | AQUEOUS | TKN-A | 17 OCT 90-A | 17 OCT 90-A |
| 011836-0003-SA | AQUEOUS | NO3-A | 24 OCT 90-B | - |
| 011836-0004-SA | AQUEOUS | NH3-A | 31 OCT 90-B | - |
| 011836-0004-SA | AQUEOUS | SO4-IC-A | 18 OCT 90-N | - |
| 011836-0004-SA | AQUEOUS | CL-IC-A | 18 OCT 90-N | - |
| 011836-0004-SA | AQUEOUS | F-A | 08 NOV 90-A | - |
| 011836-0004-SA | AQUEOUS | TKN-A | 17 OCT 90-A | 17 OCT 90-A |
| 011836-0004-SA | AQUEOUS | NO3-A | 24 OCT 90-B | - |
| 011836-0005-SA | AQUEOUS | NH3-A | 31 OCT 90-B | - |
| 011836-0005-SA | AQUEOUS | SO4-IC-A | 18 OCT 90-N | - |
| 011836-0005-SA | AQUEOUS | CL-IC-A | 18 OCT 90-N | - |
| 011836-0005-SA | AQUEOUS | F-A | 08 NOV 90-A | - |
| 011836-0005-SA | AQUEOUS | TKN-A | 17 OCT 90-A | 17 OCT 90-A |
| 011836-0005-SA | AQUEOUS | NO3-A | 24 OCT 90-B | - |
| 011836-0006-SA | AQUEOUS | NH3-A | 31 OCT 90-B | - |
| 011836-0006-SA | AQUEOUS | SO4-IC-A | 18 OCT 90-N | - |
| 011836-0006-SA | AQUEOUS | CL-IC-A | 18 OCT 90-N | - |
| 011836-0006-SA | AQUEOUS | F-A | 08 NOV 90-A | - |
| 011836-0006-SA | AQUEOUS | TKN-A | 17 OCT 90-A | 17 OCT 90-A |
| 011836-0006-SA | AQUEOUS | NO3-A | 24 OCT 90-B | - |
| 011836-0007-SA | AQUEOUS | NH3-A | 31 OCT 90-B | - |
| 011836-0007-SA | AQUEOUS | SO4-IC-A | 18 OCT 90-N | - |
| 011836-0007-SA | AQUEOUS | CL-IC-A | 18 OCT 90-N | - |
| 011836-0007-SA | AQUEOUS | F-A | 08 NOV 90-A | - |
| 011836-0007-SA | AQUEOUS | TKN-A | 17 OCT 90-A | 17 OCT 90-A |
| 011836-0007-SA | AQUEOUS | NO3-A | 24 OCT 90-B | - |
| 011836-0008-SA | AQUEOUS | NH3-A | 31 OCT 90-B | - |
| 011836-0008-SA | AQUEOUS | SO4-IC-A | 18 OCT 90-N | - |
| 011836-0008-SA | AQUEOUS | CL-IC-A | 18 OCT 90-N | - |
| 011836-0008-SA | AQUEOUS | F-A | 08 NOV 90-A | - |
| 011836-0008-SA | AQUEOUS | TKN-A | 17 OCT 90-A | 17 OCT 90-A |

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QC LOT ASSIGNMENT REPORT
Wet Chemistry Analysis and Preparation (cont.)

| Laboratory Sample Number | QC Matrix | QC Category | QC Lot Number (DCS) | QC Run Number (SCS/BLANK) |
|---|---|---|---|---|
| 011836-0008-SA | AQUEOUS | NO3-A | 24 OCT 90-B | - |
| 011836-0009-SA | AQUEOUS | NH3-A | 31 OCT 90-B | - |
| 011836-0009-SA | AQUEOUS | SO4-IC-A | 18 OCT 90-N | - |
| 011836-0009-SA | AQUEOUS | CL-IC-A | 18 OCT 90-N | - |
| 011836-0009-SA | AQUEOUS | F-A | 08 NOV 90-A | - |
| 011836-0009-SA | AQUEOUS | TKN-A | 17 OCT 90-A | 17 OCT 90-A |
| 011836-0009-SA | AQUEOUS | NO3-A | 24 OCT 90-B | - |

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DUPLICATE CONTROL SAMPLE REPORT
Wet Chemistry Analysis and Preparation

| Analyte | Concentration Spiked | Measured DCS1 | Measured DCS2 | Measured AVG | Accuracy Average(%) DCS | Accuracy Limits | Precisic (RPD) DCS | Limi |
|---|---|---|---|---|---|---|---|---|
| Category: NH3-A<br>Matrix: AQUEOUS<br>QC Lot: 31 OCT 90-A<br>Concentration Units: mg/L | | | | | | | | |
| Ammonia as N | 9.1 | 8.73 | 8.70 | 8.72 | 96 | 93-107 | 0.3 | 1 |
| Category: SO4-IC-A<br>Matrix: AQUEOUS<br>QC Lot: 18 OCT 90-N<br>Concentration Units: mg/L | | | | | | | | |
| Sulfate | 200 | 198 | 203 | 200 | 100 | 93-107 | 2.5 | 2 |
| Category: CL-IC-A<br>Matrix: AQUEOUS<br>QC Lot: 18 OCT 90-N<br>Concentration Units: mg/L | | | | | | | | |
| Chloride | 100 | 97.5 | 99.2 | 98.4 | 98 | 92-108 | 1.7 | 2 |
| Category: F-A<br>Matrix: AQUEOUS<br>QC Lot: 08 NOV 90-A<br>Concentration Units: mg/L | | | | | | | | |
| Fluoride | 4.1 | 3.90 | 3.93 | 3.92 | 95 | 88-112 | 0.8 | 1 |
| Category: TKN-A<br>Matrix: AQUEOUS<br>QC Lot: 17 OCT 90-A<br>Concentration Units: mg/L | | | | | | | | |
| Total Kjeldahl Nitrogen as N | 3.7 | 3.65 | 3.74 | 3.70 | 100 | 78-122 | 2.4 | 2 |

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

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

| Analyte | Concentration Spiked | Measured DCS1 | Measured DCS2 | Measured AVG | Accuracy Average(%) DCS | Accuracy Limits | Precisic (RPD) DCS | Limi |
|---|---|---|---|---|---|---|---|---|
| Category: NO3-A<br>Matrix: AQUEOUS<br>QC Lot: 24 OCT 90-B<br>Concentration Units: mg/L | | | | | | | | |
| Nitrate as N | 2.8 | 2.66 | 2.76 | 2.71 | 97 | 91-109 | 3.7 | 1 |
| Category: NH3-A<br>Matrix: AQUEOUS<br>QC Lot: 31 OCT 90-B<br>Concentration Units: mg/L | | | | | | | | |
| Ammonia as N | 9.1 | 8.72 | 8.80 | 8.76 | 96 | 93-107 | 0.9 | 1 |

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: 17 OCT 90-A QC Run: 17 OCT 90-A | | | |
| Total Kjeldahl Nitrogen as N | ND | mg/L | 0.50 |