

## ANALYTICAL REPORT

Job Number: 240-17525-2

Job Description: RVAAP - ECC

For:  
Environmental Chemical Corp.  
33 Boston Post Road West  
Suite 40  
Marlborough, MA 01752  
Attention: Mr. Jackson Kiker



Approved for release.  
Mark J Loeb  
Project Manager II  
12/27/2012 4:43 PM

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Project Manager II  
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12/27/2012

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# Table of Contents

|                                    |    |
|------------------------------------|----|
| Cover Title Page . . . . .         | 1  |
| Data Summaries . . . . .           | 4  |
| Report Narrative . . . . .         | 4  |
| Sample Summary . . . . .           | 6  |
| Executive Summary . . . . .        | 7  |
| Method Summary . . . . .           | 13 |
| Method / Analyst Summary . . . . . | 14 |
| Sample Datasheets . . . . .        | 15 |
| QC Data Summary . . . . .          | 21 |
| Data Qualifiers . . . . .          | 31 |
| QC Association Summary . . . . .   | 32 |
| Lab Chronicle . . . . .            | 33 |
| Reagent Traceability . . . . .     | 36 |
| COAs . . . . .                     | 43 |
| Certification Summary . . . . .    | 71 |
| Inorganic Sample Data . . . . .    | 72 |
| Metals Data . . . . .              | 72 |
| Met Cover Page . . . . .           | 73 |
| Met Sample Data . . . . .          | 74 |
| Met QC Data . . . . .              | 80 |
| Met ICV/CCV . . . . .              | 80 |
| Met CRQL . . . . .                 | 82 |
| Met Blanks . . . . .               | 84 |
| Met ICSA/ICSAB . . . . .           | 87 |
| Met MS/MSD/PDS . . . . .           | 89 |
| Met Dup/Trip . . . . .             | 93 |

# Table of Contents

|                                        |     |
|----------------------------------------|-----|
| Met LCS/LCSD .....                     | 95  |
| Met Serial Dilution .....              | 96  |
| Met MDL .....                          | 98  |
| Met Linear Ranges .....                | 100 |
| Met Preparation Log .....              | 101 |
| Met Analysis Run Log .....             | 102 |
| Met ICP/MS Int Stds .....              | 108 |
| Met Raw Data .....                     | 110 |
| Met Prep Data .....                    | 227 |
| Subcontracted Data .....               | 229 |
| Shipping and Receiving Documents ..... | 230 |
| Client Chain of Custody .....          | 231 |
| Sample Receipt Checklist .....         | 234 |

## CASE NARRATIVE

**Client: Environmental Chemical Corp.**

**Project: RVAAP - ECC**

**Report Number: 240-17525-2**

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6020 Metals analysis was performed at the TestAmerica Pittsburgh Laboratory.

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

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

TestAmerica utilizes USEPA approved methods and DOD QSM, where applicable, in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

All parameters for which TestAmerica North Canton has certification were evaluated to the limit of detection (LOD) and include qualified results where applicable. Parameters not certified under QSM, if any, were evaluated to the detection limit (DL) and include qualified results where applicable.

The sample(s) that contain constituents flagged with U are undetected. The result associated with this flag is the limit of detection (LOD).

### **RECEIPT**

The samples were received on 11/12/2012 5:57 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.3° C and 3.4° C.

### **TOTAL METALS (ICPMS)**

Samples 069SS-0001M-0001-SO (240-17525-1), 069SS-0002M-0001-SO (240-17525-2), 069SS-003M-0001-SO (240-17525-3), 069SS-004M-0001-SO (240-17525-4), 077SS-0001M-0001-SO (240-17525-5) and 077SS-0002M-0001-SO (240-17525-6) were analyzed for total metals (ICPMS) with incremental sample preparation in accordance with ITRC Technical and Regulatory Guidance ISM, February 2012 and EPA SW-846 Method 6020 DoD. The samples began the drying and disaggregation process on 11/12/2012, were prepared on 11/20/2012 and analyzed on 12/21/2012.

ICB, CCB, and ICSA samples are evaluated using the lowest LOD and DL criteria in LIMS. Using this criteria, an individual element may occasionally be flagged as out of control. If the element has a higher LOD or DL, the data is evaluated to the higher limit and determined to be acceptable.

Several analytes were detected in method blank MB 180-59046/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Aluminum and Manganese failed the recovery criteria high for the MS of sample 069SS-0001M-0001-SOMS (240-17525-1) in batch 180-59218.

Iron and Manganese failed the recovery criteria low for the MS of sample 077SS-0001M-0001-SOMS (240-17525-5) in batch 180-59218. Aluminum, Calcium and Copper failed the recovery criteria high.

The interference check standard solution (ICSA) associated with batch 59046 showed results for one or more elements at a level greater than the limit of detection (LOD). It is believed that the solution contains trace impurities of this element / these elements and the results are not due to matrix interference. These results are consistent with those found by the manufacturer of the ICSA solution.

The matrix spike (MS) recoveries for the following sample associated with batch 59046 were outside control limits for antimony.: 069SS-0001M-0001-S0 (240-17525-1). The associated laboratory control sample (LCS) recovery met acceptance criteria.

The sample duplicate precision for batch 59046 was outside control limits for calcium. The associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision met acceptance criteria.

The serial dilution performed for the following sample(s) associated with batch 59046 was outside control limits for calcium.: 069SS-0001M-0001-S0 (240-17525-1)

The matrix spike (MS) recoveries for the following sample associated with batch 59046 were outside control limits for copper, magnesium, and antimony.: 077SS-0001M-0001-SO (240-17525-5). The associated laboratory control sample (LCS) recovery met acceptance criteria.

The sample duplicate precision for batch 59046 was outside control limits for calcium and sodium. The associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision met acceptance criteria.

The serial dilution performed for the following sample(s) associated with batch 59046 was outside control limits for calcium.: 077SS-0001M-0001-SO (240-17525-5)

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

## SAMPLE SUMMARY

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

| Lab Sample ID | Client Sample ID    | Client Matrix | Date/Time<br>Sampled | Date/Time<br>Received |
|---------------|---------------------|---------------|----------------------|-----------------------|
| 240-17525-1   | 069SS-0001M-0001-S0 | Solid         | 11/11/2012 0915      | 11/12/2012 1757       |
| 240-17525-1MS | 069SS-0001M-0001-S0 | Solid         | 11/11/2012 0915      | 11/12/2012 1757       |
| 240-17525-1DU | 069SS-0001M-0001-S0 | Solid         | 11/11/2012 0915      | 11/12/2012 1757       |
| 240-17525-2   | 069SS-0002M-0001-SO | Solid         | 11/11/2012 0915      | 11/12/2012 1757       |
| 240-17525-3   | 069SS-003M-0001-SO  | Solid         | 11/11/2012 1015      | 11/12/2012 1757       |
| 240-17525-4   | 069SS-004M-0001-SO  | Solid         | 11/11/2012 0950      | 11/12/2012 1757       |
| 240-17525-5   | 077SS-0001M-0001-SO | Solid         | 11/11/2012 1045      | 11/12/2012 1757       |
| 240-17525-5MS | 077SS-0001M-0001-SO | Solid         | 11/11/2012 1045      | 11/12/2012 1757       |
| 240-17525-5DU | 077SS-0001M-0001-SO | Solid         | 11/11/2012 1045      | 11/12/2012 1757       |
| 240-17525-6   | 077SS-0002M-0001-SO | Solid         | 11/11/2012 1045      | 11/12/2012 1757       |

## EXECUTIVE SUMMARY - Detections

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

| Lab Sample ID<br>Analyte | Client Sample ID           | Result | Qualifier | Reporting<br>Limit | Units | Method   |
|--------------------------|----------------------------|--------|-----------|--------------------|-------|----------|
| <b>240-17525-1</b>       | <b>069SS-0001M-0001-S0</b> |        |           |                    |       |          |
| Silver                   |                            | 0.034  | J         | 0.089              | mg/Kg | 6020/DOD |
| Aluminum                 |                            | 14000  | J         | 2.7                | mg/Kg | 6020/DOD |
| Arsenic                  |                            | 10     |           | 0.089              | mg/Kg | 6020/DOD |
| Barium                   |                            | 76     | Q         | 0.89               | mg/Kg | 6020/DOD |
| Beryllium                |                            | 0.82   |           | 0.089              | mg/Kg | 6020/DOD |
| Calcium                  |                            | 5300   |           | 8.9                | mg/Kg | 6020/DOD |
| Cadmium                  |                            | 0.29   |           | 0.089              | mg/Kg | 6020/DOD |
| Chromium                 |                            | 24     |           | 0.18               | mg/Kg | 6020/DOD |
| Cobalt                   |                            | 11     | Q         | 0.045              | mg/Kg | 6020/DOD |
| Copper                   |                            | 19     | Q         | 0.18               | mg/Kg | 6020/DOD |
| Iron                     |                            | 24000  |           | 4.5                | mg/Kg | 6020/DOD |
| Magnesium                |                            | 3900   |           | 8.9                | mg/Kg | 6020/DOD |
| Manganese                |                            | 430    | Q J       | 0.45               | mg/Kg | 6020/DOD |
| Sodium                   |                            | 53     |           | 8.9                | mg/Kg | 6020/DOD |
| Nickel                   |                            | 27     | Q         | 0.089              | mg/Kg | 6020/DOD |
| Lead                     |                            | 19     |           | 0.089              | mg/Kg | 6020/DOD |
| Antimony                 |                            | 0.14   | J         | 0.18               | mg/Kg | 6020/DOD |
| Thallium                 |                            | 0.23   |           | 0.089              | mg/Kg | 6020/DOD |
| Vanadium                 |                            | 21     |           | 0.089              | mg/Kg | 6020/DOD |
| Zinc                     |                            | 79     | Q         | 0.45               | mg/Kg | 6020/DOD |
| Potassium                |                            | 1500   |           | 8.9                | mg/Kg | 6020/DOD |
| Selenium                 |                            | 0.78   |           | 0.45               | mg/Kg | 6020/DOD |

## EXECUTIVE SUMMARY - Detections

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

| Lab Sample ID<br>Analyte | Client Sample ID           | Result | Qualifier | Reporting<br>Limit | Units | Method   |
|--------------------------|----------------------------|--------|-----------|--------------------|-------|----------|
| <b>240-17525-2</b>       | <b>069SS-0002M-0001-SO</b> |        |           |                    |       |          |
| Silver                   |                            | 0.035  | J         | 0.094              | mg/Kg | 6020/DOD |
| Aluminum                 |                            | 13000  |           | 2.8                | mg/Kg | 6020/DOD |
| Arsenic                  |                            | 10     |           | 0.094              | mg/Kg | 6020/DOD |
| Barium                   |                            | 74     | Q         | 0.94               | mg/Kg | 6020/DOD |
| Beryllium                |                            | 0.75   |           | 0.094              | mg/Kg | 6020/DOD |
| Calcium                  |                            | 5000   |           | 9.4                | mg/Kg | 6020/DOD |
| Cadmium                  |                            | 0.27   |           | 0.094              | mg/Kg | 6020/DOD |
| Chromium                 |                            | 19     |           | 0.19               | mg/Kg | 6020/DOD |
| Cobalt                   |                            | 11     | Q         | 0.047              | mg/Kg | 6020/DOD |
| Copper                   |                            | 30     | Q         | 0.19               | mg/Kg | 6020/DOD |
| Iron                     |                            | 24000  |           | 4.7                | mg/Kg | 6020/DOD |
| Magnesium                |                            | 3800   |           | 9.4                | mg/Kg | 6020/DOD |
| Manganese                |                            | 480    | Q         | 0.47               | mg/Kg | 6020/DOD |
| Sodium                   |                            | 52     |           | 9.4                | mg/Kg | 6020/DOD |
| Nickel                   |                            | 24     | Q         | 0.094              | mg/Kg | 6020/DOD |
| Lead                     |                            | 19     |           | 0.094              | mg/Kg | 6020/DOD |
| Antimony                 |                            | 0.16   | J         | 0.19               | mg/Kg | 6020/DOD |
| Thallium                 |                            | 0.18   |           | 0.094              | mg/Kg | 6020/DOD |
| Vanadium                 |                            | 20     |           | 0.094              | mg/Kg | 6020/DOD |
| Zinc                     |                            | 78     | Q         | 0.47               | mg/Kg | 6020/DOD |
| Potassium                |                            | 1200   |           | 9.4                | mg/Kg | 6020/DOD |
| Selenium                 |                            | 0.71   |           | 0.47               | mg/Kg | 6020/DOD |



## EXECUTIVE SUMMARY - Detections

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

| Lab Sample ID<br>Analyte | Client Sample ID          | Result | Qualifier | Reporting<br>Limit | Units | Method   |
|--------------------------|---------------------------|--------|-----------|--------------------|-------|----------|
| <b>240-17525-3</b>       | <b>069SS-003M-0001-SO</b> |        |           |                    |       |          |
| Silver                   |                           | 0.032  | J         | 0.085              | mg/Kg | 6020/DOD |
| Aluminum                 |                           | 11000  |           | 2.5                | mg/Kg | 6020/DOD |
| Arsenic                  |                           | 8.6    |           | 0.085              | mg/Kg | 6020/DOD |
| Barium                   |                           | 65     | Q         | 0.85               | mg/Kg | 6020/DOD |
| Beryllium                |                           | 0.63   |           | 0.085              | mg/Kg | 6020/DOD |
| Calcium                  |                           | 7700   |           | 8.5                | mg/Kg | 6020/DOD |
| Cadmium                  |                           | 0.19   |           | 0.085              | mg/Kg | 6020/DOD |
| Chromium                 |                           | 17     |           | 0.17               | mg/Kg | 6020/DOD |
| Cobalt                   |                           | 8.1    | Q         | 0.042              | mg/Kg | 6020/DOD |
| Copper                   |                           | 11     | Q         | 0.17               | mg/Kg | 6020/DOD |
| Iron                     |                           | 20000  |           | 4.2                | mg/Kg | 6020/DOD |
| Magnesium                |                           | 2800   |           | 8.5                | mg/Kg | 6020/DOD |
| Manganese                |                           | 570    | Q         | 0.42               | mg/Kg | 6020/DOD |
| Sodium                   |                           | 47     |           | 8.5                | mg/Kg | 6020/DOD |
| Nickel                   |                           | 16     | Q         | 0.085              | mg/Kg | 6020/DOD |
| Lead                     |                           | 19     |           | 0.085              | mg/Kg | 6020/DOD |
| Antimony                 |                           | 0.16   | J         | 0.17               | mg/Kg | 6020/DOD |
| Thallium                 |                           | 0.15   |           | 0.085              | mg/Kg | 6020/DOD |
| Vanadium                 |                           | 18     |           | 0.085              | mg/Kg | 6020/DOD |
| Zinc                     |                           | 41     | Q         | 0.42               | mg/Kg | 6020/DOD |
| Potassium                |                           | 830    |           | 8.5                | mg/Kg | 6020/DOD |
| Selenium                 |                           | 0.71   |           | 0.42               | mg/Kg | 6020/DOD |

## EXECUTIVE SUMMARY - Detections

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

| Lab Sample ID<br>Analyte | Client Sample ID          | Result | Qualifier | Reporting<br>Limit | Units | Method   |
|--------------------------|---------------------------|--------|-----------|--------------------|-------|----------|
| <b>240-17525-4</b>       | <b>069SS-004M-0001-SO</b> |        |           |                    |       |          |
| Silver                   |                           | 0.045  | J         | 0.079              | mg/Kg | 6020/DOD |
| Aluminum                 |                           | 14000  |           | 2.4                | mg/Kg | 6020/DOD |
| Arsenic                  |                           | 9.8    |           | 0.079              | mg/Kg | 6020/DOD |
| Barium                   |                           | 100    | Q         | 0.79               | mg/Kg | 6020/DOD |
| Beryllium                |                           | 0.82   |           | 0.079              | mg/Kg | 6020/DOD |
| Calcium                  |                           | 25000  |           | 7.9                | mg/Kg | 6020/DOD |
| Cadmium                  |                           | 0.32   |           | 0.079              | mg/Kg | 6020/DOD |
| Chromium                 |                           | 22     |           | 0.16               | mg/Kg | 6020/DOD |
| Cobalt                   |                           | 11     | Q         | 0.040              | mg/Kg | 6020/DOD |
| Copper                   |                           | 17     | Q         | 0.16               | mg/Kg | 6020/DOD |
| Iron                     |                           | 24000  |           | 4.0                | mg/Kg | 6020/DOD |
| Magnesium                |                           | 4800   |           | 7.9                | mg/Kg | 6020/DOD |
| Manganese                |                           | 560    | Q         | 0.40               | mg/Kg | 6020/DOD |
| Sodium                   |                           | 88     |           | 7.9                | mg/Kg | 6020/DOD |
| Nickel                   |                           | 26     | Q         | 0.079              | mg/Kg | 6020/DOD |
| Lead                     |                           | 28     |           | 0.079              | mg/Kg | 6020/DOD |
| Antimony                 |                           | 0.13   | J         | 0.16               | mg/Kg | 6020/DOD |
| Thallium                 |                           | 0.17   |           | 0.079              | mg/Kg | 6020/DOD |
| Vanadium                 |                           | 21     |           | 0.079              | mg/Kg | 6020/DOD |
| Zinc                     |                           | 64     | Q         | 0.40               | mg/Kg | 6020/DOD |
| Potassium                |                           | 1500   |           | 7.9                | mg/Kg | 6020/DOD |
| Selenium                 |                           | 0.75   |           | 0.40               | mg/Kg | 6020/DOD |

## EXECUTIVE SUMMARY - Detections

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

| Lab Sample ID<br>Analyte | Client Sample ID           | Result | Qualifier | Reporting<br>Limit | Units | Method   |
|--------------------------|----------------------------|--------|-----------|--------------------|-------|----------|
| <b>240-17525-5</b>       | <b>077SS-0001M-0001-SO</b> |        |           |                    |       |          |
| Silver                   |                            | 0.027  | J         | 0.083              | mg/Kg | 6020/DOD |
| Aluminum                 |                            | 8200   |           | 2.5                | mg/Kg | 6020/DOD |
| Arsenic                  |                            | 12     |           | 0.083              | mg/Kg | 6020/DOD |
| Barium                   |                            | 49     | Q         | 0.83               | mg/Kg | 6020/DOD |
| Beryllium                |                            | 0.46   |           | 0.083              | mg/Kg | 6020/DOD |
| Calcium                  |                            | 4500   |           | 8.3                | mg/Kg | 6020/DOD |
| Cadmium                  |                            | 0.19   |           | 0.083              | mg/Kg | 6020/DOD |
| Chromium                 |                            | 18     |           | 0.17               | mg/Kg | 6020/DOD |
| Cobalt                   |                            | 7.4    | Q         | 0.041              | mg/Kg | 6020/DOD |
| Copper                   |                            | 16     | Q         | 0.17               | mg/Kg | 6020/DOD |
| Iron                     |                            | 22000  |           | 4.1                | mg/Kg | 6020/DOD |
| Magnesium                |                            | 2800   |           | 8.3                | mg/Kg | 6020/DOD |
| Manganese                |                            | 540    | Q         | 0.41               | mg/Kg | 6020/DOD |
| Sodium                   |                            | 29     |           | 8.3                | mg/Kg | 6020/DOD |
| Nickel                   |                            | 24     | Q         | 0.083              | mg/Kg | 6020/DOD |
| Lead                     |                            | 22     |           | 0.083              | mg/Kg | 6020/DOD |
| Antimony                 |                            | 0.20   |           | 0.17               | mg/Kg | 6020/DOD |
| Thallium                 |                            | 0.13   |           | 0.083              | mg/Kg | 6020/DOD |
| Vanadium                 |                            | 16     |           | 0.083              | mg/Kg | 6020/DOD |
| Zinc                     |                            | 63     | Q         | 0.41               | mg/Kg | 6020/DOD |
| Potassium                |                            | 830    |           | 8.3                | mg/Kg | 6020/DOD |
| Selenium                 |                            | 0.56   |           | 0.41               | mg/Kg | 6020/DOD |

## EXECUTIVE SUMMARY - Detections

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

| Lab Sample ID<br>Analyte | Client Sample ID           | Result | Qualifier | Reporting<br>Limit | Units | Method   |
|--------------------------|----------------------------|--------|-----------|--------------------|-------|----------|
| <b>240-17525-6</b>       | <b>077SS-0002M-0001-SO</b> |        |           |                    |       |          |
| Silver                   |                            | 0.030  | J         | 0.089              | mg/Kg | 6020/DOD |
| Aluminum                 |                            | 7700   |           | 2.7                | mg/Kg | 6020/DOD |
| Arsenic                  |                            | 14     |           | 0.089              | mg/Kg | 6020/DOD |
| Barium                   |                            | 48     | Q         | 0.89               | mg/Kg | 6020/DOD |
| Beryllium                |                            | 0.42   |           | 0.089              | mg/Kg | 6020/DOD |
| Calcium                  |                            | 5200   |           | 8.9                | mg/Kg | 6020/DOD |
| Cadmium                  |                            | 0.20   |           | 0.089              | mg/Kg | 6020/DOD |
| Chromium                 |                            | 15     |           | 0.18               | mg/Kg | 6020/DOD |
| Cobalt                   |                            | 7.7    | Q         | 0.045              | mg/Kg | 6020/DOD |
| Copper                   |                            | 17     | Q         | 0.18               | mg/Kg | 6020/DOD |
| Iron                     |                            | 20000  |           | 4.5                | mg/Kg | 6020/DOD |
| Magnesium                |                            | 2700   |           | 8.9                | mg/Kg | 6020/DOD |
| Manganese                |                            | 520    | Q         | 0.45               | mg/Kg | 6020/DOD |
| Sodium                   |                            | 32     |           | 8.9                | mg/Kg | 6020/DOD |
| Nickel                   |                            | 28     | Q         | 0.089              | mg/Kg | 6020/DOD |
| Lead                     |                            | 21     |           | 0.089              | mg/Kg | 6020/DOD |
| Antimony                 |                            | 0.17   | J         | 0.18               | mg/Kg | 6020/DOD |
| Thallium                 |                            | 0.14   |           | 0.089              | mg/Kg | 6020/DOD |
| Vanadium                 |                            | 15     |           | 0.089              | mg/Kg | 6020/DOD |
| Zinc                     |                            | 62     | Q         | 0.45               | mg/Kg | 6020/DOD |
| Potassium                |                            | 740    |           | 8.9                | mg/Kg | 6020/DOD |
| Selenium                 |                            | 0.53   |           | 0.45               | mg/Kg | 6020/DOD |

## METHOD SUMMARY

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

| Description          | Lab Location | Method         | Preparation Method |
|----------------------|--------------|----------------|--------------------|
| <b>Matrix: Solid</b> |              |                |                    |
| Metals (ICP/MS)      | TAL PIT      | SW846 6020/DOD |                    |
| Preparation, Metals  | TAL PIT      |                | SW846 3050B        |

### Lab References:

TAL PIT = TestAmerica Pittsburgh

### Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

## METHOD / ANALYST SUMMARY

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

| Method         | Analyst          | Analyst ID |
|----------------|------------------|------------|
| SW846 6020/DOD | Reinheimer, Bill | BR         |

**Analytical Data**

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

**Client Sample ID: 069SS-0001M-0001-S0**

Lab Sample ID: 240-17525-1

Date Sampled: 11/11/2012 0915

Client Matrix: Solid

Date Received: 11/12/2012 1757

**6020/DOD Metals (ICP/MS)**

Analysis Method: 6020/DOD

Analysis Batch: 180-59218

Instrument ID: M

Prep Method: 3050B

Prep Batch: 180-59046

Lab File ID: M21221A.xml

Dilution: 1.0

Initial Weight/Volume: 1.12 g

Analysis Date: 12/21/2012 1807

Final Weight/Volume: 100 mL

Prep Date: 11/20/2012 1218

| Analyte   | DryWt Corrected: N | Result (mg/Kg) | Qualifier | DL     | LOQ   |
|-----------|--------------------|----------------|-----------|--------|-------|
| Silver    |                    | 0.034          | J         | 0.010  | 0.089 |
| Aluminum  |                    | 14000          | J         | 0.25   | 2.7   |
| Arsenic   |                    | 10             |           | 0.016  | 0.089 |
| Barium    |                    | 76             | Q         | 0.0096 | 0.89  |
| Beryllium |                    | 0.82           |           | 0.0067 | 0.089 |
| Calcium   |                    | 5300           |           | 1.2    | 8.9   |
| Cadmium   |                    | 0.29           |           | 0.012  | 0.089 |
| Chromium  |                    | 24             |           | 0.020  | 0.18  |
| Cobalt    |                    | 11             | Q         | 0.0021 | 0.045 |
| Copper    |                    | 19             | Q         | 0.029  | 0.18  |
| Iron      |                    | 24000          |           | 0.96   | 4.5   |
| Magnesium |                    | 3900           |           | 0.96   | 8.9   |
| Manganese |                    | 430            | Q J       | 0.014  | 0.45  |
| Sodium    |                    | 53             |           | 2.4    | 8.9   |
| Nickel    |                    | 27             | Q         | 0.010  | 0.089 |
| Lead      |                    | 19             |           | 0.014  | 0.089 |
| Antimony  |                    | 0.14           | J         | 0.041  | 0.18  |
| Thallium  |                    | 0.23           |           | 0.0091 | 0.089 |
| Vanadium  |                    | 21             |           | 0.027  | 0.089 |
| Zinc      |                    | 79             | Q         | 0.058  | 0.45  |
| Potassium |                    | 1500           |           | 2.8    | 8.9   |
| Selenium  |                    | 0.78           |           | 0.045  | 0.45  |

**Analytical Data**

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

**Client Sample ID: 069SS-0002M-0001-SO**

Lab Sample ID: 240-17525-2

Date Sampled: 11/11/2012 0915

Client Matrix: Solid

Date Received: 11/12/2012 1757

**6020/DOD Metals (ICP/MS)**

|                  |                 |                 |           |                        |             |
|------------------|-----------------|-----------------|-----------|------------------------|-------------|
| Analysis Method: | 6020/DOD        | Analysis Batch: | 180-59218 | Instrument ID:         | M           |
| Prep Method:     | 3050B           | Prep Batch:     | 180-59046 | Lab File ID:           | M21221A.xml |
| Dilution:        | 1.0             |                 |           | Initial Weight/Volume: | 1.06 g      |
| Analysis Date:   | 12/21/2012 1847 |                 |           | Final Weight/Volume:   | 100 mL      |
| Prep Date:       | 11/20/2012 1218 |                 |           |                        |             |

| Analyte   | DryWt Corrected: N | Result (mg/Kg) | Qualifier | DL     | LOQ   |
|-----------|--------------------|----------------|-----------|--------|-------|
| Silver    |                    | 0.035          | J         | 0.011  | 0.094 |
| Aluminum  |                    | 13000          |           | 0.27   | 2.8   |
| Arsenic   |                    | 10             |           | 0.017  | 0.094 |
| Barium    |                    | 74             | Q         | 0.010  | 0.94  |
| Beryllium |                    | 0.75           |           | 0.0071 | 0.094 |
| Calcium   |                    | 5000           |           | 1.3    | 9.4   |
| Cadmium   |                    | 0.27           |           | 0.012  | 0.094 |
| Chromium  |                    | 19             |           | 0.021  | 0.19  |
| Cobalt    |                    | 11             | Q         | 0.0023 | 0.047 |
| Copper    |                    | 30             | Q         | 0.031  | 0.19  |
| Iron      |                    | 24000          |           | 1.0    | 4.7   |
| Magnesium |                    | 3800           |           | 1.0    | 9.4   |
| Manganese |                    | 480            | Q         | 0.015  | 0.47  |
| Sodium    |                    | 52             |           | 2.5    | 9.4   |
| Nickel    |                    | 24             | Q         | 0.011  | 0.094 |
| Lead      |                    | 19             |           | 0.015  | 0.094 |
| Antimony  |                    | 0.16           | J         | 0.043  | 0.19  |
| Thallium  |                    | 0.18           |           | 0.0096 | 0.094 |
| Vanadium  |                    | 20             |           | 0.028  | 0.094 |
| Zinc      |                    | 78             | Q         | 0.061  | 0.47  |
| Potassium |                    | 1200           |           | 3.0    | 9.4   |
| Selenium  |                    | 0.71           |           | 0.048  | 0.47  |



**Analytical Data**

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

**Client Sample ID:** 069SS-003M-0001-SO

Lab Sample ID: 240-17525-3

Date Sampled: 11/11/2012 1015

Client Matrix: Solid

Date Received: 11/12/2012 1757

**6020/DOD Metals (ICP/MS)**

|                  |                 |                 |           |                        |             |
|------------------|-----------------|-----------------|-----------|------------------------|-------------|
| Analysis Method: | 6020/DOD        | Analysis Batch: | 180-59218 | Instrument ID:         | M           |
| Prep Method:     | 3050B           | Prep Batch:     | 180-59046 | Lab File ID:           | M21221A.xml |
| Dilution:        | 1.0             |                 |           | Initial Weight/Volume: | 1.18 g      |
| Analysis Date:   | 12/21/2012 1852 |                 |           | Final Weight/Volume:   | 100 mL      |
| Prep Date:       | 11/20/2012 1218 |                 |           |                        |             |

| Analyte   | DryWt Corrected: N | Result (mg/Kg) | Qualifier | DL     | LOQ   |
|-----------|--------------------|----------------|-----------|--------|-------|
| Silver    |                    | 0.032          | J         | 0.0097 | 0.085 |
| Aluminum  |                    | 11000          |           | 0.24   | 2.5   |
| Arsenic   |                    | 8.6            |           | 0.015  | 0.085 |
| Barium    |                    | 65             | Q         | 0.0091 | 0.85  |
| Beryllium |                    | 0.63           |           | 0.0064 | 0.085 |
| Calcium   |                    | 7700           |           | 1.1    | 8.5   |
| Cadmium   |                    | 0.19           |           | 0.011  | 0.085 |
| Chromium  |                    | 17             |           | 0.019  | 0.17  |
| Cobalt    |                    | 8.1            | Q         | 0.0020 | 0.042 |
| Copper    |                    | 11             | Q         | 0.028  | 0.17  |
| Iron      |                    | 20000          |           | 0.91   | 4.2   |
| Magnesium |                    | 2800           |           | 0.91   | 8.5   |
| Manganese |                    | 570            | Q         | 0.013  | 0.42  |
| Sodium    |                    | 47             |           | 2.3    | 8.5   |
| Nickel    |                    | 16             | Q         | 0.0096 | 0.085 |
| Lead      |                    | 19             |           | 0.013  | 0.085 |
| Antimony  |                    | 0.16           | J         | 0.039  | 0.17  |
| Thallium  |                    | 0.15           |           | 0.0086 | 0.085 |
| Vanadium  |                    | 18             |           | 0.025  | 0.085 |
| Zinc      |                    | 41             | Q         | 0.055  | 0.42  |
| Potassium |                    | 830            |           | 2.7    | 8.5   |
| Selenium  |                    | 0.71           |           | 0.043  | 0.42  |

**Analytical Data**

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

**Client Sample ID:** 069SS-004M-0001-SO

Lab Sample ID: 240-17525-4

Date Sampled: 11/11/2012 0950

Client Matrix: Solid

Date Received: 11/12/2012 1757

**6020/DOD Metals (ICP/MS)**

|                  |                 |                 |           |                        |             |
|------------------|-----------------|-----------------|-----------|------------------------|-------------|
| Analysis Method: | 6020/DOD        | Analysis Batch: | 180-59218 | Instrument ID:         | M           |
| Prep Method:     | 3050B           | Prep Batch:     | 180-59046 | Lab File ID:           | M21221A.xml |
| Dilution:        | 1.0             |                 |           | Initial Weight/Volume: | 1.26 g      |
| Analysis Date:   | 12/21/2012 1856 |                 |           | Final Weight/Volume:   | 100 mL      |
| Prep Date:       | 11/20/2012 1218 |                 |           |                        |             |

| Analyte   | DryWt Corrected: N | Result (mg/Kg) | Qualifier | DL     | LOQ   |
|-----------|--------------------|----------------|-----------|--------|-------|
| Silver    |                    | 0.045          | J         | 0.0090 | 0.079 |
| Aluminum  |                    | 14000          |           | 0.23   | 2.4   |
| Arsenic   |                    | 9.8            |           | 0.014  | 0.079 |
| Barium    |                    | 100            | Q         | 0.0085 | 0.79  |
| Beryllium |                    | 0.82           |           | 0.0060 | 0.079 |
| Calcium   |                    | 25000          |           | 1.1    | 7.9   |
| Cadmium   |                    | 0.32           |           | 0.010  | 0.079 |
| Chromium  |                    | 22             |           | 0.018  | 0.16  |
| Cobalt    |                    | 11             | Q         | 0.0019 | 0.040 |
| Copper    |                    | 17             | Q         | 0.026  | 0.16  |
| Iron      |                    | 24000          |           | 0.85   | 4.0   |
| Magnesium |                    | 4800           |           | 0.86   | 7.9   |
| Manganese |                    | 560            | Q         | 0.013  | 0.40  |
| Sodium    |                    | 88             |           | 2.1    | 7.9   |
| Nickel    |                    | 26             | Q         | 0.0090 | 0.079 |
| Lead      |                    | 28             |           | 0.012  | 0.079 |
| Antimony  |                    | 0.13           | J         | 0.036  | 0.16  |
| Thallium  |                    | 0.17           |           | 0.0081 | 0.079 |
| Vanadium  |                    | 21             |           | 0.024  | 0.079 |
| Zinc      |                    | 64             | Q         | 0.051  | 0.40  |
| Potassium |                    | 1500           |           | 2.5    | 7.9   |
| Selenium  |                    | 0.75           |           | 0.040  | 0.40  |

**Analytical Data**

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

**Client Sample ID: 077SS-0001M-0001-SO**

Lab Sample ID: 240-17525-5

Date Sampled: 11/11/2012 1045

Client Matrix: Solid

Date Received: 11/12/2012 1757

**6020/DOD Metals (ICP/MS)**

|                  |                 |                 |           |                        |             |
|------------------|-----------------|-----------------|-----------|------------------------|-------------|
| Analysis Method: | 6020/DOD        | Analysis Batch: | 180-59218 | Instrument ID:         | M           |
| Prep Method:     | 3050B           | Prep Batch:     | 180-59046 | Lab File ID:           | M21221A.xml |
| Dilution:        | 1.0             |                 |           | Initial Weight/Volume: | 1.21 g      |
| Analysis Date:   | 12/21/2012 1900 |                 |           | Final Weight/Volume:   | 100 mL      |
| Prep Date:       | 11/20/2012 1218 |                 |           |                        |             |

| Analyte   | DryWt Corrected: N | Result (mg/Kg) | Qualifier | DL     | LOQ   |
|-----------|--------------------|----------------|-----------|--------|-------|
| Silver    |                    | 0.027          | J         | 0.0094 | 0.083 |
| Aluminum  |                    | 8200           |           | 0.24   | 2.5   |
| Arsenic   |                    | 12             |           | 0.015  | 0.083 |
| Barium    |                    | 49             | Q         | 0.0088 | 0.83  |
| Beryllium |                    | 0.46           |           | 0.0062 | 0.083 |
| Calcium   |                    | 4500           |           | 1.1    | 8.3   |
| Cadmium   |                    | 0.19           |           | 0.011  | 0.083 |
| Chromium  |                    | 18             |           | 0.018  | 0.17  |
| Cobalt    |                    | 7.4            | Q         | 0.0020 | 0.041 |
| Copper    |                    | 16             | Q         | 0.027  | 0.17  |
| Iron      |                    | 22000          |           | 0.89   | 4.1   |
| Magnesium |                    | 2800           |           | 0.89   | 8.3   |
| Manganese |                    | 540            | Q         | 0.013  | 0.41  |
| Sodium    |                    | 29             |           | 2.2    | 8.3   |
| Nickel    |                    | 24             | Q         | 0.0093 | 0.083 |
| Lead      |                    | 22             |           | 0.013  | 0.083 |
| Antimony  |                    | 0.20           |           | 0.038  | 0.17  |
| Thallium  |                    | 0.13           |           | 0.0084 | 0.083 |
| Vanadium  |                    | 16             |           | 0.025  | 0.083 |
| Zinc      |                    | 63             | Q         | 0.054  | 0.41  |
| Potassium |                    | 830            |           | 2.6    | 8.3   |
| Selenium  |                    | 0.56           |           | 0.042  | 0.41  |

**Analytical Data**

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

**Client Sample ID: 077SS-0002M-0001-SO**

Lab Sample ID: 240-17525-6

Date Sampled: 11/11/2012 1045

Client Matrix: Solid

Date Received: 11/12/2012 1757

**6020/DOD Metals (ICP/MS)**

|                  |                 |                 |           |                        |             |
|------------------|-----------------|-----------------|-----------|------------------------|-------------|
| Analysis Method: | 6020/DOD        | Analysis Batch: | 180-59218 | Instrument ID:         | M           |
| Prep Method:     | 3050B           | Prep Batch:     | 180-59046 | Lab File ID:           | M21221A.xml |
| Dilution:        | 1.0             |                 |           | Initial Weight/Volume: | 1.12 g      |
| Analysis Date:   | 12/21/2012 1925 |                 |           | Final Weight/Volume:   | 100 mL      |
| Prep Date:       | 11/20/2012 1218 |                 |           |                        |             |

| Analyte   | DryWt Corrected: N | Result (mg/Kg) | Qualifier | DL     | LOQ   |
|-----------|--------------------|----------------|-----------|--------|-------|
| Silver    |                    | 0.030          | J         | 0.010  | 0.089 |
| Aluminum  |                    | 7700           |           | 0.25   | 2.7   |
| Arsenic   |                    | 14             |           | 0.016  | 0.089 |
| Barium    |                    | 48             | Q         | 0.0096 | 0.89  |
| Beryllium |                    | 0.42           |           | 0.0067 | 0.089 |
| Calcium   |                    | 5200           |           | 1.2    | 8.9   |
| Cadmium   |                    | 0.20           |           | 0.012  | 0.089 |
| Chromium  |                    | 15             |           | 0.020  | 0.18  |
| Cobalt    |                    | 7.7            | Q         | 0.0021 | 0.045 |
| Copper    |                    | 17             | Q         | 0.029  | 0.18  |
| Iron      |                    | 20000          |           | 0.96   | 4.5   |
| Magnesium |                    | 2700           |           | 0.96   | 8.9   |
| Manganese |                    | 520            | Q         | 0.014  | 0.45  |
| Sodium    |                    | 32             |           | 2.4    | 8.9   |
| Nickel    |                    | 28             | Q         | 0.010  | 0.089 |
| Lead      |                    | 21             |           | 0.014  | 0.089 |
| Antimony  |                    | 0.17           | J         | 0.041  | 0.18  |
| Thallium  |                    | 0.14           |           | 0.0091 | 0.089 |
| Vanadium  |                    | 15             |           | 0.027  | 0.089 |
| Zinc      |                    | 62             | Q         | 0.058  | 0.45  |
| Potassium |                    | 740            |           | 2.8    | 8.9   |
| Selenium  |                    | 0.53           |           | 0.045  | 0.45  |

## Quality Control Results

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

### Method Blank - Batch: 180-59046

### Method: 6020/DOD Preparation: 3050B

Lab Sample ID: MB 180-59046/1-A  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 12/21/2012 1759  
Prep Date: 11/20/2012 1218  
Leach Date: N/A

Analysis Batch: 180-59218  
Prep Batch: 180-59046  
Leach Batch: N/A  
Units: mg/Kg

Instrument ID: M  
Lab File ID: M21221A.xml  
Initial Weight/Volume: 1.00 g  
Final Weight/Volume: 100 mL

| Analyte   | Result | Qual | DL     | LOQ   |
|-----------|--------|------|--------|-------|
| Silver    | 0.030  | U    | 0.011  | 0.10  |
| Aluminum  | 0.498  | J    | 0.28   | 3.0   |
| Arsenic   | 0.050  | U    | 0.018  | 0.10  |
| Barium    | 0.0235 | J Q  | 0.011  | 1.0   |
| Beryllium | 0.010  | U    | 0.0075 | 0.10  |
| Calcium   | 3.11   | J    | 1.3    | 10    |
| Cadmium   | 0.030  | U    | 0.013  | 0.10  |
| Chromium  | 0.0232 | J    | 0.022  | 0.20  |
| Cobalt    | 0.010  | U Q  | 0.0024 | 0.050 |
| Copper    | 0.060  | U Q  | 0.033  | 0.20  |
| Iron      | 2.20   | J    | 1.1    | 5.0   |
| Magnesium | 2.0    | U    | 1.1    | 10    |
| Manganese | 0.0259 | J Q  | 0.016  | 0.50  |
| Sodium    | 5.0    | U    | 2.7    | 10    |
| Nickel    | 0.030  | U Q  | 0.011  | 0.10  |
| Lead      | 0.030  | U    | 0.015  | 0.10  |
| Antimony  | 0.10   | U    | 0.046  | 0.20  |
| Thallium  | 0.020  | U    | 0.010  | 0.10  |
| Vanadium  | 0.060  | U    | 0.030  | 0.10  |
| Zinc      | 0.0677 | J Q  | 0.065  | 0.50  |
| Potassium | 6.0    | U    | 3.2    | 10    |
| Selenium  | 0.10   | U    | 0.051  | 0.50  |

## Quality Control Results

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

### Lab Control Sample - Batch: 180-59046

Method: 6020/DOD  
Preparation: 3050B

|                |                   |                 |           |                        |             |
|----------------|-------------------|-----------------|-----------|------------------------|-------------|
| Lab Sample ID: | LCS 180-59046/2-A | Analysis Batch: | 180-59218 | Instrument ID:         | M           |
| Client Matrix: | Solid             | Prep Batch:     | 180-59046 | Lab File ID:           | M21221A.xml |
| Dilution:      | 1.0               | Leach Batch:    | N/A       | Initial Weight/Volume: | 1.00 g      |
| Analysis Date: | 12/21/2012 1803   | Units:          | mg/Kg     | Final Weight/Volume:   | 100 mL      |
| Prep Date:     | 11/20/2012 1218   |                 |           |                        |             |
| Leach Date:    | N/A               |                 |           |                        |             |

| Analyte   | Spike Amount | Result | % Rec. | Limit    | Qual |
|-----------|--------------|--------|--------|----------|------|
| Silver    | 10.0         | 8.90   | 89     | 60 - 114 |      |
| Aluminum  | 1000         | 898    | 90     | 80 - 120 |      |
| Arsenic   | 100          | 83.1   | 83     | 73 - 110 |      |
| Barium    | 100          | 85.7   | 86     | 70 - 110 | Q    |
| Beryllium | 100          | 84.3   | 84     | 79 - 110 |      |
| Calcium   | 1000         | 890    | 89     | 80 - 120 |      |
| Cadmium   | 100          | 84.4   | 84     | 74 - 110 |      |
| Chromium  | 100          | 97.1   | 97     | 70 - 110 |      |
| Cobalt    | 100          | 97.0   | 97     | 74 - 110 | Q    |
| Copper    | 100          | 92.6   | 93     | 73 - 110 | Q    |
| Iron      | 1000         | 957    | 96     | 80 - 120 |      |
| Magnesium | 1000         | 917    | 92     | 80 - 120 |      |
| Manganese | 100          | 95.3   | 95     | 80 - 120 | Q    |
| Sodium    | 1000         | 895    | 89     | 80 - 120 |      |
| Nickel    | 100          | 91.2   | 91     | 75 - 110 | Q    |
| Lead      | 100          | 89.4   | 89     | 75 - 110 |      |
| Antimony  | 10.0         | 8.38   | 84     | 68 - 113 |      |
| Thallium  | 25.0         | 20.9   | 84     | 71 - 110 |      |
| Vanadium  | 100          | 97.2   | 97     | 72 - 110 |      |
| Zinc      | 100          | 85.1   | 85     | 72 - 113 | Q    |
| Potassium | 1000         | 910    | 91     | 80 - 120 |      |
| Selenium  | 100          | 81.1   | 81     | 65 - 110 |      |

## Quality Control Results

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

### Matrix Spike - Batch: 180-59046

Method: 6020/DOD  
Preparation: 3050B

|                |                 |                 |           |                        |             |
|----------------|-----------------|-----------------|-----------|------------------------|-------------|
| Lab Sample ID: | 240-17525-1     | Analysis Batch: | 180-59218 | Instrument ID:         | M           |
| Client Matrix: | Solid           | Prep Batch:     | 180-59046 | Lab File ID:           | M21221A.xml |
| Dilution:      | 1.0             | Leach Batch:    | N/A       | Initial Weight/Volume: | 1.12 g      |
| Analysis Date: | 12/21/2012 1820 | Units:          | mg/Kg     | Final Weight/Volume:   | 100 mL      |
| Prep Date:     | 11/20/2012 1218 |                 |           |                        |             |
| Leach Date:    | N/A             |                 |           |                        |             |

| Analyte   | Sample Result/Qual |   | Spike Amount | Result | % Rec. | Limit    | Qual |
|-----------|--------------------|---|--------------|--------|--------|----------|------|
| Silver    | 0.034              | J | 8.93         | 7.31   | 81     | 75 - 125 |      |
| Aluminum  | 14000              |   | 893          | 16000  | 191    | 70 - 130 | 4    |
| Arsenic   | 10                 |   | 8.93         | 16.7   | 72     | 23 - 131 |      |
| Barium    | 76                 |   | 8.93         | 83.4   | 86     | 10 - 199 | Q 4  |
| Beryllium | 0.82               |   | 8.93         | 8.38   | 85     | 58 - 112 |      |
| Calcium   | 5300               |   | 893          | 6310   | 112    | 70 - 130 | 4    |
| Cadmium   | 0.29               |   | 8.93         | 7.33   | 79     | 58 - 110 |      |
| Chromium  | 24                 |   | 8.93         | 31.7   | 86     | 10 - 199 |      |
| Cobalt    | 11                 |   | 8.93         | 18.7   | 86     | 55 - 110 | Q    |
| Copper    | 19                 |   | 8.93         | 25.5   | 75     | 10 - 199 | Q    |
| Iron      | 24000              |   | 893          | 25300  | 102    | 70 - 130 | 4    |
| Magnesium | 3900               |   | 893          | 4870   | 103    | 70 - 130 | 4    |
| Manganese | 430                |   | 8.93         | 449    | 241    | 10 - 199 | Q 4  |
| Sodium    | 53                 |   | 893          | 851    | 89     | 70 - 130 |      |
| Nickel    | 27                 |   | 8.93         | 35.8   | 95     | 10 - 176 | Q    |
| Lead      | 19                 |   | 8.93         | 26.4   | 89     | 10 - 199 |      |
| Antimony  | 0.14               | J | 8.93         | 2.11   | 22     | 75 - 125 | J    |
| Thallium  | 0.23               |   | 8.93         | 7.74   | 84     | 82 - 110 |      |
| Vanadium  | 21                 |   | 8.93         | 30.1   | 103    | 39 - 129 |      |
| Zinc      | 79                 |   | 8.93         | 79.6   | 12     | 10 - 199 | Q 4  |
| Potassium | 1500               |   | 893          | 2270   | 87     | 70 - 130 |      |
| Selenium  | 0.78               |   | 8.93         | 6.54   | 64     | 39 - 116 |      |

### Post Digestion Spike - Batch: 180-59046

Method: 6020/DOD  
Preparation: 3050B

|                |                 |                 |           |                        |             |
|----------------|-----------------|-----------------|-----------|------------------------|-------------|
| Lab Sample ID: | 240-17525-1     | Analysis Batch: | 180-59218 | Instrument ID:         | M           |
| Client Matrix: | Solid           | Prep Batch:     | 180-59046 | Lab File ID:           | M21221A.xml |
| Dilution:      | 1.0             | Leach Batch:    | N/A       | Initial Weight/Volume: | 1.12 g      |
| Analysis Date: | 12/21/2012 1840 | Units:          | mg/Kg     | Final Weight/Volume:   | 100 mL      |
| Prep Date:     | 11/20/2012 1218 |                 |           |                        |             |
| Leach Date:    | N/A             |                 |           |                        |             |

| Analyte   | Sample Result/Qual |   | Spike Amount | Result | % Rec. | Limit    | Qual |
|-----------|--------------------|---|--------------|--------|--------|----------|------|
| Silver    | 0.034              | J | 4.46         | 3.91   | 87     | 80 - 120 |      |
| Aluminum  | 14000              |   | 179          | 14600  | 200    | 80 - 120 |      |
| Arsenic   | 10                 |   | 3.57         | 13.6   | 94     | 80 - 120 |      |
| Barium    | 76                 |   | 179          | 230    | 86     | 80 - 120 | Q    |
| Beryllium | 0.82               |   | 4.46         | 4.86   | 91     | 80 - 120 |      |

## Quality Control Results

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

### Post Digestion Spike - Batch: 180-59046

Method: 6020/DOD  
Preparation: 3050B

|                |                 |                 |           |                        |             |
|----------------|-----------------|-----------------|-----------|------------------------|-------------|
| Lab Sample ID: | 240-17525-1     | Analysis Batch: | 180-59218 | Instrument ID:         | M           |
| Client Matrix: | Solid           | Prep Batch:     | 180-59046 | Lab File ID:           | M21221A.xml |
| Dilution:      | 1.0             | Leach Batch:    | N/A       | Initial Weight/Volume: | 1.12 g      |
| Analysis Date: | 12/21/2012 1840 | Units:          | mg/Kg     | Final Weight/Volume:   | 100 mL      |
| Prep Date:     | 11/20/2012 1218 |                 |           |                        |             |
| Leach Date:    | N/A             |                 |           |                        |             |

| Analyte   | Sample Result/Qual | Spike Amount | Result | % Rec. | Limit    | Qual |
|-----------|--------------------|--------------|--------|--------|----------|------|
| Calcium   | 5300               | 4460         | 9950   | 104    | 80 - 120 |      |
| Cadmium   | 0.29               | 4.46         | 4.15   | 87     | 80 - 120 |      |
| Chromium  | 24                 | 17.9         | 41.5   | 98     | 80 - 120 |      |
| Cobalt    | 11                 | 44.6         | 56.0   | 101    | 80 - 120 | Q    |
| Copper    | 19                 | 22.3         | 39.0   | 90     | 80 - 120 | Q    |
| Iron      | 24000              | 89.3         | 25600  | 1350   | 80 - 120 |      |
| Magnesium | 3900               | 4460         | 8160   | 94     | 80 - 120 |      |
| Manganese | 430                | 44.6         | 488    | 136    | 80 - 120 | Q    |
| Sodium    | 53                 | 4460         | 4290   | 95     | 80 - 120 |      |
| Nickel    | 27                 | 44.6         | 68.4   | 92     | 80 - 120 | Q    |
| Lead      | 19                 | 1.79         | 19.7   | 66     | 80 - 120 |      |
| Antimony  | 0.14               | J 44.6       | 38.7   | 86     | 80 - 120 |      |
| Thallium  | 0.23               | 4.46         | 4.12   | 87     | 80 - 120 |      |
| Vanadium  | 21                 | 44.6         | 69.0   | 108    | 80 - 120 |      |
| Zinc      | 79                 | 44.6         | 118    | 89     | 80 - 120 | Q    |
| Potassium | 1500               | 4460         | 5840   | 98     | 80 - 120 |      |
| Selenium  | 0.78               | 0.893        | 1.50   | 81     | 80 - 120 |      |

### Matrix Spike - Batch: 180-59046

Method: 6020/DOD  
Preparation: 3050B

|                |                 |                 |           |                        |             |
|----------------|-----------------|-----------------|-----------|------------------------|-------------|
| Lab Sample ID: | 240-17525-5     | Analysis Batch: | 180-59218 | Instrument ID:         | M           |
| Client Matrix: | Solid           | Prep Batch:     | 180-59046 | Lab File ID:           | M21221A.xml |
| Dilution:      | 1.0             | Leach Batch:    | N/A       | Initial Weight/Volume: | 1.21 g      |
| Analysis Date: | 12/21/2012 1913 | Units:          | mg/Kg     | Final Weight/Volume:   | 100 mL      |
| Prep Date:     | 11/20/2012 1218 |                 |           |                        |             |
| Leach Date:    | N/A             |                 |           |                        |             |

| Analyte   | Sample Result/Qual | Spike Amount | Result | % Rec. | Limit    | Qual |
|-----------|--------------------|--------------|--------|--------|----------|------|
| Silver    | 0.027 J            | 8.26         | 6.74   | 81     | 75 - 125 |      |
| Aluminum  | 8200               | 826          | 11100  | 349    | 70 - 130 | 4    |
| Arsenic   | 12                 | 8.26         | 18.8   | 78     | 23 - 131 |      |
| Barium    | 49                 | 8.26         | 58.5   | 118    | 10 - 199 | Q 4  |
| Beryllium | 0.46               | 8.26         | 7.39   | 84     | 58 - 112 |      |
| Calcium   | 4500               | 826          | 5790   | 160    | 70 - 130 | 4    |
| Cadmium   | 0.19               | 8.26         | 6.76   | 79     | 58 - 110 |      |
| Chromium  | 18                 | 8.26         | 27.7   | 114    | 10 - 199 |      |
| Cobalt    | 7.4                | 8.26         | 14.7   | 88     | 55 - 110 | Q    |
| Copper    | 16                 | 8.26         | 42.3   | 317    | 10 - 199 | Q J  |



## Quality Control Results

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

### Matrix Spike - Batch: 180-59046

Method: 6020/DOD  
Preparation: 3050B

|                |                 |                 |           |                        |             |
|----------------|-----------------|-----------------|-----------|------------------------|-------------|
| Lab Sample ID: | 240-17525-5     | Analysis Batch: | 180-59218 | Instrument ID:         | M           |
| Client Matrix: | Solid           | Prep Batch:     | 180-59046 | Lab File ID:           | M21221A.xml |
| Dilution:      | 1.0             | Leach Batch:    | N/A       | Initial Weight/Volume: | 1.21 g      |
| Analysis Date: | 12/21/2012 1913 | Units:          | mg/Kg     | Final Weight/Volume:   | 100 mL      |
| Prep Date:     | 11/20/2012 1218 |                 |           |                        |             |
| Leach Date:    | N/A             |                 |           |                        |             |

| Analyte   | Sample Result/Qual | Spike Amount | Result | % Rec. | Limit    | Qual |
|-----------|--------------------|--------------|--------|--------|----------|------|
| Iron      | 22000              | 826          | 21700  | -54    | 70 - 130 | 4    |
| Magnesium | 2800               | 826          | 3930   | 132    | 70 - 130 | J    |
| Manganese | 540                | 8.26         | 538    | -80    | 10 - 199 | Q 4  |
| Sodium    | 29                 | 826          | 770    | 90     | 70 - 130 |      |
| Nickel    | 24                 | 8.26         | 31.7   | 94     | 10 - 176 | Q    |
| Lead      | 22                 | 8.26         | 30.7   | 103    | 10 - 199 |      |
| Antimony  | 0.20               | 8.26         | 1.93   | 21     | 75 - 125 | J    |
| Thallium  | 0.13               | 8.26         | 7.07   | 84     | 82 - 110 |      |
| Vanadium  | 16                 | 8.26         | 25.3   | 118    | 39 - 129 |      |
| Zinc      | 63                 | 8.26         | 69.8   | 88     | 10 - 199 | Q 4  |
| Potassium | 830                | 826          | 1840   | 122    | 70 - 130 |      |
| Selenium  | 0.56               | 8.26         | 6.51   | 72     | 39 - 116 |      |

### Post Digestion Spike - Batch: 180-59046

Method: 6020/DOD  
Preparation: 3050B

|                |                 |                 |           |                        |             |
|----------------|-----------------|-----------------|-----------|------------------------|-------------|
| Lab Sample ID: | 240-17525-5     | Analysis Batch: | 180-59218 | Instrument ID:         | M           |
| Client Matrix: | Solid           | Prep Batch:     | 180-59046 | Lab File ID:           | M21221A.xml |
| Dilution:      | 1.0             | Leach Batch:    | N/A       | Initial Weight/Volume: | 1.21 g      |
| Analysis Date: | 12/21/2012 1917 | Units:          | mg/Kg     | Final Weight/Volume:   | 100 mL      |
| Prep Date:     | 11/20/2012 1218 |                 |           |                        |             |
| Leach Date:    | N/A             |                 |           |                        |             |

| Analyte   | Sample Result/Qual | Spike Amount | Result | % Rec. | Limit    | Qual |
|-----------|--------------------|--------------|--------|--------|----------|------|
| Silver    | 0.027 J            | 4.13         | 3.61   | 87     | 80 - 120 |      |
| Aluminum  | 8200               | 165          | 8490   | 176    | 80 - 120 |      |
| Arsenic   | 12                 | 3.31         | 15.3   | 87     | 80 - 120 |      |
| Barium    | 49                 | 165          | 191    | 86     | 80 - 120 | Q    |
| Beryllium | 0.46               | 4.13         | 4.01   | 86     | 80 - 120 |      |
| Calcium   | 4500               | 4130         | 8720   | 103    | 80 - 120 |      |
| Cadmium   | 0.19               | 4.13         | 3.67   | 84     | 80 - 120 |      |
| Chromium  | 18                 | 16.5         | 34.2   | 97     | 80 - 120 |      |
| Cobalt    | 7.4                | 41.3         | 48.2   | 99     | 80 - 120 | Q    |
| Copper    | 16                 | 20.7         | 34.3   | 88     | 80 - 120 | Q    |
| Iron      | 22000              | 82.6         | 23100  | 1060   | 80 - 120 |      |
| Magnesium | 2800               | 4130         | 6610   | 91     | 80 - 120 |      |
| Manganese | 540                | 41.3         | 604    | 144    | 80 - 120 | Q    |
| Sodium    | 29                 | 4130         | 3800   | 91     | 80 - 120 |      |
| Nickel    | 24                 | 41.3         | 60.8   | 89     | 80 - 120 | Q    |

## Quality Control Results

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

### Post Digestion Spike - Batch: 180-59046

Method: 6020/DOD  
Preparation: 3050B

|                |                 |                 |           |                        |             |
|----------------|-----------------|-----------------|-----------|------------------------|-------------|
| Lab Sample ID: | 240-17525-5     | Analysis Batch: | 180-59218 | Instrument ID:         | M           |
| Client Matrix: | Solid           | Prep Batch:     | 180-59046 | Lab File ID:           | M21221A.xml |
| Dilution:      | 1.0             | Leach Batch:    | N/A       | Initial Weight/Volume: | 1.21 g      |
| Analysis Date: | 12/21/2012 1917 | Units:          | mg/Kg     | Final Weight/Volume:   | 100 mL      |
| Prep Date:     | 11/20/2012 1218 |                 |           |                        |             |
| Leach Date:    | N/A             |                 |           |                        |             |

| Analyte   | Sample Result/Qual | Spike Amount | Result | % Rec. | Limit    | Qual |
|-----------|--------------------|--------------|--------|--------|----------|------|
| Lead      | 22                 | 1.65         | 23.5   | 80     | 80 - 120 |      |
| Antimony  | 0.20               | 41.3         | 34.9   | 84     | 80 - 120 |      |
| Thallium  | 0.13               | 4.13         | 3.82   | 89     | 80 - 120 |      |
| Vanadium  | 16                 | 41.3         | 59.9   | 107    | 80 - 120 |      |
| Zinc      | 63                 | 41.3         | 96.9   | 83     | 80 - 120 | Q    |
| Potassium | 830                | 4130         | 4780   | 96     | 80 - 120 |      |
| Selenium  | 0.56               | 0.826        | 1.32   | 92     | 80 - 120 |      |

## Quality Control Results

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

### Serial Dilution - Batch: 180-59046

**Method: 6020/DOD**  
**Preparation: 3050B**

|                |                 |                 |           |                        |             |
|----------------|-----------------|-----------------|-----------|------------------------|-------------|
| Lab Sample ID: | 240-17525-1     | Analysis Batch: | 180-59218 | Instrument ID:         | M           |
| Client Matrix: | Solid           | Prep Batch:     | 180-59046 | Lab File ID:           | M21221A.xml |
| Dilution:      | 5.0             | Leach Batch:    | N/A       | Initial Weight/Volume: | 1.12 g      |
| Analysis Date: | 12/21/2012 1812 | Units:          | mg/Kg     | Final Weight/Volume:   | 100 mL      |
| Prep Date:     | 11/20/2012 1218 |                 |           |                        |             |
| Leach Date:    | N/A             |                 |           |                        |             |

| Analyte   | Sample Result/Qual |   | Result | %Diff | Limit | Qual |
|-----------|--------------------|---|--------|-------|-------|------|
| Silver    | 0.034              | J | 0.13   | NC    | 10    | U    |
| Aluminum  | 14000              |   | 14300  | 0.56  | 10    | D    |
| Arsenic   | 10                 |   | 10.1   | 1.3   | 10    | D    |
| Barium    | 76                 |   | 76.8   | 1.5   | 10    | D Q  |
| Beryllium | 0.82               |   | 0.812  | 0.74  | 10    | D    |
| Calcium   | 5300               |   | 4730   | 11    | 10    | D V  |
| Cadmium   | 0.29               |   | 0.284  | NC    | 10    | J D  |
| Chromium  | 24                 |   | 23.5   | 2.3   | 10    | D    |
| Cobalt    | 11                 |   | 10.7   | 3.2   | 10    | D Q  |
| Copper    | 19                 |   | 18.8   | 0.14  | 10    | D Q  |
| Iron      | 24000              |   | 24900  | 2.3   | 10    | D    |
| Magnesium | 3900               |   | 3880   | 1.7   | 10    | D    |
| Manganese | 430                |   | 416    | 2.6   | 10    | D Q  |
| Sodium    | 53                 |   | 46.1   | NC    | 10    | D    |
| Nickel    | 27                 |   | 26.9   | 1.8   | 10    | D Q  |
| Lead      | 19                 |   | 17.5   | 5.6   | 10    | D    |
| Antimony  | 0.14               | J | 0.45   | NC    | 10    | U    |
| Thallium  | 0.23               |   | 0.248  | NC    | 10    | J D  |
| Vanadium  | 21                 |   | 20.3   | 3.2   | 10    | D    |
| Zinc      | 79                 |   | 82.0   | 4.5   | 10    | D Q  |
| Potassium | 1500               |   | 1460   | 2.2   | 10    | D    |
| Selenium  | 0.78               |   | 0.45   | NC    | 10    | U    |

### Duplicate - Batch: 180-59046

**Method: 6020/DOD**  
**Preparation: 3050B**

|                |                 |                 |           |                        |             |
|----------------|-----------------|-----------------|-----------|------------------------|-------------|
| Lab Sample ID: | 240-17525-1     | Analysis Batch: | 180-59218 | Instrument ID:         | M           |
| Client Matrix: | Solid           | Prep Batch:     | 180-59046 | Lab File ID:           | M21221A.xml |
| Dilution:      | 1.0             | Leach Batch:    | N/A       | Initial Weight/Volume: | 1.12 g      |
| Analysis Date: | 12/21/2012 1816 | Units:          | mg/Kg     | Final Weight/Volume:   | 100 mL      |
| Prep Date:     | 11/20/2012 1218 |                 |           |                        |             |
| Leach Date:    | N/A             |                 |           |                        |             |

| Analyte   | Sample Result/Qual |   | Result | RPD | Limit | Qual |
|-----------|--------------------|---|--------|-----|-------|------|
| Silver    | 0.034              | J | 0.0317 | 7   | 20    | J    |
| Aluminum  | 14000              |   | 15000  | 5   | 20    |      |
| Arsenic   | 10                 |   | 10.7   | 4   | 20    |      |
| Barium    | 76                 |   | 75.2   | 0.7 | 20    | Q    |
| Beryllium | 0.82               |   | 0.801  | 2   | 20    |      |
| Calcium   | 5300               |   | 6580   | 21  | 20    | J    |
| Cadmium   | 0.29               |   | 0.277  | 5   | 20    |      |

## Quality Control Results

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

### Duplicate - Batch: 180-59046

Method: 6020/DOD  
Preparation: 3050B

|                |                 |                 |           |                        |             |
|----------------|-----------------|-----------------|-----------|------------------------|-------------|
| Lab Sample ID: | 240-17525-1     | Analysis Batch: | 180-59218 | Instrument ID:         | M           |
| Client Matrix: | Solid           | Prep Batch:     | 180-59046 | Lab File ID:           | M21221A.xml |
| Dilution:      | 1.0             | Leach Batch:    | N/A       | Initial Weight/Volume: | 1.12 g      |
| Analysis Date: | 12/21/2012 1816 | Units:          | mg/Kg     | Final Weight/Volume:   | 100 mL      |
| Prep Date:     | 11/20/2012 1218 |                 |           |                        |             |
| Leach Date:    | N/A             |                 |           |                        |             |

| Analyte   | Sample Result/Qual | Result | RPD | Limit | Qual |
|-----------|--------------------|--------|-----|-------|------|
| Chromium  | 24                 | 25.4   | 5   | 20    |      |
| Cobalt    | 11                 | 11.9   | 8   | 20    | Q    |
| Copper    | 19                 | 20.5   | 9   | 20    | Q    |
| Iron      | 24000              | 25800  | 6   | 20    |      |
| Magnesium | 3900               | 4170   | 6   | 20    |      |
| Manganese | 430                | 448    | 5   | 20    | Q    |
| Sodium    | 53                 | 59.6   | 11  | 20    |      |
| Nickel    | 27                 | 28.8   | 5   | 20    | Q    |
| Lead      | 19                 | 17.8   | 4   | 20    |      |
| Antimony  | 0.14 J             | 0.119  | 13  | 20    | J    |
| Thallium  | 0.23               | 0.186  | 23  | 20    |      |
| Vanadium  | 21                 | 22.7   | 8   | 20    |      |
| Zinc      | 79                 | 80.9   | 3   | 20    | Q    |
| Potassium | 1500               | 1610   | 8   | 20    |      |
| Selenium  | 0.78               | 0.732  | 7   | 20    |      |

### Serial Dilution - Batch: 180-59046

Method: 6020/DOD  
Preparation: 3050B

|                |                 |                 |           |                        |             |
|----------------|-----------------|-----------------|-----------|------------------------|-------------|
| Lab Sample ID: | 240-17525-5     | Analysis Batch: | 180-59218 | Instrument ID:         | M           |
| Client Matrix: | Solid           | Prep Batch:     | 180-59046 | Lab File ID:           | M21221A.xml |
| Dilution:      | 5.0             | Leach Batch:    | N/A       | Initial Weight/Volume: | 1.21 g      |
| Analysis Date: | 12/21/2012 1905 | Units:          | mg/Kg     | Final Weight/Volume:   | 100 mL      |
| Prep Date:     | 11/20/2012 1218 |                 |           |                        |             |
| Leach Date:    | N/A             |                 |           |                        |             |

| Analyte   | Sample Result/Qual | Result | %Diff | Limit | Qual |
|-----------|--------------------|--------|-------|-------|------|
| Silver    | 0.027 J            | 0.12   | NC    | 10    | U    |
| Aluminum  | 8200               | 8340   | 1.8   | 10    | D    |
| Arsenic   | 12                 | 12.5   | 0.37  | 10    | D    |
| Barium    | 49                 | 49.9   | 2.3   | 10    | D Q  |
| Beryllium | 0.46               | 0.482  | 4.0   | 10    | D    |
| Calcium   | 4500               | 3920   | 12    | 10    | D V  |
| Cadmium   | 0.19               | 0.189  | NC    | 10    | J D  |
| Chromium  | 18                 | 17.5   | 3.7   | 10    | D    |
| Cobalt    | 7.4                | 7.02   | 5.3   | 10    | D Q  |
| Copper    | 16                 | 15.9   | 1.1   | 10    | D Q  |
| Iron      | 22000              | 22800  | 2.6   | 10    | D    |
| Magnesium | 2800               | 2850   | 0.20  | 10    | D    |
| Manganese | 540                | 532    | 2.3   | 10    | D Q  |
| Sodium    | 29                 | 29.1   | NC    | 10    | J D  |

## Quality Control Results

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

### Serial Dilution - Batch: 180-59046

**Method: 6020/DOD**  
**Preparation: 3050B**

|                |                 |                 |           |                        |             |
|----------------|-----------------|-----------------|-----------|------------------------|-------------|
| Lab Sample ID: | 240-17525-5     | Analysis Batch: | 180-59218 | Instrument ID:         | M           |
| Client Matrix: | Solid           | Prep Batch:     | 180-59046 | Lab File ID:           | M21221A.xml |
| Dilution:      | 5.0             | Leach Batch:    | N/A       | Initial Weight/Volume: | 1.21 g      |
| Analysis Date: | 12/21/2012 1905 | Units:          | mg/Kg     | Final Weight/Volume:   | 100 mL      |
| Prep Date:     | 11/20/2012 1218 |                 |           |                        |             |
| Leach Date:    | N/A             |                 |           |                        |             |

| Analyte   | Sample Result/Qual | Result | %Diff | Limit | Qual |
|-----------|--------------------|--------|-------|-------|------|
| Nickel    | 24                 | 23.2   | 3.3   | 10    | D Q  |
| Lead      | 22                 | 20.9   | 5.7   | 10    | D    |
| Antimony  | 0.20               | 0.199  | NC    | 10    | J D  |
| Thallium  | 0.13               | 0.135  | NC    | 10    | J D  |
| Vanadium  | 16                 | 15.0   | 3.8   | 10    | D    |
| Zinc      | 63                 | 65.4   | 4.5   | 10    | D Q  |
| Potassium | 830                | 819    | 1.1   | 10    | D    |
| Selenium  | 0.56               | 0.41   | NC    | 10    | U    |

### Duplicate - Batch: 180-59046

**Method: 6020/DOD**  
**Preparation: 3050B**

|                |                 |                 |           |                        |             |
|----------------|-----------------|-----------------|-----------|------------------------|-------------|
| Lab Sample ID: | 240-17525-5     | Analysis Batch: | 180-59218 | Instrument ID:         | M           |
| Client Matrix: | Solid           | Prep Batch:     | 180-59046 | Lab File ID:           | M21221A.xml |
| Dilution:      | 1.0             | Leach Batch:    | N/A       | Initial Weight/Volume: | 1.21 g      |
| Analysis Date: | 12/21/2012 1909 | Units:          | mg/Kg     | Final Weight/Volume:   | 100 mL      |
| Prep Date:     | 11/20/2012 1218 |                 |           |                        |             |
| Leach Date:    | N/A             |                 |           |                        |             |

| Analyte   | Sample Result/Qual | Result | RPD | Limit | Qual |
|-----------|--------------------|--------|-----|-------|------|
| Silver    | 0.027 J            | 0.0289 | 6   | 20    | J    |
| Aluminum  | 8200               | 8790   | 7   | 20    |      |
| Arsenic   | 12                 | 11.9   | 5   | 20    |      |
| Barium    | 49                 | 50.2   | 3   | 20    | Q    |
| Beryllium | 0.46               | 0.474  | 2   | 20    |      |
| Calcium   | 4500               | 5540   | 21  | 20    | J    |
| Cadmium   | 0.19               | 0.203  | 6   | 20    |      |
| Chromium  | 18                 | 20.7   | 13  | 20    |      |
| Cobalt    | 7.4                | 7.51   | 1   | 20    | Q    |
| Copper    | 16                 | 16.3   | 2   | 20    | Q    |
| Iron      | 22000              | 19700  | 12  | 20    |      |
| Magnesium | 2800               | 3170   | 11  | 20    |      |
| Manganese | 540                | 521    | 4   | 20    | Q    |
| Sodium    | 29                 | 39.2   | 28  | 20    | J    |
| Nickel    | 24                 | 26.3   | 9   | 20    | Q    |
| Lead      | 22                 | 24.3   | 9   | 20    |      |
| Antimony  | 0.20               | 0.139  | 35  | 20    | J    |
| Thallium  | 0.13               | 0.128  | 5   | 20    |      |
| Vanadium  | 16                 | 15.3   | 2   | 20    |      |
| Zinc      | 63                 | 66.8   | 7   | 20    | Q    |
| Potassium | 830                | 884    | 7   | 20    |      |

## Quality Control Results

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

### Duplicate - Batch: 180-59046

### Method: 6020/DOD Preparation: 3050B

|                |                 |                 |           |                        |             |
|----------------|-----------------|-----------------|-----------|------------------------|-------------|
| Lab Sample ID: | 240-17525-5     | Analysis Batch: | 180-59218 | Instrument ID:         | M           |
| Client Matrix: | Solid           | Prep Batch:     | 180-59046 | Lab File ID:           | M21221A.xml |
| Dilution:      | 1.0             | Leach Batch:    | N/A       | Initial Weight/Volume: | 1.21 g      |
| Analysis Date: | 12/21/2012 1909 | Units:          | mg/Kg     | Final Weight/Volume:   | 100 mL      |
| Prep Date:     | 11/20/2012 1218 |                 |           |                        |             |
| Leach Date:    | N/A             |                 |           |                        |             |

| Analyte  | Sample Result/Qual | Result | RPD | Limit | Qual |
|----------|--------------------|--------|-----|-------|------|
| Selenium | 0.56               | 0.591  | 5   | 20    |      |

## DATA REPORTING QUALIFIERS

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

| Lab Section | Qualifier | Description                                                                                                                                               |
|-------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Metals      | J         | Estimated: The analyte was positively identified; the quantitation is an estimation                                                                       |
|             | J         | Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.                           |
|             | 4         | MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable. |
|             | Q         | One or more quality control criteria failed.                                                                                                              |
|             | V         | Serial Dilution exceeds the control limits                                                                                                                |
|             | D         | The reported value is from a dilution.                                                                                                                    |
|             | U         | Undetected at the Limit of Detection.                                                                                                                     |

## Quality Control Results

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

### QC Association Summary

| Lab Sample ID                   | Client Sample ID    | Report Basis | Client Matrix | Method   | Prep Batch |
|---------------------------------|---------------------|--------------|---------------|----------|------------|
| <b>Metals</b>                   |                     |              |               |          |            |
| <b>Prep Batch: 180-59046</b>    |                     |              |               |          |            |
| LCS 180-59046/2-A               | Lab Control Sample  | T            | Solid         | 3050B    |            |
| MB 180-59046/1-A                | Method Blank        | T            | Solid         | 3050B    |            |
| 240-17525-1                     | 069SS-0001M-0001-SO | T            | Solid         | 3050B    |            |
| 240-17525-1DU                   | Duplicate           | T            | Solid         | 3050B    |            |
| 240-17525-1MS                   | Matrix Spike        | T            | Solid         | 3050B    |            |
| 240-17525-2                     | 069SS-0002M-0001-SO | T            | Solid         | 3050B    |            |
| 240-17525-3                     | 069SS-003M-0001-SO  | T            | Solid         | 3050B    |            |
| 240-17525-4                     | 069SS-004M-0001-SO  | T            | Solid         | 3050B    |            |
| 240-17525-5                     | 077SS-0001M-0001-SO | T            | Solid         | 3050B    |            |
| 240-17525-5DU                   | Duplicate           | T            | Solid         | 3050B    |            |
| 240-17525-5MS                   | Matrix Spike        | T            | Solid         | 3050B    |            |
| 240-17525-6                     | 077SS-0002M-0001-SO | T            | Solid         | 3050B    |            |
| <b>Analysis Batch:180-59218</b> |                     |              |               |          |            |
| LCS 180-59046/2-A               | Lab Control Sample  | T            | Solid         | 6020/DOD | 180-59046  |
| MB 180-59046/1-A                | Method Blank        | T            | Solid         | 6020/DOD | 180-59046  |
| 240-17525-1                     | 069SS-0001M-0001-SO | T            | Solid         | 6020/DOD | 180-59046  |
| 240-17525-1DU                   | Duplicate           | T            | Solid         | 6020/DOD | 180-59046  |
| 240-17525-1MS                   | Matrix Spike        | T            | Solid         | 6020/DOD | 180-59046  |
| 240-17525-2                     | 069SS-0002M-0001-SO | T            | Solid         | 6020/DOD | 180-59046  |
| 240-17525-3                     | 069SS-003M-0001-SO  | T            | Solid         | 6020/DOD | 180-59046  |
| 240-17525-4                     | 069SS-004M-0001-SO  | T            | Solid         | 6020/DOD | 180-59046  |
| 240-17525-5                     | 077SS-0001M-0001-SO | T            | Solid         | 6020/DOD | 180-59046  |
| 240-17525-5DU                   | Duplicate           | T            | Solid         | 6020/DOD | 180-59046  |
| 240-17525-5MS                   | Matrix Spike        | T            | Solid         | 6020/DOD | 180-59046  |
| 240-17525-6                     | 077SS-0002M-0001-SO | T            | Solid         | 6020/DOD | 180-59046  |

#### Report Basis

T = Total



## Quality Control Results

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

### Laboratory Chronicle

Lab ID: 240-17525-1

Client ID: 069SS-0001M-0001-S0

Sample Date/Time: 11/11/2012 09:15

Received Date/Time: 11/12/2012 17:57

| Method     | Bottle ID       | Run | Analysis Batch | Prep Batch | Date Prepared / Analyzed | Dil | Lab     | Analyst |
|------------|-----------------|-----|----------------|------------|--------------------------|-----|---------|---------|
| P:3050B    | 240-17525-Q-1-A |     | 180-59218      | 180-59046  | 11/20/2012 12:18         | 1   | TAL PIT | BR      |
| A:6020/DOD | 240-17525-Q-1-A |     | 180-59218      | 180-59046  | 12/21/2012 18:07         | 1   | TAL PIT | BR      |

Lab ID: 240-17525-1

Client ID: 069SS-0001M-0001-S0

Sample Date/Time: 11/11/2012 09:15

Received Date/Time: 11/12/2012 17:57

| Method     | Bottle ID          | Run | Analysis Batch | Prep Batch | Date Prepared / Analyzed | Dil | Lab     | Analyst |
|------------|--------------------|-----|----------------|------------|--------------------------|-----|---------|---------|
| P:3050B    | 240-17525-Q-1-C MS |     | 180-59218      | 180-59046  | 11/20/2012 12:18         | 1   | TAL PIT | BR      |
| A:6020/DOD | 240-17525-Q-1-C MS |     | 180-59218      | 180-59046  | 12/21/2012 18:20         | 1   | TAL PIT | BR      |

Lab ID: 240-17525-1

Client ID: 069SS-0001M-0001-S0

Sample Date/Time: 11/11/2012 09:15

Received Date/Time: 11/12/2012 17:57

| Method     | Bottle ID          | Run | Analysis Batch | Prep Batch | Date Prepared / Analyzed | Dil | Lab     | Analyst |
|------------|--------------------|-----|----------------|------------|--------------------------|-----|---------|---------|
| P:3050B    | 240-17525-Q-1-B DU |     | 180-59218      | 180-59046  | 11/20/2012 12:18         | 1   | TAL PIT | BR      |
| A:6020/DOD | 240-17525-Q-1-B DU |     | 180-59218      | 180-59046  | 12/21/2012 18:16         | 1   | TAL PIT | BR      |

Lab ID: 240-17525-1 SD

Client ID: 069SS-0001M-0001-S0

Sample Date/Time: 11/11/2012 09:15

Received Date/Time: 11/12/2012 17:57

| Method     | Bottle ID                | Run | Analysis Batch | Prep Batch | Date Prepared / Analyzed | Dil | Lab     | Analyst |
|------------|--------------------------|-----|----------------|------------|--------------------------|-----|---------|---------|
| P:3050B    | 240-17525-Q-1-A SD<br>^5 |     | 180-59218      | 180-59046  | 11/20/2012 12:18         | 5   | TAL PIT | BR      |
| A:6020/DOD | 240-17525-Q-1-A SD<br>^5 |     | 180-59218      | 180-59046  | 12/21/2012 18:12         | 5   | TAL PIT | BR      |
| P:3050B    | 240-17525-Q-1-A<br>PDS   |     | 180-59218      | 180-59046  | 11/20/2012 12:18         | 1   | TAL PIT | BR      |
| A:6020/DOD | 240-17525-Q-1-A<br>PDS   |     | 180-59218      | 180-59046  | 12/21/2012 18:40         | 1   | TAL PIT | BR      |

Lab ID: 240-17525-2

Client ID: 069SS-0002M-0001-S0

Sample Date/Time: 11/11/2012 09:15

Received Date/Time: 11/12/2012 17:57

| Method     | Bottle ID       | Run | Analysis Batch | Prep Batch | Date Prepared / Analyzed | Dil | Lab     | Analyst |
|------------|-----------------|-----|----------------|------------|--------------------------|-----|---------|---------|
| P:3050B    | 240-17525-G-2-A |     | 180-59218      | 180-59046  | 11/20/2012 12:18         | 1   | TAL PIT | BR      |
| A:6020/DOD | 240-17525-G-2-A |     | 180-59218      | 180-59046  | 12/21/2012 18:47         | 1   | TAL PIT | BR      |

## Quality Control Results

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

### Laboratory Chronicle

Lab ID: 240-17525-3

Client ID: 069SS-003M-0001-SO

Sample Date/Time: 11/11/2012 10:15

Received Date/Time: 11/12/2012 17:57

| Method     | Bottle ID       | Run | Analysis Batch | Prep Batch | Date Prepared / Analyzed | Dil | Lab     | Analyst |
|------------|-----------------|-----|----------------|------------|--------------------------|-----|---------|---------|
| P:3050B    | 240-17525-F-3-A |     | 180-59218      | 180-59046  | 11/20/2012 12:18         | 1   | TAL PIT | BR      |
| A:6020/DOD | 240-17525-F-3-A |     | 180-59218      | 180-59046  | 12/21/2012 18:52         | 1   | TAL PIT | BR      |

Lab ID: 240-17525-4

Client ID: 069SS-004M-0001-SO

Sample Date/Time: 11/11/2012 09:50

Received Date/Time: 11/12/2012 17:57

| Method     | Bottle ID       | Run | Analysis Batch | Prep Batch | Date Prepared / Analyzed | Dil | Lab     | Analyst |
|------------|-----------------|-----|----------------|------------|--------------------------|-----|---------|---------|
| P:3050B    | 240-17525-F-4-A |     | 180-59218      | 180-59046  | 11/20/2012 12:18         | 1   | TAL PIT | BR      |
| A:6020/DOD | 240-17525-F-4-A |     | 180-59218      | 180-59046  | 12/21/2012 18:56         | 1   | TAL PIT | BR      |

Lab ID: 240-17525-5

Client ID: 077SS-0001M-0001-SO

Sample Date/Time: 11/11/2012 10:45

Received Date/Time: 11/12/2012 17:57

| Method     | Bottle ID       | Run | Analysis Batch | Prep Batch | Date Prepared / Analyzed | Dil | Lab     | Analyst |
|------------|-----------------|-----|----------------|------------|--------------------------|-----|---------|---------|
| P:3050B    | 240-17525-Q-5-A |     | 180-59218      | 180-59046  | 11/20/2012 12:18         | 1   | TAL PIT | BR      |
| A:6020/DOD | 240-17525-Q-5-A |     | 180-59218      | 180-59046  | 12/21/2012 19:00         | 1   | TAL PIT | BR      |

Lab ID: 240-17525-5

Client ID: 077SS-0001M-0001-SO

Sample Date/Time: 11/11/2012 10:45

Received Date/Time: 11/12/2012 17:57

| Method     | Bottle ID          | Run | Analysis Batch | Prep Batch | Date Prepared / Analyzed | Dil | Lab     | Analyst |
|------------|--------------------|-----|----------------|------------|--------------------------|-----|---------|---------|
| P:3050B    | 240-17525-Q-5-C MS |     | 180-59218      | 180-59046  | 11/20/2012 12:18         | 1   | TAL PIT | BR      |
| A:6020/DOD | 240-17525-Q-5-C MS |     | 180-59218      | 180-59046  | 12/21/2012 19:13         | 1   | TAL PIT | BR      |

Lab ID: 240-17525-5

Client ID: 077SS-0001M-0001-SO

Sample Date/Time: 11/11/2012 10:45

Received Date/Time: 11/12/2012 17:57

| Method     | Bottle ID          | Run | Analysis Batch | Prep Batch | Date Prepared / Analyzed | Dil | Lab     | Analyst |
|------------|--------------------|-----|----------------|------------|--------------------------|-----|---------|---------|
| P:3050B    | 240-17525-Q-5-B DU |     | 180-59218      | 180-59046  | 11/20/2012 12:18         | 1   | TAL PIT | BR      |
| A:6020/DOD | 240-17525-Q-5-B DU |     | 180-59218      | 180-59046  | 12/21/2012 19:09         | 1   | TAL PIT | BR      |

## Quality Control Results

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

### Laboratory Chronicle

Lab ID: 240-17525-5 SD

Client ID: 077SS-0001M-0001-SO

Sample Date/Time: 11/11/2012 10:45

Received Date/Time: 11/12/2012 17:57

| Method     | Bottle ID                | Run | Analysis Batch | Prep Batch | Date Prepared / Analyzed | Dil | Lab     | Analyst |
|------------|--------------------------|-----|----------------|------------|--------------------------|-----|---------|---------|
| P:3050B    | 240-17525-Q-5-A SD<br>^5 |     | 180-59218      | 180-59046  | 11/20/2012 12:18         | 5   | TAL PIT | BR      |
| A:6020/DOD | 240-17525-Q-5-A SD<br>^5 |     | 180-59218      | 180-59046  | 12/21/2012 19:05         | 5   | TAL PIT | BR      |
| P:3050B    | 240-17525-Q-5-A<br>PDS   |     | 180-59218      | 180-59046  | 11/20/2012 12:18         | 1   | TAL PIT | BR      |
| A:6020/DOD | 240-17525-Q-5-A<br>PDS   |     | 180-59218      | 180-59046  | 12/21/2012 19:17         | 1   | TAL PIT | BR      |

Lab ID: 240-17525-6

Client ID: 077SS-0002M-0001-SO

Sample Date/Time: 11/11/2012 10:45

Received Date/Time: 11/12/2012 17:57

| Method     | Bottle ID       | Run | Analysis Batch | Prep Batch | Date Prepared / Analyzed | Dil | Lab     | Analyst |
|------------|-----------------|-----|----------------|------------|--------------------------|-----|---------|---------|
| P:3050B    | 240-17525-G-6-A |     | 180-59218      | 180-59046  | 11/20/2012 12:18         | 1   | TAL PIT | BR      |
| A:6020/DOD | 240-17525-G-6-A |     | 180-59218      | 180-59046  | 12/21/2012 19:25         | 1   | TAL PIT | BR      |

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

| Method     | Bottle ID        | Run | Analysis Batch | Prep Batch | Date Prepared / Analyzed | Dil | Lab     | Analyst |
|------------|------------------|-----|----------------|------------|--------------------------|-----|---------|---------|
| P:3050B    | MB 180-59046/1-A |     | 180-59218      | 180-59046  | 11/20/2012 12:18         | 1   | TAL PIT | BR      |
| A:6020/DOD | MB 180-59046/1-A |     | 180-59218      | 180-59046  | 12/21/2012 17:59         | 1   | TAL PIT | BR      |

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

| Method     | Bottle ID         | Run | Analysis Batch | Prep Batch | Date Prepared / Analyzed | Dil | Lab     | Analyst |
|------------|-------------------|-----|----------------|------------|--------------------------|-----|---------|---------|
| P:3050B    | LCS 180-59046/2-A |     | 180-59218      | 180-59046  | 11/20/2012 12:18         | 1   | TAL PIT | BR      |
| A:6020/DOD | LCS 180-59046/2-A |     | 180-59218      | 180-59046  | 12/21/2012 18:03         | 1   | TAL PIT | BR      |

#### Lab References:

TAL PIT = TestAmerica Pittsburgh

# REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

| Reagent ID        | Exp Date | Prep Date                          | Dilutant Used | Reagent Final Volume | Parent Reagent      |              | Analyte   | Concentration |
|-------------------|----------|------------------------------------|---------------|----------------------|---------------------|--------------|-----------|---------------|
|                   |          |                                    |               |                      | Reagent ID          | Volume Added |           |               |
| CANMS2_00001      | 07/10/13 | High Purity Standards, Lot 1218529 |               |                      | (Purchased Reagent) |              | Aluminum  | 1000 ug/mL    |
|                   |          |                                    |               |                      |                     |              | Calcium   | 1000 ug/mL    |
|                   |          |                                    |               |                      |                     |              | Iron      | 1000 ug/mL    |
|                   |          |                                    |               |                      |                     |              | Magnesium | 1000 ug/mL    |
|                   |          |                                    |               |                      |                     |              | Potassium | 1000 ug/mL    |
|                   |          |                                    |               |                      |                     |              | Sodium    | 1000 ug/mL    |
| CANMSA) Low_00001 | 01/10/13 | High Purity Standards, Lot 1102022 |               |                      | (Purchased Reagent) |              | Arsenic   | 10 ug/mL      |
|                   |          |                                    |               |                      |                     |              | B         | 10 ug/mL      |
|                   |          |                                    |               |                      |                     |              | Barium    | 10 ug/mL      |
|                   |          |                                    |               |                      |                     |              | Beryllium | 10 ug/mL      |
|                   |          |                                    |               |                      |                     |              | Cadmium   | 10 ug/mL      |
|                   |          |                                    |               |                      |                     |              | Chromium  | 10 ug/mL      |
|                   |          |                                    |               |                      |                     |              | Cobalt    | 10 ug/mL      |
|                   |          |                                    |               |                      |                     |              | Copper    | 10 ug/mL      |
|                   |          |                                    |               |                      |                     |              | Lead      | 10 ug/mL      |
|                   |          |                                    |               |                      |                     |              | Manganese | 10 ug/mL      |
|                   |          |                                    |               |                      |                     |              | Nickel    | 10 ug/mL      |
|                   |          |                                    |               |                      |                     |              | Selenium  | 10 ug/mL      |
|                   |          |                                    |               |                      |                     |              | Sr        | 10 ug/mL      |
|                   |          |                                    |               |                      |                     |              | Thallium  | 10 ug/mL      |
|                   |          |                                    |               |                      |                     |              | Vanadium  | 10 ug/mL      |
|                   |          |                                    |               |                      |                     |              | Zinc      | 10 ug/mL      |
| CANMSA_High_00001 | 09/11/13 | High Purity Standards, Lot 1225405 |               |                      | (Purchased Reagent) |              | Arsenic   | 100 ug/mL     |
|                   |          |                                    |               |                      |                     |              | Barium    | 100 ug/mL     |
|                   |          |                                    |               |                      |                     |              | Beryllium | 100 ug/mL     |
|                   |          |                                    |               |                      |                     |              | Cadmium   | 100 ug/mL     |
|                   |          |                                    |               |                      |                     |              | Chromium  | 100 ug/mL     |
|                   |          |                                    |               |                      |                     |              | Cobalt    | 100 ug/mL     |
|                   |          |                                    |               |                      |                     |              | Copper    | 100 ug/mL     |
|                   |          |                                    |               |                      |                     |              | Lead      | 100 ug/mL     |
|                   |          |                                    |               |                      |                     |              | Manganese | 100 ug/mL     |
|                   |          |                                    |               |                      |                     |              | Nickel    | 100 ug/mL     |
|                   |          |                                    |               |                      |                     |              | Selenium  | 100 ug/mL     |
|                   |          |                                    |               |                      |                     |              | Sr        | 100 ug/mL     |
|                   |          |                                    |               |                      |                     |              | Thallium  | 25 ug/mL      |
|                   |          |                                    |               |                      |                     |              | Vanadium  | 100 ug/mL     |
|                   |          |                                    |               |                      |                     |              | Zinc      | 100 ug/mL     |
| CANMSB_High_00001 | 09/11/13 | High Purity Standards, Lot 1225412 |               |                      | (Purchased Reagent) |              | Antimony  | 10 ug/mL      |
|                   |          |                                    |               |                      |                     |              | B         | 10 ug/mL      |
|                   |          |                                    |               |                      |                     |              | Mo        | 10 ug/mL      |
|                   |          |                                    |               |                      |                     |              | Silver    | 10 ug/mL      |
|                   |          |                                    |               |                      |                     |              | Sn        | 10 ug/mL      |
|                   |          |                                    |               |                      |                     |              | Ti        | 10 ug/mL      |
| CANMSB_Low_00001  | 01/10/13 | High Purity Standards, Lot 1102023 |               |                      | (Purchased Reagent) |              | Antimony  | 10 ug/mL      |
|                   |          |                                    |               |                      |                     |              | Mo        | 10 ug/mL      |
|                   |          |                                    |               |                      |                     |              | Silver    | 10 ug/mL      |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

| Reagent ID          | Exp Date | Prep Date                            | Dilutant Used        | Reagent Final Volume | Parent Reagent      |              | Analyte   | Concentration |
|---------------------|----------|--------------------------------------|----------------------|----------------------|---------------------|--------------|-----------|---------------|
|                     |          |                                      |                      |                      | Reagent ID          | Volume Added |           |               |
|                     |          |                                      |                      |                      |                     |              | Sn        | 10 ug/mL      |
|                     |          |                                      |                      |                      |                     |              | Ti        | 10 ug/mL      |
| MCCV1X_00031        | 01/06/13 | 12/06/12                             | DI Water, Lot K35N55 | 500 mL               | MCALSPECAREV_00003  | 10 mL        | Aluminum  | 0.5 ppm       |
|                     |          |                                      |                      |                      |                     |              | Arsenic   | 0.1 ppm       |
|                     |          |                                      |                      |                      |                     |              | Barium    | 0.1 ppm       |
|                     |          |                                      |                      |                      |                     |              | Beryllium | 0.1 ppm       |
|                     |          |                                      |                      |                      |                     |              | Cadmium   | 0.1 ppm       |
|                     |          |                                      |                      |                      |                     |              | Calcium   | 50 ppm        |
|                     |          |                                      |                      |                      |                     |              | Chromium  | 0.1 ppm       |
|                     |          |                                      |                      |                      |                     |              | Cobalt    | 0.1 ppm       |
|                     |          |                                      |                      |                      |                     |              | Copper    | 0.1 ppm       |
|                     |          |                                      |                      |                      |                     |              | Iron      | 25 ppm        |
|                     |          |                                      |                      |                      |                     |              | Lead      | 0.1 ppm       |
|                     |          |                                      |                      |                      |                     |              | Magnesium | 50 ppm        |
|                     |          |                                      |                      |                      |                     |              | Manganese | 0.5 ppm       |
|                     |          |                                      |                      |                      |                     |              | Nickel    | 0.1 ppm       |
|                     |          |                                      |                      |                      |                     |              | Potassium | 50 ppm        |
|                     |          |                                      |                      |                      |                     |              | Selenium  | 0.1 ppm       |
|                     |          |                                      |                      |                      |                     |              | Silver    | 0.1 ppm       |
|                     |          |                                      |                      |                      |                     |              | Sodium    | 50 ppm        |
|                     |          |                                      |                      |                      |                     |              | Thallium  | 0.1 ppm       |
|                     |          |                                      |                      |                      |                     |              | Vanadium  | 0.1 ppm       |
|                     |          |                                      |                      |                      |                     |              | Zinc      | 0.1 ppm       |
| .MCALSPECAREV_00003 | 04/01/13 | Inorganic Ventures, Lot F2-MEB415031 |                      |                      | MCALSPECB_00004     | 10 mL        | Antimony  | 0.1 ppm       |
|                     |          |                                      |                      |                      | (Purchased Reagent) | Aluminum     | 25 ppm    |               |
|                     |          |                                      |                      |                      |                     | Arsenic      | 5 ppm     |               |
|                     |          |                                      |                      |                      |                     | Barium       | 5 ppm     |               |
|                     |          |                                      |                      |                      |                     | Beryllium    | 5 ppm     |               |
|                     |          |                                      |                      |                      |                     | Cadmium      | 5 ppm     |               |
|                     |          |                                      |                      |                      |                     | Calcium      | 2500 ppm  |               |
|                     |          |                                      |                      |                      |                     | Chromium     | 5 ppm     |               |
|                     |          |                                      |                      |                      |                     | Cobalt       | 5 ppm     |               |
|                     |          |                                      |                      |                      |                     | Copper       | 5 ppm     |               |
|                     |          |                                      |                      |                      |                     | Iron         | 1250 ppm  |               |
|                     |          |                                      |                      |                      |                     | Lead         | 5 ppm     |               |
|                     |          |                                      |                      |                      |                     | Magnesium    | 2500 ppm  |               |
|                     |          |                                      |                      |                      |                     | Manganese    | 25 ppm    |               |
|                     |          |                                      |                      |                      |                     | Nickel       | 5 ppm     |               |
|                     |          |                                      |                      |                      |                     | Potassium    | 2500 ppm  |               |
|                     |          |                                      |                      |                      |                     | Selenium     | 5 ppm     |               |
|                     |          |                                      |                      |                      |                     | Silver       | 5 ppm     |               |
|                     |          |                                      |                      |                      |                     | Sodium       | 2500 ppm  |               |
|                     |          |                                      |                      |                      |                     | Thallium     | 5 ppm     |               |
|                     |          |                                      |                      |                      |                     | Vanadium     | 5 ppm     |               |
|                     |          |                                      |                      |                      |                     | Zinc         | 5 ppm     |               |
| .MCALSPECB_00004    | 04/01/13 | Inorganic Ventures, Lot F2-MEB415032 |                      |                      | (Purchased Reagent) | Antimony     | 5 ppm     |               |
| MCRIX_00023         | 01/07/13 | 12/07/12                             | HNO3, Lot K09N65     | 250 mL               | MMSCRI-1B_00002     | 1 mL         | Aluminum  | 0.03 ppm      |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

| Reagent ID       | Exp Date | Prep Date                            | Dilutant Used    | Reagent Final Volume | Parent Reagent      |              | Analyte   | Concentration |
|------------------|----------|--------------------------------------|------------------|----------------------|---------------------|--------------|-----------|---------------|
|                  |          |                                      |                  |                      | Reagent ID          | Volume Added |           |               |
|                  |          |                                      |                  |                      |                     |              | Arsenic   | 0.001 ppm     |
|                  |          |                                      |                  |                      |                     |              | Barium    | 0.01 ppm      |
|                  |          |                                      |                  |                      |                     |              | Beryllium | 0.001 ppm     |
|                  |          |                                      |                  |                      |                     |              | Cadmium   | 0.001 ppm     |
|                  |          |                                      |                  |                      |                     |              | Calcium   | 0.1 ppm       |
|                  |          |                                      |                  |                      |                     |              | Chromium  | 0.002 ppm     |
|                  |          |                                      |                  |                      |                     |              | Cobalt    | 0.0005 ppm    |
|                  |          |                                      |                  |                      |                     |              | Copper    | 0.002 ppm     |
|                  |          |                                      |                  |                      |                     |              | Iron      | 0.05 ppm      |
|                  |          |                                      |                  |                      |                     |              | Lead      | 0.001 ppm     |
|                  |          |                                      |                  |                      |                     |              | Magnesium | 0.1 ppm       |
|                  |          |                                      |                  |                      |                     |              | Manganese | 0.005 ppm     |
|                  |          |                                      |                  |                      |                     |              | Nickel    | 0.001 ppm     |
|                  |          |                                      |                  |                      |                     |              | Potassium | 0.1 ppm       |
|                  |          |                                      |                  |                      |                     |              | Selenium  | 0.005 ppm     |
|                  |          |                                      |                  |                      |                     |              | Silver    | 0.001 ppm     |
|                  |          |                                      |                  |                      |                     |              | Sodium    | 0.1 ppm       |
|                  |          |                                      |                  |                      |                     |              | Thallium  | 0.001 ppm     |
|                  |          |                                      |                  |                      |                     |              | Vanadium  | 0.001 ppm     |
|                  |          |                                      |                  |                      |                     |              | Zinc      | 0.005 ppm     |
| .MMSCRI-1B_00002 | 10/01/13 | Inorganic Ventures, Lot F2-MEB439152 |                  |                      | MMSCRI-2_00004      | 1 mL         | Antimony  | 0.002 ppm     |
|                  |          |                                      |                  |                      | (Purchased Reagent) | Aluminum     | 7.5 ppm   |               |
|                  |          |                                      |                  |                      |                     | Arsenic      | 0.25 ppm  |               |
|                  |          |                                      |                  |                      |                     | Barium       | 2.5 ppm   |               |
|                  |          |                                      |                  |                      |                     | Beryllium    | 0.25 ppm  |               |
|                  |          |                                      |                  |                      |                     | Cadmium      | 0.25 ppm  |               |
|                  |          |                                      |                  |                      |                     | Calcium      | 25 ppm    |               |
|                  |          |                                      |                  |                      |                     | Chromium     | 0.5 ppm   |               |
|                  |          |                                      |                  |                      |                     | Cobalt       | 0.125 ppm |               |
|                  |          |                                      |                  |                      |                     | Copper       | 0.5 ppm   |               |
|                  |          |                                      |                  |                      |                     | Iron         | 12.5 ppm  |               |
|                  |          |                                      |                  |                      |                     | Lead         | 0.25 ppm  |               |
|                  |          |                                      |                  |                      |                     | Magnesium    | 25 ppm    |               |
|                  |          |                                      |                  |                      |                     | Manganese    | 1.25 ppm  |               |
|                  |          |                                      |                  |                      |                     | Nickel       | 0.25 ppm  |               |
|                  |          |                                      |                  |                      |                     | Potassium    | 25 ppm    |               |
|                  |          |                                      |                  |                      |                     | Selenium     | 1.25 ppm  |               |
|                  |          |                                      |                  |                      |                     | Silver       | 0.25 ppm  |               |
|                  |          |                                      |                  |                      |                     | Sodium       | 25 ppm    |               |
|                  |          |                                      |                  |                      |                     | Thallium     | 0.25 ppm  |               |
|                  |          |                                      |                  |                      |                     | Vanadium     | 0.25 ppm  |               |
| Zinc             | 1.25 ppm |                                      |                  |                      |                     |              |           |               |
| .MMSCRI-2_00004  | 10/01/13 | Inorganic Ventures, Lot F2-MEB436153 |                  |                      | (Purchased Reagent) |              | Antimony  | 0.5 ppm       |
| MCRIX_00024      | 03/08/13 | 12/08/12                             | HNO3, Lot K09N65 | 250 mL               | MMSCRI-1B_00002     | 1 mL         | Aluminum  | 0.03 ppm      |
|                  |          |                                      |                  |                      |                     |              | Arsenic   | 0.001 ppm     |
|                  |          |                                      |                  |                      |                     |              | Barium    | 0.01 ppm      |
|                  |          |                                      |                  |                      |                     |              | Beryllium | 0.001 ppm     |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

| Reagent ID       | Exp Date | Prep Date                            | Dilutant Used              | Reagent Final Volume | Parent Reagent      |              | Analyte   | Concentration |
|------------------|----------|--------------------------------------|----------------------------|----------------------|---------------------|--------------|-----------|---------------|
|                  |          |                                      |                            |                      | Reagent ID          | Volume Added |           |               |
|                  |          |                                      |                            |                      |                     |              | Cadmium   | 0.001 ppm     |
|                  |          |                                      |                            |                      |                     |              | Calcium   | 0.1 ppm       |
|                  |          |                                      |                            |                      |                     |              | Chromium  | 0.002 ppm     |
|                  |          |                                      |                            |                      |                     |              | Cobalt    | 0.0005 ppm    |
|                  |          |                                      |                            |                      |                     |              | Copper    | 0.002 ppm     |
|                  |          |                                      |                            |                      |                     |              | Iron      | 0.05 ppm      |
|                  |          |                                      |                            |                      |                     |              | Lead      | 0.001 ppm     |
|                  |          |                                      |                            |                      |                     |              | Magnesium | 0.1 ppm       |
|                  |          |                                      |                            |                      |                     |              | Manganese | 0.005 ppm     |
|                  |          |                                      |                            |                      |                     |              | Nickel    | 0.001 ppm     |
|                  |          |                                      |                            |                      |                     |              | Potassium | 0.1 ppm       |
|                  |          |                                      |                            |                      |                     |              | Selenium  | 0.005 ppm     |
|                  |          |                                      |                            |                      |                     |              | Silver    | 0.001 ppm     |
|                  |          |                                      |                            |                      |                     |              | Sodium    | 0.1 ppm       |
|                  |          |                                      |                            |                      |                     |              | Thallium  | 0.001 ppm     |
|                  |          |                                      |                            |                      |                     |              | Vanadium  | 0.001 ppm     |
|                  |          |                                      |                            |                      |                     |              | Zinc      | 0.005 ppm     |
| .MMSCRI-1B_00002 | 10/01/13 | Inorganic Ventures, Lot F2-MEB439152 |                            |                      | MMSCRI-2_00004      | 1 mL         | Antimony  | 0.002 ppm     |
|                  |          |                                      |                            |                      |                     |              | Aluminum  | 7.5 ppm       |
|                  |          |                                      |                            |                      |                     |              | Arsenic   | 0.25 ppm      |
|                  |          |                                      |                            |                      |                     |              | Barium    | 2.5 ppm       |
|                  |          |                                      |                            |                      |                     |              | Beryllium | 0.25 ppm      |
|                  |          |                                      |                            |                      |                     |              | Cadmium   | 0.25 ppm      |
|                  |          |                                      |                            |                      |                     |              | Calcium   | 25 ppm        |
|                  |          |                                      |                            |                      |                     |              | Chromium  | 0.5 ppm       |
|                  |          |                                      |                            |                      |                     |              | Cobalt    | 0.125 ppm     |
|                  |          |                                      |                            |                      |                     |              | Copper    | 0.5 ppm       |
|                  |          |                                      |                            |                      |                     |              | Iron      | 12.5 ppm      |
|                  |          |                                      |                            |                      |                     |              | Lead      | 0.25 ppm      |
|                  |          |                                      |                            |                      |                     |              | Magnesium | 25 ppm        |
|                  |          |                                      |                            |                      |                     |              | Manganese | 1.25 ppm      |
|                  |          |                                      |                            |                      |                     |              | Nickel    | 0.25 ppm      |
|                  |          |                                      |                            |                      |                     |              | Potassium | 25 ppm        |
|                  |          |                                      |                            |                      |                     |              | Selenium  | 1.25 ppm      |
| .MMSCRI-2_00004  | 10/01/13 | Inorganic Ventures, Lot F2-MEB436153 |                            |                      | (Purchased Reagent) |              | Antimony  | 0.5 ppm       |
|                  |          |                                      |                            |                      |                     |              | Aluminum  | 0.4 mg/L      |
|                  |          |                                      |                            |                      |                     |              | Antimony  | 0.08 mg/L     |
|                  |          |                                      |                            |                      |                     |              | Arsenic   | 0.08 mg/L     |
|                  |          |                                      |                            |                      |                     |              | Barium    | 0.08 mg/L     |
|                  |          |                                      |                            |                      |                     |              | Beryllium | 0.08 mg/L     |
|                  |          |                                      |                            |                      |                     |              | Cadmium   | 0.08 mg/L     |
|                  |          |                                      |                            |                      |                     |              | Calcium   | 40 mg/L       |
|                  |          |                                      |                            |                      |                     |              |           |               |
|                  |          |                                      |                            |                      |                     |              |           |               |
|                  |          |                                      |                            |                      |                     |              |           |               |
|                  |          |                                      |                            |                      |                     |              |           |               |
|                  |          |                                      |                            |                      |                     |              |           |               |
|                  |          |                                      |                            |                      |                     |              |           |               |
|                  |          |                                      |                            |                      |                     |              |           |               |
|                  |          |                                      |                            |                      |                     |              |           |               |
|                  |          |                                      |                            |                      |                     |              |           |               |
| MICPMSICV_00012  | 12/30/12 | 12/03/12                             | 2% Nitric Acid, Lot K09N65 | 250 mg/L             | MICPMSICV_00005     | 10 mg/L      | Aluminum  | 0.4 mg/L      |
|                  |          |                                      |                            |                      |                     |              | Antimony  | 0.08 mg/L     |
|                  |          |                                      |                            |                      |                     |              | Arsenic   | 0.08 mg/L     |
|                  |          |                                      |                            |                      |                     |              | Barium    | 0.08 mg/L     |
|                  |          |                                      |                            |                      |                     |              | Beryllium | 0.08 mg/L     |
|                  |          |                                      |                            |                      |                     |              | Cadmium   | 0.08 mg/L     |
|                  |          |                                      |                            |                      |                     |              | Calcium   | 40 mg/L       |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

| Reagent ID       | Exp Date | Prep Date | Dilutant Used                | Reagent Final Volume | Parent Reagent      |              | Analyte   | Concentration |
|------------------|----------|-----------|------------------------------|----------------------|---------------------|--------------|-----------|---------------|
|                  |          |           |                              |                      | Reagent ID          | Volume Added |           |               |
|                  |          |           |                              |                      |                     |              | Chromium  | 0.08 mg/L     |
|                  |          |           |                              |                      |                     |              | Cobalt    | 0.08 mg/L     |
|                  |          |           |                              |                      |                     |              | Copper    | 0.08 mg/L     |
|                  |          |           |                              |                      |                     |              | Iron      | 20 mg/L       |
|                  |          |           |                              |                      |                     |              | Lead      | 0.08 mg/L     |
|                  |          |           |                              |                      |                     |              | Magnesium | 40 mg/L       |
|                  |          |           |                              |                      |                     |              | Manganese | 0.4 mg/L      |
|                  |          |           |                              |                      |                     |              | Nickel    | 0.08 mg/L     |
|                  |          |           |                              |                      |                     |              | Potassium | 40 mg/L       |
|                  |          |           |                              |                      |                     |              | Selenium  | 0.08 mg/L     |
|                  |          |           |                              |                      |                     |              | Silver    | 0.08 mg/L     |
|                  |          |           |                              |                      |                     |              | Sodium    | 40 mg/L       |
|                  |          |           |                              |                      |                     |              | Thallium  | 0.08 mg/L     |
|                  |          |           |                              |                      |                     |              | Vanadium  | 0.08 mg/L     |
|                  |          |           |                              |                      |                     |              | Zinc      | 0.08 mg/L     |
| .MICPMSICV_00005 | 12/30/12 |           | SPEX CertiPrep, Lot 26-209JB |                      | (Purchased Reagent) |              | Aluminum  | 10 ppm        |
|                  |          |           |                              |                      |                     |              | Antimony  | 2 ppm         |
|                  |          |           |                              |                      |                     |              | Arsenic   | 2 ppm         |
|                  |          |           |                              |                      |                     |              | Barium    | 2 ppm         |
|                  |          |           |                              |                      |                     |              | Beryllium | 2 ppm         |
|                  |          |           |                              |                      |                     |              | Cadmium   | 2 ppm         |
|                  |          |           |                              |                      |                     |              | Calcium   | 1000 ppm      |
|                  |          |           |                              |                      |                     |              | Chromium  | 2 ppm         |
|                  |          |           |                              |                      |                     |              | Cobalt    | 2 ppm         |
|                  |          |           |                              |                      |                     |              | Copper    | 2 ppm         |
|                  |          |           |                              |                      |                     |              | Iron      | 500 ppm       |
|                  |          |           |                              |                      |                     |              | Lead      | 2 ppm         |
|                  |          |           |                              |                      |                     |              | Magnesium | 1000 ppm      |
|                  |          |           |                              |                      |                     |              | Manganese | 10 ppm        |
|                  |          |           |                              |                      |                     |              | Nickel    | 2 ppm         |
|                  |          |           |                              |                      |                     |              | Potassium | 1000 ppm      |
|                  |          |           |                              |                      |                     |              | Selenium  | 2 ppm         |
|                  |          |           |                              |                      |                     |              | Silver    | 2 ppm         |
|                  |          |           |                              |                      |                     |              | Sodium    | 1000 ppm      |
|                  |          |           |                              |                      |                     |              | Thallium  | 2 ppm         |
|                  |          |           |                              |                      |                     |              | Vanadium  | 2 ppm         |
|                  |          |           |                              |                      |                     |              | Zinc      | 2 ppm         |
| MICSABX_00026    | 03/08/13 | 12/08/12  | DI Water, Lot J38N82         | 100 mL               | M6020ICS-0A_00003   | 10 mL        | Aluminum  | 100 ppm       |
|                  |          |           |                              |                      |                     |              | Calcium   | 100 ppm       |
|                  |          |           |                              |                      |                     |              | Iron      | 100 ppm       |
|                  |          |           |                              |                      |                     |              | Magnesium | 100 ppm       |
|                  |          |           |                              |                      |                     |              | Mo        | 2 ppm         |
|                  |          |           |                              |                      |                     |              | Potassium | 100 ppm       |
|                  |          |           |                              |                      |                     |              | Sodium    | 100 ppm       |
|                  |          |           |                              |                      |                     |              | Ti        | 2 ppm         |
|                  |          |           |                              |                      | M6020ICS-0B_00004   | 1 mL         | Arsenic   | 0.02 ppm      |
|                  |          |           |                              |                      |                     |              | Cadmium   | 0.02 ppm      |



REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

| Reagent ID         | Exp Date | Prep Date                            | Dilutant Used        | Reagent Final Volume | Parent Reagent    |              | Analyte   | Concentration |
|--------------------|----------|--------------------------------------|----------------------|----------------------|-------------------|--------------|-----------|---------------|
|                    |          |                                      |                      |                      | Reagent ID        | Volume Added |           |               |
|                    |          |                                      |                      |                      |                   |              | Chromium  | 0.02 ppm      |
|                    |          |                                      |                      |                      |                   |              | Cobalt    | 0.02 ppm      |
|                    |          |                                      |                      |                      |                   |              | Copper    | 0.02 ppm      |
|                    |          |                                      |                      |                      |                   |              | Manganese | 0.0225 ppm    |
|                    |          |                                      |                      |                      |                   |              | Nickel    | 0.02 ppm      |
|                    |          |                                      |                      |                      |                   |              | Silver    | 0.02 ppm      |
|                    |          |                                      |                      |                      | MMSICSAB-1_00004  | 0.2 mL       | Zinc      | 0.025 ppm     |
|                    |          |                                      |                      |                      |                   |              | Barium    | 0.02 ppm      |
|                    |          |                                      |                      |                      |                   |              | Beryllium | 0.02 ppm      |
|                    |          |                                      |                      |                      |                   |              | Lead      | 0.02 ppm      |
|                    |          |                                      |                      |                      |                   |              | Sr        | 0.02 ppm      |
|                    |          |                                      |                      |                      |                   |              | Thallium  | 0.02 ppm      |
|                    |          |                                      |                      |                      | MMSICSAB-2_00004  | 0.2 mL       | Vanadium  | 0.02 ppm      |
|                    |          |                                      |                      |                      |                   |              | Antimony  | 0.02 ppm      |
|                    |          |                                      |                      |                      |                   |              | B         | 0.05 ppm      |
|                    |          |                                      |                      |                      |                   |              | Selenium  | 0.05 ppm      |
|                    |          |                                      |                      |                      |                   |              | Si        | 0.5 ppm       |
|                    |          |                                      |                      |                      |                   |              | Sn        | 0.1 ppm       |
| .M6020ICS-0A_00003 | 11/01/13 | Inorganic Ventures, Lot F2-MEB418129 |                      | (Purchased Reagent)  | Aluminum          | 1000 ppm     |           |               |
|                    |          |                                      |                      |                      | Calcium           | 1000 ppm     |           |               |
|                    |          |                                      |                      |                      | Iron              | 1000 ppm     |           |               |
|                    |          |                                      |                      |                      | Magnesium         | 1000 ppm     |           |               |
|                    |          |                                      |                      |                      | Mo                | 20 ppm       |           |               |
|                    |          |                                      |                      |                      | Potassium         | 1000 ppm     |           |               |
|                    |          |                                      |                      |                      | Sodium            | 1000 ppm     |           |               |
|                    |          |                                      |                      |                      | Ti                | 20 ppm       |           |               |
| .M6020ICS-0B_00004 | 11/01/13 | Inorganic Ventures, Lot F2-MEB415126 |                      | (Purchased Reagent)  | Arsenic           | 2 ppm        |           |               |
|                    |          |                                      |                      |                      | Cadmium           | 2 ppm        |           |               |
|                    |          |                                      |                      |                      | Chromium          | 2 ppm        |           |               |
|                    |          |                                      |                      |                      | Cobalt            | 2 ppm        |           |               |
|                    |          |                                      |                      |                      | Copper            | 2 ppm        |           |               |
|                    |          |                                      |                      |                      | Manganese         | 2.25 ppm     |           |               |
|                    |          |                                      |                      |                      | Nickel            | 2 ppm        |           |               |
|                    |          |                                      |                      |                      | Silver            | 2 ppm        |           |               |
| .MMSICSAB-1_00004  | 04/01/13 | Inorganic Ventures, Lot F2-MEB415033 |                      | (Purchased Reagent)  | Zinc              | 2.5 ppm      |           |               |
|                    |          |                                      |                      |                      | Barium            | 10 ppm       |           |               |
|                    |          |                                      |                      |                      | Beryllium         | 10 ppm       |           |               |
|                    |          |                                      |                      |                      | Lead              | 10 ppm       |           |               |
|                    |          |                                      |                      |                      | Sr                | 10 ppm       |           |               |
|                    |          |                                      |                      |                      | Thallium          | 10 ppm       |           |               |
|                    |          |                                      |                      |                      | Vanadium          | 10 ppm       |           |               |
| .MMSICSAB-2_00004  | 04/01/13 | Inorganic Ventures, Lot F2-MEB361116 |                      | (Purchased Reagent)  | Antimony          | 10 ppm       |           |               |
|                    |          |                                      |                      |                      | B                 | 25 ppm       |           |               |
|                    |          |                                      |                      |                      | Selenium          | 25 ppm       |           |               |
|                    |          |                                      |                      |                      | Si                | 250 ppm      |           |               |
|                    |          |                                      |                      |                      | Sn                | 50 ppm       |           |               |
| MICSAX 00023       | 03/08/13 | 12/08/12                             | DI Water, Lot J38N82 | 100 mL               | M6020ICS-0A 00003 | 10 mL        | Aluminum  | 100 ppm       |

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

| Reagent ID         | Exp Date | Prep Date                               | Dilutant Used        | Reagent Final Volume | Parent Reagent      |              | Analyte   | Concentration |
|--------------------|----------|-----------------------------------------|----------------------|----------------------|---------------------|--------------|-----------|---------------|
|                    |          |                                         |                      |                      | Reagent ID          | Volume Added |           |               |
|                    |          |                                         |                      |                      |                     |              | Calcium   | 100 ppm       |
|                    |          |                                         |                      |                      |                     |              | Iron      | 100 ppm       |
|                    |          |                                         |                      |                      |                     |              | Magnesium | 100 ppm       |
|                    |          |                                         |                      |                      |                     |              | Mo        | 2 ppm         |
|                    |          |                                         |                      |                      |                     |              | Potassium | 100 ppm       |
|                    |          |                                         |                      |                      |                     |              | Sodium    | 100 ppm       |
|                    |          |                                         |                      |                      |                     |              | Ti        | 2 ppm         |
| .M6020ICS-0A_00003 | 11/01/13 | Inorganic Ventures, Lot F2-MEB418129    |                      |                      | (Purchased Reagent) |              | Aluminum  | 1000 ppm      |
|                    |          |                                         |                      |                      |                     |              | Calcium   | 1000 ppm      |
|                    |          |                                         |                      |                      |                     |              | Iron      | 1000 ppm      |
|                    |          |                                         |                      |                      |                     |              | Magnesium | 1000 ppm      |
|                    |          |                                         |                      |                      |                     |              | Mo        | 20 ppm        |
|                    |          |                                         |                      |                      |                     |              | Potassium | 1000 ppm      |
|                    |          |                                         |                      |                      |                     |              | Sodium    | 1000 ppm      |
|                    |          |                                         |                      |                      |                     |              | Ti        | 20 ppm        |
| MSTD3X_00016       | 02/18/13 | 11/18/12                                | DI Water, Lot K35N55 | 250 mL               | MCALSPECB_00004     | 10 mL        | Antimony  | 0.2 ppm       |
| .MCALSPECB_00004   | 04/01/13 | Inorganic Ventures, Lot F2-MEB415032    |                      |                      | (Purchased Reagent) |              | Antimony  | 5 ppm         |
| MTAPITTICPMS_00008 | 03/01/13 | INORGANIC VENTURES, Lot F2-MEB410066    |                      |                      | (Purchased Reagent) |              | Aluminum  | 200 ug/mL     |
|                    |          |                                         |                      |                      |                     |              | Arsenic   | 4 ug/mL       |
|                    |          |                                         |                      |                      |                     |              | Barium    | 200 ug/mL     |
|                    |          |                                         |                      |                      |                     |              | Beryllium | 5 ug/mL       |
|                    |          |                                         |                      |                      |                     |              | Cadmium   | 5 ug/mL       |
|                    |          |                                         |                      |                      |                     |              | Chromium  | 20 ug/mL      |
|                    |          |                                         |                      |                      |                     |              | Cobalt    | 50 ug/mL      |
|                    |          |                                         |                      |                      |                     |              | Copper    | 25 ug/mL      |
|                    |          |                                         |                      |                      |                     |              | Iron      | 100 ug/mL     |
|                    |          |                                         |                      |                      |                     |              | Lead      | 2 ug/mL       |
|                    |          |                                         |                      |                      |                     |              | Manganese | 50 ug/mL      |
|                    |          |                                         |                      |                      |                     |              | Nickel    | 50 ug/mL      |
|                    |          |                                         |                      |                      |                     |              | Selenium  | 1 ug/mL       |
|                    |          |                                         |                      |                      |                     |              | Silver    | 5 ug/mL       |
|                    |          |                                         |                      |                      |                     |              | Thallium  | 5 ug/mL       |
|                    |          |                                         |                      |                      |                     |              | Vanadium  | 50 ug/mL      |
|                    |          |                                         |                      |                      |                     |              | Zinc      | 50 ug/mL      |
| MTAPITTMCA_00008   | 07/01/13 | INORGANIC VENTURES, Lot E2-MEB404058MCA |                      |                      | (Purchased Reagent) |              | Calcium   | 5000 ug/mL    |
|                    |          |                                         |                      |                      |                     |              | Magnesium | 5000 ug/mL    |
|                    |          |                                         |                      |                      |                     |              | Potassium | 5000 ug/mL    |
|                    |          |                                         |                      |                      |                     |              | Sodium    | 5000 ug/mL    |
| MTAPITTMSC_00013   | 07/01/13 | Inorganic Ventures, Lot F2-MED427091    |                      |                      | (Purchased Reagent) |              | Antimony  | 50 ug/mL      |

**1.0** **INORGANIC VENTURES** is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."



**2.0** **DESCRIPTION OF CRM** Custom Solution  
Catalog No.: TAPITT-CAL-SPECA-REV  
Lot Number: **F2-MEB415031**  
Matrix: 3% HNO<sub>3</sub>(v/v)

2,500 µg/mL ea:

Ca, K, Mg, Na,

1,250 µg/mL ea:

Fe,

25 µg/mL ea:

Al, Mn,

5 µg/mL ea:

Ag, As, Ba, Be, Cd, Co, Cr<sub>3</sub>, Cu, Ni,

Pb, Se, Sr, Tl, V, Zn

### 3.0 CERTIFIED VALUES AND UNCERTAINTIES

| ELEMENT                     | CERTIFIED VALUE     | ELEMENT      | CERTIFIED VALUE     | ELEMENT       | CERTIFIED VALUE     |
|-----------------------------|---------------------|--------------|---------------------|---------------|---------------------|
| Aluminum, Al                | 25.00 ± 0.18 µg/mL  | Arsenic, As  | 5.000 ± 0.032 µg/mL | Barium, Ba    | 4.999 ± 0.036 µg/mL |
| Beryllium, Be               | 5.002 ± 0.036 µg/mL | Cadmium, Cd  | 5.000 ± 0.032 µg/mL | Calcium, Ca   | 2,500 ± 16 µg/mL    |
| Chromium+3, Cr <sub>3</sub> | 5.001 ± 0.032 µg/mL | Cobalt, Co   | 5.003 ± 0.032 µg/mL | Copper, Cu    | 5.001 ± 0.032 µg/mL |
| Iron, Fe                    | 1,250 ± 8 µg/mL     | Lead, Pb     | 5.002 ± 0.032 µg/mL | Magnesium, Mg | 2,500 ± 16 µg/mL    |
| Manganese, Mn               | 25.02 ± 0.15 µg/mL  | Nickel, Ni   | 4.999 ± 0.028 µg/mL | Potassium, K  | 2,500 ± 16 µg/mL    |
| Selenium, Se                | 5.002 ± 0.028 µg/mL | Silver, Ag   | 4.999 ± 0.032 µg/mL | Sodium, Na    | 2,500 ± 16 µg/mL    |
| Strontium, Sr               | 5.001 ± 0.032 µg/mL | Thallium, Tl | 5.002 ± 0.032 µg/mL | Vanadium, V   | 4.999 ± 0.032 µg/mL |
| Zinc, Zn                    | 5.001 ± 0.028 µg/mL |              |                     |               |                     |

**Certified Density:** 1.051 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of  $k = 2$ .

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

$(\bar{x})$  = mean

$x_i$  = individual results

$n$  = number of measurements

$$\text{Uncertainty } (\pm) = 2 \left[ \sum (s_i)^2 \right]^{1/2}$$

2 = the coverage factor.

$\left[ \sum (s_i)^2 \right]^{1/2}$  = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

#### 4.0 TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

• "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

• This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

##### 4.1 ASSAY INFORMATION

| ELEMENT | METHOD      | NIST SRM# | SRM LOT#     | ELEMENT | METHOD    | NIST SRM# | SRM LOT# |
|---------|-------------|-----------|--------------|---------|-----------|-----------|----------|
| Ag      | ICP Assay   | 3151      | 992212       | Ag      | Volhard   | 999b      | 999b     |
| Al      | ICP Assay   | 3101a     | 060502       | Al      | EDTA      | 928       | 928      |
| As      | Calculated  |           | See Sec. 4.2 | As      | ICP Assay | 3103a     | 010713   |
| Ba      | Gravimetric |           | See Sec. 4.2 | Ba      | ICP Assay | 3104a     | 070222   |
| Be      | Calculated  |           | See Sec. 4.2 | Be      | ICP Assay | 3105a     | 892707   |
| Ca      | ICP Assay   | 3109a     | 050825       | Ca      | EDTA      | 928       | 928      |
| Cd      | ICP Assay   | 3108      | 060531       | Cd      | EDTA      | 928       | 928      |
| Co      | ICP Assay   | 3113      | 00630        | Co      | EDTA      | 928       | 928      |
| Cr3     | Calculated  |           | See Sec. 4.2 | Cr3     | ICP Assay | 3112a     | 030730   |
| Cu      | ICP Assay   | 3114      | 011017       | Cu      | EDTA      | 928       | 928      |
| Fe      | ICP Assay   | 3126a     | 051031       | Fe      | EDTA      | 928       | 928      |
| K       | Gravimetric |           | See Sec. 4.2 | K       | ICP Assay | 3141a     | 051220   |
| Mg      | ICP Assay   | 3131a     | 050302       | Mg      | EDTA      | 928       | 928      |
| Mn      | ICP Assay   | 3132      | 050429       | Mn      | EDTA      | 928       | 928      |
| Na      | Gravimetric |           | See Sec. 4.2 | Na      | ICP Assay | 3152a     | 010728   |
| Ni      | ICP Assay   | 3136      | 000612       | Ni      | EDTA      | 928       | 928      |
| Pb      | ICP Assay   | 3128      | 030721       | Pb      | EDTA      | 928       | 928      |
| Se      | Calculated  |           | See Sec. 4.2 | Se      | ICP Assay | 3149      | 992106   |
| Sr      | ICP Assay   | 3153a     | 990906       | Sr      | EDTA      | 928       | 928      |
| Tl      | Calculated  |           | See Sec. 4.2 | Tl      | ICP Assay | 3158      | 993012   |
| V       | ICP Assay   | 3165      | 992706       | V       | EDTA      | 928       | 928      |
| Zn      | ICP Assay   | 3168a     | 080123       | Zn      | EDTA      | 928       | 928      |

- 4.2 **BALANCE CALIBRATION** - All analytical balances are calibrated yearly by an A2LA accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).
- 4.3 **THERMOMETER CALIBRATION** - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.
- 4.4 **GLASSWARE CALIBRATION** - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

**5.0 TRACE METALLIC IMPURITIES (TMI ) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL - N/A**

**6.0 INTENDED USE**

For the calibration of analytical instruments including but not limited to the following:  
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry  
For the validation of analytical methods  
For the preparation of "working reference samples"  
For interference studies and the determination of correction coefficients  
For detection limit and linearity studies  
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

**7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL**

**Storage & Handling** - Keep Tightly sealed when not in use. Store and use at  $20 \pm 4^{\circ}\text{C}$ . Do Not pipette from the container. Do Not return portions removed from pipetting to container.

**Element Specific Information** - For specific information regarding any element: Contact technical staff.

**Uranium Note:** If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

**Low Silver Note:** This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

**8.0 HAZARDOUS INFORMATION** - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

**9.0 HOMOGENEITY** - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous.  
Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

**10.0 QUALITY STANDARD DOCUMENTATION**

**10.1 ISO 9001 Quality Management System Registration**  
- QMI File Number 010105

**10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"**  
- Chemical Testing - Accredited A2LA Certificate Number 883.01

**10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"**  
- Reference Materials Production - Accredited A2LA Certificate Number 883.02

**10.4 10CFR50 Appendix B - Nuclear Regulatory Commission**  
- Domestic Licensing of Production and Utilization Facilities

**10.5 10CFR21 - Nuclear Regulatory Commission**  
- Reporting Defects and Non-Compliance

## 11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

**11.1 Shelf Life** - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

**11.2 Expiration Date** - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

**11.3 Chemical Stability** - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

**Certification Date:** March 06, 2012

**Expiration Date:** **EXPIRES**  
01 APR 2013

## 12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

**Certificate Prepared By:** Donna Senn, Product Documentation Technician



**Certificate Approved By:** Brian Alexander, PhD., Quality Control Supervisor



**Certifying Officer:** Paul Gaines, PhD., Senior Technical Director



# CERTIFICATE OF ANALYSIS

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**1.0** **INORGANIC VENTURES** is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."



**2.0 DESCRIPTION OF CRM** Custom Solution  
Catalog No.: TAPITT-CAL-SPECB  
Lot Number: **F2-MEB415032**  
Matrix: tr. HF, 3% HNO<sub>3</sub>(v/v)

250 µg/mL ea:

Si,

5 µg/mL ea:

B, Mo, Sb, Sn, Ti

## 3.0 CERTIFIED VALUES AND UNCERTAINTIES

| ELEMENT      | CERTIFIED VALUE     | ELEMENT  | CERTIFIED VALUE     | ELEMENT        | CERTIFIED VALUE     |
|--------------|---------------------|----------|---------------------|----------------|---------------------|
| Antimony, Sb | 5.002 ± 0.045 µg/mL | Boron, B | 5.000 ± 0.032 µg/mL | Molybdenum, Mo | 5.002 ± 0.035 µg/mL |
| Silicon, Si  | 250.1 ± 1.2 µg/mL   | Tin, Sn  | 5.002 ± 0.041 µg/mL | Titanium, Ti   | 5.002 ± 0.039 µg/mL |

**Certified Density:** 1.016 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

( $\bar{x}$ ) = mean

$x_i$  = individual results

n = number of measurements

$$\text{Uncertainty } (\pm) = 2 \left[ \sum (s_i)^2 \right]^{1/2}$$

2 = the coverage factor.

$\left[ \sum (s_i)^2 \right]^{1/2}$  = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

## 4.0 TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

• "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

• This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

#### 4.1 ASSAY INFORMATION

| ELEMENT | METHOD     | NIST SRM# | SRM LOT#     | ELEMENT | METHOD    | NIST SRM# | SRM LOT# |
|---------|------------|-----------|--------------|---------|-----------|-----------|----------|
| B       | Calculated |           | See Sec. 4.2 | B       | ICP Assay | 3107      | 070514   |
| Mo      | Calculated |           | See Sec. 4.2 | Mo      | ICP Assay | 3134      | 891307   |
| Sb      | Calculated |           | See Sec. 4.2 | Sb      | ICP Assay | 3102A     | 061229   |
| Si      | Calculated |           | See Sec. 4.2 | Si      | ICP Assay | 3150      | 071204   |
| Sn      | Calculated |           | See Sec. 4.2 | Sn      | ICP Assay | 3161a     | 070330   |
| Ti      | Calculated |           | See Sec. 4.2 | Ti      | ICP Assay | 3162a     | 060808   |

4.2 **BALANCE CALIBRATION** - All analytical balances are calibrated yearly by an A2LA accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

4.3 **THERMOMETER CALIBRATION** - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

4.4 **GLASSWARE CALIBRATION** - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

#### 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL - N/A

#### 6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:  
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry  
For the validation of analytical methods  
For the preparation of "working reference samples"  
For interference studies and the determination of correction coefficients  
For detection limit and linearity studies  
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

#### 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

**Storage & Handling** - Keep **Tightly** sealed when not in use. Store and use at  $20 \pm 4^\circ\text{C}$ . **Do Not** pipette from the container. **Do Not** return portions removed from pipetting to container.

**Element Specific Information** - For specific information regarding any element: Contact technical staff.

**Uranium Note:** If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

**HF Note:** This standard should not be prepared or stored in glass.

#### 8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

#### 9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.



## 10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration  
- QMI File Number 010105

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"  
- Chemical Testing - Accredited A2LA Certificate Number 883.01

10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"  
- Reference Materials Production - Accredited A2LA Certificate Number 883.02

10.4 10CFR50 Appendix B - Nuclear Regulatory Commission  
- Domestic Licensing of Production and Utilization Facilities

10.5 10CFR21 - Nuclear Regulatory Commission  
- Reporting Defects and Non-Compliance

## 11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

11.1 Shelf Life - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

11.3 Chemical Stability - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: March 06, 2012

Expiration Date: **EXPIRES**  
01 MAR 2013

## 12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By: Donna Senn, Product Documentation  
Technician



Certificate Approved By: Brian Alexander, PhD., Quality Control Supervisor



Certifying Officer: Paul Gaines, PhD., Senior Technical Director



**1.0** **INORGANIC VENTURES** is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."



**2.0** **DESCRIPTION OF CRM** Custom Solution  
Catalog No.: TAPITT-MSICSAB-1  
Lot Number: **F2-MEB415033**  
Matrix: 3% HNO<sub>3</sub>(v/v)

10 µg/mL ea:

Ba, Be, Pb, Sr, Ti, V

### 3.0 CERTIFIED VALUES AND UNCERTAINTIES

| ELEMENT       | CERTIFIED VALUE    | ELEMENT       | CERTIFIED VALUE    | ELEMENT     | CERTIFIED VALUE    |
|---------------|--------------------|---------------|--------------------|-------------|--------------------|
| Barium, Ba    | 10.00 ± 0.07 µg/mL | Beryllium, Be | 10.00 ± 0.07 µg/mL | Lead, Pb    | 10.00 ± 0.06 µg/mL |
| Strontium, Sr | 10.00 ± 0.06 µg/mL | Thallium, Tl  | 10.00 ± 0.06 µg/mL | Vanadium, V | 10.00 ± 0.06 µg/mL |

**Certified Density:** 1.014 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

( $\bar{x}$ ) = mean

$x_i$  = individual results

n = number of measurements

$$\text{Uncertainty } (\pm) = 2 \left[ \sum (s_i)^2 \right]^{1/2}$$

2 = the coverage factor.

$\left[ \sum (s_i)^2 \right]^{1/2}$  = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

### 4.0 TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

• "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

• This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

#### 4.1 ASSAY INFORMATION

| ELEMENT | METHOD      | NIST SRM# | SRM LOT#     | ELEMENT | METHOD    | NIST SRM# | SRM LOT# |
|---------|-------------|-----------|--------------|---------|-----------|-----------|----------|
| Ba      | Gravimetric |           | See Sec. 4.2 | Ba      | ICP Assay | 3104a     | 070222   |
| Be      | Calculated  |           | See Sec. 4.2 | Be      | ICP Assay | 3105a     | 892707   |
| Pb      | ICP Assay   | 3128      | 030721       | Pb      | EDTA      | 928       | 928      |
| Sr      | ICP Assay   | 3153a     | 990906       | Sr      | EDTA      | 928       | 928      |
| Tl      | Calculated  |           | See Sec. 4.2 | Tl      | ICP Assay | 3158      | 993012   |
| V       | ICP Assay   | 3165      | 992706       | V       | EDTA      | 928       | 928      |

4.2 **BALANCE CALIBRATION** - All analytical balances are calibrated yearly by an A2LA accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

4.3 **THERMOMETER CALIBRATION** - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

4.4 **GLASSWARE CALIBRATION** - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

#### 5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL - N/A

#### 6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:  
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry  
For the validation of analytical methods  
For the preparation of "working reference samples"  
For interference studies and the determination of correction coefficients  
For detection limit and linearity studies  
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

#### 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

**Storage & Handling** - Keep **Tightly** sealed when not in use. Store and use at  $20 \pm 4^{\circ}\text{C}$ . Do Not pipette from the container. Do Not return portions removed from pipetting to container.

Element Specific Information - For specific information regarding any element: Contact technical staff.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

#### 8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

#### 9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

#### 10.0 QUALITY STANDARD DOCUMENTATION

10.1 **ISO 9001 Quality Management System Registration**  
- QMI File Number 010105

10.2 **ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"**  
- Chemical Testing - Accredited A2LA Certificate Number 883.01

10.3 **ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"**  
- Reference Materials Production - Accredited A2LA Certificate Number 883.02

10.4 **10CFR50 Appendix B - Nuclear Regulatory Commission**  
- Domestic Licensing of Production and Utilization Facilities

10.5 **10CFR21 - Nuclear Regulatory Commission**  
- Reporting Defects and Non-Compliance

## 11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

**11.1 Shelf Life** - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

**11.2 Expiration Date** - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

**11.3 Chemical Stability** - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

**Certification Date:** March 06, 2012

**Expiration Date:** **EXPIRES**  
01 <sup>st</sup> 2013

## 12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

**Certificate Prepared By:** Donna Senn, Product Documentation  
Technician



**Certificate Approved By:** Brian Alexander, PhD., Quality Control Supervisor



**Certifying Officer:** Paul Gaines, PhD., Senior Technical Director



**1.0** **INORGANIC VENTURES** is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."



**2.0 DESCRIPTION OF CRM** Custom Solution  
Catalog No.: TAPITT-MSICSAB-2  
Lot Number: E2-MEB361116  
Matrix: tr. HF, 3% HNO<sub>3</sub>(v/v)

250 µg/mL ea:

Si,

50 µg/mL ea:

Sn,

25 µg/mL ea:

B, Se,

10 µg/mL ea:

Sb

### 3.0 CERTIFIED VALUES AND UNCERTAINTIES

| ELEMENT      | CERTIFIED VALUE    | ELEMENT  | CERTIFIED VALUE    | ELEMENT      | CERTIFIED VALUE    |
|--------------|--------------------|----------|--------------------|--------------|--------------------|
| Antimony, Sb | 10.01 ± 0.05 µg/mL | Boron, B | 24.98 ± 0.18 µg/mL | Selenium, Se | 25.03 ± 0.33 µg/mL |
| Silicon, Si  | 249.8 ± 0.6 µg/mL  | Tin, Sn  | 49.97 ± 0.34 µg/mL |              |                    |

**Certified Density:** 1.018 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

( $\bar{x}$ ) = mean

$x_i$  = individual results

n = number of measurements

$$\text{Uncertainty } (\pm) = \frac{2 [(\sum s_i)^2]^{1/2}}{(n)^{1/2}}$$

$\sum s_i$  = The summation of all significant estimated errors

(Most common are the errors from instrumental measurement, weighing, dilution to volume and the fixed error reported on the NIST SRM certificate of analysis)

### 4.0 TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

- "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

- This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

#### 4.1 ASSAY INFORMATION

| ELEMENT | METHOD    | NIST SRM# | SRM LOT# | ELEMENT | METHOD     | NIST SRM# | SRM LOT#     |
|---------|-----------|-----------|----------|---------|------------|-----------|--------------|
| B       | ICP Assay | 3107      | 070514   | Sb      | Calculated |           | See Sec. 4.2 |
| Sb      | ICP Assay | 3102A     | 061229   | Se      | Calculated |           | See Sec. 4.2 |
| Se      | ICP Assay | 3149      | 992106   | Si      | Calculated |           | See Sec. 4.2 |
| Si      | ICP Assay | 3150      | 071204   | Sn      | Calculated |           | See Sec. 4.2 |
| Sn      | ICP Assay | 3161a     | 070330   |         |            |           |              |

4.2 **BALANCE CALIBRATION** - All analytical balances are calibrated yearly by an A2LA accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

4.3 **THERMOMETER CALIBRATION** - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

4.4 **GLASSWARE CALIBRATION** - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

#### 5.0 TRACE METALLIC IMPURITIES (TMI ) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL - N/A

#### 6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:  
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry  
For the validation of analytical methods  
For the preparation of "working reference samples"  
For interference studies and the determination of correction coefficients  
For detection limit and linearity studies  
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

#### 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

**Storage & Handling** - Keep Tightly sealed when not in use. Store and use at  $20 \pm 4^\circ\text{C}$ . Do Not pipette from the container. Do Not return portions removed from pipetting to container.

**Element Specific Information** - For specific information regarding any element: Contact technical staff.

**Uranium Note:** If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

**HF Note:** This standard should not be prepared or stored in glass.

#### 8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

#### 9.0 HOMOGENEITY - This solution was mixed according to in-house procedure IV-MPM-004 and is guaranteed to be homogeneous.

#### 10.0 QUALITY STANDARD DOCUMENTATION

10.1 **ISO 9001 Quality Management System Registration**  
- QMI File Number 010105

10.2 **ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"**  
- Chemical Testing - Accredited A2LA Certificate Number 883.01

10.3 **ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"**  
- Reference Materials Production - Accredited A2LA Certificate Number 883.02

10.4 **10CFR50 Appendix B - Nuclear Regulatory Commission**  
- Domestic Licensing of Production and Utilization Facilities

10.5 **10CFR21 - Nuclear Regulatory Commission**  
- Reporting Defects and Non-Compliance

## 11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

**11.1 Shelf Life** - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

**11.2 Expiration Date** - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

**11.3 Chemical Stability** - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

**Certification Date:** January 26, 2011

**Expiration Date:** **EXPIRES**  
01 APR 2013

## 12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

**Certificate Prepared By:** Donna Senn, Product Documentation Technician

*Donna Senn*

**Certificate Approved By:** Madeline Gozzi, Quality Control Supervisor

*Madeline Gozzi*

**Certifying Officer:** Paul Gaines, PhD., Senior Technical Director

*Paul R. Gaines*

CH 713 / 2012

**1.0** **INORGANIC VENTURES** is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."



**2.0 DESCRIPTION OF CRM** Custom Solution  
Catalog No.: TAPITT-MS-A  
Lot Number: **E2-MEB404058MCA**  
Matrix: 3% HNO<sub>3</sub>(v/v)

5,000 µg/mL ea:

Ca, K, Mg, Na

### 3.0 CERTIFIED VALUES AND UNCERTAINTIES

| ELEMENT     | CERTIFIED VALUE  | ELEMENT       | CERTIFIED VALUE  | ELEMENT      | CERTIFIED VALUE  |
|-------------|------------------|---------------|------------------|--------------|------------------|
| Calcium, Ca | 5,000 ± 32 µg/mL | Magnesium, Mg | 5,000 ± 32 µg/mL | Potassium, K | 5,000 ± 32 µg/mL |
| Sodium, Na  | 5,000 ± 32 µg/mL |               |                  |              |                  |

**Certified Density:** 1.073 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{X}) = \frac{\sum x_i}{n}$$

 $(\bar{X})$  = mean

 $x_i$  = individual results

n = number of measurements

$$\text{Uncertainty } (\pm) = \frac{2 [(\sum s_i^2)]^{1/2}}{(n)^{1/2}}$$

 $\sum s_i$  = The summation of all significant estimated errors

(Most common are the errors from instrumental measurement, weighing, dilution to volume and the fixed error reported on the NIST SRM certificate of analysis)

### 4.0 TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

- "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)
- This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.



#### 4.1 ASSAY INFORMATION

| ELEMENT | METHOD      | NIST SRM# | SRM LOT#     | ELEMENT | METHOD    | NIST SRM# | SRM LOT# |
|---------|-------------|-----------|--------------|---------|-----------|-----------|----------|
| Ca      | ICP Assay   | 3109a     | 050825       | Ca      | EDTA      | 928       | 928      |
| K       | Gravimetric |           | See Sec. 4.2 | K       | ICP Assay | 3141a     | 051220   |
| Mg      | ICP Assay   | 3131a     | 050302       | Mg      | EDTA      | 928       | 928      |
| Na      | Gravimetric |           | See Sec. 4.2 | Na      | ICP Assay | 3152a     | 010728   |

4.2 **BALANCE CALIBRATION** - All analytical balances are calibrated yearly by an A2LA accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

4.3 **THERMOMETER CALIBRATION** - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

4.4 **GLASSWARE CALIBRATION** - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

#### 5.0 TRACE METALLIC IMPURITIES (TMI ) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL - N/A

#### 6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:  
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry  
For the validation of analytical methods  
For the preparation of "working reference samples"  
For interference studies and the determination of correction coefficients  
For detection limit and linearity studies  
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

#### 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

**Storage & Handling** - Keep **Tightly** sealed when not in use. Store and use at  $20 \pm 4^{\circ}\text{C}$ . **Do Not** pipette from the container. **Do Not** return portions removed from pipetting to container.

**Element Specific Information** - For specific information regarding any element: Contact technical staff.

**Uranium Note:** If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

#### 8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

#### 9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous.

#### 10.0 QUALITY STANDARD DOCUMENTATION

10.1 **ISO 9001 Quality Management System Registration**  
- QMI File Number 010105

10.2 **ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"**  
- Chemical Testing - Accredited A2LA Certificate Number 883.01

10.3 **ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"**  
- Reference Materials Production - Accredited A2LA Certificate Number 883.02

10.4 **10CFR50 Appendix B - Nuclear Regulatory Commission**  
- Domestic Licensing of Production and Utilization Facilities

10.5 **10CFR21 - Nuclear Regulatory Commission**  
- Reporting Defects and Non-Compliance

## 11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

**11.1 Shelf Life** - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

**11.2 Expiration Date** - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

**11.3 Chemical Stability** - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

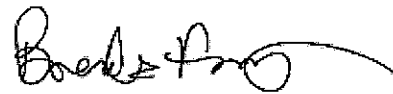
**Certification Date:** January 13, 2012

**Expiration Date:**

**EXPIRES**  
01/13/2013

## 12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

**Certificate Prepared By:** Brenda Francis  
Product Documentation Technician



**Certificate Approved By:** Brian Alexander  
PhD., Quality Control Supervisor



**Certifying Officer:** Paul Gaines  
PhD., Senior Technical Director



**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING**

**Product code** TAPITMS-A  
**Product name** Multi-element Solution Standard in Dilute Nitric Acid  
**Common Name** Contains: 5000 µg/mL ea: Ca, K, Mg, Na  
**Manufacturer, importer, supplier** Inorganic Ventures  
300 Technology Drive  
Christiansburg, VA 24073  
web: www.inorganicventures.com  
**Emergency telephone number** 800-424-9300 CHEMTREC (24 hrs)

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

| CAS       | Chemical Name     | % Weight | ACGIH*      | OSHA*                  |
|-----------|-------------------|----------|-------------|------------------------|
| 7732-18-5 | Water             | ~93.3    | N/A         | N/A                    |
| 7697-37-2 | Nitric Acid       | ~3       | 2 ppm TWA   | 2 ppm TWA; 5 mg/m3 TWA |
| 7757-79-1 | Potassium nitrate | ~1.3     | N/A         | N/A                    |
| 497-19-8  | Sodium Carbonate  | ~1.2     | N/A         | N/A                    |
| 1305-78-8 | Calcium Oxide     | ~0.7     | 2 mg/m3 TWA | 5 mg/m3 TWA            |
| 7439-95-4 | Magnesium         | ~0.5     | N/A         | N/A                    |

\* ACGIH - Occupational Exposure Limits - TWAs

\* OSHA - Final PELs - Time Weighted Averages (TWAs)

**3. HAZARDS IDENTIFICATION**
**Emergency Overview**

- Vapours may be irritating to eyes, nose, throat, and lungs
- Corrosive

|                     |                                              |
|---------------------|----------------------------------------------|
| <b>Eye contact</b>  | • Contact with eyes may cause irritation     |
| <b>Skin contact</b> | • Substance may cause slight skin irritation |
| <b>Inhalation</b>   | • May cause irritation of respiratory tract  |
| <b>Ingestion</b>    | • Harmful if swallowed                       |

**4. FIRST-AID MEASURES**

|                       |                                                                                                                                                                                                                                                                                                     |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General advice</b> | • Show this safety data sheet to the doctor in attendance                                                                                                                                                                                                                                           |
| <b>Skin contact</b>   | <ul style="list-style-type: none"> <li>• Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes</li> <li>• Consult a physician if necessary</li> </ul>                                                                                                      |
| <b>Eye contact</b>    | <ul style="list-style-type: none"> <li>• Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes</li> <li>• Keep eye wide open while rinsing</li> <li>• If eye irritation persists, consult a specialist</li> </ul> |
| <b>Inhalation</b>     | <ul style="list-style-type: none"> <li>• Move to fresh air in case of accidental inhalation of vapours</li> <li>• If breathing is difficult, give oxygen</li> <li>• Consult a physician if necessary</li> </ul>                                                                                     |
| <b>Ingestion</b>      | <ul style="list-style-type: none"> <li>• Call a physician or Poison Control Centre immediately</li> <li>• If swallowed, seek medical advice immediately and show this container or label</li> <li>• If conscious, drink plenty of water</li> </ul>                                                  |

**5. FIRE-FIGHTING MEASURES**

|                                     |                                                                                                          |
|-------------------------------------|----------------------------------------------------------------------------------------------------------|
| <b>Flash point</b>                  | NA                                                                                                       |
| <b>Suitable extinguishing media</b> | • Use extinguishing measures that are appropriate to local circumstances and the surrounding environment |
| <b>Specific hazards</b>             | • Thermal decomposition can lead to release of irritating gases and vapours                              |

|                                                                                         |                                                                                                                                                                                         |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Specific methods                                                                        | <ul style="list-style-type: none"> <li>Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations</li> </ul>                      |
| Special protective equipment for firefighters                                           | <ul style="list-style-type: none"> <li>As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear</li> </ul> |
| NFPA (National Fire Protection Association)                                             | <ul style="list-style-type: none"> <li>Health - 2</li> <li>Fire Hazard - 0</li> <li>Reactivity - 0</li> </ul>                                                                           |
| Under conditions giving incomplete combustion, hazardous gases produced may consist of: | <ul style="list-style-type: none"> <li>nitrogen oxides (NOx).</li> </ul>                                                                                                                |

## 6. ACCIDENTAL RELEASE MEASURES

|                           |                                                                                                                                                                                                                                                                                                       |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Personal precautions      | <ul style="list-style-type: none"> <li>Evacuate personnel to safe areas</li> <li>Keep people away from and upwind of spill/leak</li> <li>Wear personal protective equipment</li> <li>Ensure adequate ventilation</li> </ul>                                                                           |
| Environmental precautions | <ul style="list-style-type: none"> <li>Prevent further leakage or spillage if safe to do so</li> <li>Prevent product from entering drains</li> </ul>                                                                                                                                                  |
| Methods for cleaning up   | <ul style="list-style-type: none"> <li>Dam up</li> <li>Neutralize with lime milk or soda and flush with plenty of water</li> <li>Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container</li> <li>After cleaning, flush away traces with water</li> </ul> |

## 7. HANDLING AND STORAGE

### Handling

|                                |                                                                                                                  |
|--------------------------------|------------------------------------------------------------------------------------------------------------------|
| Technical measures/Precautions | <ul style="list-style-type: none"> <li>Use only in area provided with appropriate exhaust ventilation</li> </ul> |
| Safe handling advice           | <ul style="list-style-type: none"> <li>Wear personal protective equipment</li> </ul>                             |

### Storage

|                                |                                                                                                                                                                                                                                      |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Technical measures/Precautions | <ul style="list-style-type: none"> <li>Keep in properly labelled containers</li> <li>Store at room temperature in the original container</li> <li>Keep containers tightly closed in a dry, cool and well-ventilated place</li> </ul> |
| Incompatible products          | <ul style="list-style-type: none"> <li>organic materials</li> <li>reducing agents</li> </ul>                                                                                                                                         |

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

|                               |                                                                                                                                                         |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Personal protective equipment |                                                                                                                                                         |
| Hand protection               | <ul style="list-style-type: none"> <li>impervious gloves</li> </ul>                                                                                     |
| Eye protection                | <ul style="list-style-type: none"> <li>tightly fitting safety goggles</li> </ul>                                                                        |
| Respiratory protection        | <ul style="list-style-type: none"> <li>Ensure adequate ventilation</li> </ul>                                                                           |
| Skin and body protection      | <ul style="list-style-type: none"> <li>Chemical resistant apron</li> <li>Lab coat</li> </ul>                                                            |
| Hygiene measures              | <ul style="list-style-type: none"> <li>When using, do not eat, drink or smoke</li> <li>Regular cleaning of equipment, work area and clothing</li> </ul> |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### General Information

|            |            |
|------------|------------|
| Form       | liquid.    |
| Appearance | clear      |
| Colour     | colorless. |
| Odour      | None.      |

### Important Health Safety and Environmental Information

|                     |        |
|---------------------|--------|
| pH                  | 0 to 2 |
| Boiling point/range | 100°C  |
| Flash point         | N/A    |

Vapour pressure  
Water solubility

NA.  
miscible.

## 10. STABILITY AND REACTIVITY

|                                  |                                                                                                                                |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Stability                        | <ul style="list-style-type: none"><li>Stable under normal conditions</li><li>Hazardous polymerization does not occur</li></ul> |
| Materials to avoid               | <ul style="list-style-type: none"><li>organic materials</li><li>reducing agents</li></ul>                                      |
| Hazardous decomposition products | <ul style="list-style-type: none"><li>nitrogen oxides (NOx)</li></ul>                                                          |

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Component Information

| CAS       | Chemical Name     | % Weight | LD50/oral/rat =                   | LD50/dermal/rat =                 |
|-----------|-------------------|----------|-----------------------------------|-----------------------------------|
| 7732-18-5 | Water             | ~93.3    | N/A                               | N/A                               |
| 7697-37-2 | Nitric Acid       | ~3       | Inhalation LC50 Rat: 130 mg/kg/4H | Inhalation LC50 Rat: 130 mg/kg/4H |
| 7757-79-1 | Potassium nitrate | ~1.3     | Oral LD50 Rat: 3750 mg/kg         | Oral LD50 Rat: 3750 mg/kg         |
| 497-19-8  | Sodium Carbonate  | ~1.2     | Oral LD50 Rat: 4090 mg/kg         | Oral LD50 Rat: 4090 mg/kg         |
| 1305-78-8 | Calcium Oxide     | ~0.7     | N/A                               | N/A                               |
| 7439-95-4 | Magnesium         | ~0.5     | N/A                               | N/A                               |

#### Product Information

|                  |                                                                                                                         |
|------------------|-------------------------------------------------------------------------------------------------------------------------|
| Local effects    | Na- . KNO3 - . Poison.                                                                                                  |
| Skin irritation  | May cause skin irritation and/or dermatitis.                                                                            |
| Eye irritation   | May cause eye irritation with susceptible persons.                                                                      |
| Inhalation       | May cause irritation of respiratory tract.                                                                              |
| Ingestion        | If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. |
| Chronic toxicity | Avoid repeated exposure. KNO3 - . Chronic exposure may cause: Methemoglobinemia, anemia, and nephritis.                 |

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity effects

#### Component Information

| CAS       | Chemical Name     | % Weight | EFAD* | EFFSD*                                 | EMD - Ecotoxicity* |
|-----------|-------------------|----------|-------|----------------------------------------|--------------------|
| 7732-18-5 | Water             | ~93.3    | N/A   | N/A                                    | N/A                |
| 7697-37-2 | Nitric Acid       | ~3       | N/A   | N/A                                    | N/A                |
| 7757-79-1 | Potassium nitrate | ~1.3     | N/A   | N/A                                    | N/A                |
| 497-19-8  | Sodium Carbonate  | ~1.2     | N/A   | 96 Hr LC50 bluegill: 320 mg/L (static) | N/A                |
| 1305-78-8 | Calcium Oxide     | ~0.7     | N/A   | N/A                                    | N/A                |
| 7439-95-4 | Magnesium         | ~0.5     | N/A   | N/A                                    | N/A                |

\* EFAD - Ecotoxicity - Freshwater Algae Data

\* EFFSD - Ecotoxicity - Freshwater Fish Species Data

\* EMD - Ecotoxicity - Microtox Data

#### Product Information

Do not allow material to contaminate ground water or sewage system

#### Other information

**13. DISPOSAL CONSIDERATIONS**

|                                       |                                                                                    |
|---------------------------------------|------------------------------------------------------------------------------------|
| Waste from residues / unused products | • In accordance with local and national regulations                                |
| Contaminated packaging                | • Empty containers should be taken for local recycling, recovery or waste disposal |

**14. TRANSPORT INFORMATION****DOT**

UN-No

UN3264 / Class 8

Proper shipping name

Corrosive liquid, acidic, inorganic, n.o.s

Packing group

III

**IATA-DGR**

UN-No

UN3264 / Class 8

Proper shipping name

Corrosive liquid, acidic, inorganic, n.o.s

Packing group

III

**15. REGULATORY INFORMATION****U.S. INVENTORIES:**

| CAS       | Chemical Name     | % Weight | CPCL* | NJRTK*  | CERCLA/SARA*                      |
|-----------|-------------------|----------|-------|---------|-----------------------------------|
| 7732-18-5 | Water             | ~93.3    | N/A   | N/A     | N/A                               |
| 7697-37-2 | Nitric Acid       | ~3       | N/A   | sn 1356 | 1000 lb final RQ; 454 kg final RQ |
| 7757-79-1 | Potassium nitrate | ~1.3     | N/A   | sn 1574 | N/A                               |
| 497-19-8  | Sodium Carbonate  | ~1.2     | N/A   | N/A     | N/A                               |
| 1305-78-8 | Calcium Oxide     | ~0.7     | N/A   | sn 0325 | N/A                               |
| 7439-95-4 | Magnesium         | ~0.5     | N/A   | sn 1136 | N/A                               |

\* CPCL - California - Proposition 65 - Carcinogens List

\* NJRTK - New Jersey - Department of Health RTK List

\* CERCLA/SARA - Hazardous Substances and their Reportable Quantities

**INTERNATIONAL INVENTORIES:**

| CAS       | Chemical Name     | % Weight | WHMIS*                                                           | EINECCS - European Union* |
|-----------|-------------------|----------|------------------------------------------------------------------|---------------------------|
| 7732-18-5 | Water             | ~93.3    | Uncontrolled product according to WHMIS classification criteria  | 231-791-2                 |
| 7697-37-2 | Nitric Acid       | ~3       | C, E (including 60%, 61.3%, 63%, 67%, 67.18%, 70%, 90%); E (10%) | 231-714-2                 |
| 7757-79-1 | Potassium nitrate | ~1.3     | C                                                                | 231-818-8                 |
| 497-19-8  | Sodium Carbonate  | ~1.2     | N/A                                                              | 207-838-8                 |
| 1305-78-8 | Calcium Oxide     | ~0.7     | E                                                                | 215-138-9                 |
| 7439-95-4 | Magnesium         | ~0.5     | B4, B6                                                           | 231-104-6                 |

\* WHMIS - Canada - WHMIS - Classifications of Substances

\* EINECCS - European Union - European inventory of Existing Commercial Chemical Substances (EINECCS)

**16. OTHER INFORMATION**

The above information is believed to be accurate and represents the best information available to us. It has been compiled from the data presented in various technical publications and our experience and should only be used as a guide for handling this product. It is the user's responsibility to determine the suitability of this information for their particular purposes. We assume that only qualified individuals, trained and familiar with procedures suitable to this product will handle this material. Inorganic Ventures, Inc. assumes no responsibility and shall not be held liable for any damage resulting from misuse of this product.

**1.0 INORGANIC VENTURES** is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."



**2.0 DESCRIPTION OF CRM** Custom Solution  
Catalog No.: TAPITT-MS-C  
Lot Number: **F2-MEB427091**  
Matrix: tr. HF, 3% HNO<sub>3</sub>(v/v)

1,000 µg/mL ea:

Si,

200 µg/mL ea:

Sn,

100 µg/mL ea:

Mo, Ti,

50 µg/mL ea:

Sb

### 3.0 CERTIFIED VALUES AND UNCERTAINTIES

| ELEMENT      | CERTIFIED VALUE    | ELEMENT        | CERTIFIED VALUE   | ELEMENT     | CERTIFIED VALUE |
|--------------|--------------------|----------------|-------------------|-------------|-----------------|
| Antimony, Sb | 50.03 ± 0.38 µg/mL | Molybdenum, Mo | 100.0 ± 0.8 µg/mL | Silicon, Si | 1,000 ± 5 µg/mL |
| Tin, Sn      | 200.0 ± 1.3 µg/mL  | Titanium, Ti   | 100.0 ± 0.7 µg/mL |             |                 |

**Certified Density:** 1.019 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{x}) = \frac{\sum x_i}{n}$$

( $\bar{x}$ ) = mean

$x_i$  = individual results

n = number of measurements

$$\text{Uncertainty } (\pm) = 2 \left[ \sum (s_i)^2 \right]^{1/2}$$

2 = the coverage factor.

$\left[ \sum (s_i)^2 \right]^{1/2}$  = The square root of the sum of the squares of the most common errors (where's stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

#### 4.0 TRACEABILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

• "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

• This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

##### 4.1 ASSAY INFORMATION

| ELEMENT | METHOD     | NIST SRM# | SRM LOT#     | ELEMENT | METHOD    | NIST SRM# | SRM LOT# |
|---------|------------|-----------|--------------|---------|-----------|-----------|----------|
| Mo      | Calculated |           | See Sec. 4.2 | Mo      | ICP Assay | 3134      | 891307   |
| Sb      | Calculated |           | See Sec. 4.2 | Sb      | ICP Assay | 3102A     | 061229   |
| Si      | Calculated |           | See Sec. 4.2 | Si      | ICP Assay | 3150      | 071204   |
| Sn      | Calculated |           | See Sec. 4.2 | Sn      | ICP Assay | 3161a     | 070330   |
| Ti      | ICP Assay  | 3162a     | 060808       |         |           |           |          |

4.2 **BALANCE CALIBRATION** - All analytical balances are calibrated yearly by an A2LA accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

4.3 **THERMOMETER CALIBRATION** - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

4.4 **GLASSWARE CALIBRATION** - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

#### 5.0 TRACE METALLIC IMPURITIES (TMI ) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL - N/A

#### 6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:

HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry

For the validation of analytical methods

For the preparation of "working reference samples"

For interference studies and the determination of correction coefficients

For detection limit and linearity studies

For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

#### 7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

**Storage & Handling** - Keep Tightly sealed when not in use. Store and use at  $20 \pm 4^\circ\text{C}$ . Do Not pipette from the container. Do Not return portions removed from pipetting to container.

**Element Specific Information** - For specific information regarding any element: Contact technical staff.

**Uranium Note:** If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

**HF Note:** This standard should not be prepared or stored in glass.

#### 8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

#### 9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.



## 10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration  
- QMI File Number 010105

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"  
- Chemical Testing - Accredited A2LA Certificate Number 883.01

10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"  
- Reference Materials Production - Accredited A2LA Certificate Number 883.02

10.4 10CFR50 Appendix B - Nuclear Regulatory Commission  
- Domestic Licensing of Production and Utilization Facilities

10.5 10CFR21 - Nuclear Regulatory Commission  
- Reporting Defects and Non-Compliance

## 11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

11.1 Shelf Life - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

11.3 Chemical Stability - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: June 21, 2012

Expiration Date: **EXPIRES**

01/12/2013

## 12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By: Donna Senn  
Product Documentation Technician



Certificate Approved By: Brian Alexander  
PhD., Quality Control Supervisor



Certifying Officer: Paul Gaines  
PhD., Senior Technical Director



**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING**

**Product code** TAPITMS-C  
**Product name** Multi-element Solution Standard in Dilute Nitric Acid trace Hydrofluoric Acid  
**Common Name** Contains: 1000 µg/mL Si; 200 µg/mL Sn; 100 µg/mL ea: Mo, Ti; 50 µg/mL Sb  
**Manufacturer, importer, supplier** Inorganic Ventures  
300 Technology Drive  
Christiansburg, VA 24073  
Web: www.inorganicventures.com  
**Emergency telephone number** 800-424-9300 CHEMTREC (24 hrs)

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

| CAS        | Chemical Name     | % Weight | ACGIH*                                          | OSHA*                              |
|------------|-------------------|----------|-------------------------------------------------|------------------------------------|
| 7732-18-5  | Water             | ~96.80   | N/A                                             | N/A                                |
| 7697-37-2  | Nitric Acid       | ~3       | 2 ppm TWA                                       | 2 ppm TWA; 5 mg/m <sup>3</sup> TWA |
| 7664-39-3  | Hydrogen fluoride | <0.1     | 0.5 ppm TWA (as F)                              | 3 ppm TWA                          |
| 60676-86-0 | Silica, fused     | ~0.2     | 0.1 mg/m <sup>3</sup> TWA (respirable fraction) | N/A                                |

\* ACGIH - Occupational Exposure Limits - TWAs

\* OSHA - Final PELs - Time Weighted Averages (TWAs)

**3. HAZARDS IDENTIFICATION**
**Emergency Overview**

- Vapours may be irritating to eyes, nose, throat, and lungs
- Corrosive

**Eye contact**

- Contact with eyes may cause irritation

**Skin contact**

- Causes severe burns

**Inhalation**

- May cause irritation of respiratory tract

**Ingestion**

- Harmful if swallowed

**4. FIRST AID MEASURES**
**General advice**

- Show this safety data sheet to the doctor in attendance

**Skin contact**

- Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes
- First treatment with calcium gluconate paste
- Immediate medical attention is required

**Eye contact**

- Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes
- Keep eye wide open while rinsing
- Immediate medical attention is required

**Inhalation**

- Move to fresh air in case of accidental inhalation of vapours
- If breathing is difficult, give oxygen
- Immediate medical attention is required

**Ingestion**

- Call a physician or Poison Control Centre immediately
- If swallowed, seek medical advice immediately and show this container or label
- If conscious, drink plenty of water

**Notes to physician**

- Treat symptomatically

**Protection of first-aiders**

- Use personal protective equipment

**5. FIRE-FIGHTING MEASURES**

|                                                                                         |                                                                                                                                                                                         |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flash point                                                                             | NA                                                                                                                                                                                      |
| Suitable extinguishing media                                                            | <ul style="list-style-type: none"> <li>Use extinguishing measures that are appropriate to local circumstances and the surrounding environment</li> </ul>                                |
| Specific hazards                                                                        | <ul style="list-style-type: none"> <li>Thermal decomposition can lead to release of irritating gases and vapours</li> </ul>                                                             |
| Specific methods                                                                        | <ul style="list-style-type: none"> <li>Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations</li> </ul>                      |
| Special protective equipment for firefighters                                           | <ul style="list-style-type: none"> <li>As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear</li> </ul> |
| NFPA (National Fire Protection Association)                                             | <ul style="list-style-type: none"> <li>Health - 2</li> <li>Fire Hazard - 0</li> <li>Reactivity - 0</li> </ul>                                                                           |
| Under conditions giving incomplete combustion, hazardous gases produced may consist of: | <ul style="list-style-type: none"> <li>nitrogen oxides (NO<sub>x</sub>).</li> <li>F<sup>+</sup></li> </ul>                                                                              |

## 6. ACCIDENTAL RELEASE MEASURES

|                           |                                                                                                                                                                                                                                                                                                       |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Personal precautions      | <ul style="list-style-type: none"> <li>Evacuate personnel to safe areas</li> <li>Keep people away from and upwind of spill/leak</li> <li>Wear personal protective equipment</li> <li>Ensure adequate ventilation</li> </ul>                                                                           |
| Environmental precautions | <ul style="list-style-type: none"> <li>Prevent further leakage or spillage if safe to do so</li> <li>Prevent product from entering drains</li> </ul>                                                                                                                                                  |
| Methods for cleaning up   | <ul style="list-style-type: none"> <li>Dam up</li> <li>Neutralize with lime milk or soda and flush with plenty of water</li> <li>Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container</li> <li>After cleaning, flush away traces with water</li> </ul> |

## 7. HANDLING AND STORAGE

### Handling

|                                |                                                                                                                                 |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Technical measures/Precautions | <ul style="list-style-type: none"> <li>Use only in area provided with appropriate exhaust ventilation</li> </ul>                |
| Safe handling advice           | <ul style="list-style-type: none"> <li>Wear personal protective equipment</li> <li>Use product only in closed system</li> </ul> |

### Storage

|                                |                                                                                                                                                                                                                                      |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Technical measures/Precautions | <ul style="list-style-type: none"> <li>Keep in properly labelled containers</li> <li>Store at room temperature in the original container</li> <li>Keep containers tightly closed in a dry, cool and well-ventilated place</li> </ul> |
| Incompatible products          | <ul style="list-style-type: none"> <li>organic materials</li> <li>reducing agents</li> </ul>                                                                                                                                         |

## 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

|                                      |                                                                                                                                                         |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal protective equipment</b> |                                                                                                                                                         |
| Hand protection                      | <ul style="list-style-type: none"> <li>impervious gloves</li> </ul>                                                                                     |
| Eye protection                       | <ul style="list-style-type: none"> <li>tightly fitting safety goggles</li> </ul>                                                                        |
| Respiratory protection               | <ul style="list-style-type: none"> <li>Ensure adequate ventilation</li> </ul>                                                                           |
| Skin and body protection             | <ul style="list-style-type: none"> <li>Chemical resistant apron</li> <li>Lab coat</li> </ul>                                                            |
| Hygiene measures                     | <ul style="list-style-type: none"> <li>When using, do not eat, drink or smoke</li> <li>Regular cleaning of equipment, work area and clothing</li> </ul> |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### General Information

|            |            |
|------------|------------|
| Form       | liquid.    |
| Appearance | clear      |
| Colour     | colorless. |
| Odour      | None.      |

### Important Health Safety and Environmental Information

|                     |           |
|---------------------|-----------|
| pH                  | 0 to 2    |
| Boiling point/range | 100°C     |
| Flash point         | NA        |
| Vapour density      | NA.       |
| Water solubility    | miscible. |

## 10. STABILITY AND REACTIVITY

|                                  |                                                                                                                                |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Stability                        | <ul style="list-style-type: none"><li>Stable under normal conditions</li><li>Hazardous polymerization does not occur</li></ul> |
| Materials to avoid               | <ul style="list-style-type: none"><li>organic materials</li><li>reducing agents</li></ul>                                      |
| Hazardous decomposition products | <ul style="list-style-type: none"><li>nitrogen oxides (NO<sub>x</sub>)</li><li>F<sup>-</sup></li></ul>                         |

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

#### Component Information

| CAS        | Chemical Name     | % Weight | LD50/oral/rat =                   | LD50/dermal/rat =                 |
|------------|-------------------|----------|-----------------------------------|-----------------------------------|
| 7732-18-5  | Water             | ~96.80   | N/A                               | N/A                               |
| 7697-37-2  | Nitric Acid       | ~3       | Inhalation LC50 Rat: 130 mg/kg/4H | Inhalation LC50 Rat: 130 mg/kg/4H |
| 7664-39-3  | Hydrogen fluoride | <0.1     | Inhalation LC50 Rat: 1276 ppm/1H  | Inhalation LC50 Rat: 1276 ppm/1H  |
| 60676-86-0 | Silica, fused     | ~0.2     | N/A                               | N/A                               |

#### Product Information

|                  |                                                                                                                                               |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Local effects    | HF is toxic and can cause severe burns that are not apparent immediately.                                                                     |
| Skin irritation  | Causes severe burns.                                                                                                                          |
| Eye irritation   | Irritant.                                                                                                                                     |
| Inhalation       | Irritant.                                                                                                                                     |
| Ingestion        | If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. Harmful if swallowed. |
| Chronic toxicity | Avoid repeated exposure. Prolonged exposure may cause chronic effects.                                                                        |

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity effects

#### Component Information

| CAS        | Chemical Name     | % Weight | EFAD* | EFFSD* | EMD - Ecotoxicity* |
|------------|-------------------|----------|-------|--------|--------------------|
| 7732-18-5  | Water             | ~96.80   | N/A   | N/A    | N/A                |
| 7697-37-2  | Nitric Acid       | ~3       | N/A   | N/A    | N/A                |
| 7664-39-3  | Hydrogen fluoride | <0.1     | N/A   | N/A    | N/A                |
| 60676-86-0 | Silica, fused     | ~0.2     | N/A   | N/A    | N/A                |

- \* EFAD - Ecotoxicity - Freshwater Algae Data
- \* EFFSD - Ecotoxicity - Freshwater Fish Species Data
- \* EMD - Ecotoxicity - Microtox Data

## Product Information

Do not allow material to contaminate ground water or sewage system

## Other information

### 13. DISPOSAL CONSIDERATIONS

|                                       |                                                                                                                                    |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Waste from residues / unused products | <ul style="list-style-type: none"> <li>In accordance with local and national regulations</li> </ul>                                |
| Contaminated packaging                | <ul style="list-style-type: none"> <li>Empty containers should be taken for local recycling, recovery or waste disposal</li> </ul> |

### 14. TRANSPORT INFORMATION

#### DOT

|                      |                                            |
|----------------------|--------------------------------------------|
| UN-No                | UN3264 / Class 8                           |
| Proper shipping name | Corrosive liquid, acidic, inorganic, n.o.s |
| Packing group        | III                                        |

#### IATA-DGR

|                      |                                            |
|----------------------|--------------------------------------------|
| UN-No                | UN3264 / Class 8                           |
| Proper shipping name | Corrosive liquid, acidic, inorganic, n.o.s |
| Packing group        | III                                        |

### 15. REGULATORY INFORMATION

#### U.S. INVENTORIES:

| CAS        | Chemical Name     | % Weight | CPCL* | NJRTK*  | CERCLA/SARA*                      |
|------------|-------------------|----------|-------|---------|-----------------------------------|
| 7732-18-5  | Water             | ~96.80   | N/A   | N/A     | N/A                               |
| 7697-37-2  | Nitric Acid       | ~3       | N/A   | sn 1356 | 1000 lb final RQ; 454 kg final RQ |
| 7664-39-3  | Hydrogen fluoride | <0.1     | N/A   | sn 1014 | 100 lb final RQ; 45.4 kg final RQ |
| 60676-86-0 | Silica, fused     | ~0.2     | N/A   | sn 1656 | N/A                               |

\* CPCL - California - Proposition 65 - Carcinogens List

\* NJRTK - New Jersey - Department of Health RTK List

\* CERCLA/SARA - Hazardous Substances and their Reportable Quantities

#### INTERNATIONAL INVENTORIES:

| CAS        | Chemical Name     | % Weight | WHMIS*                                                           | EINECS - European Union* |
|------------|-------------------|----------|------------------------------------------------------------------|--------------------------|
| 7732-18-5  | Water             | ~96.80   | Uncontrolled product according to WHMIS classification criteria  | 231-791-2                |
| 7697-37-2  | Nitric Acid       | ~3       | C, E (including 60%, 61.3%, 63%, 67%, 67.18%, 70%, 90%); E (10%) | 231-714-2                |
| 7664-39-3  | Hydrogen fluoride | <0.1     | D1A, E; D1B (including 12%, 24%, 48-50%, 52%, 70%)               | 231-634-8                |
| 60676-86-0 | Silica, fused     | ~0.2     | Uncontrolled product according to WHMIS classification criteria  | 262-373-8                |

\* WHMIS - Canada - WHMIS - Classifications of Substances

\* EINECS - European Union - European inventory of Existing Commercial Chemical Substances (EINECS)

### 16. OTHER INFORMATION

The above information is believed to be accurate and represents the best information available to us. It has been compiled from the data presented in various technical publications and our experience and should only be used as a guide for handling this product. It is the user's responsibility to determine the

suitability of this information for their particular purposes. We assume that only qualified individuals, trained and familiar with procedures suitable to this product will handle this material. Inorganic Ventures, Inc. assumes no responsibility and shall not be held liable for any damage resulting from misuse of this product.

## Certification Summary

Client: Environmental Chemical Corp.  
Project/Site: RVAAP - ECC

TestAmerica Job ID: 240-17525-2

| Laboratory             | Authority           | Program       | EPA Region | Certification ID |
|------------------------|---------------------|---------------|------------|------------------|
| TestAmerica Pittsburgh | Arkansas DEQ        | State Program | 6          | 88-0690          |
| TestAmerica Pittsburgh | California          | NELAP         | 9          | 4224CA           |
| TestAmerica Pittsburgh | Connecticut         | State Program | 1          | PH-0688          |
| TestAmerica Pittsburgh | Florida             | NELAP         | 4          | E871008          |
| TestAmerica Pittsburgh | Illinois            | NELAP         | 5          | 002602           |
| TestAmerica Pittsburgh | Kansas              | NELAP         | 7          | E-10350          |
| TestAmerica Pittsburgh | L-A-B               | DoD ELAP      |            | L2314            |
| TestAmerica Pittsburgh | Louisiana           | NELAP         | 6          | 04041            |
| TestAmerica Pittsburgh | New Hampshire       | NELAP         | 1          | 203011           |
| TestAmerica Pittsburgh | New Jersey          | NELAP         | 2          | PA005            |
| TestAmerica Pittsburgh | New York            | NELAP         | 2          | 11182            |
| TestAmerica Pittsburgh | North Carolina DENR | State Program | 4          | 434              |
| TestAmerica Pittsburgh | Pennsylvania        | NELAP         | 3          | 02-00416         |
| TestAmerica Pittsburgh | South Carolina      | State Program | 4          | 89014            |
| TestAmerica Pittsburgh | USDA                | Federal       |            | P330-10-00139    |
| TestAmerica Pittsburgh | USDA                | Federal       |            | P-Soil-01        |
| TestAmerica Pittsburgh | Utah                | NELAP         | 8          | STLP             |
| TestAmerica Pittsburgh | Virginia            | NELAP         | 3          | 460189           |
| TestAmerica Pittsburgh | West Virginia DEP   | State Program | 3          | 142              |
| TestAmerica Pittsburgh | Wisconsin           | State Program | 5          | 998027800        |

Accreditation may not be offered or required for all methods and analytes reported in this package Please contact your project manager for the laboratory's current list of certified methods and analytes.

# METALS



COVER PAGE  
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 240-17525-2  
SDG No.: \_\_\_\_\_  
Project: RVAAP - ECC

| Client Sample ID           | Lab Sample ID      |
|----------------------------|--------------------|
| <u>069SS-0001M-0001-S0</u> | <u>240-17525-1</u> |
| <u>069SS-0002M-0001-S0</u> | <u>240-17525-2</u> |
| <u>069SS-003M-0001-S0</u>  | <u>240-17525-3</u> |
| <u>069SS-004M-0001-S0</u>  | <u>240-17525-4</u> |
| <u>077SS-0001M-0001-S0</u> | <u>240-17525-5</u> |
| <u>077SS-0002M-0001-S0</u> | <u>240-17525-6</u> |

Comments:

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: 069SS-0001M-0001-S0

Lab Sample ID: 240-17525-1

Lab Name: TestAmerica Pittsburgh

Job No.: 240-17525-2

SDG ID.:

Matrix: Solid

Date Sampled: 11/11/2012 09:15

Reporting Basis: WET

Date Received: 11/12/2012 17:57

| Analyte   | Result | LOQ   | LOD    | DL     | Units | C | Q   | DIL | Method   |
|-----------|--------|-------|--------|--------|-------|---|-----|-----|----------|
| Silver    | 0.034  | 0.089 | 0.027  | 0.010  | mg/Kg | J |     | 1   | 6020/DOD |
| Aluminum  | 14000  | 2.7   | 0.54   | 0.25   | mg/Kg |   | J   | 1   | 6020/DOD |
| Arsenic   | 10     | 0.089 | 0.045  | 0.016  | mg/Kg |   |     | 1   | 6020/DOD |
| Barium    | 76     | 0.89  | 0.018  | 0.0096 | mg/Kg |   | Q   | 1   | 6020/DOD |
| Beryllium | 0.82   | 0.089 | 0.0089 | 0.0067 | mg/Kg |   |     | 1   | 6020/DOD |
| Calcium   | 5300   | 8.9   | 2.2    | 1.2    | mg/Kg |   |     | 1   | 6020/DOD |
| Cadmium   | 0.29   | 0.089 | 0.027  | 0.012  | mg/Kg |   |     | 1   | 6020/DOD |
| Chromium  | 24     | 0.18  | 0.036  | 0.020  | mg/Kg |   |     | 1   | 6020/DOD |
| Cobalt    | 11     | 0.045 | 0.0089 | 0.0021 | mg/Kg |   | Q   | 1   | 6020/DOD |
| Copper    | 19     | 0.18  | 0.054  | 0.029  | mg/Kg |   | Q   | 1   | 6020/DOD |
| Iron      | 24000  | 4.5   | 1.8    | 0.96   | mg/Kg |   |     | 1   | 6020/DOD |
| Magnesium | 3900   | 8.9   | 1.8    | 0.96   | mg/Kg |   |     | 1   | 6020/DOD |
| Manganese | 430    | 0.45  | 0.027  | 0.014  | mg/Kg |   | Q J | 1   | 6020/DOD |
| Sodium    | 53     | 8.9   | 4.5    | 2.4    | mg/Kg |   |     | 1   | 6020/DOD |
| Nickel    | 27     | 0.089 | 0.027  | 0.010  | mg/Kg |   | Q   | 1   | 6020/DOD |
| Lead      | 19     | 0.089 | 0.027  | 0.014  | mg/Kg |   |     | 1   | 6020/DOD |
| Antimony  | 0.14   | 0.18  | 0.089  | 0.041  | mg/Kg | J | J   | 1   | 6020/DOD |
| Thallium  | 0.23   | 0.089 | 0.018  | 0.0091 | mg/Kg |   |     | 1   | 6020/DOD |
| Vanadium  | 21     | 0.089 | 0.054  | 0.027  | mg/Kg |   |     | 1   | 6020/DOD |
| Zinc      | 79     | 0.45  | 0.18   | 0.058  | mg/Kg |   | Q   | 1   | 6020/DOD |
| Potassium | 1500   | 8.9   | 5.4    | 2.8    | mg/Kg |   |     | 1   | 6020/DOD |
| Selenium  | 0.78   | 0.45  | 0.089  | 0.045  | mg/Kg |   |     | 1   | 6020/DOD |

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: 069SS-0002M-0001-SO

Lab Sample ID: 240-17525-2

Lab Name: TestAmerica Pittsburgh

Job No.: 240-17525-2

SDG ID.:

Matrix: Solid

Date Sampled: 11/11/2012 09:15

Reporting Basis: WET

Date Received: 11/12/2012 17:57

| Analyte   | Result | LOQ   | LOD    | DL     | Units | C | Q | DIL | Method   |
|-----------|--------|-------|--------|--------|-------|---|---|-----|----------|
| Silver    | 0.035  | 0.094 | 0.028  | 0.011  | mg/Kg | J |   | 1   | 6020/DOD |
| Aluminum  | 13000  | 2.8   | 0.57   | 0.27   | mg/Kg |   |   | 1   | 6020/DOD |
| Arsenic   | 10     | 0.094 | 0.047  | 0.017  | mg/Kg |   |   | 1   | 6020/DOD |
| Barium    | 74     | 0.94  | 0.019  | 0.010  | mg/Kg |   | Q | 1   | 6020/DOD |
| Beryllium | 0.75   | 0.094 | 0.0094 | 0.0071 | mg/Kg |   |   | 1   | 6020/DOD |
| Calcium   | 5000   | 9.4   | 2.4    | 1.3    | mg/Kg |   |   | 1   | 6020/DOD |
| Cadmium   | 0.27   | 0.094 | 0.028  | 0.012  | mg/Kg |   |   | 1   | 6020/DOD |
| Chromium  | 19     | 0.19  | 0.038  | 0.021  | mg/Kg |   |   | 1   | 6020/DOD |
| Cobalt    | 11     | 0.047 | 0.0094 | 0.0023 | mg/Kg |   | Q | 1   | 6020/DOD |
| Copper    | 30     | 0.19  | 0.057  | 0.031  | mg/Kg |   | Q | 1   | 6020/DOD |
| Iron      | 24000  | 4.7   | 1.9    | 1.0    | mg/Kg |   |   | 1   | 6020/DOD |
| Magnesium | 3800   | 9.4   | 1.9    | 1.0    | mg/Kg |   |   | 1   | 6020/DOD |
| Manganese | 480    | 0.47  | 0.028  | 0.015  | mg/Kg |   | Q | 1   | 6020/DOD |
| Sodium    | 52     | 9.4   | 4.7    | 2.5    | mg/Kg |   |   | 1   | 6020/DOD |
| Nickel    | 24     | 0.094 | 0.028  | 0.011  | mg/Kg |   | Q | 1   | 6020/DOD |
| Lead      | 19     | 0.094 | 0.028  | 0.015  | mg/Kg |   |   | 1   | 6020/DOD |
| Antimony  | 0.16   | 0.19  | 0.094  | 0.043  | mg/Kg | J |   | 1   | 6020/DOD |
| Thallium  | 0.18   | 0.094 | 0.019  | 0.0096 | mg/Kg |   |   | 1   | 6020/DOD |
| Vanadium  | 20     | 0.094 | 0.057  | 0.028  | mg/Kg |   |   | 1   | 6020/DOD |
| Zinc      | 78     | 0.47  | 0.19   | 0.061  | mg/Kg |   | Q | 1   | 6020/DOD |
| Potassium | 1200   | 9.4   | 5.7    | 3.0    | mg/Kg |   |   | 1   | 6020/DOD |
| Selenium  | 0.71   | 0.47  | 0.094  | 0.048  | mg/Kg |   |   | 1   | 6020/DOD |

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: 069SS-003M-0001-SO

Lab Sample ID: 240-17525-3

Lab Name: TestAmerica Pittsburgh

Job No.: 240-17525-2

SDG ID.:

Matrix: Solid

Date Sampled: 11/11/2012 10:15

Reporting Basis: WET

Date Received: 11/12/2012 17:57

| Analyte   | Result | LOQ   | LOD    | DL     | Units | C | Q | DIL | Method   |
|-----------|--------|-------|--------|--------|-------|---|---|-----|----------|
| Silver    | 0.032  | 0.085 | 0.025  | 0.0097 | mg/Kg | J |   | 1   | 6020/DOD |
| Aluminum  | 11000  | 2.5   | 0.51   | 0.24   | mg/Kg |   |   | 1   | 6020/DOD |
| Arsenic   | 8.6    | 0.085 | 0.042  | 0.015  | mg/Kg |   |   | 1   | 6020/DOD |
| Barium    | 65     | 0.85  | 0.017  | 0.0091 | mg/Kg |   | Q | 1   | 6020/DOD |
| Beryllium | 0.63   | 0.085 | 0.0085 | 0.0064 | mg/Kg |   |   | 1   | 6020/DOD |
| Calcium   | 7700   | 8.5   | 2.1    | 1.1    | mg/Kg |   |   | 1   | 6020/DOD |
| Cadmium   | 0.19   | 0.085 | 0.025  | 0.011  | mg/Kg |   |   | 1   | 6020/DOD |
| Chromium  | 17     | 0.17  | 0.034  | 0.019  | mg/Kg |   |   | 1   | 6020/DOD |
| Cobalt    | 8.1    | 0.042 | 0.0085 | 0.0020 | mg/Kg |   | Q | 1   | 6020/DOD |
| Copper    | 11     | 0.17  | 0.051  | 0.028  | mg/Kg |   | Q | 1   | 6020/DOD |
| Iron      | 20000  | 4.2   | 1.7    | 0.91   | mg/Kg |   |   | 1   | 6020/DOD |
| Magnesium | 2800   | 8.5   | 1.7    | 0.91   | mg/Kg |   |   | 1   | 6020/DOD |
| Manganese | 570    | 0.42  | 0.025  | 0.013  | mg/Kg |   | Q | 1   | 6020/DOD |
| Sodium    | 47     | 8.5   | 4.2    | 2.3    | mg/Kg |   |   | 1   | 6020/DOD |
| Nickel    | 16     | 0.085 | 0.025  | 0.0096 | mg/Kg |   | Q | 1   | 6020/DOD |
| Lead      | 19     | 0.085 | 0.025  | 0.013  | mg/Kg |   |   | 1   | 6020/DOD |
| Antimony  | 0.16   | 0.17  | 0.085  | 0.039  | mg/Kg | J |   | 1   | 6020/DOD |
| Thallium  | 0.15   | 0.085 | 0.017  | 0.0086 | mg/Kg |   |   | 1   | 6020/DOD |
| Vanadium  | 18     | 0.085 | 0.051  | 0.025  | mg/Kg |   |   | 1   | 6020/DOD |
| Zinc      | 41     | 0.42  | 0.17   | 0.055  | mg/Kg |   | Q | 1   | 6020/DOD |
| Potassium | 830    | 8.5   | 5.1    | 2.7    | mg/Kg |   |   | 1   | 6020/DOD |
| Selenium  | 0.71   | 0.42  | 0.085  | 0.043  | mg/Kg |   |   | 1   | 6020/DOD |

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: 069SS-004M-0001-SO

Lab Sample ID: 240-17525-4

Lab Name: TestAmerica Pittsburgh

Job No.: 240-17525-2

SDG ID.:

Matrix: Solid

Date Sampled: 11/11/2012 09:50

Reporting Basis: WET

Date Received: 11/12/2012 17:57

| Analyte   | Result | LOQ   | LOD    | DL     | Units | C | Q | DIL | Method   |
|-----------|--------|-------|--------|--------|-------|---|---|-----|----------|
| Silver    | 0.045  | 0.079 | 0.024  | 0.0090 | mg/Kg | J |   | 1   | 6020/DOD |
| Aluminum  | 14000  | 2.4   | 0.48   | 0.23   | mg/Kg |   |   | 1   | 6020/DOD |
| Arsenic   | 9.8    | 0.079 | 0.040  | 0.014  | mg/Kg |   |   | 1   | 6020/DOD |
| Barium    | 100    | 0.79  | 0.016  | 0.0085 | mg/Kg |   | Q | 1   | 6020/DOD |
| Beryllium | 0.82   | 0.079 | 0.0079 | 0.0060 | mg/Kg |   |   | 1   | 6020/DOD |
| Calcium   | 25000  | 7.9   | 2.0    | 1.1    | mg/Kg |   |   | 1   | 6020/DOD |
| Cadmium   | 0.32   | 0.079 | 0.024  | 0.010  | mg/Kg |   |   | 1   | 6020/DOD |
| Chromium  | 22     | 0.16  | 0.032  | 0.018  | mg/Kg |   |   | 1   | 6020/DOD |
| Cobalt    | 11     | 0.040 | 0.0079 | 0.0019 | mg/Kg |   | Q | 1   | 6020/DOD |
| Copper    | 17     | 0.16  | 0.048  | 0.026  | mg/Kg |   | Q | 1   | 6020/DOD |
| Iron      | 24000  | 4.0   | 1.6    | 0.85   | mg/Kg |   |   | 1   | 6020/DOD |
| Magnesium | 4800   | 7.9   | 1.6    | 0.86   | mg/Kg |   |   | 1   | 6020/DOD |
| Manganese | 560    | 0.40  | 0.024  | 0.013  | mg/Kg |   | Q | 1   | 6020/DOD |
| Sodium    | 88     | 7.9   | 4.0    | 2.1    | mg/Kg |   |   | 1   | 6020/DOD |
| Nickel    | 26     | 0.079 | 0.024  | 0.0090 | mg/Kg |   | Q | 1   | 6020/DOD |
| Lead      | 28     | 0.079 | 0.024  | 0.012  | mg/Kg |   |   | 1   | 6020/DOD |
| Antimony  | 0.13   | 0.16  | 0.079  | 0.036  | mg/Kg | J |   | 1   | 6020/DOD |
| Thallium  | 0.17   | 0.079 | 0.016  | 0.0081 | mg/Kg |   |   | 1   | 6020/DOD |
| Vanadium  | 21     | 0.079 | 0.048  | 0.024  | mg/Kg |   |   | 1   | 6020/DOD |
| Zinc      | 64     | 0.40  | 0.16   | 0.051  | mg/Kg |   | Q | 1   | 6020/DOD |
| Potassium | 1500   | 7.9   | 4.8    | 2.5    | mg/Kg |   |   | 1   | 6020/DOD |
| Selenium  | 0.75   | 0.40  | 0.079  | 0.040  | mg/Kg |   |   | 1   | 6020/DOD |

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: 077SS-0001M-0001-SO

Lab Sample ID: 240-17525-5

Lab Name: TestAmerica Pittsburgh

Job No.: 240-17525-2

SDG ID.:

Matrix: Solid

Date Sampled: 11/11/2012 10:45

Reporting Basis: WET

Date Received: 11/12/2012 17:57

| Analyte   | Result | LOQ   | LOD    | DL     | Units | C | Q | DIL | Method   |
|-----------|--------|-------|--------|--------|-------|---|---|-----|----------|
| Silver    | 0.027  | 0.083 | 0.025  | 0.0094 | mg/Kg | J |   | 1   | 6020/DOD |
| Aluminum  | 8200   | 2.5   | 0.50   | 0.24   | mg/Kg |   |   | 1   | 6020/DOD |
| Arsenic   | 12     | 0.083 | 0.041  | 0.015  | mg/Kg |   |   | 1   | 6020/DOD |
| Barium    | 49     | 0.83  | 0.017  | 0.0088 | mg/Kg |   | Q | 1   | 6020/DOD |
| Beryllium | 0.46   | 0.083 | 0.0083 | 0.0062 | mg/Kg |   |   | 1   | 6020/DOD |
| Calcium   | 4500   | 8.3   | 2.1    | 1.1    | mg/Kg |   |   | 1   | 6020/DOD |
| Cadmium   | 0.19   | 0.083 | 0.025  | 0.011  | mg/Kg |   |   | 1   | 6020/DOD |
| Chromium  | 18     | 0.17  | 0.033  | 0.018  | mg/Kg |   |   | 1   | 6020/DOD |
| Cobalt    | 7.4    | 0.041 | 0.0083 | 0.0020 | mg/Kg |   | Q | 1   | 6020/DOD |
| Copper    | 16     | 0.17  | 0.050  | 0.027  | mg/Kg |   | Q | 1   | 6020/DOD |
| Iron      | 22000  | 4.1   | 1.7    | 0.89   | mg/Kg |   |   | 1   | 6020/DOD |
| Magnesium | 2800   | 8.3   | 1.7    | 0.89   | mg/Kg |   |   | 1   | 6020/DOD |
| Manganese | 540    | 0.41  | 0.025  | 0.013  | mg/Kg |   | Q | 1   | 6020/DOD |
| Sodium    | 29     | 8.3   | 4.1    | 2.2    | mg/Kg |   |   | 1   | 6020/DOD |
| Nickel    | 24     | 0.083 | 0.025  | 0.0093 | mg/Kg |   | Q | 1   | 6020/DOD |
| Lead      | 22     | 0.083 | 0.025  | 0.013  | mg/Kg |   |   | 1   | 6020/DOD |
| Antimony  | 0.20   | 0.17  | 0.083  | 0.038  | mg/Kg |   |   | 1   | 6020/DOD |
| Thallium  | 0.13   | 0.083 | 0.017  | 0.0084 | mg/Kg |   |   | 1   | 6020/DOD |
| Vanadium  | 16     | 0.083 | 0.050  | 0.025  | mg/Kg |   |   | 1   | 6020/DOD |
| Zinc      | 63     | 0.41  | 0.17   | 0.054  | mg/Kg |   | Q | 1   | 6020/DOD |
| Potassium | 830    | 8.3   | 5.0    | 2.6    | mg/Kg |   |   | 1   | 6020/DOD |
| Selenium  | 0.56   | 0.41  | 0.083  | 0.042  | mg/Kg |   |   | 1   | 6020/DOD |

1A-IN  
INORGANIC ANALYSIS DATA SHEET  
METALS

Client Sample ID: 077SS-0002M-0001-SO

Lab Sample ID: 240-17525-6

Lab Name: TestAmerica Pittsburgh

Job No.: 240-17525-2

SDG ID.:

Matrix: Solid

Date Sampled: 11/11/2012 10:45

Reporting Basis: WET

Date Received: 11/12/2012 17:57

| Analyte   | Result | LOQ   | LOD    | DL     | Units | C | Q | DIL | Method   |
|-----------|--------|-------|--------|--------|-------|---|---|-----|----------|
| Silver    | 0.030  | 0.089 | 0.027  | 0.010  | mg/Kg | J |   | 1   | 6020/DOD |
| Aluminum  | 7700   | 2.7   | 0.54   | 0.25   | mg/Kg |   |   | 1   | 6020/DOD |
| Arsenic   | 14     | 0.089 | 0.045  | 0.016  | mg/Kg |   |   | 1   | 6020/DOD |
| Barium    | 48     | 0.89  | 0.018  | 0.0096 | mg/Kg |   | Q | 1   | 6020/DOD |
| Beryllium | 0.42   | 0.089 | 0.0089 | 0.0067 | mg/Kg |   |   | 1   | 6020/DOD |
| Calcium   | 5200   | 8.9   | 2.2    | 1.2    | mg/Kg |   |   | 1   | 6020/DOD |
| Cadmium   | 0.20   | 0.089 | 0.027  | 0.012  | mg/Kg |   |   | 1   | 6020/DOD |
| Chromium  | 15     | 0.18  | 0.036  | 0.020  | mg/Kg |   |   | 1   | 6020/DOD |
| Cobalt    | 7.7    | 0.045 | 0.0089 | 0.0021 | mg/Kg |   | Q | 1   | 6020/DOD |
| Copper    | 17     | 0.18  | 0.054  | 0.029  | mg/Kg |   | Q | 1   | 6020/DOD |
| Iron      | 20000  | 4.5   | 1.8    | 0.96   | mg/Kg |   |   | 1   | 6020/DOD |
| Magnesium | 2700   | 8.9   | 1.8    | 0.96   | mg/Kg |   |   | 1   | 6020/DOD |
| Manganese | 520    | 0.45  | 0.027  | 0.014  | mg/Kg |   | Q | 1   | 6020/DOD |
| Sodium    | 32     | 8.9   | 4.5    | 2.4    | mg/Kg |   |   | 1   | 6020/DOD |
| Nickel    | 28     | 0.089 | 0.027  | 0.010  | mg/Kg |   | Q | 1   | 6020/DOD |
| Lead      | 21     | 0.089 | 0.027  | 0.014  | mg/Kg |   |   | 1   | 6020/DOD |
| Antimony  | 0.17   | 0.18  | 0.089  | 0.041  | mg/Kg | J |   | 1   | 6020/DOD |
| Thallium  | 0.14   | 0.089 | 0.018  | 0.0091 | mg/Kg |   |   | 1   | 6020/DOD |
| Vanadium  | 15     | 0.089 | 0.054  | 0.027  | mg/Kg |   |   | 1   | 6020/DOD |
| Zinc      | 62     | 0.45  | 0.18   | 0.058  | mg/Kg |   | Q | 1   | 6020/DOD |
| Potassium | 740    | 8.9   | 5.4    | 2.8    | mg/Kg |   |   | 1   | 6020/DOD |
| Selenium  | 0.53   | 0.45  | 0.089  | 0.045  | mg/Kg |   |   | 1   | 6020/DOD |

2A-IN  
CALIBRATION VERIFICATIONS  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

ICV Source: MICPMSICV\_00012 Concentration Units: ug/L

CCV Source: MCCV1X\_00031

| Analyte          | ICV 180-59218/5<br>12/21/2012 14:54 |   |       |     | CCV 180-59218/10<br>12/21/2012 15:23 |   |       |     | CCV 180-59218/34<br>12/21/2012 17:25 |   |       |     |
|------------------|-------------------------------------|---|-------|-----|--------------------------------------|---|-------|-----|--------------------------------------|---|-------|-----|
|                  | Found                               | C | True  | %R  | Found                                | C | True  | %R  | Found                                | C | True  | %R  |
| <b>Aluminum</b>  | 382                                 |   | 400   | 96  | 475                                  |   | 500   | 95  | 471                                  |   | 500   | 94  |
| <b>Antimony</b>  | 81.6                                |   | 80.0  | 102 | 94.9                                 |   | 100   | 95  | 95.7                                 |   | 100   | 96  |
| <b>Arsenic</b>   | 81.4                                |   | 80.0  | 102 | 97.6                                 |   | 100   | 98  | 99.6                                 |   | 100   | 100 |
| <b>Barium</b>    | 80.6                                |   | 80.0  | 101 | 93.5                                 |   | 100   | 94  | 94.9                                 |   | 100   | 95  |
| <b>Beryllium</b> | 79.3                                |   | 80.0  | 99  | 99.3                                 |   | 100   | 99  | 98.3                                 |   | 100   | 98  |
| <b>Cadmium</b>   | 82.4                                |   | 80.0  | 103 | 98.5                                 |   | 100   | 99  | 97.1                                 |   | 100   | 97  |
| <b>Calcium</b>   | 38300                               |   | 40000 | 96  | 47800                                |   | 50000 | 96  | 49400                                |   | 50000 | 99  |
| <b>Chromium</b>  | 78.4                                |   | 80.0  | 98  | 95.1                                 |   | 100   | 95  | 95.1                                 |   | 100   | 95  |
| <b>Cobalt</b>    | 78.3                                |   | 80.0  | 98  | 95.8                                 |   | 100   | 96  | 95.4                                 |   | 100   | 95  |
| <b>Copper</b>    | 81.0                                |   | 80.0  | 101 | 96.4                                 |   | 100   | 96  | 97.0                                 |   | 100   | 97  |
| <b>Iron</b>      | 19300                               |   | 20000 | 96  | 24300                                |   | 25000 | 97  | 24900                                |   | 25000 | 100 |
| <b>Lead</b>      | 79.5                                |   | 80.0  | 99  | 94.9                                 |   | 100   | 95  | 92.2                                 |   | 100   | 92  |
| <b>Magnesium</b> | 38400                               |   | 40000 | 96  | 48400                                |   | 50000 | 97  | 49500                                |   | 50000 | 99  |
| <b>Manganese</b> | 390                                 |   | 400   | 98  | 490                                  |   | 500   | 98  | 498                                  |   | 500   | 100 |
| <b>Nickel</b>    | 79.0                                |   | 80.0  | 99  | 96.6                                 |   | 100   | 97  | 96.4                                 |   | 100   | 96  |
| <b>Potassium</b> | 38500                               |   | 40000 | 96  | 46900                                |   | 50000 | 94  | 49000                                |   | 50000 | 98  |
| <b>Selenium</b>  | 83.8                                |   | 80.0  | 105 | 102                                  |   | 100   | 102 | 102                                  |   | 100   | 102 |
| <b>Silver</b>    | 80.9                                |   | 80.0  | 101 | 97.4                                 |   | 100   | 97  | 95.6                                 |   | 100   | 96  |
| <b>Sodium</b>    | 38900                               |   | 40000 | 97  | 48900                                |   | 50000 | 98  | 49400                                |   | 50000 | 99  |
| <b>Thallium</b>  | 82.3                                |   | 80.0  | 103 | 94.6                                 |   | 100   | 95  | 92.5                                 |   | 100   | 92  |
| <b>Vanadium</b>  | 76.1                                |   | 80.0  | 95  | 93.6                                 |   | 100   | 94  | 93.5                                 |   | 100   | 94  |
| <b>Zinc</b>      | 83.8                                |   | 80.0  | 105 | 100                                  |   | 100   | 100 | 98.1                                 |   | 100   | 98  |

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.  
Italicized analytes were not requested for this sequence.



2A-IN  
CALIBRATION VERIFICATIONS  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

ICV Source: MICPMSICV\_00012 Concentration Units: ug/L

CCV Source: MCCV1X\_00031

| Analyte          | CCV 180-59218/46<br>12/21/2012 18:28 |   |       |     | CCV 180-59218/58<br>12/21/2012 19:32 |   |       |     |       |   |      |    |
|------------------|--------------------------------------|---|-------|-----|--------------------------------------|---|-------|-----|-------|---|------|----|
|                  | Found                                | C | True  | %R  | Found                                | C | True  | %R  | Found | C | True | %R |
| <b>Aluminum</b>  | 476                                  |   | 500   | 95  | 464                                  |   | 500   | 93  |       |   |      |    |
| <b>Antimony</b>  | 93.2                                 |   | 100   | 93  | 93.7                                 |   | 100   | 94  |       |   |      |    |
| <b>Arsenic</b>   | 98.0                                 |   | 100   | 98  | 98.0                                 |   | 100   | 98  |       |   |      |    |
| <b>Barium</b>    | 92.4                                 |   | 100   | 92  | 94.2                                 |   | 100   | 94  |       |   |      |    |
| <b>Beryllium</b> | 99.3                                 |   | 100   | 99  | 101                                  |   | 100   | 101 |       |   |      |    |
| <b>Cadmium</b>   | 94.1                                 |   | 100   | 94  | 94.3                                 |   | 100   | 94  |       |   |      |    |
| <b>Calcium</b>   | 51100                                |   | 50000 | 102 | 49500                                |   | 50000 | 99  |       |   |      |    |
| <b>Chromium</b>  | 95.8                                 |   | 100   | 96  | 93.7                                 |   | 100   | 94  |       |   |      |    |
| <b>Cobalt</b>    | 96.8                                 |   | 100   | 97  | 93.3                                 |   | 100   | 93  |       |   |      |    |
| <b>Copper</b>    | 97.0                                 |   | 100   | 97  | 95.0                                 |   | 100   | 95  |       |   |      |    |
| <b>Iron</b>      | 25500                                |   | 25000 | 102 | 25200                                |   | 25000 | 101 |       |   |      |    |
| <b>Lead</b>      | 93.8                                 |   | 100   | 94  | 94.9                                 |   | 100   | 95  |       |   |      |    |
| <b>Magnesium</b> | 50600                                |   | 50000 | 101 | 49100                                |   | 50000 | 98  |       |   |      |    |
| <b>Manganese</b> | 516                                  |   | 500   | 103 | 505                                  |   | 500   | 101 |       |   |      |    |
| <b>Nickel</b>    | 97.1                                 |   | 100   | 97  | 93.3                                 |   | 100   | 93  |       |   |      |    |
| <b>Potassium</b> | 51000                                |   | 50000 | 102 | 49000                                |   | 50000 | 98  |       |   |      |    |
| <b>Selenium</b>  | 100                                  |   | 100   | 100 | 101                                  |   | 100   | 101 |       |   |      |    |
| <b>Silver</b>    | 92.4                                 |   | 100   | 92  | 92.2                                 |   | 100   | 92  |       |   |      |    |
| <b>Sodium</b>    | 50200                                |   | 50000 | 100 | 49400                                |   | 50000 | 99  |       |   |      |    |
| <b>Thallium</b>  | 93.5                                 |   | 100   | 94  | 94.9                                 |   | 100   | 95  |       |   |      |    |
| <b>Vanadium</b>  | 95.2                                 |   | 100   | 95  | 93.2                                 |   | 100   | 93  |       |   |      |    |
| <b>Zinc</b>      | 98.8                                 |   | 100   | 99  | 95.6                                 |   | 100   | 96  |       |   |      |    |

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.  
Italicized analytes were not requested for this sequence.

2B-IN  
CRQL CHECK STANDARD  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2  
 SDG No.: \_\_\_\_\_  
 Method: 6020/DOD Instrument ID: M  
 Lab Sample ID: CRI 180-59218/7 Concentration Units: ug/L  
 CRQL Check Standard Source: MCRIX\_00023

| Analyte   | CRQL Check Standard |       |            |       |        |
|-----------|---------------------|-------|------------|-------|--------|
|           | True                | Found | Qualifiers | %R(1) | Limits |
| Silver    | 1.00                | 1.06  |            | 106   | 80-120 |
| Aluminum  | 30.0                | 29.9  | J          | 100   | 80-120 |
| Arsenic   | 1.00                | 1.16  |            | 116   | 80-120 |
| Barium    | 10.0                | 10.2  |            | 102   | 80-120 |
| Beryllium | 1.00                | 0.850 | J          | 85    | 80-120 |
| Calcium   | 100                 | 111   |            | 111   | 80-120 |
| Cadmium   | 1.00                | 1.09  |            | 109   | 80-120 |
| Chromium  | 2.00                | 2.08  |            | 104   | 80-120 |
| Cobalt    | 0.500               | 0.527 |            | 105   | 80-120 |
| Copper    | 2.00                | 2.28  |            | 114   | 80-120 |
| Iron      | 50.0                | 56.1  |            | 112   | 80-120 |
| Magnesium | 100                 | 95.0  | J          | 95    | 80-120 |
| Manganese | 5.00                | 5.25  |            | 105   | 80-120 |
| Sodium    | 100                 | 93.4  | J          | 93    | 80-120 |
| Nickel    | 1.00                | 1.09  |            | 109   | 80-120 |
| Lead      | 1.00                | 1.03  |            | 103   | 80-120 |
| Antimony  | 2.00                | 2.09  |            | 104   | 80-120 |
| Thallium  | 1.00                | 0.945 | J          | 95    | 80-120 |
| Vanadium  | 1.00                | 0.962 | J          | 96    | 80-120 |
| Zinc      | 5.00                | 5.46  |            | 109   | 80-120 |
| Potassium | 100                 | 94.5  | J          | 94    | 80-120 |
| Selenium  | 5.00                | 5.38  |            | 108   | 80-120 |

Lab Sample ID: CRI 180-59218/72 Concentration Units: ug/L  
 CRQL Check Standard Source: MCRIX\_00024

| Analyte   | CRQL Check Standard |       |            |       |        |
|-----------|---------------------|-------|------------|-------|--------|
|           | True                | Found | Qualifiers | %R(1) | Limits |
| Silver    | 1.00                | 0.949 | J          | 95    | 80-120 |
| Aluminum  | 30.0                | 29.8  | J          | 99    | 80-120 |
| Arsenic   | 1.00                | 1.17  |            | 117   | 80-120 |
| Barium    | 10.0                | 10.1  |            | 101   | 80-120 |
| Beryllium | 1.00                | 0.879 | J          | 88    | 80-120 |
| Calcium   | 100                 | 104   |            | 104   | 80-120 |
| Cadmium   | 1.00                | 1.00  |            | 100   | 80-120 |
| Chromium  | 2.00                | 1.91  | J          | 96    | 80-120 |

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

2B-IN  
CRQL CHECK STANDARD  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2  
 SDG No.: \_\_\_\_\_  
 Method: 6020/DOD Instrument ID: M  
 Lab Sample ID: CRI 180-59218/72 Concentration Units: ug/L  
 CRQL Check Standard Source: MCRIX\_00024

| Analyte   | CRQL Check Standard |       |            |       |        |
|-----------|---------------------|-------|------------|-------|--------|
|           | True                | Found | Qualifiers | %R(1) | Limits |
| Cobalt    | 0.500               | 0.490 | J          | 98    | 80-120 |
| Copper    | 2.00                | 2.14  |            | 107   | 80-120 |
| Iron      | 50.0                | 59.8  |            | 120   | 80-120 |
| Magnesium | 100                 | 90.0  | J          | 90    | 80-120 |
| Manganese | 5.00                | 5.23  |            | 105   | 80-120 |
| Sodium    | 100                 | 85.4  | J          | 85    | 80-120 |
| Nickel    | 1.00                | 1.04  |            | 104   | 80-120 |
| Lead      | 1.00                | 0.945 | J          | 95    | 80-120 |
| Antimony  | 2.00                | 1.97  | J          | 98    | 80-120 |
| Thallium  | 1.00                | 0.880 | J          | 88    | 80-120 |
| Vanadium  | 1.00                | 0.884 | J          | 88    | 80-120 |
| Zinc      | 5.00                | 4.86  | J          | 97    | 80-120 |
| Potassium | 100                 | 88.1  | J          | 88    | 80-120 |
| Selenium  | 5.00                | 5.67  |            | 113   | 80-120 |

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

FORM IIB-IN

3-IN  
INSTRUMENT BLANKS  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

Concentration Units: ug/L

| Analyte   | RL   | ICB 180-59218/6<br>12/21/2012 15:02 |   | CCB1 180-59218/11<br>12/21/2012 15:30 |   | CCB3 180-59218/35<br>12/21/2012 17:33 |   | CCB4 180-59218/47<br>12/21/2012 18:36 |   |
|-----------|------|-------------------------------------|---|---------------------------------------|---|---------------------------------------|---|---------------------------------------|---|
|           |      | Found                               | C | Found                                 | C | Found                                 | C | Found                                 | C |
| Aluminum  | 30   | 5.0                                 | U | 5.0                                   | U | 5.0                                   | U | 5.0                                   | U |
| Antimony  | 2.0  | 0.90                                | U | 0.90                                  | U | 0.90                                  | U | 0.90                                  | U |
| Arsenic   | 1.0  | 0.50                                | U | 0.50                                  | U | 0.50                                  | U | 0.50                                  | U |
| Barium    | 10   | 0.15                                | U | 0.15                                  | U | 0.15                                  | U | 0.15                                  | U |
| Beryllium | 1.0  | 0.090                               | U | 0.090                                 | U | 0.090                                 | U | 0.090                                 | U |
| Cadmium   | 1.0  | 0.30                                | U | 0.30                                  | U | 0.30                                  | U | 0.30                                  | U |
| Calcium   | 100  | 20                                  | U | 20                                    | U | 20                                    | U | 20                                    | U |
| Chromium  | 2.0  | 1.0                                 | U | 1.0                                   | U | 1.0                                   | U | 1.0                                   | U |
| Cobalt    | 0.50 | 0.050                               | U | 0.050                                 | U | 0.050                                 | U | 0.050                                 | U |
| Copper    | 2.0  | 0.50                                | U | 0.50                                  | U | 0.50                                  | U | 0.50                                  | U |
| Iron      | 50   | 20                                  | U | 20                                    | U | 20                                    | U | 20                                    | U |
| Lead      | 1.0  | 0.30                                | U | 0.30                                  | U | 0.30                                  | U | 0.30                                  | U |
| Magnesium | 100  | 22                                  | U | 22                                    | U | 22                                    | U | 22                                    | U |
| Manganese | 5.0  | 0.30                                | U | 0.30                                  | U | 0.460                                 | J | 0.457                                 | J |
| Nickel    | 1.0  | 0.35                                | U | 0.35                                  | U | 0.35                                  | U | 0.35                                  | U |
| Potassium | 100  | 60                                  | U | 60                                    | U | 60                                    | U | 60                                    | U |
| Selenium  | 5.0  | 1.0                                 | U | 1.0                                   | U | 1.0                                   | U | 1.0                                   | U |
| Silver    | 1.0  | 0.20                                | U | 0.20                                  | U | 0.20                                  | U | 0.20                                  | U |
| Sodium    | 100  | 55                                  | U | 55                                    | U | 55                                    | U | 55                                    | U |
| Thallium  | 1.0  | 0.20                                | U | 0.20                                  | U | 0.20                                  | U | 0.20                                  | U |
| Vanadium  | 1.0  | 0.60                                | U | 0.60                                  | U | 0.60                                  | U | 0.60                                  | U |
| Zinc      | 5.0  | 2.0                                 | U | 2.0                                   | U | 2.0                                   | U | 2.0                                   | U |

Italicized analytes were not requested for this sequence.

3-IN  
INSTRUMENT BLANKS  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

Concentration Units: ug/L

| Analyte   | RL   | CCB5 180-59218/59<br>12/21/2012 19:40 |   |       |   |       |   |       |   |
|-----------|------|---------------------------------------|---|-------|---|-------|---|-------|---|
|           |      | Found                                 | C | Found | C | Found | C | Found | C |
| Aluminum  | 30   | 5.0                                   | U |       |   |       |   |       |   |
| Antimony  | 2.0  | 0.90                                  | U |       |   |       |   |       |   |
| Arsenic   | 1.0  | 0.50                                  | U |       |   |       |   |       |   |
| Barium    | 10   | 0.15                                  | U |       |   |       |   |       |   |
| Beryllium | 1.0  | 0.090                                 | U |       |   |       |   |       |   |
| Cadmium   | 1.0  | 0.30                                  | U |       |   |       |   |       |   |
| Calcium   | 100  | 20                                    | U |       |   |       |   |       |   |
| Chromium  | 2.0  | 1.0                                   | U |       |   |       |   |       |   |
| Cobalt    | 0.50 | 0.050                                 | U |       |   |       |   |       |   |
| Copper    | 2.0  | 0.50                                  | U |       |   |       |   |       |   |
| Iron      | 50   | 20                                    | U |       |   |       |   |       |   |
| Lead      | 1.0  | 0.30                                  | U |       |   |       |   |       |   |
| Magnesium | 100  | 22                                    | U |       |   |       |   |       |   |
| Manganese | 5.0  | 0.517                                 | J |       |   |       |   |       |   |
| Nickel    | 1.0  | 0.35                                  | U |       |   |       |   |       |   |
| Potassium | 100  | 60                                    | U |       |   |       |   |       |   |
| Selenium  | 5.0  | 1.0                                   | U |       |   |       |   |       |   |
| Silver    | 1.0  | 0.20                                  | U |       |   |       |   |       |   |
| Sodium    | 100  | 55                                    | U |       |   |       |   |       |   |
| Thallium  | 1.0  | 0.20                                  | U |       |   |       |   |       |   |
| Vanadium  | 1.0  | 0.60                                  | U |       |   |       |   |       |   |
| Zinc      | 5.0  | 2.0                                   | U |       |   |       |   |       |   |

Italicized analytes were not requested for this sequence.

3-IN  
METHOD BLANK  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2  
 SDG No.: \_\_\_\_\_  
 Concentration Units: mg/Kg Lab Sample ID: MB 180-59046/1-A  
 Instrument Code: M Batch No.: 59218

| CAS No.   | Analyte   | Concentration | C | Q | Method   |
|-----------|-----------|---------------|---|---|----------|
| 7440-22-4 | Silver    | 0.030         | U |   | 6020_DoD |
| 7429-90-5 | Aluminum  | 0.498         | J |   | 6020_DoD |
| 7440-38-2 | Arsenic   | 0.050         | U |   | 6020_DoD |
| 7440-39-3 | Barium    | 0.0235        | J | Q | 6020_DoD |
| 7440-41-7 | Beryllium | 0.010         | U |   | 6020_DoD |
| 7440-70-2 | Calcium   | 3.11          | J |   | 6020_DoD |
| 7440-43-9 | Cadmium   | 0.030         | U |   | 6020_DoD |
| 7440-47-3 | Chromium  | 0.0232        | J |   | 6020_DoD |
| 7440-48-4 | Cobalt    | 0.010         | U | Q | 6020_DoD |
| 7440-50-8 | Copper    | 0.060         | U | Q | 6020_DoD |
| 7439-89-6 | Iron      | 2.20          | J |   | 6020_DoD |
| 7439-95-4 | Magnesium | 2.0           | U |   | 6020_DoD |
| 7439-96-5 | Manganese | 0.0259        | J | Q | 6020_DoD |
| 7440-23-5 | Sodium    | 5.0           | U |   | 6020_DoD |
| 7440-02-0 | Nickel    | 0.030         | U | Q | 6020_DoD |
| 7439-92-1 | Lead      | 0.030         | U |   | 6020_DoD |
| 7440-36-0 | Antimony  | 0.10          | U |   | 6020_DoD |
| 7440-28-0 | Thallium  | 0.020         | U |   | 6020_DoD |
| 7440-62-2 | Vanadium  | 0.060         | U |   | 6020_DoD |
| 7440-66-6 | Zinc      | 0.0677        | J | Q | 6020_DoD |
| 7440-09-7 | Potassium | 6.0           | U |   | 6020_DoD |
| 7782-49-2 | Selenium  | 0.10          | U |   | 6020_DoD |

4A-IN  
INTERFERENCE CHECK STANDARD  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICSA 180-59218/8 Instrument ID: M  
 Lab File ID: M21221A.xml ICS Source: MICSAX\_00023  
 Concentration Units: ug/L

| Analyte           | True<br>Solution A | Found<br>Solution A | Percent<br>Recovery |
|-------------------|--------------------|---------------------|---------------------|
| <b>Aluminum</b>   | <b>100000</b>      | <b>99510</b>        | <b>100</b>          |
| <b>Antimony</b>   |                    | <b>0.259</b>        |                     |
| <b>Arsenic</b>    |                    | <b>0.0940</b>       |                     |
| <b>Barium</b>     |                    | <b>0.205</b>        |                     |
| <b>Beryllium</b>  |                    | <b>0.0100</b>       |                     |
| <b>Cadmium</b>    |                    | <b>0.249</b>        |                     |
| <b>Calcium</b>    | <b>100000</b>      | <b>102700</b>       | <b>103</b>          |
| <b>Chromium</b>   |                    | <b>0.0160</b>       |                     |
| <b>Cobalt</b>     |                    | <b>0.170</b>        |                     |
| <b>Copper</b>     |                    | <b>1.52</b>         |                     |
| <b>Iron</b>       | <b>100000</b>      | <b>102400</b>       | <b>102</b>          |
| <b>Lead</b>       |                    | <b>0.197</b>        |                     |
| <b>Magnesium</b>  | <b>100000</b>      | <b>102600</b>       | <b>103</b>          |
| <b>Manganese</b>  |                    | <b>0.303</b>        |                     |
| <b>Nickel</b>     |                    | <b>0.472</b>        |                     |
| <b>Potassium</b>  | <b>100000</b>      | <b>100700</b>       | <b>101</b>          |
| <b>Selenium</b>   |                    | <b>-0.157</b>       |                     |
| <b>Silver</b>     |                    | <b>0.0950</b>       |                     |
| <b>Sodium</b>     | <b>100000</b>      | <b>104100</b>       | <b>104</b>          |
| <b>Thallium</b>   |                    | <b>0.0060</b>       |                     |
| <b>Vanadium</b>   |                    | <b>-0.238</b>       |                     |
| <b>Zinc</b>       |                    | <b>2.75</b>         |                     |
| <i>Boron</i>      |                    | <i>0.861</i>        |                     |
| <i>Molybdenum</i> | <i>2000</i>        | <i>2254</i>         | <i>113</i>          |
| <i>Silicon</i>    |                    | <i>27.6</i>         |                     |
| <i>Strontium</i>  |                    | <i>4.45</i>         |                     |
| <i>Tin</i>        |                    | <i>0.204</i>        |                     |
| <i>Titanium</i>   | <i>2000</i>        | <i>2258</i>         | <i>113</i>          |

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

4A-IN  
INTERFERENCE CHECK STANDARD  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICSAB 180-59218/9 Instrument ID: M  
 Lab File ID: M21221A.xml ICS Source: MICSABX\_00026  
 Concentration Units: ug/L

| Analyte           | True          | Found         | Percent<br>Recovery |
|-------------------|---------------|---------------|---------------------|
|                   | Solution AB   | Solution AB   |                     |
| <b>Aluminum</b>   | <b>100000</b> | <b>98643</b>  | <b>99</b>           |
| <b>Antimony</b>   | <b>20.0</b>   | <b>20.4</b>   | <b>102</b>          |
| <b>Arsenic</b>    | <b>20.0</b>   | <b>20.2</b>   | <b>101</b>          |
| <b>Barium</b>     | <b>20.0</b>   | <b>20.3</b>   | <b>102</b>          |
| <b>Beryllium</b>  | <b>20.0</b>   | <b>20.3</b>   | <b>101</b>          |
| <b>Cadmium</b>    | <b>20.0</b>   | <b>20.6</b>   | <b>103</b>          |
| <b>Calcium</b>    | <b>100000</b> | <b>102067</b> | <b>102</b>          |
| <b>Chromium</b>   | <b>20.0</b>   | <b>20.4</b>   | <b>102</b>          |
| <b>Cobalt</b>     | <b>20.0</b>   | <b>19.9</b>   | <b>100</b>          |
| <b>Copper</b>     | <b>20.0</b>   | <b>20.5</b>   | <b>102</b>          |
| <b>Iron</b>       | <b>100000</b> | <b>100737</b> | <b>101</b>          |
| <b>Lead</b>       | <b>20.0</b>   | <b>21.1</b>   | <b>105</b>          |
| <b>Magnesium</b>  | <b>100000</b> | <b>100623</b> | <b>101</b>          |
| <b>Manganese</b>  | <b>22.5</b>   | <b>20.2</b>   | <b>90</b>           |
| <b>Nickel</b>     | <b>20.0</b>   | <b>19.9</b>   | <b>99</b>           |
| <b>Potassium</b>  | <b>100000</b> | <b>99393</b>  | <b>99</b>           |
| <b>Selenium</b>   | <b>50.0</b>   | <b>50.6</b>   | <b>101</b>          |
| <b>Silver</b>     | <b>20.0</b>   | <b>20.2</b>   | <b>101</b>          |
| <b>Sodium</b>     | <b>100000</b> | <b>102433</b> | <b>102</b>          |
| <b>Thallium</b>   | <b>20.0</b>   | <b>20.8</b>   | <b>104</b>          |
| <b>Vanadium</b>   | <b>20.0</b>   | <b>20.3</b>   | <b>102</b>          |
| <b>Zinc</b>       | <b>25.0</b>   | <b>22.4</b>   | <b>90</b>           |
| <i>Boron</i>      | <i>50.0</i>   | <i>49.7</i>   | <i>99</i>           |
| <i>Molybdenum</i> | <i>2000</i>   | <i>2216</i>   | <i>111</i>          |
| <i>Silicon</i>    | <i>500</i>    | <i>562</i>    | <i>112</i>          |
| <i>Strontium</i>  | <i>20.0</i>   | <i>23.3</i>   | <i>117</i>          |
| <i>Tin</i>        | <i>100</i>    | <i>103</i>    | <i>103</i>          |
| <i>Titanium</i>   | <i>2000</i>   | <i>2232</i>   | <i>112</i>          |

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



5A-IN  
MATRIX SPIKE SAMPLE RECOVERY  
METALS

Client ID: 069SS-0001M-0001-S0 MS

Lab ID: 240-17525-1 MS

Lab Name: TestAmerica Pittsburgh

Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

Matrix: Solid

Concentration Units: mg/Kg

% Solids: \_\_\_\_\_

| Analyte   | SSR<br>C | Sample<br>Result (SR)<br>C |   | Spike<br>Added (SA) | %R  | Control<br>Limit<br>%R | Q   | Method   |
|-----------|----------|----------------------------|---|---------------------|-----|------------------------|-----|----------|
| Silver    | 7.31     | 0.034                      | J | 8.93                | 81  | 75-125                 |     | 6020/DOD |
| Aluminum  | 16000    | 14000                      |   | 893                 | 191 | 70-130                 | 4   | 6020/DOD |
| Arsenic   | 16.7     | 10                         |   | 8.93                | 72  | 23-131                 |     | 6020/DOD |
| Barium    | 83.4     | 76                         |   | 8.93                | 86  | 10-199                 | Q 4 | 6020/DOD |
| Beryllium | 8.38     | 0.82                       |   | 8.93                | 85  | 58-112                 |     | 6020/DOD |
| Calcium   | 6310     | 5300                       |   | 893                 | 112 | 70-130                 | 4   | 6020/DOD |
| Cadmium   | 7.33     | 0.29                       |   | 8.93                | 79  | 58-110                 |     | 6020/DOD |
| Chromium  | 31.7     | 24                         |   | 8.93                | 86  | 10-199                 |     | 6020/DOD |
| Cobalt    | 18.7     | 11                         |   | 8.93                | 86  | 55-110                 | Q   | 6020/DOD |
| Copper    | 25.5     | 19                         |   | 8.93                | 75  | 10-199                 | Q   | 6020/DOD |
| Iron      | 25300    | 24000                      |   | 893                 | 102 | 70-130                 | 4   | 6020/DOD |
| Magnesium | 4870     | 3900                       |   | 893                 | 103 | 70-130                 | 4   | 6020/DOD |
| Manganese | 449      | 430                        |   | 8.93                | 241 | 10-199                 | Q 4 | 6020/DOD |
| Sodium    | 851      | 53                         |   | 893                 | 89  | 70-130                 |     | 6020/DOD |
| Nickel    | 35.8     | 27                         |   | 8.93                | 95  | 10-176                 | Q   | 6020/DOD |
| Lead      | 26.4     | 19                         |   | 8.93                | 89  | 10-199                 |     | 6020/DOD |
| Antimony  | 2.11     | 0.14                       | J | 8.93                | 22  | 75-125                 | J   | 6020/DOD |
| Thallium  | 7.74     | 0.23                       |   | 8.93                | 84  | 82-110                 |     | 6020/DOD |
| Vanadium  | 30.1     | 21                         |   | 8.93                | 103 | 39-129                 |     | 6020/DOD |
| Zinc      | 79.6     | 79                         |   | 8.93                | 12  | 10-199                 | Q 4 | 6020/DOD |
| Potassium | 2270     | 1500                       |   | 893                 | 87  | 70-130                 |     | 6020/DOD |
| Selenium  | 6.54     | 0.78                       |   | 8.93                | 64  | 39-116                 |     | 6020/DOD |

SSR = Spiked Sample Result

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

5A-IN  
MATRIX SPIKE SAMPLE RECOVERY  
METALS

Client ID: 077SS-0001M-0001-SO MS

Lab ID: 240-17525-5 MS

Lab Name: TestAmerica Pittsburgh

Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

Matrix: Solid

Concentration Units: mg/Kg

% Solids: \_\_\_\_\_

| Analyte   | SSR<br>C | Sample<br>Result (SR)<br>C |   | Spike<br>Added (SA) | %R  | Control<br>Limit<br>%R | Q   | Method   |
|-----------|----------|----------------------------|---|---------------------|-----|------------------------|-----|----------|
| Silver    | 6.74     | 0.027                      | J | 8.26                | 81  | 75-125                 |     | 6020/DOD |
| Aluminum  | 11100    | 8200                       |   | 826                 | 349 | 70-130                 | 4   | 6020/DOD |
| Arsenic   | 18.8     | 12                         |   | 8.26                | 78  | 23-131                 |     | 6020/DOD |
| Barium    | 58.5     | 49                         |   | 8.26                | 118 | 10-199                 | Q 4 | 6020/DOD |
| Beryllium | 7.39     | 0.46                       |   | 8.26                | 84  | 58-112                 |     | 6020/DOD |
| Calcium   | 5790     | 4500                       |   | 826                 | 160 | 70-130                 | 4   | 6020/DOD |
| Cadmium   | 6.76     | 0.19                       |   | 8.26                | 79  | 58-110                 |     | 6020/DOD |
| Chromium  | 27.7     | 18                         |   | 8.26                | 114 | 10-199                 |     | 6020/DOD |
| Cobalt    | 14.7     | 7.4                        |   | 8.26                | 88  | 55-110                 | Q   | 6020/DOD |
| Copper    | 42.3     | 16                         |   | 8.26                | 317 | 10-199                 | Q J | 6020/DOD |
| Iron      | 21700    | 22000                      |   | 826                 | -54 | 70-130                 | 4   | 6020/DOD |
| Magnesium | 3930     | 2800                       |   | 826                 | 132 | 70-130                 | J   | 6020/DOD |
| Manganese | 538      | 540                        |   | 8.26                | -80 | 10-199                 | Q 4 | 6020/DOD |
| Sodium    | 770      | 29                         |   | 826                 | 90  | 70-130                 |     | 6020/DOD |
| Nickel    | 31.7     | 24                         |   | 8.26                | 94  | 10-176                 | Q   | 6020/DOD |
| Lead      | 30.7     | 22                         |   | 8.26                | 103 | 10-199                 |     | 6020/DOD |
| Antimony  | 1.93     | 0.20                       |   | 8.26                | 21  | 75-125                 | J   | 6020/DOD |
| Thallium  | 7.07     | 0.13                       |   | 8.26                | 84  | 82-110                 |     | 6020/DOD |
| Vanadium  | 25.3     | 16                         |   | 8.26                | 118 | 39-129                 |     | 6020/DOD |
| Zinc      | 69.8     | 63                         |   | 8.26                | 88  | 10-199                 | Q 4 | 6020/DOD |
| Potassium | 1840     | 830                        |   | 826                 | 122 | 70-130                 |     | 6020/DOD |
| Selenium  | 6.51     | 0.56                       |   | 8.26                | 72  | 39-116                 |     | 6020/DOD |

SSR = Spiked Sample Result

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

5B-IN  
POST DIGESTION SPIKE SAMPLE RECOVERY  
METALS

Client ID: 069SS-0001M-0001-S0 PDS

Lab ID: 240-17525-1 PDS

Lab Name: TestAmerica Pittsburgh

Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

Matrix: Solid

Concentration Units: mg/Kg

| Analyte   | SSR<br>C | Sample<br>Result (SR)<br>C | Spike<br>Added (SA) | %R   | Control<br>Limit<br>%R | Q | Method   |
|-----------|----------|----------------------------|---------------------|------|------------------------|---|----------|
| Silver    | 3.91     | 0.034                      | J 4.46              | 87   | 80-120                 |   | 6020/DOD |
| Aluminum  | 14600    | 14000                      | 179                 | 200  | 80-120                 |   | 6020/DOD |
| Arsenic   | 13.6     | 10                         | 3.57                | 94   | 80-120                 |   | 6020/DOD |
| Barium    | 230      | 76                         | 179                 | 86   | 80-120                 | Q | 6020/DOD |
| Beryllium | 4.86     | 0.82                       | 4.46                | 91   | 80-120                 |   | 6020/DOD |
| Calcium   | 9950     | 5300                       | 4460                | 104  | 80-120                 |   | 6020/DOD |
| Cadmium   | 4.15     | 0.29                       | 4.46                | 87   | 80-120                 |   | 6020/DOD |
| Chromium  | 41.5     | 24                         | 17.9                | 98   | 80-120                 |   | 6020/DOD |
| Cobalt    | 56.0     | 11                         | 44.6                | 101  | 80-120                 | Q | 6020/DOD |
| Copper    | 39.0     | 19                         | 22.3                | 90   | 80-120                 | Q | 6020/DOD |
| Iron      | 25600    | 24000                      | 89.3                | 1350 | 80-120                 |   | 6020/DOD |
| Magnesium | 8160     | 3900                       | 4460                | 94   | 80-120                 |   | 6020/DOD |
| Manganese | 488      | 430                        | 44.6                | 136  | 80-120                 | Q | 6020/DOD |
| Sodium    | 4290     | 53                         | 4460                | 95   | 80-120                 |   | 6020/DOD |
| Nickel    | 68.4     | 27                         | 44.6                | 92   | 80-120                 | Q | 6020/DOD |
| Lead      | 19.7     | 19                         | 1.79                | 66   | 80-120                 |   | 6020/DOD |
| Antimony  | 38.7     | 0.14                       | J 44.6              | 86   | 80-120                 |   | 6020/DOD |
| Thallium  | 4.12     | 0.23                       | 4.46                | 87   | 80-120                 |   | 6020/DOD |
| Vanadium  | 69.0     | 21                         | 44.6                | 108  | 80-120                 |   | 6020/DOD |
| Zinc      | 118      | 79                         | 44.6                | 89   | 80-120                 | Q | 6020/DOD |
| Potassium | 5840     | 1500                       | 4460                | 98   | 80-120                 |   | 6020/DOD |
| Selenium  | 1.50     | 0.78                       | 0.893               | 81   | 80-120                 |   | 6020/DOD |

SSR = Spiked Sample Result

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

5B-IN  
POST DIGESTION SPIKE SAMPLE RECOVERY  
METALS

Client ID: 077SS-0001M-0001-SO PDS

Lab ID: 240-17525-5 PDS

Lab Name: TestAmerica Pittsburgh

Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

Matrix: Solid

Concentration Units: mg/Kg

| Analyte   | SSR<br>C | Sample<br>Result (SR)<br>C | Spike<br>Added (SA) | %R   | Control<br>Limit<br>%R | Q | Method   |
|-----------|----------|----------------------------|---------------------|------|------------------------|---|----------|
| Silver    | 3.61     | 0.027                      | J 4.13              | 87   | 80-120                 |   | 6020/DOD |
| Aluminum  | 8490     | 8200                       | 165                 | 176  | 80-120                 |   | 6020/DOD |
| Arsenic   | 15.3     | 12                         | 3.31                | 87   | 80-120                 |   | 6020/DOD |
| Barium    | 191      | 49                         | 165                 | 86   | 80-120                 | Q | 6020/DOD |
| Beryllium | 4.01     | 0.46                       | 4.13                | 86   | 80-120                 |   | 6020/DOD |
| Calcium   | 8720     | 4500                       | 4130                | 103  | 80-120                 |   | 6020/DOD |
| Cadmium   | 3.67     | 0.19                       | 4.13                | 84   | 80-120                 |   | 6020/DOD |
| Chromium  | 34.2     | 18                         | 16.5                | 97   | 80-120                 |   | 6020/DOD |
| Cobalt    | 48.2     | 7.4                        | 41.3                | 99   | 80-120                 | Q | 6020/DOD |
| Copper    | 34.3     | 16                         | 20.7                | 88   | 80-120                 | Q | 6020/DOD |
| Iron      | 23100    | 22000                      | 82.6                | 1060 | 80-120                 |   | 6020/DOD |
| Magnesium | 6610     | 2800                       | 4130                | 91   | 80-120                 |   | 6020/DOD |
| Manganese | 604      | 540                        | 41.3                | 144  | 80-120                 | Q | 6020/DOD |
| Sodium    | 3800     | 29                         | 4130                | 91   | 80-120                 |   | 6020/DOD |
| Nickel    | 60.8     | 24                         | 41.3                | 89   | 80-120                 | Q | 6020/DOD |
| Lead      | 23.5     | 22                         | 1.65                | 80   | 80-120                 |   | 6020/DOD |
| Antimony  | 34.9     | 0.20                       | 41.3                | 84   | 80-120                 |   | 6020/DOD |
| Thallium  | 3.82     | 0.13                       | 4.13                | 89   | 80-120                 |   | 6020/DOD |
| Vanadium  | 59.9     | 16                         | 41.3                | 107  | 80-120                 |   | 6020/DOD |
| Zinc      | 96.9     | 63                         | 41.3                | 83   | 80-120                 | Q | 6020/DOD |
| Potassium | 4780     | 830                        | 4130                | 96   | 80-120                 |   | 6020/DOD |
| Selenium  | 1.32     | 0.56                       | 0.826               | 92   | 80-120                 |   | 6020/DOD |

SSR = Spiked Sample Result

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

6-IN  
DUPLICATES  
METALS

Client ID: 069SS-0001M-0001-S0 DU

Lab ID: 240-17525-1 DU

Lab Name: TestAmerica Pittsburgh

Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

% Solids for Sample: \_\_\_\_\_

% Solids for Duplicate: \_\_\_\_\_

Matrix: Solid

Concentration Units: mg/Kg

| Analyte   | Control Limit | Sample (S)<br>C | Duplicate (D)<br>C | RPD | Q | Method   |
|-----------|---------------|-----------------|--------------------|-----|---|----------|
| Silver    | 0.089         | 0.034 J         | 0.0317 J           | 7   |   | 6020/DOD |
| Aluminum  | 2.7           | 14000           | 15000              | 5   |   | 6020/DOD |
| Arsenic   | 0.089         | 10              | 10.7               | 4   |   | 6020/DOD |
| Barium    | 0.89          | 76              | 75.2               | 0.7 | Q | 6020/DOD |
| Beryllium | 0.089         | 0.82            | 0.801              | 2   |   | 6020/DOD |
| Calcium   | 8.9           | 5300            | 6580               | 21  | J | 6020/DOD |
| Cadmium   | 0.089         | 0.29            | 0.277              | 5   |   | 6020/DOD |
| Chromium  | 0.18          | 24              | 25.4               | 5   |   | 6020/DOD |
| Cobalt    | 0.045         | 11              | 11.9               | 8   | Q | 6020/DOD |
| Copper    | 0.18          | 19              | 20.5               | 9   | Q | 6020/DOD |
| Iron      | 4.5           | 24000           | 25800              | 6   |   | 6020/DOD |
| Magnesium | 8.9           | 3900            | 4170               | 6   |   | 6020/DOD |
| Manganese | 0.45          | 430             | 448                | 5   | Q | 6020/DOD |
| Sodium    | 8.9           | 53              | 59.6               | 11  |   | 6020/DOD |
| Nickel    | 0.089         | 27              | 28.8               | 5   | Q | 6020/DOD |
| Lead      | 0.089         | 19              | 17.8               | 4   |   | 6020/DOD |
| Antimony  | 0.18          | 0.14 J          | 0.119 J            | 13  |   | 6020/DOD |
| Thallium  | 0.089         | 0.23            | 0.186              | 23  |   | 6020/DOD |
| Vanadium  | 0.089         | 21              | 22.7               | 8   |   | 6020/DOD |
| Zinc      | 0.45          | 79              | 80.9               | 3   | Q | 6020/DOD |
| Potassium | 8.9           | 1500            | 1610               | 8   |   | 6020/DOD |
| Selenium  | 0.45          | 0.78            | 0.732              | 7   |   | 6020/DOD |

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

FORM VI-IN

6-IN  
DUPLICATES  
METALS

Client ID: 077SS-0001M-0001-SO DU

Lab ID: 240-17525-5 DU

Lab Name: TestAmerica Pittsburgh

Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

% Solids for Sample: \_\_\_\_\_

% Solids for Duplicate: \_\_\_\_\_

Matrix: Solid

Concentration Units: mg/Kg

| Analyte   | Control Limit | Sample (S)<br>C | Duplicate (D)<br>C | RPD | Q | Method   |
|-----------|---------------|-----------------|--------------------|-----|---|----------|
| Silver    | 0.083         | 0.027 J         | 0.0289 J           | 6   |   | 6020/DOD |
| Aluminum  | 2.5           | 8200            | 8790               | 7   |   | 6020/DOD |
| Arsenic   | 0.083         | 12              | 11.9               | 5   |   | 6020/DOD |
| Barium    | 0.83          | 49              | 50.2               | 3   | Q | 6020/DOD |
| Beryllium | 0.083         | 0.46            | 0.474              | 2   |   | 6020/DOD |
| Calcium   | 8.3           | 4500            | 5540               | 21  | J | 6020/DOD |
| Cadmium   | 0.083         | 0.19            | 0.203              | 6   |   | 6020/DOD |
| Chromium  | 0.17          | 18              | 20.7               | 13  |   | 6020/DOD |
| Cobalt    | 0.041         | 7.4             | 7.51               | 1   | Q | 6020/DOD |
| Copper    | 0.17          | 16              | 16.3               | 2   | Q | 6020/DOD |
| Iron      | 4.1           | 22000           | 19700              | 12  |   | 6020/DOD |
| Magnesium | 8.3           | 2800            | 3170               | 11  |   | 6020/DOD |
| Manganese | 0.41          | 540             | 521                | 4   | Q | 6020/DOD |
| Sodium    | 8.3           | 29              | 39.2               | 28  | J | 6020/DOD |
| Nickel    | 0.083         | 24              | 26.3               | 9   | Q | 6020/DOD |
| Lead      | 0.083         | 22              | 24.3               | 9   |   | 6020/DOD |
| Antimony  | 0.17          | 0.20            | 0.139 J            | 35  |   | 6020/DOD |
| Thallium  | 0.083         | 0.13            | 0.128              | 5   |   | 6020/DOD |
| Vanadium  | 0.083         | 16              | 15.3               | 2   |   | 6020/DOD |
| Zinc      | 0.41          | 63              | 66.8               | 7   | Q | 6020/DOD |
| Potassium | 8.3           | 830             | 884                | 7   |   | 6020/DOD |
| Selenium  | 0.41          | 0.56            | 0.591              | 5   |   | 6020/DOD |

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

FORM VI-IN

7A-IN  
LAB CONTROL SAMPLE  
METALS

Lab ID: LCS 180-59046/2-A

Lab Name: TestAmerica Pittsburgh

Job No.: 240-17525-2

Sample Matrix: Solid

LCS Source: CANMSB\_High\_00001

| Analyte   | Solid(mg/Kg) |       |   |    |        |     |   |          |
|-----------|--------------|-------|---|----|--------|-----|---|----------|
|           | True         | Found | C | %R | Limits |     | Q | Method   |
| Silver    | 10.0         | 8.90  |   | 89 | 60     | 114 |   | 6020/DOD |
| Aluminum  | 1000         | 898   |   | 90 | 80     | 120 |   | 6020/DOD |
| Arsenic   | 100          | 83.1  |   | 83 | 73     | 110 |   | 6020/DOD |
| Barium    | 100          | 85.7  |   | 86 | 70     | 110 | Q | 6020/DOD |
| Beryllium | 100          | 84.3  |   | 84 | 79     | 110 |   | 6020/DOD |
| Calcium   | 1000         | 890   |   | 89 | 80     | 120 |   | 6020/DOD |
| Cadmium   | 100          | 84.4  |   | 84 | 74     | 110 |   | 6020/DOD |
| Chromium  | 100          | 97.1  |   | 97 | 70     | 110 |   | 6020/DOD |
| Cobalt    | 100          | 97.0  |   | 97 | 74     | 110 | Q | 6020/DOD |
| Copper    | 100          | 92.6  |   | 93 | 73     | 110 | Q | 6020/DOD |
| Iron      | 1000         | 957   |   | 96 | 80     | 120 |   | 6020/DOD |
| Magnesium | 1000         | 917   |   | 92 | 80     | 120 |   | 6020/DOD |
| Manganese | 100          | 95.3  |   | 95 | 80     | 120 | Q | 6020/DOD |
| Sodium    | 1000         | 895   |   | 89 | 80     | 120 |   | 6020/DOD |
| Nickel    | 100          | 91.2  |   | 91 | 75     | 110 | Q | 6020/DOD |
| Lead      | 100          | 89.4  |   | 89 | 75     | 110 |   | 6020/DOD |
| Antimony  | 10.0         | 8.38  |   | 84 | 68     | 113 |   | 6020/DOD |
| Thallium  | 25.0         | 20.9  |   | 84 | 71     | 110 |   | 6020/DOD |
| Vanadium  | 100          | 97.2  |   | 97 | 72     | 110 |   | 6020/DOD |
| Zinc      | 100          | 85.1  |   | 85 | 72     | 113 | Q | 6020/DOD |
| Potassium | 1000         | 910   |   | 91 | 80     | 120 |   | 6020/DOD |
| Selenium  | 100          | 81.1  |   | 81 | 65     | 110 |   | 6020/DOD |

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

FORM VIIA - IN

8-IN  
ICP-AES AND ICP-MS SERIAL DILUTIONS  
METALS

Lab ID: 240-17525-1

SDG No:

Lab Name: TestAmerica Pittsburgh

Job No: 240-17525-2

Matrix: Solid

Concentration Units: mg/Kg

| Analyte   | Initial Sample<br>Result (I) | C | Serial<br>Dilution<br>Result (S) | C | %<br>Difference | Q   | Method   |
|-----------|------------------------------|---|----------------------------------|---|-----------------|-----|----------|
| Silver    | 0.034                        | J | 0.13                             | U | NC              |     | 6020/DOD |
| Aluminum  | 14000                        |   | 14300                            |   | 0.56            | D   | 6020/DOD |
| Arsenic   | 10                           |   | 10.1                             |   | 1.3             | D   | 6020/DOD |
| Barium    | 76                           |   | 76.8                             |   | 1.5             | D Q | 6020/DOD |
| Beryllium | 0.82                         |   | 0.812                            |   | 0.74            | D   | 6020/DOD |
| Calcium   | 5300                         |   | 4730                             |   | 11              | D V | 6020/DOD |
| Cadmium   | 0.29                         |   | 0.284                            | J | NC              | D   | 6020/DOD |
| Chromium  | 24                           |   | 23.5                             |   | 2.3             | D   | 6020/DOD |
| Cobalt    | 11                           |   | 10.7                             |   | 3.2             | D Q | 6020/DOD |
| Copper    | 19                           |   | 18.8                             |   | 0.14            | D Q | 6020/DOD |
| Iron      | 24000                        |   | 24900                            |   | 2.3             | D   | 6020/DOD |
| Magnesium | 3900                         |   | 3880                             |   | 1.7             | D   | 6020/DOD |
| Manganese | 430                          |   | 416                              |   | 2.6             | D Q | 6020/DOD |
| Sodium    | 53                           |   | 46.1                             |   | NC              | D   | 6020/DOD |
| Nickel    | 27                           |   | 26.9                             |   | 1.8             | D Q | 6020/DOD |
| Lead      | 19                           |   | 17.5                             |   | 5.6             | D   | 6020/DOD |
| Antimony  | 0.14                         | J | 0.45                             | U | NC              |     | 6020/DOD |
| Thallium  | 0.23                         |   | 0.248                            | J | NC              | D   | 6020/DOD |
| Vanadium  | 21                           |   | 20.3                             |   | 3.2             | D   | 6020/DOD |
| Zinc      | 79                           |   | 82.0                             |   | 4.5             | D Q | 6020/DOD |
| Potassium | 1500                         |   | 1460                             |   | 2.2             | D   | 6020/DOD |
| Selenium  | 0.78                         |   | 0.45                             | U | NC              |     | 6020/DOD |

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

FORM VIII-IN



8-IN  
ICP-AES AND ICP-MS SERIAL DILUTIONS  
METALS

Lab ID: 240-17525-5

SDG No:

Lab Name: TestAmerica Pittsburgh

Job No: 240-17525-2

Matrix: Solid

Concentration Units: mg/Kg

| Analyte   | Initial Sample<br>Result (I) C |   | Serial<br>Dilution<br>Result (S) C |   | %<br>Difference | Q   | Method   |
|-----------|--------------------------------|---|------------------------------------|---|-----------------|-----|----------|
| Silver    | 0.027                          | J | 0.12                               | U | NC              |     | 6020/DOD |
| Aluminum  | 8200                           |   | 8340                               |   | 1.8             | D   | 6020/DOD |
| Arsenic   | 12                             |   | 12.5                               |   | 0.37            | D   | 6020/DOD |
| Barium    | 49                             |   | 49.9                               |   | 2.3             | D Q | 6020/DOD |
| Beryllium | 0.46                           |   | 0.482                              |   | 4.0             | D   | 6020/DOD |
| Calcium   | 4500                           |   | 3920                               |   | 12              | D V | 6020/DOD |
| Cadmium   | 0.19                           |   | 0.189                              | J | NC              | D   | 6020/DOD |
| Chromium  | 18                             |   | 17.5                               |   | 3.7             | D   | 6020/DOD |
| Cobalt    | 7.4                            |   | 7.02                               |   | 5.3             | D Q | 6020/DOD |
| Copper    | 16                             |   | 15.9                               |   | 1.1             | D Q | 6020/DOD |
| Iron      | 22000                          |   | 22800                              |   | 2.6             | D   | 6020/DOD |
| Magnesium | 2800                           |   | 2850                               |   | 0.20            | D   | 6020/DOD |
| Manganese | 540                            |   | 532                                |   | 2.3             | D Q | 6020/DOD |
| Sodium    | 29                             |   | 29.1                               | J | NC              | D   | 6020/DOD |
| Nickel    | 24                             |   | 23.2                               |   | 3.3             | D Q | 6020/DOD |
| Lead      | 22                             |   | 20.9                               |   | 5.7             | D   | 6020/DOD |
| Antimony  | 0.20                           |   | 0.199                              | J | NC              | D   | 6020/DOD |
| Thallium  | 0.13                           |   | 0.135                              | J | NC              | D   | 6020/DOD |
| Vanadium  | 16                             |   | 15.0                               |   | 3.8             | D   | 6020/DOD |
| Zinc      | 63                             |   | 65.4                               |   | 4.5             | D Q | 6020/DOD |
| Potassium | 830                            |   | 819                                |   | 1.1             | D   | 6020/DOD |
| Selenium  | 0.56                           |   | 0.41                               | U | NC              |     | 6020/DOD |

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

FORM VIII-IN

9-IN  
DETECTION LIMITS  
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 240-17525-2  
 SDG Number: \_\_\_\_\_  
 Matrix: Solid Instrument ID: M  
 Method: 6020/DOD DL Date: 01/26/2010 16:34  
 Prep Method: 3050B

| Analyte   | Wavelength/<br>Mass | LOQ<br>(mg/Kg) | DL<br>(mg/Kg) |
|-----------|---------------------|----------------|---------------|
| Aluminum  | 27                  | 3              | 0.2849        |
| Antimony  | 121                 | 0.2            | 0.0459        |
| Arsenic   | 75                  | 0.1            | 0.0181        |
| Barium    | 137                 | 1              | 0.0107        |
| Beryllium | 9                   | 0.1            | 0.0075        |
| Cadmium   | 111                 | 0.1            | 0.0132        |
| Calcium   | 44                  | 10             | 1.326         |
| Chromium  | 52                  | 0.2            | 0.0223        |
| Cobalt    | 59                  | 0.05           | 0.0024        |
| Copper    | 65                  | 0.2            | 0.033         |
| Iron      | 56                  | 5              | 1.077         |
| Lead      | 208                 | 0.1            | 0.0154        |
| Magnesium | 26                  | 10             | 1.079         |
| Manganese | 55                  | 0.5            | 0.0159        |
| Nickel    | 60                  | 0.1            | 0.0113        |
| Potassium | 39                  | 10             | 3.155         |
| Selenium  | 82                  | 0.5            | 0.0509        |
| Silver    | 107                 | 0.1            | 0.0114        |
| Sodium    | 23                  | 10             | 2.658         |
| Thallium  | 205                 | 0.1            | 0.0102        |
| Vanadium  | 51                  | 0.1            | 0.0299        |
| Zinc      | 66                  | 0.5            | 0.0648        |

9-IN  
CALIBRATION BLANK DETECTION LIMITS  
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 240-17525-2  
SDG Number: \_\_\_\_\_  
Matrix: Solid Instrument ID: M  
Method: 6020/DOD XMDL Date: 01/26/2010 16:34

| Analyte   | Wavelength/<br>Mass | XRL<br>(ug/L) | XMDL<br>(ug/L) |
|-----------|---------------------|---------------|----------------|
| Aluminum  | 27                  | 30            | 2.5662         |
| Antimony  | 121                 | 2             | 0.459          |
| Arsenic   | 75                  | 1             | 0.2908         |
| Barium    | 137                 | 10            | 0.098          |
| Beryllium | 9                   | 1             | 0.0451         |
| Cadmium   | 111                 | 1             | 0.132          |
| Calcium   | 44                  | 100           | 9.357          |
| Chromium  | 52                  | 2             | 0.5433         |
| Cobalt    | 59                  | 0.5           | 0.0263         |
| Copper    | 65                  | 2             | 0.2443         |
| Iron      | 56                  | 50            | 10.77          |
| Lead      | 208                 | 1             | 0.154          |
| Magnesium | 26                  | 100           | 10.8           |
| Manganese | 55                  | 5             | 0.159          |
| Nickel    | 60                  | 1             | 0.1749         |
| Potassium | 39                  | 100           | 31.6           |
| Selenium  | 82                  | 5             | 0.509          |
| Silver    | 107                 | 1             | 0.114          |
| Sodium    | 23                  | 100           | 26.8           |
| Thallium  | 205                 | 1             | 0.102          |
| Vanadium  | 51                  | 1             | 0.299          |
| Zinc      | 66                  | 5             | 0.9609         |

11-IN  
LINEAR RANGES  
METALS

Lab Name: TestAmerica Pittsburgh

Job No: 240-17525-2

SDG No.: \_\_\_\_\_

Instrument ID: M

Date: 03/14/2011 22:35

| Analyte   | Integ.<br>Time<br>(Sec.) | Concentration<br>(ug/L) | Method   |
|-----------|--------------------------|-------------------------|----------|
| Silver    |                          | 2500                    | 6020/DOD |
| Aluminum  |                          | 450000                  | 6020/DOD |
| Arsenic   |                          | 4500                    | 6020/DOD |
| Barium    |                          | 13500                   | 6020/DOD |
| Beryllium |                          | 9000                    | 6020/DOD |
| Calcium   |                          | 1500000                 | 6020/DOD |
| Cadmium   |                          | 13500                   | 6020/DOD |
| Chromium  |                          | 13500                   | 6020/DOD |
| Cobalt    |                          | 13500                   | 6020/DOD |
| Copper    |                          | 20000                   | 6020/DOD |
| Iron      |                          | 450000                  | 6020/DOD |
| Magnesium |                          | 1500000                 | 6020/DOD |
| Manganese |                          | 25000                   | 6020/DOD |
| Sodium    |                          | 450000                  | 6020/DOD |
| Nickel    |                          | 13500                   | 6020/DOD |
| Lead      |                          | 20000                   | 6020/DOD |
| Antimony  |                          | 13500                   | 6020/DOD |
| Thallium  |                          | 13500                   | 6020/DOD |
| Vanadium  |                          | 13500                   | 6020/DOD |
| Zinc      |                          | 25000                   | 6020/DOD |
| Potassium |                          | 450000                  | 6020/DOD |
| Selenium  |                          | 4500                    | 6020/DOD |

12-IN  
PREPARATION LOG  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

Prep Method: 3050B

| Lab<br>Sample<br>ID | Preparation<br>Date | Prep<br>Batch | Initial<br>Weight<br>(g) | Initial<br>Volume | Final<br>Volume<br>(mL) |
|---------------------|---------------------|---------------|--------------------------|-------------------|-------------------------|
| MB 180-59046/1-A    | 11/20/2012 12:18    | 59046         | 1.00                     |                   | 100                     |
| LCS 180-59046/2-A   | 11/20/2012 12:18    | 59046         | 1.00                     |                   | 100                     |
| 240-17525-1         | 11/20/2012 12:18    | 59046         | 1.12                     |                   | 100                     |
| 240-17525-1 DU      | 11/20/2012 12:18    | 59046         | 1.12                     |                   | 100                     |
| 240-17525-1 MS      | 11/20/2012 12:18    | 59046         | 1.12                     |                   | 100                     |
| 240-17525-2         | 11/20/2012 12:18    | 59046         | 1.06                     |                   | 100                     |
| 240-17525-3         | 11/20/2012 12:18    | 59046         | 1.18                     |                   | 100                     |
| 240-17525-4         | 11/20/2012 12:18    | 59046         | 1.26                     |                   | 100                     |
| 240-17525-5         | 11/20/2012 12:18    | 59046         | 1.21                     |                   | 100                     |
| 240-17525-5 DU      | 11/20/2012 12:18    | 59046         | 1.21                     |                   | 100                     |
| 240-17525-5 MS      | 11/20/2012 12:18    | 59046         | 1.21                     |                   | 100                     |
| 240-17525-6         | 11/20/2012 12:18    | 59046         | 1.12                     |                   | 100                     |

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

Instrument ID: M Method: 6020/DOD

Start Date: 12/21/2012 13:40 End Date: 12/22/2012 00:23

| Lab<br>Sample<br>ID | D<br>/<br>F | T<br>y<br>p<br>e | Time  | Analytes |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
|---------------------|-------------|------------------|-------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|--------|--------|--------|--------|--------|--------|--------|--------|
|                     |             |                  |       | A<br>g   | A<br>l | A<br>s | B<br>a | B<br>e | C<br>a | C<br>d | C<br>o | C<br>r | C<br>u | F<br>e | K | M<br>g | M<br>n | N<br>a | N<br>i | P<br>b | S<br>b | S<br>e | T<br>l |
| ITUNE 180-59218/1   |             |                  | 13:40 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| STD1 180-59218/2 IC |             |                  | 14:40 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| STD2 180-59218/3 IC |             |                  | 14:46 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| STD3 180-59218/4 IC | 1           |                  | 14:50 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| ICV 180-59218/5     | 1           |                  | 14:54 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| ICB 180-59218/6     | 1           |                  | 15:02 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| CRI 180-59218/7     | 1           |                  | 15:06 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| ICSA 180-59218/8    | 1           |                  | 15:10 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| ICSAB 180-59218/9   | 1           |                  | 15:15 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| CCV 180-59218/10    | 1           |                  | 15:23 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| CCB1 180-59218/11   | 1           |                  | 15:30 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| ZZZZZZ              |             |                  | 15:34 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 15:38 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 15:46 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 15:51 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 15:55 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 15:59 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 16:04 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 16:11 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 16:15 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 16:19 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| CCV 180-59218/22    |             |                  | 16:27 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| CCB2 180-59218/23   |             |                  | 16:35 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 16:39 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 16:43 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 16:48 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 16:52 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 16:56 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 17:00 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 17:05 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 17:09 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 17:13 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 17:18 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| CCV 180-59218/34    | 1           |                  | 17:25 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| CCB3 180-59218/35   | 1           |                  | 17:33 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| ZZZZZZ              |             |                  | 17:37 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 17:42 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 17:46 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 17:50 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| MB 180-59046/1-A    | 1           | T                | 17:59 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| LCS 180-59046/2-A   | 1           | T                | 18:03 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| 240-17525-1         | 1           | T                | 18:07 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

Instrument ID: M Method: 6020/DOD

Start Date: 12/21/2012 13:40 End Date: 12/22/2012 00:23

| Lab<br>Sample<br>ID | D<br>/<br>F | T<br>y<br>p<br>e | Time  | Analytes |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
|---------------------|-------------|------------------|-------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|--------|--------|--------|--------|--------|--------|--------|--------|
|                     |             |                  |       | A<br>g   | A<br>l | A<br>s | B<br>a | B<br>e | C<br>a | C<br>d | C<br>o | C<br>r | C<br>u | F<br>e | K | M<br>g | M<br>n | N<br>a | N<br>i | P<br>b | S<br>b | S<br>e | T<br>l |
| 240-17525-1 SD      | 5           | T                | 18:12 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| 240-17525-1 DU      | 1           | T                | 18:16 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| 240-17525-1 MS      | 1           | T                | 18:20 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| CCV 180-59218/46    | 1           |                  | 18:28 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| CCB4 180-59218/47   | 1           |                  | 18:36 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| 240-17525-1 PDS     | 1           | T                | 18:40 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| 240-17525-2         | 1           | T                | 18:47 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| 240-17525-3         | 1           | T                | 18:52 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| 240-17525-4         | 1           | T                | 18:56 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| 240-17525-5         | 1           | T                | 19:00 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| 240-17525-5 SD      | 5           | T                | 19:05 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| 240-17525-5 DU      | 1           | T                | 19:09 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| 240-17525-5 MS      | 1           | T                | 19:13 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| 240-17525-5 PDS     | 1           | T                | 19:17 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| 240-17525-6         | 1           | T                | 19:25 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| CCV 180-59218/58    | 1           |                  | 19:32 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| CCB5 180-59218/59   | 1           |                  | 19:40 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| ZZZZZZ              |             |                  | 19:44 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 19:49 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 19:53 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 19:57 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 20:02 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 20:06 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 20:10 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 20:15 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 20:17 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 20:22 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| CCV 180-59218/70    |             |                  | 20:25 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| CCB6 180-59218/71   |             |                  | 20:32 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| CRI 180-59218/72    | 1           |                  | 20:41 | X        | X      | X      | X      | X      | X      | X      | X      | X      | X      | X      | X | X      | X      | X      | X      | X      | X      | X      |        |
| CCV 180-59218/73    |             |                  | 20:48 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| CCB7 180-59218/74   |             |                  | 20:55 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 21:00 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 21:04 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 21:08 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 21:13 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 21:17 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 21:21 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 21:26 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 21:30 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 21:38 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 21:42 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

Instrument ID: M Method: 6020/DOD

Start Date: 12/21/2012 13:40 End Date: 12/22/2012 00:23

| Lab<br>Sample<br>ID | D<br>/<br>F | T<br>y<br>p<br>e | Time  | Analytes |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
|---------------------|-------------|------------------|-------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---|--------|--------|--------|--------|--------|--------|--------|--------|
|                     |             |                  |       | A<br>g   | A<br>l | A<br>s | B<br>a | B<br>e | C<br>a | C<br>d | C<br>o | C<br>r | C<br>u | F<br>e | K | M<br>g | M<br>n | N<br>a | N<br>i | P<br>b | S<br>b | S<br>e | T<br>l |
| CCV 180-59218/85    |             |                  | 21:50 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| CCB8 180-59218/86   |             |                  | 21:57 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 22:01 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 22:06 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 22:10 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 22:14 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 22:19 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 22:23 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 22:27 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 22:32 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 22:36 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 22:40 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| CCV 180-59218/97    |             |                  | 22:47 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| CCB9 180-59218/98   |             |                  | 22:55 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 22:59 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 23:06 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 23:11 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 23:15 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 23:19 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 23:24 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 23:28 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 23:32 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 23:37 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 23:41 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| CCV 180-59218/109   |             |                  | 23:48 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| CCB10 180-59218/110 |             |                  | 23:56 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 00:00 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 00:04 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| ZZZZZZ              |             |                  | 00:09 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| CCV 180-59218/114   |             |                  | 00:16 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |
| CCB11 180-59218/115 |             |                  | 00:23 |          |        |        |        |        |        |        |        |        |        |        |   |        |        |        |        |        |        |        |        |



13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

Instrument ID: M Method: 6020/DOD

Start Date: 12/21/2012 13:40 End Date: 12/22/2012 00:23

| Lab<br>Sample<br>ID | D<br>/<br>F | T<br>y<br>p<br>e | Time  | Analytes |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|-------------|------------------|-------|----------|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                     |             |                  |       | V        | Z<br>n |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ITUNE 180-59218/1   |             |                  | 13:40 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| STD1 180-59218/2 IC |             |                  | 14:40 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| STD2 180-59218/3 IC |             |                  | 14:46 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| STD3 180-59218/4 IC | 1           |                  | 14:50 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ICV 180-59218/5     | 1           |                  | 14:54 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ICB 180-59218/6     | 1           |                  | 15:02 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CRI 180-59218/7     | 1           |                  | 15:06 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ICSA 180-59218/8    | 1           |                  | 15:10 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ICSAB 180-59218/9   | 1           |                  | 15:15 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-59218/10    | 1           |                  | 15:23 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB1 180-59218/11   | 1           |                  | 15:30 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 15:34 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 15:38 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 15:46 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 15:51 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 15:55 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 15:59 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 16:04 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 16:11 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 16:15 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 16:19 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-59218/22    |             |                  | 16:27 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB2 180-59218/23   |             |                  | 16:35 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 16:39 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 16:43 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 16:48 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 16:52 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 16:56 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 17:00 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 17:05 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 17:09 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 17:13 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 17:18 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-59218/34    | 1           |                  | 17:25 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB3 180-59218/35   | 1           |                  | 17:33 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 17:37 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 17:42 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 17:46 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 17:50 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MB 180-59046/1-A    | 1           | T                | 17:59 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LCS 180-59046/2-A   | 1           | T                | 18:03 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 240-17525-1         | 1           | T                | 18:07 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

Instrument ID: M Method: 6020/DOD

Start Date: 12/21/2012 13:40 End Date: 12/22/2012 00:23

| Lab<br>Sample<br>ID | D<br>/<br>F | T<br>y<br>p<br>e | Time  | Analytes |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|-------------|------------------|-------|----------|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                     |             |                  |       | V        | Z<br>n |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 240-17525-1 SD      | 5           | T                | 18:12 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 240-17525-1 DU      | 1           | T                | 18:16 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 240-17525-1 MS      | 1           | T                | 18:20 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-59218/46    | 1           |                  | 18:28 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB4 180-59218/47   | 1           |                  | 18:36 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 240-17525-1 PDS     | 1           | T                | 18:40 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 240-17525-2         | 1           | T                | 18:47 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 240-17525-3         | 1           | T                | 18:52 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 240-17525-4         | 1           | T                | 18:56 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 240-17525-5         | 1           | T                | 19:00 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 240-17525-5 SD      | 5           | T                | 19:05 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 240-17525-5 DU      | 1           | T                | 19:09 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 240-17525-5 MS      | 1           | T                | 19:13 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 240-17525-5 PDS     | 1           | T                | 19:17 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 240-17525-6         | 1           | T                | 19:25 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-59218/58    | 1           |                  | 19:32 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB5 180-59218/59   | 1           |                  | 19:40 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 19:44 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 19:49 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 19:53 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 19:57 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 20:02 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 20:06 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 20:10 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 20:15 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 20:17 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 20:22 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-59218/70    |             |                  | 20:25 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB6 180-59218/71   |             |                  | 20:32 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CRI 180-59218/72    | 1           |                  | 20:41 | X        | X      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-59218/73    |             |                  | 20:48 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB7 180-59218/74   |             |                  | 20:55 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 21:00 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 21:04 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 21:08 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 21:13 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 21:17 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 21:21 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 21:26 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 21:30 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 21:38 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 21:42 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

13-IN  
ANALYSIS RUN LOG  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

Instrument ID: M Method: 6020/DOD

Start Date: 12/21/2012 13:40 End Date: 12/22/2012 00:23

| Lab<br>Sample<br>ID | D<br>/<br>F | T<br>y<br>p<br>e | Time  | Analytes |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|-------------|------------------|-------|----------|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                     |             |                  |       | V        | Z<br>n |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-59218/85    |             |                  | 21:50 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB8 180-59218/86   |             |                  | 21:57 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 22:01 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 22:06 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 22:10 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 22:14 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 22:19 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 22:23 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 22:27 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 22:32 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 22:36 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 22:40 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-59218/97    |             |                  | 22:47 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB9 180-59218/98   |             |                  | 22:55 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 22:59 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 23:06 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 23:11 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 23:15 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 23:19 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 23:24 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 23:28 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 23:32 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 23:37 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 23:41 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-59218/109   |             |                  | 23:48 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB10 180-59218/110 |             |                  | 23:56 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 00:00 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 00:04 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ZZZZZZ              |             |                  | 00:09 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCV 180-59218/114   |             |                  | 00:16 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CCB11 180-59218/115 |             |                  | 00:23 |          |        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Prep Types

D = Dissolved

R = Total Recoverable

T = Total/NA

15-IN  
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

ICP-MS Instrument ID: M Start Date: 12/21/2012 End Date: 12/21/2012

| Lab Sample ID       | Time  | Internal Standards %RI For: |   |               |   |                 |   |                   |   |               |   |
|---------------------|-------|-----------------------------|---|---------------|---|-----------------|---|-------------------|---|---------------|---|
|                     |       | Element<br>Li-6             | Q | Element<br>Sc | Q | Element<br>Y-89 | Q | Element<br>Rh-103 | Q | Element<br>In | Q |
| STD3 180-59218/4 IC | 14:50 | 84                          |   | 95            |   | 94              |   | 93                |   | 95            |   |
| ICV 180-59218/5     | 14:54 | 84                          |   | 95            |   | 95              |   | 88                |   | 91            |   |
| ICB 180-59218/6     | 15:02 | 84                          |   | 99            |   | 97              |   | 97                |   | 99            |   |
| CRI 180-59218/7     | 15:06 | 105                         |   | 101           |   | 97              |   | 95                |   | 96            |   |
| ICSA 180-59218/8    | 15:10 | 63                          |   | 75            |   | 81              |   | 73                |   | 81            |   |
| ICSAB 180-59218/9   | 15:15 | 64                          |   | 75            |   | 84              |   | 73                |   | 81            |   |
| CCV 180-59218/10    | 15:23 | 71                          |   | 86            |   | 87              |   | 83                |   | 89            |   |
| CCB1 180-59218/11   | 15:30 | 85                          |   | 100           |   | 93              |   | 94                |   | 96            |   |
| CCV 180-59218/34    | 17:25 | 76                          |   | 89            |   | 80              |   | 78                |   | 79            |   |
| CCB3 180-59218/35   | 17:33 | 90                          |   | 100           |   | 92              |   | 89                |   | 86            |   |
| MB 180-59046/1-A    | 17:59 | 89                          |   | 99            |   | 85              |   | 86                |   | 82            |   |
| LCS 180-59046/2-A   | 18:03 | 76                          |   | 82            |   | 76              |   | 79                |   | 75            |   |
| 240-17525-1         | 18:07 | 71                          |   | 87            |   | 0               |   | 79                |   | 76            |   |
| 240-17525-1 SD      | 18:12 | 79                          |   | 97            |   | 99              |   | 87                |   | 85            |   |
| 240-17525-1 DU      | 18:16 | 71                          |   | 82            |   | 0               |   | 75                |   | 77            |   |
| 240-17525-1 MS      | 18:20 | 69                          |   | 90            |   | 0               |   | 74                |   | 75            |   |
| CCV 180-59218/46    | 18:28 | 73                          |   | 84            |   | 82              |   | 81                |   | 81            |   |
| CCB4 180-59218/47   | 18:36 | 89                          |   | 105           |   | 89              |   | 90                |   | 86            |   |
| 240-17525-1 PDS     | 18:40 | 66                          |   | 76            |   | 0               |   | 69                |   | 71            |   |
| 240-17525-2         | 18:47 | 77                          |   | 94            |   | 0               |   | 76                |   | 76            |   |
| 240-17525-3         | 18:52 | 77                          |   | 89            |   | 0               |   | 76                |   | 76            |   |
| 240-17525-4         | 18:56 | 66                          |   | 71            |   | 0               |   | 67                |   | 69            |   |
| 240-17525-5         | 19:00 | 77                          |   | 88            |   | 0               |   | 77                |   | 77            |   |
| 240-17525-5 SD      | 19:05 | 82                          |   | 98            |   | 98              |   | 89                |   | 86            |   |
| 240-17525-5 DU      | 19:09 | 75                          |   | 87            |   | 0               |   | 77                |   | 77            |   |
| 240-17525-5 MS      | 19:13 | 71                          |   | 84            |   | 0               |   | 75                |   | 76            |   |
| 240-17525-5 PDS     | 19:17 | 70                          |   | 76            |   | 0               |   | 70                |   | 70            |   |
| 240-17525-6         | 19:25 | 78                          |   | 84            |   | 0               |   | 78                |   | 77            |   |
| CCV 180-59218/58    | 19:32 | 74                          |   | 88            |   | 81              |   | 81                |   | 80            |   |
| CCB5 180-59218/59   | 19:40 | 88                          |   | 100           |   | 86              |   | 89                |   | 83            |   |
| CRI 180-59218/72    | 20:41 | 92                          |   | 99            |   | 86              |   | 93                |   | 85            |   |

15-IN  
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY  
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

ICP-MS Instrument ID: M Start Date: 12/21/2012 End Date: 12/21/2012

| Lab Sample ID       | Time  | Internal Standards %RI For: |   |            |   |            |   |         |   |         |   |
|---------------------|-------|-----------------------------|---|------------|---|------------|---|---------|---|---------|---|
|                     |       | Element Tb                  | Q | Element Ho | Q | Element Bi | Q | Element | Q | Element | Q |
| STD3 180-59218/4 IC | 14:50 | 98                          |   | 98         |   | 98         |   |         |   |         |   |
| ICV 180-59218/5     | 14:54 | 95                          |   | 95         |   | 88         |   |         |   |         |   |
| ICB 180-59218/6     | 15:02 | 100                         |   | 100        |   | 103        |   |         |   |         |   |
| CRI 180-59218/7     | 15:06 | 97                          |   | 97         |   | 99         |   |         |   |         |   |
| ICSA 180-59218/8    | 15:10 | 84                          |   | 84         |   | 81         |   |         |   |         |   |
| ICSAB 180-59218/9   | 15:15 | 85                          |   | 85         |   | 79         |   |         |   |         |   |
| CCV 180-59218/10    | 15:23 | 95                          |   | 96         |   | 90         |   |         |   |         |   |
| CCB1 180-59218/11   | 15:30 | 100                         |   | 100        |   | 104        |   |         |   |         |   |
| CCV 180-59218/34    | 17:25 | 82                          |   | 82         |   | 80         |   |         |   |         |   |
| CCB3 180-59218/35   | 17:33 | 87                          |   | 88         |   | 95         |   |         |   |         |   |
| MB 180-59046/1-A    | 17:59 | 84                          |   | 84         |   | 91         |   |         |   |         |   |
| LCS 180-59046/2-A   | 18:03 | 83                          |   | 84         |   | 79         |   |         |   |         |   |
| 240-17525-1         | 18:07 | 83                          |   | 81         |   | 74         |   |         |   |         |   |
| 240-17525-1 SD      | 18:12 | 88                          |   | 88         |   | 89         |   |         |   |         |   |
| 240-17525-1 DU      | 18:16 | 82                          |   | 81         |   | 74         |   |         |   |         |   |
| 240-17525-1 MS      | 18:20 | 81                          |   | 79         |   | 68         |   |         |   |         |   |
| CCV 180-59218/46    | 18:28 | 84                          |   | 85         |   | 79         |   |         |   |         |   |
| CCB4 180-59218/47   | 18:36 | 89                          |   | 89         |   | 99         |   |         |   |         |   |
| 240-17525-1 PDS     | 18:40 | 78                          |   | 77         |   | 70         |   |         |   |         |   |
| 240-17525-2         | 18:47 | 81                          |   | 80         |   | 72         |   |         |   |         |   |
| 240-17525-3         | 18:52 | 80                          |   | 79         |   | 73         |   |         |   |         |   |
| 240-17525-4         | 18:56 | 77                          |   | 76         |   | 68         |   |         |   |         |   |
| 240-17525-5         | 19:00 | 83                          |   | 82         |   | 75         |   |         |   |         |   |
| 240-17525-5 SD      | 19:05 | 89                          |   | 89         |   | 92         |   |         |   |         |   |
| 240-17525-5 DU      | 19:09 | 82                          |   | 81         |   | 76         |   |         |   |         |   |
| 240-17525-5 MS      | 19:13 | 82                          |   | 80         |   | 71         |   |         |   |         |   |
| 240-17525-5 PDS     | 19:17 | 78                          |   | 77         |   | 69         |   |         |   |         |   |
| 240-17525-6         | 19:25 | 82                          |   | 82         |   | 76         |   |         |   |         |   |
| CCV 180-59218/58    | 19:32 | 83                          |   | 83         |   | 77         |   |         |   |         |   |
| CCB5 180-59218/59   | 19:40 | 86                          |   | 86         |   | 98         |   |         |   |         |   |
| CRI 180-59218/72    | 20:41 | 86                          |   | 86         |   | 98         |   |         |   |         |   |

## Dilution Corrected Concentrations

STD1 646076 INT STD 12/21/2012 2:40:29 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li      | 9Be    | 10B    | 11B      | 13C    | 23Na     | 25Mg     | 26Mg     |
|------|----------|----------|--------|--------|----------|--------|----------|----------|----------|
|      |          | ppb      | ppb    | ppb    | ppb      | ppb    | ppb      | ppb      | ppb      |
| 1    | 14:41:12 | 100.326% | 0.026  | 0.049  | 0.015    | 0.000  | -0.000   | 0.121    | 0.145    |
| 2    | 14:41:55 | 98.324%  | -0.016 | -0.035 | -0.012   | 0.000  | 0.096    | -0.038   | -0.082   |
| 3    | 14:42:38 | 101.349% | -0.011 | -0.015 | -0.003   | 0.000  | -0.096   | -0.082   | -0.063   |
| X    |          | 100.000% | 0.000  | -0.000 | 0.000    | 0.000  | -0.000   | -0.000   | 0.000    |
| σ    |          | 1.539%   | 0.023  | 0.044  | 0.014    | 0.000  | 0.096    | 0.107    | 0.126    |
| %RSD |          | 1.539    | 0.000  | 0.000  | 0.000    | 0.000  | 0.000    | 0.000    | 0.000    |
| Run  | Time     | 27Al     | 28Si   | 37Cl   | 39K      | 43Ca   | 44Ca     | 45Sc     | 47Ti     |
|      |          | ppb      | ppb    | ppb    | ppb      | ppb    | ppb      | ppb      | ppb      |
| 1    | 14:41:12 | 0.071    | -0.142 | 0.000  | 0.211    | -3.689 | -0.993   | 100.160% | -0.026   |
| 2    | 14:41:55 | 0.029    | 0.228  | 0.000  | 0.965    | 4.189  | 0.780    | 98.687%  | 0.004    |
| 3    | 14:42:38 | -0.100   | -0.086 | 0.000  | -1.176   | -0.500 | 0.212    | 101.153% | 0.022    |
| X    |          | 0.000    | -0.000 | 0.000  | 0.000    | -0.000 | 0.000    | 100.000% | -0.000   |
| σ    |          | 0.089    | 0.199  | 0.000  | 1.086    | 3.963  | 0.905    | 1.240%   | 0.024    |
| %RSD |          | 0.000    | 0.000  | 0.000  | 0.000    | 0.000  | 0.000    | 1.240    | 0.000    |
| Run  | Time     | 51V      | 52Cr   | 55Mn   | 56Fe     | 57Fe   | 59Co     | 60Ni     | 63Cu     |
|      |          | ppb      | ppb    | ppb    | ppb      | ppb    | ppb      | ppb      | ppb      |
| 1    | 14:41:12 | 0.004    | 0.003  | 0.002  | 1.316    | 0.343  | -0.002   | -0.010   | 0.004    |
| 2    | 14:41:55 | 0.006    | -0.010 | 0.001  | 1.533    | 0.616  | 0.001    | 0.004    | -0.000   |
| 3    | 14:42:38 | -0.010   | 0.006  | -0.003 | -2.849   | -0.959 | 0.001    | 0.006    | -0.004   |
| X    |          | -0.000   | 0.000  | -0.000 | 0.000    | -0.000 | 0.000    | 0.000    | 0.000    |
| σ    |          | 0.008    | 0.009  | 0.003  | 2.470    | 0.842  | 0.001    | 0.009    | 0.004    |
| %RSD |          | 0.000    | 0.000  | 0.000  | 0.000    | 0.000  | 0.000    | 0.000    | 0.000    |
| Run  | Time     | 65Cu     | 66Zn   | 68Zn   | 75As     | 78Se   | 82Se     | 83Kr     | 88Sr     |
|      |          | ppb      | ppb    | ppb    | ppb      | ppb    | ppb      | ppb      | ppb      |
| 1    | 14:41:12 | 0.001    | 0.028  | -0.082 | 0.041    | -0.048 | 0.216    | 0.000    | 0.000    |
| 2    | 14:41:55 | -0.003   | -0.020 | -0.034 | 0.055    | 0.086  | 0.315    | 0.000    | -0.002   |
| 3    | 14:42:38 | 0.003    | -0.008 | 0.116  | -0.096   | -0.038 | -0.531   | 0.000    | 0.002    |
| X    |          | -0.000   | -0.000 | 0.000  | -0.000   | -0.000 | 0.000    | 0.000    | -0.000   |
| σ    |          | 0.003    | 0.025  | 0.103  | 0.084    | 0.075  | 0.462    | 0.000    | 0.002    |
| %RSD |          | 0.000    | 0.000  | 0.000  | 0.000    | 0.000  | 0.000    | 0.000    | 0.000    |
| Run  | Time     | 89Y      | 95Mo   | 98Mo   | 103Rh    | 107Ag  | 109Ag    | 111Cd    | 114Cd    |
|      |          | ppb      | ppb    | ppb    | ppb      | ppb    | ppb      | ppb      | ppb      |
| 1    | 14:41:12 | 98.602%  | 0.000  | 0.002  | 99.283%  | -0.000 | 0.007    | -0.000   | 0.001    |
| 2    | 14:41:55 | 98.752%  | -0.005 | 0.004  | 99.369%  | 0.001  | -0.008   | -0.000   | -0.001   |
| 3    | 14:42:38 | 102.646% | 0.005  | -0.006 | 101.348% | -0.000 | 0.001    | 0.000    | 0.000    |
| X    |          | 100.000% | -0.000 | -0.000 | 100.000% | -0.000 | -0.000   | 0.000    | 0.000    |
| σ    |          | 2.293%   | 0.005  | 0.005  | 1.168%   | 0.001  | 0.007    | 0.000    | 0.001    |
| %RSD |          | 2.293    | 0.000  | 0.000  | 1.168    | 0.000  | 0.000    | 0.000    | 0.000    |
| Run  | Time     | 115In    | 118Sn  | 121Sb  | 123Sb    | 135Ba  | 137Ba    | 159Tb    | 165Ho    |
|      |          | ppb      | ppb    | ppb    | ppb      | ppb    | ppb      | ppb      | ppb      |
| 1    | 14:41:12 | 97.832%  | 0.020  | 0.001  | 0.007    | 0.003  | -0.003   | 97.667%  | 97.707%  |
| 2    | 14:41:55 | 99.582%  | 0.012  | 0.003  | -0.000   | -0.008 | 0.003    | 99.643%  | 99.218%  |
| 3    | 14:42:38 | 102.587% | -0.032 | -0.004 | -0.006   | 0.005  | 0.000    | 102.690% | 103.075% |
| X    |          | 100.000% | -0.000 | -0.000 | 0.000    | 0.000  | 0.000    | 100.000% | 100.000% |
| σ    |          | 2.405%   | 0.028  | 0.004  | 0.006    | 0.007  | 0.003    | 2.530%   | 2.768%   |
| %RSD |          | 2.405    | 0.000  | 0.000  | 0.000    | 0.000  | 0.000    | 2.530    | 2.768    |
| Run  | Time     | 203Tl    | 205Tl  | 206Pb  | 207Pb    | 208Pb  | 209Bi    |          |          |
|      |          | ppb      | ppb    | ppb    | ppb      | ppb    | ppb      |          |          |
| 1    | 14:41:12 | 0.001    | 0.002  | -0.005 | -0.004   | -0.005 | 98.387%  |          |          |
| 2    | 14:41:55 | -0.001   | 0.001  | -0.001 | 0.006    | 0.002  | 98.959%  |          |          |
| 3    | 14:42:38 | 0.000    | -0.003 | 0.006  | -0.001   | 0.003  | 102.653% |          |          |
| X    |          | 0.000    | 0.000  | -0.000 | -0.000   | 0.000  | 100.000% |          |          |
| σ    |          | 0.001    | 0.003  | 0.006  | 0.005    | 0.004  | 2.316%   |          |          |
| %RSD |          | 0.000    | 0.000  | 0.000  | 0.000    | 0.000  | 2.316    |          |          |

STD2 646077 12/21/2012 2:46:12 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li      | 9Be     | 10B      | 11B        | 13C        | 23Na       | 25Mg       | 26Mg       |
|------|----------|----------|---------|----------|------------|------------|------------|------------|------------|
|      |          | ppb      | ppb     | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 14:46:55 | 83.710%  | 197.100 | 0.517    | 0.350      | 0.000      | 99630.000  | 99880.000  | 100100.000 |
| 2    | 14:47:38 | 81.753%  | 201.300 | 0.277    | 0.426      | 0.000      | 100400.000 | 99470.000  | 99540.000  |
| 3    | 14:48:21 | 81.540%  | 201.600 | 0.673    | 0.424      | 0.000      | 99960.000  | 100700.000 | 100300.000 |
| X    |          | 82.334%  | 200.000 | 0.489    | 0.400      | 0.000      | 100000.000 | 100000.000 | 100000.000 |
| σ    |          | 1.196%   | 2.558   | 0.199    | 0.043      | 0.000      | 394.300    | 599.800    | 416.400    |
| %RSD |          | 1.453    | 1.279   | 40.800   | 10.800     | 0.000      | 0.394      | 0.600      | 0.416      |
| Run  | Time     | 27Al     | 28Si    | 37Cl     | 39K        | 43Ca       | 44Ca       | 45Sc       | 47Ti       |
|      |          | ppb      | ppb     | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 14:46:55 | 1002.000 | 7.389   | 0.000    | 102500.000 | 103000.000 | 103000.000 | 86.434%    | 0.181      |
| 2    | 14:47:38 | 999.400  | 6.642   | 0.000    | 97760.000  | 97500.000  | 97730.000  | 91.830%    | 0.252      |
| 3    | 14:48:21 | 998.600  | 7.611   | 0.000    | 99740.000  | 99490.000  | 99260.000  | 89.937%    | 0.204      |
| X    |          | 1000.000 | 7.214   | 0.000    | 100000.000 | 100000.000 | 100000.000 | 89.400%    | 0.212      |
| σ    |          | 1.768    | 0.507   | 0.000    | 2379.000   | 2788.000   | 2723.000   | 2.737%     | 0.036      |
| %RSD |          | 0.177    | 7.030   | 0.000    | 2.379      | 2.788      | 2.723      | 3.062      | 16.990     |
| Run  | Time     | 51V      | 52Cr    | 55Mn     | 56Fe       | 57Fe       | 59Co       | 60Ni       | 63Cu       |
|      |          | ppb      | ppb     | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 14:46:55 | 204.800  | 204.400 | 1022.000 | 51360.000  | 51210.000  | 203.500    | 202.400    | 201.700    |
| 2    | 14:47:38 | 195.500  | 196.000 | 982.100  | 49050.000  | 49050.000  | 196.100    | 196.500    | 196.800    |
| 3    | 14:48:21 | 199.700  | 199.600 | 995.600  | 49590.000  | 49740.000  | 200.400    | 201.100    | 201.500    |
| X    |          | 200.000  | 200.000 | 1000.000 | 50000.000  | 50000.000  | 200.000    | 200.000    | 200.000    |
| σ    |          | 4.634    | 4.201   | 20.490   | 1205.000   | 1100.000   | 3.683      | 3.128      | 2.774      |
| %RSD |          | 2.317    | 2.100   | 2.049    | 2.410      | 2.200      | 1.842      | 1.564      | 1.387      |
| Run  | Time     | 65Cu     | 66Zn    | 68Zn     | 75As       | 78Se       | 82Se       | 83Kr       | 88Sr       |
|      |          | ppb      | ppb     | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 14:46:55 | 202.400  | 202.700 | 201.200  | 202.500    | 199.300    | 199.500    | 0.000      | 199.500    |
| 2    | 14:47:38 | 197.400  | 196.900 | 197.800  | 197.200    | 198.700    | 198.900    | 0.000      | 200.100    |
| 3    | 14:48:21 | 200.200  | 200.300 | 201.000  | 200.300    | 202.000    | 201.600    | 0.000      | 200.400    |
| X    |          | 200.000  | 200.000 | 200.000  | 200.000    | 200.000    | 200.000    | 0.000      | 200.000    |
| σ    |          | 2.505    | 2.906   | 1.876    | 2.634      | 1.776      | 1.406      | 0.000      | 0.465      |
| %RSD |          | 1.253    | 1.453   | 0.938    | 1.317      | 0.888      | 0.703      | 0.000      | 0.232      |
| Run  | Time     | 89Y      | 95Mo    | 98Mo     | 103Rh      | 107Ag      | 109Ag      | 111Cd      | 114Cd      |
|      |          | ppb      | ppb     | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 14:46:55 | 88.007%  | 0.287   | 0.233    | 81.670%    | 198.000    | 199.400    | 199.900    | 199.800    |
| 2    | 14:47:38 | 89.396%  | 0.295   | 0.244    | 82.109%    | 200.000    | 199.500    | 199.300    | 200.100    |
| 3    | 14:48:21 | 89.768%  | 0.294   | 0.284    | 82.232%    | 202.000    | 201.000    | 200.800    | 200.200    |
| X    |          | 89.057%  | 0.292   | 0.254    | 82.004%    | 200.000    | 200.000    | 200.000    | 200.000    |
| σ    |          | 0.929%   | 0.004   | 0.027    | 0.296%     | 2.016      | 0.892      | 0.745      | 0.212      |
| %RSD |          | 1.043    | 1.410   | 10.580   | 0.361      | 1.008      | 0.446      | 0.372      | 0.106      |
| Run  | Time     | 115In    | 118Sn   | 121Sb    | 123Sb      | 135Ba      | 137Ba      | 159Tb      | 165Ho      |
|      |          | ppb      | ppb     | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 14:46:55 | 86.458%  | 0.124   | 0.092    | 0.099      | 200.200    | 200.300    | 89.599%    | 89.313%    |
| 2    | 14:47:38 | 88.194%  | 0.176   | 0.097    | 0.104      | 199.800    | 200.100    | 90.949%    | 91.146%    |
| 3    | 14:48:21 | 88.765%  | 0.115   | 0.120    | 0.119      | 199.900    | 199.600    | 91.204%    | 91.191%    |
| X    |          | 87.806%  | 0.138   | 0.103    | 0.107      | 200.000    | 200.000    | 90.584%    | 90.550%    |
| σ    |          | 1.202%   | 0.033   | 0.015    | 0.010      | 0.213      | 0.324      | 0.862%     | 1.071%     |
| %RSD |          | 1.368    | 23.620  | 14.400   | 9.788      | 0.106      | 0.162      | 0.952      | 1.183      |
| Run  | Time     | 203Tl    | 205Tl   | 206Pb    | 207Pb      | 208Pb      | 209Bi      |            |            |
|      |          | ppb      | ppb     | ppb      | ppb        | ppb        | ppb        |            |            |
| 1    | 14:46:55 | 196.200  | 196.400 | 195.000  | 194.900    | 195.400    | 80.426%    |            |            |
| 2    | 14:47:38 | 201.700  | 201.100 | 201.600  | 201.300    | 201.700    | 80.130%    |            |            |
| 3    | 14:48:21 | 202.000  | 202.500 | 203.400  | 203.800    | 202.900    | 80.621%    |            |            |
| X    |          | 200.000  | 200.000 | 200.000  | 200.000    | 200.000    | 80.392%    |            |            |
| σ    |          | 3.255    | 3.220   | 4.428    | 4.589      | 4.035      | 0.247%     |            |            |
| %RSD |          | 1.627    | 1.610   | 2.214    | 2.295      | 2.018      | 0.308      |            |            |

STD3 646078 12/21/2012 2:50:30 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be       | 10B     | 11B     | 13C     | 23Na    | 25Mg    | 26Mg    |
|------|----------|---------|-----------|---------|---------|---------|---------|---------|---------|
|      |          | ppb     | ppb       | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 14:51:13 | 87.128% | 0.172     | 196.100 | 200.400 | 0.000   | 47.550  | 44.320  | 43.660  |
| 2    | 14:51:55 | 83.973% | 0.125     | 199.500 | 197.700 | 0.000   | 45.620  | 41.230  | 41.690  |
| 3    | 14:52:38 | 81.584% | 0.047     | 204.400 | 202.000 | 0.000   | 43.680  | 39.200  | 39.070  |
| X    |          | 84.228% | 0.115     | 200.000 | 200.000 | 0.000   | 45.620  | 41.580  | 41.470  |
| σ    |          | 2.781%  | 0.063     | 4.147   | 2.162   | 0.000   | 1.934   | 2.577   | 2.303   |
| %RSD |          | 3.301   | 55.190    | 2.074   | 1.081   | 0.000   | 4.240   | 6.196   | 5.554   |
| Run  | Time     | 27Al    | 28Si      | 37Cl    | 39K     | 43Ca    | 44Ca    | 45Sc    | 47Ti    |
|      |          | ppb     | ppb       | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 14:51:13 | 21.340  | 9902.000  | 0.000   | 38.240  | 46.830  | 126.600 | 97.190% | 198.000 |
| 2    | 14:51:55 | 17.700  | 10120.000 | 0.000   | 36.840  | 61.530  | 120.100 | 94.015% | 200.900 |
| 3    | 14:52:38 | 14.380  | 9977.000  | 0.000   | 33.860  | 37.130  | 115.800 | 92.619% | 201.100 |
| X    |          | 17.810  | 10000.000 | 0.000   | 36.310  | 48.500  | 120.900 | 94.608% | 200.000 |
| σ    |          | 3.482   | 111.300   | 0.000   | 2.235   | 12.280  | 5.455   | 2.343%  | 1.697   |
| %RSD |          | 19.550  | 1.113     | 0.000   | 6.153   | 25.330  | 4.514   | 2.476   | 0.849   |
| Run  | Time     | 51V     | 52Cr      | 55Mn    | 56Fe    | 57Fe    | 59Co    | 60Ni    | 63Cu    |
|      |          | ppb     | ppb       | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 14:51:13 | 0.183   | 0.108     | 0.660   | 145.600 | 151.800 | 0.109   | 0.277   | 0.344   |
| 2    | 14:51:55 | 0.139   | 0.085     | 0.633   | 65.430  | 71.580  | 0.102   | 0.322   | 0.254   |
| 3    | 14:52:38 | 0.114   | 0.096     | 0.625   | 44.300  | 51.060  | 0.093   | 0.277   | 0.297   |
| X    |          | 0.146   | 0.096     | 0.639   | 85.100  | 91.470  | 0.101   | 0.292   | 0.298   |
| σ    |          | 0.035   | 0.012     | 0.018   | 53.430  | 53.210  | 0.008   | 0.026   | 0.045   |
| %RSD |          | 23.900  | 12.040    | 2.804   | 62.780  | 58.180  | 8.241   | 8.956   | 15.170  |
| Run  | Time     | 65Cu    | 66Zn      | 68Zn    | 75As    | 78Se    | 82Se    | 83Kr    | 88Sr    |
|      |          | ppb     | ppb       | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 14:51:13 | 0.403   | 1.282     | 0.921   | 0.762   | 2.781   | 2.593   | 0.000   | 0.180   |
| 2    | 14:51:55 | 0.307   | 0.910     | 1.096   | 0.579   | 1.327   | 1.813   | 0.000   | 0.155   |
| 3    | 14:52:38 | 0.321   | 1.141     | 1.116   | 0.372   | 1.174   | 0.823   | 0.000   | 0.165   |
| X    |          | 0.344   | 1.111     | 1.044   | 0.571   | 1.761   | 1.743   | 0.000   | 0.166   |
| σ    |          | 0.052   | 0.188     | 0.107   | 0.196   | 0.887   | 0.887   | 0.000   | 0.013   |
| %RSD |          | 15.100  | 16.910    | 10.240  | 34.230  | 50.370  | 50.870  | 0.000   | 7.526   |
| Run  | Time     | 89Y     | 95Mo      | 98Mo    | 103Rh   | 107Ag   | 109Ag   | 111Cd   | 114Cd   |
|      |          | ppb     | ppb       | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 14:51:13 | 92.881% | 197.400   | 196.400 | 92.957% | 0.197   | 0.198   | 0.215   | -0.207  |
| 2    | 14:51:55 | 94.037% | 201.000   | 201.800 | 92.501% | 0.173   | 0.182   | 0.120   | -0.187  |
| 3    | 14:52:38 | 93.853% | 201.700   | 201.700 | 93.481% | 0.159   | 0.177   | 0.048   | -0.429  |
| X    |          | 93.590% | 200.000   | 200.000 | 92.980% | 0.176   | 0.186   | 0.128   | -0.275  |
| σ    |          | 0.621%  | 2.312     | 3.080   | 0.491%  | 0.019   | 0.011   | 0.084   | 0.134   |
| %RSD |          | 0.664   | 1.156     | 1.540   | 0.528   | 10.650  | 5.884   | 65.420  | 48.910  |
| Run  | Time     | 115In   | 118Sn     | 121Sb   | 123Sb   | 135Ba   | 137Ba   | 159Tb   | 165Ho   |
|      |          | ppb     | ppb       | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 14:51:13 | 94.307% | 199.700   | 198.700 | 199.200 | 0.246   | 0.347   | 95.529% | 95.544% |
| 2    | 14:51:55 | 95.780% | 200.200   | 200.300 | 199.600 | 0.162   | 0.353   | 97.906% | 98.646% |
| 3    | 14:52:38 | 96.014% | 200.100   | 201.000 | 201.200 | 0.181   | 0.351   | 98.977% | 99.384% |
| X    |          | 95.367% | 200.000   | 200.000 | 200.000 | 0.196   | 0.350   | 97.471% | 97.858% |
| σ    |          | 0.925%  | 0.260     | 1.183   | 1.021   | 0.044   | 0.003   | 1.765%  | 2.038%  |
| %RSD |          | 0.970   | 0.130     | 0.591   | 0.511   | 22.550  | 0.943   | 1.811   | 2.082   |
| Run  | Time     | 203Tl   | 205Tl     | 206Pb   | 207Pb   | 208Pb   | 209Bi   |         |         |
|      |          | ppb     | ppb       | ppb     | ppb     | ppb     | ppb     |         |         |
| 1    | 14:51:13 | 0.057   | 0.080     | 0.202   | 0.202   | 0.197   | 96.594% |         |         |
| 2    | 14:51:55 | 0.068   | 0.069     | 0.156   | 0.132   | 0.147   | 98.200% |         |         |
| 3    | 14:52:38 | 0.069   | 0.067     | 0.132   | 0.127   | 0.130   | 99.915% |         |         |
| X    |          | 0.065   | 0.072     | 0.163   | 0.154   | 0.158   | 98.236% |         |         |
| σ    |          | 0.007   | 0.007     | 0.036   | 0.042   | 0.035   | 1.661%  |         |         |
| %RSD |          | 10.140  | 9.486     | 21.970  | 27.440  | 22.270  | 1.691   |         |         |



ICV 660333 12/21/2012 2:54:48 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li      | 9Be      | 10B      | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 14:55:31 | 84.912%  | 78.070   | 84.470   | 84.810    | 0.000     | 38590.000 | 38460.000 | 37870.000 |
| 2    | 14:56:14 | 84.808%  | 79.070   | 85.980   | 85.630    | 0.000     | 38380.000 | 38310.000 | 38060.000 |
| 3    | 14:56:57 | 82.759%  | 80.720   | 87.390   | 87.680    | 0.000     | 39810.000 | 39700.000 | 39310.000 |
| x    |          | 84.160%  | 99.108%  | 107.437% | 107.552%  | 0.000     | 97.315%   | 97.068%   | 96.036%   |
| σ    |          | 1.214%   | n/a      | n/a      | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 1.442    | 1.686    | 1.700    | 1.722     | 0.000     | 1.982     | 1.967     | 2.036     |
| Run  | Time     | 27Al     | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 14:55:31 | 376.000  | 4145.000 | 0.000    | 38290.000 | 37970.000 | 37770.000 | 95.459%   | 80.620    |
| 2    | 14:56:14 | 377.400  | 4153.000 | 0.000    | 37790.000 | 37550.000 | 37800.000 | 96.461%   | 79.910    |
| 3    | 14:56:57 | 392.700  | 4323.000 | 0.000    | 39420.000 | 38950.000 | 39350.000 | 93.921%   | 82.520    |
| x    |          | 95.507%  | 105.173% | 0.000    | 96.244%   | 95.393%   | 95.762%   | 95.280%   | 101.271%  |
| σ    |          | n/a      | n/a      | 0.000    | n/a       | n/a       | n/a       | 1.280%    | n/a       |
| %RSD |          | 2.429    | 2.384    | 0.000    | 2.162     | 1.884     | 2.367     | 1.343     | 1.671     |
| Run  | Time     | 51V      | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 14:55:31 | 75.640   | 78.110   | 385.500  | 19110.000 | 19080.000 | 77.790    | 77.740    | 79.530    |
| 2    | 14:56:14 | 74.950   | 76.630   | 385.400  | 19010.000 | 19160.000 | 77.770    | 78.040    | 81.020    |
| 3    | 14:56:57 | 77.800   | 80.550   | 399.500  | 19680.000 | 19600.000 | 79.460    | 81.120    | 82.600    |
| x    |          | 95.159%  | 98.040%  | 97.536%  | 96.331%   | 96.409%   | 97.924%   | 98.707%   | 101.316%  |
| σ    |          | n/a      | n/a      | n/a      | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 1.953    | 2.529    | 2.077    | 1.869     | 1.455     | 1.237     | 2.366     | 1.892     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 14:55:31 | 80.510   | 83.270   | 81.540   | 79.470    | 83.680    | 82.300    | 0.000     | 75.370    |
| 2    | 14:56:14 | 80.620   | 82.820   | 82.620   | 80.860    | 83.210    | 83.480    | 0.000     | 75.540    |
| 3    | 14:56:57 | 81.820   | 85.280   | 85.050   | 83.900    | 85.610    | 85.720    | 0.000     | 77.930    |
| x    |          | 101.229% | 104.737% | 103.835% | 101.763%  | 105.205%  | 104.789%  | 0.000     | 95.351%   |
| σ    |          | n/a      | n/a      | n/a      | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 0.896    | 1.567    | 2.167    | 2.785     | 1.512     | 2.071     | 0.000     | 1.878     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 14:55:31 | 94.074%  | 80.160   | 81.490   | 87.511%   | 79.790    | 79.760    | 80.990    | 81.770    |
| 2    | 14:56:14 | 95.561%  | 80.470   | 82.070   | 88.820%   | 80.280    | 80.660    | 81.600    | 81.910    |
| 3    | 14:56:57 | 95.391%  | 83.510   | 85.500   | 87.800%   | 82.510    | 82.690    | 84.540    | 84.510    |
| x    |          | 95.008%  | 101.726% | 103.772% | 88.044%   | 101.073%  | 101.299%  | 102.972%  | 103.417%  |
| σ    |          | 0.814%   | n/a      | n/a      | 0.688%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 0.857    | 2.277    | 2.611    | 0.781     | 1.796     | 1.854     | 2.308     | 1.866     |
| Run  | Time     | 115In    | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 14:55:31 | 90.037%  | 81.570   | 80.890   | 80.670    | 80.190    | 79.410    | 93.112%   | 93.225%   |
| 2    | 14:56:14 | 92.067%  | 81.850   | 80.820   | 80.270    | 80.150    | 80.450    | 95.808%   | 96.211%   |
| 3    | 14:56:57 | 91.346%  | 84.710   | 83.230   | 83.390    | 82.320    | 82.030    | 95.491%   | 95.671%   |
| x    |          | 91.150%  | 103.389% | 102.060% | 101.804%  | 101.110%  | 100.790%  | 94.803%   | 95.036%   |
| σ    |          | 1.029%   | n/a      | n/a      | n/a       | n/a       | n/a       | 1.474%    | 1.591%    |
| %RSD |          | 1.129    | 2.102    | 1.681    | 2.088     | 1.538     | 1.634     | 1.555     | 1.674     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 14:55:31 | 80.690   | 80.600   | 78.190   | 78.150    | 78.050    | 86.755%   |           |           |
| 2    | 14:56:14 | 82.260   | 82.060   | 79.440   | 78.600    | 79.110    | 88.502%   |           |           |
| 3    | 14:56:57 | 84.170   | 84.130   | 81.290   | 81.020    | 81.360    | 88.339%   |           |           |
| x    |          | 102.967% | 102.831% | 99.549%  | 99.068%   | 99.380%   | 87.865%   |           |           |
| σ    |          | n/a      | n/a      | n/a      | n/a       | n/a       | 0.965%    |           |           |
| %RSD |          | 2.114    | 2.157    | 1.959    | 1.947     | 2.125     | 1.098     |           |           |

ICB 12/21/2012 3:02:05 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be    | 10B     | 11B     | 13C     | 23Na     | 25Mg     | 26Mg     |
|------|----------|---------|--------|---------|---------|---------|----------|----------|----------|
|      |          | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 15:02:48 | 84.892% | 0.007  | 1.218   | 1.203   | 0.000   | 1.568    | 0.147    | 0.253    |
| 2    | 15:03:31 | 85.153% | 0.010  | 1.000   | 1.003   | 0.000   | 1.412    | 0.105    | 0.237    |
| 3    | 15:04:14 | 81.094% | 0.000  | 1.013   | 1.015   | 0.000   | 1.514    | 0.176    | 0.436    |
| X    |          | 83.713% | 0.006  | 1.077   | 1.074   | 0.000   | 1.498    | 0.143    | 0.309    |
| σ    |          | 2.272%  | 0.005  | 0.123   | 0.112   | 0.000   | 0.079    | 0.036    | 0.110    |
| %RSD |          | 2.714   | 91.790 | 11.370  | 10.460  | 0.000   | 5.282    | 25.280   | 35.760   |
| Run  | Time     | 27Al    | 28Si   | 37Cl    | 39K     | 43Ca    | 44Ca     | 45Sc     | 47Ti     |
|      |          | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 15:02:48 | -0.109  | 1.899  | 0.000   | 1.436   | 1.099   | 0.547    | 99.851%  | -0.054   |
| 2    | 15:03:31 | -0.158  | 1.409  | 0.000   | 0.318   | -3.409  | 0.211    | 99.875%  | -0.048   |
| 3    | 15:04:14 | -0.169  | 1.204  | 0.000   | 0.630   | -2.395  | 1.490    | 97.996%  | -0.011   |
| X    |          | -0.145  | 1.504  | 0.000   | 0.795   | -1.568  | 0.750    | 99.241%  | -0.038   |
| σ    |          | 0.032   | 0.357  | 0.000   | 0.577   | 2.365   | 0.663    | 1.078%   | 0.023    |
| %RSD |          | 21.960  | 23.760 | 0.000   | 72.600  | 150.800 | 88.440   | 1.086    | 61.040   |
| Run  | Time     | 51V     | 52Cr   | 55Mn    | 56Fe    | 57Fe    | 59Co     | 60Ni     | 63Cu     |
|      |          | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 15:02:48 | -0.019  | -0.012 | 0.028   | 4.728   | 8.973   | -0.004   | 0.001    | -0.017   |
| 2    | 15:03:31 | -0.024  | -0.013 | 0.027   | 1.265   | 6.182   | -0.000   | -0.022   | -0.004   |
| 3    | 15:04:14 | -0.010  | -0.014 | 0.025   | 0.435   | 4.461   | -0.003   | -0.035   | -0.012   |
| X    |          | -0.018  | -0.013 | 0.027   | 2.143   | 6.539   | -0.002   | -0.019   | -0.011   |
| σ    |          | 0.007   | 0.001  | 0.002   | 2.277   | 2.277   | 0.002    | 0.018    | 0.006    |
| %RSD |          | 40.290  | 5.809  | 7.406   | 106.300 | 34.830  | 78.630   | 96.050   | 59.190   |
| Run  | Time     | 65Cu    | 66Zn   | 68Zn    | 75As    | 78Se    | 82Se     | 83Kr     | 88Sr     |
|      |          | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 15:02:48 | -0.008  | 0.087  | 0.063   | 0.022   | 0.727   | 0.190    | 0.000    | -0.003   |
| 2    | 15:03:31 | 0.011   | 0.103  | -0.071  | -0.008  | 0.101   | 0.050    | 0.000    | -0.001   |
| 3    | 15:04:14 | -0.017  | 0.047  | 0.102   | 0.026   | 0.248   | 0.094    | 0.000    | -0.001   |
| X    |          | -0.005  | 0.079  | 0.031   | 0.013   | 0.359   | 0.112    | 0.000    | -0.002   |
| σ    |          | 0.014   | 0.029  | 0.090   | 0.019   | 0.327   | 0.072    | 0.000    | 0.001    |
| %RSD |          | 308.600 | 36.820 | 287.700 | 142.600 | 91.170  | 64.140   | 0.000    | 73.310   |
| Run  | Time     | 89Y     | 95Mo   | 98Mo    | 103Rh   | 107Ag   | 109Ag    | 111Cd    | 114Cd    |
|      |          | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 15:02:48 | 95.680% | 0.331  | 0.313   | 96.046% | -0.008  | -0.005   | 0.035    | 0.019    |
| 2    | 15:03:31 | 97.811% | 0.280  | 0.282   | 97.242% | -0.006  | 0.003    | 0.041    | 0.044    |
| 3    | 15:04:14 | 97.886% | 0.277  | 0.233   | 98.007% | 0.002   | 0.010    | 0.059    | 0.045    |
| X    |          | 97.126% | 0.296  | 0.276   | 97.098% | -0.004  | 0.003    | 0.045    | 0.036    |
| σ    |          | 1.253%  | 0.030  | 0.040   | 0.988%  | 0.005   | 0.007    | 0.013    | 0.015    |
| %RSD |          | 1.290   | 10.280 | 14.470  | 1.018   | 135.500 | 286.300  | 28.160   | 41.540   |
| Run  | Time     | 115In   | 118Sn  | 121Sb   | 123Sb   | 135Ba   | 137Ba    | 159Tb    | 165Ho    |
|      |          | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 15:02:48 | 96.605% | -0.009 | -0.030  | -0.042  | -0.007  | -0.003   | 98.172%  | 98.012%  |
| 2    | 15:03:31 | 99.061% | -0.059 | -0.035  | -0.032  | 0.006   | 0.005    | 100.082% | 100.715% |
| 3    | 15:04:14 | 99.713% | -0.092 | -0.034  | -0.026  | 0.015   | 0.006    | 101.752% | 101.990% |
| X    |          | 98.460% | -0.053 | -0.033  | -0.033  | 0.005   | 0.003    | 100.002% | 100.239% |
| σ    |          | 1.639%  | 0.042  | 0.003   | 0.008   | 0.011   | 0.005    | 1.791%   | 2.031%   |
| %RSD |          | 1.665   | 78.220 | 7.948   | 23.370  | 247.200 | 178.300  | 1.791    | 2.027    |
| Run  | Time     | 203Tl   | 205Tl  | 206Pb   | 207Pb   | 208Pb   | 209Bi    |          |          |
|      |          | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      |          |          |
| 1    | 15:02:48 | -0.002  | 0.001  | 0.016   | 0.012   | 0.012   | 100.765% |          |          |
| 2    | 15:03:31 | -0.010  | 0.003  | 0.013   | 0.007   | 0.007   | 103.212% |          |          |
| 3    | 15:04:14 | -0.006  | 0.003  | 0.001   | -0.003  | 0.002   | 104.444% |          |          |
| X    |          | -0.006  | 0.002  | 0.010   | 0.005   | 0.007   | 102.807% |          |          |
| σ    |          | 0.004   | 0.001  | 0.008   | 0.007   | 0.005   | 1.872%   |          |          |
| %RSD |          | 64.770  | 44.580 | 80.750  | 134.200 | 69.160  | 1.821    |          |          |

CRI 667994 12/21/2012 3:06:26 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li      | 9Be      | 10B       | 11B      | 13C      | 23Na     | 25Mg     | 26Mg     |
|------|----------|----------|----------|-----------|----------|----------|----------|----------|----------|
|      |          | ppb      | ppb      | ppb       | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 15:07:09 | 107.054% | 0.812    | 6.055     | 6.196    | 0.000    | 91.000   | 93.600   | 92.350   |
| 2    | 15:07:52 | 104.234% | 0.875    | 6.402     | 6.671    | 0.000    | 95.630   | 97.340   | 97.200   |
| 3    | 15:08:35 | 103.921% | 0.864    | 6.362     | 6.487    | 0.000    | 93.590   | 94.790   | 95.480   |
| X    |          | 105.070% | 85.024%  | 125.457%  | 129.024% | 0.000    | 93.406%  | 95.247%  | 95.007%  |
| σ    |          | 1.726%   | n/a      | n/a       | n/a      | 0.000    | n/a      | n/a      | n/a      |
| %RSD |          | 1.643    | 3.964    | 3.027     | 3.713    | 0.000    | 2.481    | 2.007    | 2.589    |
| Run  | Time     | 27Al     | 28Si     | 37Cl      | 39K      | 43Ca     | 44Ca     | 45Sc     | 47Ti     |
|      |          | ppb      | ppb      | ppb       | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 15:07:09 | 29.500   | 486.000  | 0.000     | 92.200   | 102.000  | 109.300  | 102.563% | 5.048    |
| 2    | 15:07:52 | 30.590   | 502.900  | 0.000     | 96.570   | 111.800  | 112.400  | 99.961%  | 5.433    |
| 3    | 15:08:35 | 29.700   | 492.000  | 0.000     | 94.700   | 114.300  | 112.500  | 99.246%  | 5.132    |
| X    |          | 99.760%  | 98.724%  | 0.000     | 94.490%  | 109.395% | 111.407% | 100.590% | 104.083% |
| σ    |          | n/a      | n/a      | 0.000     | n/a      | n/a      | n/a      | 1.746%   | n/a      |
| %RSD |          | 1.934    | 1.736    | 0.000     | 2.324    | 5.928    | 1.669    | 1.735    | 3.892    |
| Run  | Time     | 51V      | 52Cr     | 55Mn      | 56Fe     | 57Fe     | 59Co     | 60Ni     | 63Cu     |
|      |          | ppb      | ppb      | ppb       | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 15:07:09 | 0.918    | 2.042    | 5.215     | 57.010   | 63.550   | 0.516    | 1.079    | 2.200    |
| 2    | 15:07:52 | 1.026    | 2.070    | 5.341     | 57.560   | 61.470   | 0.521    | 1.032    | 2.323    |
| 3    | 15:08:35 | 0.942    | 2.115    | 5.183     | 53.760   | 60.230   | 0.543    | 1.151    | 2.297    |
| X    |          | 96.202%  | 103.792% | 1049.245% | 112.219% | 123.502% | 105.348% | 108.758% | 113.656% |
| σ    |          | n/a      | n/a      | n/a       | n/a      | n/a      | n/a      | n/a      | n/a      |
| %RSD |          | 5.848    | 1.777    | 1.587     | 3.654    | 2.720    | 2.691    | 5.517    | 2.861    |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn      | 75As     | 78Se     | 82Se     | 83Kr     | 88Sr     |
|      |          | ppb      | ppb      | ppb       | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 15:07:09 | 2.261    | 5.379    | 5.339     | 1.078    | 5.228    | 5.355    | 0.000    | 4.950    |
| 2    | 15:07:52 | 2.291    | 5.681    | 5.515     | 1.351    | 5.913    | 5.633    | 0.000    | 5.208    |
| 3    | 15:08:35 | 2.283    | 5.316    | 5.737     | 1.056    | 5.507    | 5.161    | 0.000    | 5.018    |
| X    |          | 113.912% | 109.177% | 110.600%  | 116.136% | 110.986% | 107.663% | 0.000    | 101.170% |
| σ    |          | n/a      | n/a      | n/a       | n/a      | n/a      | n/a      | 0.000    | n/a      |
| %RSD |          | 0.683    | 3.577    | 3.610     | 14.140   | 6.211    | 4.411    | 0.000    | 2.643    |
| Run  | Time     | 89Y      | 95Mo     | 98Mo      | 103Rh    | 107Ag    | 109Ag    | 111Cd    | 114Cd    |
|      |          | ppb      | ppb      | ppb       | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 15:07:09 | 96.867%  | 4.970    | 4.919     | 94.333%  | 1.044    | 1.030    | 1.113    | 1.096    |
| 2    | 15:07:52 | 96.093%  | 5.328    | 5.352     | 93.399%  | 1.065    | 1.153    | 1.126    | 1.100    |
| 3    | 15:08:35 | 98.349%  | 5.253    | 5.145     | 95.685%  | 1.084    | 1.036    | 1.030    | 1.130    |
| X    |          | 97.103%  | 103.672% | 102.771%  | 94.472%  | 106.436% | 107.329% | 108.974% | 110.862% |
| σ    |          | 1.146%   | n/a      | n/a       | 1.149%   | n/a      | n/a      | n/a      | n/a      |
| %RSD |          | 1.180    | 3.638    | 4.218     | 1.217    | 1.914    | 6.468    | 4.779    | 1.678    |
| Run  | Time     | 115In    | 118Sn    | 121Sb     | 123Sb    | 135Ba    | 137Ba    | 159Tb    | 165Ho    |
|      |          | ppb      | ppb      | ppb       | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 15:07:09 | 94.576%  | 5.145    | 2.030     | 2.061    | 9.901    | 9.903    | 95.624%  | 95.227%  |
| 2    | 15:07:52 | 95.184%  | 5.505    | 2.097     | 2.129    | 10.290   | 10.760   | 95.941%  | 96.344%  |
| 3    | 15:08:35 | 97.785%  | 5.245    | 2.129     | 1.994    | 10.240   | 9.904    | 98.274%  | 99.542%  |
| X    |          | 95.849%  | 105.970% | 104.264%  | 103.069% | 101.441% | 101.880% | 96.613%  | 97.038%  |
| σ    |          | 1.704%   | n/a      | n/a       | n/a      | n/a      | n/a      | 1.447%   | 2.240%   |
| %RSD |          | 1.778    | 3.505    | 2.414     | 3.295    | 2.090    | 4.835    | 1.498    | 2.308    |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb     | 207Pb    | 208Pb    | 209Bi    |          |          |
|      |          | ppb      | ppb      | ppb       | ppb      | ppb      | ppb      |          |          |
| 1    | 15:07:09 | 0.941    | 0.887    | 0.941     | 1.009    | 0.981    | 98.719%  |          |          |
| 2    | 15:07:52 | 0.987    | 0.995    | 1.007     | 1.026    | 1.053    | 97.537%  |          |          |
| 3    | 15:08:35 | 0.990    | 0.954    | 1.034     | 1.056    | 1.041    | 100.277% |          |          |
| X    |          | 97.282%  | 94.545%  | 99.402%   | 103.048% | 102.504% | 98.844%  |          |          |
| σ    |          | n/a      | n/a      | n/a       | n/a      | n/a      | 1.375%   |          |          |
| %RSD |          | 2.867    | 5.761    | 4.818     | 2.283    | 3.777    | 1.391    |          |          |

ICSA 668877 12/21/2012 3:10:46 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na       | 25Mg       | 26Mg       |
|------|----------|------------|----------|----------|------------|------------|------------|------------|------------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 15:11:29 | 65.164%    | 0.029    | 0.879    | 0.914      | 0.000      | 102900.000 | 102200.000 | 101900.000 |
| 2    | 15:12:12 | 62.260%    | 0.009    | 0.971    | 0.874      | 0.000      | 104700.000 | 102400.000 | 103100.000 |
| 3    | 15:12:55 | 61.834%    | -0.010   | 0.989    | 0.796      | 0.000      | 104700.000 | 102300.000 | 102700.000 |
| X    |          | 63.086%    | 0.010    | 0.946    | 0.861      | 0.000      | 104100.000 | 102300.000 | 102600.000 |
| σ    |          | 1.812%     | 0.019    | 0.059    | 0.060      | 0.000      | 1025.000   | 120.900    | 600.200    |
| %RSD |          | 2.872      | 202.900  | 6.188    | 6.969      | 0.000      | 0.984      | 0.118      | 0.585      |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca       | 45Sc       | 47Ti       |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 15:11:29 | 98320.000  | 27.950   | 0.000    | 101100.000 | 102000.000 | 102700.000 | 75.965%    | 2250.000   |
| 2    | 15:12:12 | 100500.000 | 27.640   | 0.000    | 100400.000 | 102100.000 | 103100.000 | 73.953%    | 2285.000   |
| 3    | 15:12:55 | 99710.000  | 27.260   | 0.000    | 100600.000 | 101800.000 | 102400.000 | 74.886%    | 2239.000   |
| X    |          | 99510.000  | 27.620   | 0.000    | 100700.000 | 102000.000 | 102700.000 | 74.935%    | 2258.000   |
| σ    |          | 1112.000   | 0.345    | 0.000    | 324.400    | 183.600    | 333.000    | 1.007%     | 24.260     |
| %RSD |          | 1.117      | 1.249    | 0.000    | 0.322      | 0.180      | 0.324      | 1.343      | 1.074      |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co       | 60Ni       | 63Cu       |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 15:11:29 | -0.246     | -0.016   | 0.298    | 101900.000 | 102300.000 | 0.169      | 0.604      | 0.868      |
| 2    | 15:12:12 | -0.131     | 0.030    | 0.311    | 103100.000 | 103600.000 | 0.174      | 0.395      | 0.926      |
| 3    | 15:12:55 | -0.337     | 0.034    | 0.300    | 102300.000 | 102300.000 | 0.166      | 0.417      | 0.914      |
| X    |          | -0.238     | 0.016    | 0.303    | 102400.000 | 102700.000 | 0.170      | 0.472      | 0.903      |
| σ    |          | 0.103      | 0.028    | 0.007    | 612.400    | 732.700    | 0.004      | 0.115      | 0.031      |
| %RSD |          | 43.460     | 177.400  | 2.445    | 0.598      | 0.713      | 2.574      | 24.310     | 3.395      |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se       | 83Kr       | 88Sr       |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 15:11:29 | 1.453      | 2.973    | 1.365    | 0.071      | 0.422      | -0.574     | 0.000      | 4.445      |
| 2    | 15:12:12 | 1.582      | 2.801    | 1.305    | 0.146      | 0.428      | 0.233      | 0.000      | 4.425      |
| 3    | 15:12:55 | 1.533      | 2.468    | 1.658    | 0.064      | 0.356      | -0.130     | 0.000      | 4.487      |
| X    |          | 1.523      | 2.747    | 1.443    | 0.094      | 0.402      | -0.157     | 0.000      | 4.452      |
| σ    |          | 0.065      | 0.257    | 0.189    | 0.045      | 0.040      | 0.404      | 0.000      | 0.032      |
| %RSD |          | 4.267      | 9.354    | 13.110   | 48.240     | 9.933      | 257.200    | 0.000      | 0.714      |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag      | 111Cd      | 114Cd      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 15:11:29 | 79.930%    | 2100.000 | 2236.000 | 72.239%    | 0.086      | 0.122      | 0.344      | 0.197      |
| 2    | 15:12:12 | 81.374%    | 2134.000 | 2263.000 | 72.789%    | 0.092      | 0.105      | 0.194      | 0.131      |
| 3    | 15:12:55 | 82.025%    | 2130.000 | 2265.000 | 73.573%    | 0.108      | 0.112      | 0.207      | 0.176      |
| X    |          | 81.110%    | 2121.000 | 2254.000 | 72.867%    | 0.095      | 0.113      | 0.249      | 0.168      |
| σ    |          | 1.072%     | 18.650   | 16.070   | 0.670%     | 0.011      | 0.008      | 0.083      | 0.033      |
| %RSD |          | 1.322      | 0.879    | 0.713    | 0.920      | 11.630     | 7.170      | 33.560     | 19.920     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba      | 159Tb      | 165Ho      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 15:11:29 | 79.590%    | 0.312    | 0.248    | 0.254      | 0.303      | 0.209      | 81.590%    | 81.897%    |
| 2    | 15:12:12 | 81.322%    | 0.175    | 0.256    | 0.259      | 0.233      | 0.191      | 84.714%    | 84.535%    |
| 3    | 15:12:55 | 82.631%    | 0.126    | 0.273    | 0.263      | 0.232      | 0.216      | 86.660%    | 86.339%    |
| X    |          | 81.181%    | 0.204    | 0.259    | 0.259      | 0.256      | 0.205      | 84.322%    | 84.257%    |
| σ    |          | 1.526%     | 0.097    | 0.013    | 0.004      | 0.040      | 0.013      | 2.558%     | 2.234%     |
| %RSD |          | 1.879      | 47.420   | 4.854    | 1.692      | 15.800     | 6.355      | 3.033      | 2.651      |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi      |            |            |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        |            |            |
| 1    | 15:11:29 | 0.001      | 0.010    | 0.220    | 0.219      | 0.212      | 80.533%    |            |            |
| 2    | 15:12:12 | -0.004     | 0.005    | 0.189    | 0.202      | 0.198      | 81.192%    |            |            |
| 3    | 15:12:55 | 0.004      | 0.003    | 0.185    | 0.201      | 0.183      | 82.267%    |            |            |
| X    |          | 0.000      | 0.006    | 0.198    | 0.207      | 0.197      | 81.331%    |            |            |
| σ    |          | 0.004      | 0.004    | 0.019    | 0.010      | 0.015      | 0.876%     |            |            |
| %RSD |          | 840.400    | 65.340   | 9.635    | 4.747      | 7.390      | 1.077      |            |            |

ICSAB 668878

12/21/2012 3:15:07 PM

QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li       | 9Be      | 10B      | 11B        | 13C        | 23Na       | 25Mg       | 26Mg       |
|------|----------|-----------|----------|----------|------------|------------|------------|------------|------------|
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 15:15:50 | 65.109%   | 20.160   | 48.080   | 49.230     | 0.000      | 101800.000 | 99380.000  | 99470.000  |
| 2    | 15:16:33 | 64.339%   | 20.210   | 48.950   | 49.260     | 0.000      | 103100.000 | 100700.000 | 101100.000 |
| 3    | 15:17:16 | 62.551%   | 20.410   | 50.900   | 50.550     | 0.000      | 102400.000 | 100100.000 | 101300.000 |
| X    |          | 64.000%   | 101.287% | 98.622%  | 99.358%    | 0.000      | 102.421%   | 100.075%   | 100.624%   |
| σ    |          | 1.312%    | n/a      | n/a      | n/a        | 0.000      | n/a        | n/a        | n/a        |
| %RSD |          | 2.051     | 0.658    | 2.935    | 1.517      | 0.000      | 0.626      | 0.664      | 0.995      |
| Run  | Time     | 27Al      | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca       | 45Sc       | 47Ti       |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 15:15:50 | 97880.000 | 554.900  | 0.000    | 99450.000  | 99420.000  | 100800.000 | 76.091%    | 2192.000   |
| 2    | 15:16:33 | 98090.000 | 564.200  | 0.000    | 99160.000  | 101200.000 | 102800.000 | 74.172%    | 2258.000   |
| 3    | 15:17:16 | 99960.000 | 567.200  | 0.000    | 99570.000  | 101700.000 | 102600.000 | 74.453%    | 2247.000   |
| X    |          | 98.642%   | 112.416% | 0.000    | 99.391%    | 100.769%   | 102.058%   | 74.905%    | 111.618%   |
| σ    |          | n/a       | n/a      | 0.000    | n/a        | n/a        | n/a        | 1.036%     | n/a        |
| %RSD |          | 1.165     | 1.142    | 0.000    | 0.211      | 1.180      | 1.087      | 1.384      | 1.569      |
| Run  | Time     | 51V       | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co       | 60Ni       | 63Cu       |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 15:15:50 | 20.190    | 20.190   | 19.900   | 99510.000  | 99720.000  | 19.780     | 19.760     | 19.820     |
| 2    | 15:16:33 | 20.710    | 20.540   | 20.550   | 101100.000 | 101300.000 | 20.040     | 19.810     | 19.860     |
| 3    | 15:17:16 | 20.130    | 20.320   | 20.240   | 101600.000 | 100900.000 | 20.000     | 20.050     | 20.410     |
| X    |          | 101.717%  | 101.755% | 87.963%  | 100.729%   | 100.639%   | 99.703%    | 99.367%    | 100.143%   |
| σ    |          | n/a       | n/a      | n/a      | n/a        | n/a        | n/a        | n/a        | n/a        |
| %RSD |          | 1.574     | 0.882    | 1.625    | 1.076      | 0.808      | 0.712      | 0.790      | 1.663      |
| Run  | Time     | 65Cu      | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se       | 83Kr       | 88Sr       |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 15:15:50 | 20.160    | 22.430   | 20.440   | 20.330     | 50.820     | 50.180     | 0.000      | 22.960     |
| 2    | 15:16:33 | 20.380    | 22.400   | 20.940   | 20.140     | 51.670     | 50.950     | 0.000      | 23.480     |
| 3    | 15:17:16 | 20.890    | 22.510   | 20.750   | 20.080     | 51.040     | 50.560     | 0.000      | 23.560     |
| X    |          | 102.391%  | 89.778%  | 82.828%  | 100.899%   | 102.355%   | 101.125%   | 0.000      | 116.678%   |
| σ    |          | n/a       | n/a      | n/a      | n/a        | n/a        | n/a        | 0.000      | n/a        |
| %RSD |          | 1.848     | 0.256    | 1.229    | 0.643      | 0.865      | 0.760      | 0.000      | 1.395      |
| Run  | Time     | 89Y       | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag      | 111Cd      | 114Cd      |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 15:15:50 | 84.166%   | 2034.000 | 2175.000 | 73.004%    | 19.650     | 19.710     | 20.350     | 19.760     |
| 2    | 15:16:33 | 84.188%   | 2101.000 | 2232.000 | 72.613%    | 20.580     | 19.990     | 20.510     | 20.420     |
| 3    | 15:17:16 | 84.115%   | 2114.000 | 2242.000 | 72.536%    | 20.280     | 20.210     | 20.850     | 20.470     |
| X    |          | 84.156%   | 104.156% | 110.832% | 72.718%    | 100.853%   | 99.839%    | 102.859%   | 101.075%   |
| σ    |          | 0.038%    | n/a      | n/a      | 0.251%     | n/a        | n/a        | n/a        | n/a        |
| %RSD |          | 0.045     | 2.055    | 1.627    | 0.345      | 2.335      | 1.255      | 1.241      | 1.963      |
| Run  | Time     | 115In     | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba      | 159Tb      | 165Ho      |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb        | ppb        | ppb        |
| 1    | 15:15:50 | 80.371%   | 100.900  | 20.370   | 20.250     | 20.370     | 20.100     | 83.662%    | 83.652%    |
| 2    | 15:16:33 | 81.354%   | 103.100  | 20.360   | 20.450     | 20.880     | 20.480     | 85.544%    | 85.802%    |
| 3    | 15:17:16 | 81.250%   | 103.900  | 20.520   | 20.620     | 20.940     | 20.370     | 85.610%    | 85.673%    |
| X    |          | 80.991%   | 102.605% | 102.085% | 102.189%   | 103.651%   | 101.574%   | 84.938%    | 85.042%    |
| σ    |          | 0.540%    | n/a      | n/a      | n/a        | n/a        | n/a        | 1.106%     | 1.205%     |
| %RSD |          | 0.667     | 1.502    | 0.454    | 0.914      | 1.499      | 0.970      | 1.302      | 1.418      |
| Run  | Time     | 203Tl     | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi      |            |            |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb        |            |            |
| 1    | 15:15:50 | 20.140    | 20.190   | 20.390   | 20.320     | 20.360     | 79.179%    |            |            |
| 2    | 15:16:33 | 20.660    | 20.710   | 21.030   | 21.270     | 21.080     | 79.812%    |            |            |
| 3    | 15:17:16 | 21.380    | 21.410   | 21.790   | 21.610     | 21.720     | 78.259%    |            |            |
| X    |          | 103.628%  | 103.859% | 105.349% | 105.330%   | 105.269%   | 79.083%    |            |            |
| σ    |          | n/a       | n/a      | n/a      | n/a        | n/a        | 0.781%     |            |            |
| %RSD |          | 3.003     | 2.945    | 3.332    | 3.176      | 3.231      | 0.988      |            |            |

CCV 664806 12/21/2012 3:23:05 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B      | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|---------|----------|----------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 15:23:48 | 70.858% | 99.180   | 96.090   | 95.900    | 0.000     | 49500.000 | 48960.000 | 48730.000 |
| 2    | 15:24:31 | 70.170% | 99.580   | 96.640   | 97.480    | 0.000     | 48710.000 | 48290.000 | 48370.000 |
| 3    | 15:25:14 | 70.664% | 99.270   | 95.280   | 97.060    | 0.000     | 48550.000 | 47890.000 | 48080.000 |
| X    |          | 70.564% | 99.343%  | 96.000%  | 96.815%   | 0.000     | 97.834%   | 96.759%   | 96.790%   |
| σ    |          | 0.355%  | n/a      | n/a      | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 0.502   | 0.208    | 0.714    | 0.848     | 0.000     | 1.046     | 1.113     | 0.672     |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 15:23:48 | 479.600 | 5035.000 | 0.000    | 46930.000 | 46810.000 | 47570.000 | 86.532%   | 100.400   |
| 2    | 15:24:31 | 476.400 | 5019.000 | 0.000    | 46920.000 | 47400.000 | 48070.000 | 85.291%   | 101.400   |
| 3    | 15:25:14 | 467.600 | 4991.000 | 0.000    | 46870.000 | 47060.000 | 47730.000 | 85.361%   | 98.460    |
| X    |          | 94.908% | 100.305% | 0.000    | 93.815%   | 94.179%   | 95.580%   | 85.728%   | 100.062%  |
| σ    |          | n/a     | n/a      | 0.000    | n/a       | n/a       | n/a       | 0.697%    | n/a       |
| %RSD |          | 1.305   | 0.443    | 0.000    | 0.073     | 0.626     | 0.543     | 0.813     | 1.471     |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 15:23:48 | 93.080  | 95.080   | 493.200  | 24310.000 | 24220.000 | 95.560    | 96.940    | 96.640    |
| 2    | 15:24:31 | 94.840  | 95.730   | 489.300  | 24350.000 | 24260.000 | 95.990    | 96.270    | 96.820    |
| 3    | 15:25:14 | 93.000  | 94.410   | 486.300  | 24270.000 | 24290.000 | 95.870    | 96.530    | 96.340    |
| X    |          | 93.637% | 95.070%  | 97.917%  | 97.250%   | 97.017%   | 95.805%   | 96.580%   | 96.603%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 1.111   | 0.692    | 0.709    | 0.155     | 0.148     | 0.231     | 0.350     | 0.250     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 15:23:48 | 95.660  | 99.760   | 99.390   | 97.650    | 100.400   | 100.900   | 0.000     | 95.660    |
| 2    | 15:24:31 | 96.630  | 100.500  | 99.610   | 96.970    | 101.200   | 102.600   | 0.000     | 96.310    |
| 3    | 15:25:14 | 96.790  | 100.400  | 101.200  | 98.050    | 101.000   | 101.000   | 0.000     | 95.660    |
| X    |          | 96.359% | 100.203% | 100.051% | 97.559%   | 100.884%  | 101.477%  | 0.000     | 95.875%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 0.633   | 0.384    | 0.958    | 0.560     | 0.414     | 0.928     | 0.000     | 0.390     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 15:23:48 | 85.934% | 100.400  | 101.100  | 82.065%   | 96.920    | 97.120    | 97.530    | 97.710    |
| 2    | 15:24:31 | 87.175% | 103.800  | 104.100  | 82.399%   | 98.100    | 97.820    | 98.140    | 98.200    |
| 3    | 15:25:14 | 88.059% | 103.400  | 104.500  | 83.182%   | 97.320    | 97.290    | 99.850    | 98.370    |
| X    |          | 87.056% | 102.554% | 103.244% | 82.549%   | 97.444%   | 97.410%   | 98.510%   | 98.094%   |
| σ    |          | 1.068%  | n/a      | n/a      | 0.573%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 1.226   | 1.812    | 1.816    | 0.694     | 0.614     | 0.379     | 1.219     | 0.351     |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 15:23:48 | 87.740% | 94.310   | 94.440   | 94.480    | 94.110    | 93.480    | 93.598%   | 94.546%   |
| 2    | 15:24:31 | 89.120% | 95.590   | 95.220   | 95.240    | 95.520    | 93.940    | 95.117%   | 96.650%   |
| 3    | 15:25:14 | 89.847% | 95.880   | 95.130   | 95.000    | 94.110    | 93.170    | 96.354%   | 97.517%   |
| X    |          | 88.902% | 95.259%  | 94.932%  | 94.904%   | 94.578%   | 93.529%   | 95.023%   | 96.238%   |
| σ    |          | 1.070%  | n/a      | n/a      | n/a       | n/a       | n/a       | 1.380%    | 1.528%    |
| %RSD |          | 1.204   | 0.880    | 0.447    | 0.410     | 0.862     | 0.411     | 1.452     | 1.588     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 15:23:48 | 93.020  | 93.000   | 93.240   | 93.820    | 93.390    | 89.207%   |           |           |
| 2    | 15:24:31 | 94.530  | 94.720   | 94.710   | 94.870    | 95.230    | 90.208%   |           |           |
| 3    | 15:25:14 | 95.840  | 95.950   | 95.760   | 96.490    | 96.130    | 90.246%   |           |           |
| X    |          | 94.463% | 94.557%  | 94.570%  | 95.060%   | 94.915%   | 89.887%   |           |           |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | 0.589%    |           |           |
| %RSD |          | 1.492   | 1.567    | 1.336    | 1.410     | 1.470     | 0.656     |           |           |

CCB1 12/21/2012 3:30:21 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be     | 10B    | 11B     | 13C     | 23Na     | 25Mg     | 26Mg     |
|------|----------|---------|---------|--------|---------|---------|----------|----------|----------|
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 15:31:04 | 86.122% | -0.017  | 0.832  | 0.771   | 0.000   | 1.514    | 0.359    | 0.512    |
| 2    | 15:31:47 | 84.577% | -0.011  | 0.649  | 0.607   | 0.000   | 1.371    | 0.403    | 0.510    |
| 3    | 15:32:30 | 84.807% | -0.024  | 0.532  | 0.583   | 0.000   | 1.614    | 0.525    | 0.460    |
| X    |          | 85.169% | -0.017  | 0.671  | 0.654   | 0.000   | 1.500    | 0.429    | 0.494    |
| σ    |          | 0.834%  | 0.006   | 0.152  | 0.102   | 0.000   | 0.122    | 0.086    | 0.030    |
| %RSD |          | 0.979   | 35.800  | 22.570 | 15.680  | 0.000   | 8.145    | 19.970   | 5.975    |
| Run  | Time     | 27Al    | 28Si    | 37Cl   | 39K     | 43Ca    | 44Ca     | 45Sc     | 47Ti     |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 15:31:04 | 0.312   | -0.710  | 0.000  | -2.164  | -7.218  | 0.845    | 101.447% | 0.039    |
| 2    | 15:31:47 | 0.258   | -0.715  | 0.000  | -2.958  | 2.784   | -1.284   | 99.220%  | 0.100    |
| 3    | 15:32:30 | 0.120   | -0.672  | 0.000  | -1.950  | -0.588  | -1.044   | 98.621%  | 0.056    |
| X    |          | 0.230   | -0.699  | 0.000  | -2.358  | -1.674  | -0.495   | 99.763%  | 0.065    |
| σ    |          | 0.099   | 0.024   | 0.000  | 0.531   | 5.089   | 1.166    | 1.489%   | 0.032    |
| %RSD |          | 43.060  | 3.372   | 0.000  | 22.530  | 304.000 | 235.700  | 1.493    | 48.470   |
| Run  | Time     | 51V     | 52Cr    | 55Mn   | 56Fe    | 57Fe    | 59Co     | 60Ni     | 63Cu     |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 15:31:04 | -0.037  | -0.013  | 0.152  | 3.032   | 11.710  | -0.007   | -0.002   | -0.007   |
| 2    | 15:31:47 | 0.006   | -0.019  | 0.149  | 2.424   | 7.754   | -0.004   | -0.013   | -0.015   |
| 3    | 15:32:30 | -0.009  | -0.028  | 0.122  | -0.634  | 5.332   | -0.007   | -0.034   | -0.026   |
| X    |          | -0.013  | -0.020  | 0.141  | 1.607   | 8.264   | -0.006   | -0.017   | -0.016   |
| σ    |          | 0.022   | 0.007   | 0.016  | 1.964   | 3.218   | 0.002    | 0.016    | 0.009    |
| %RSD |          | 161.900 | 35.420  | 11.700 | 122.200 | 38.940  | 34.350   | 99.040   | 59.360   |
| Run  | Time     | 65Cu    | 66Zn    | 68Zn   | 75As    | 78Se    | 82Se     | 83Kr     | 88Sr     |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 15:31:04 | 0.003   | 0.109   | -0.228 | -0.178  | 0.443   | -0.534   | 0.000    | 0.006    |
| 2    | 15:31:47 | 0.002   | -0.011  | -0.184 | -0.176  | 0.073   | -0.424   | 0.000    | -0.004   |
| 3    | 15:32:30 | 0.008   | 0.217   | -0.203 | 0.057   | 0.241   | 0.207    | 0.000    | -0.003   |
| X    |          | 0.004   | 0.105   | -0.205 | -0.099  | 0.252   | -0.251   | 0.000    | -0.000   |
| σ    |          | 0.003   | 0.114   | 0.022  | 0.135   | 0.185   | 0.400    | 0.000    | 0.005    |
| %RSD |          | 78.450  | 109.000 | 10.620 | 136.900 | 73.400  | 159.500  | 0.000    | 3888.000 |
| Run  | Time     | 89Y     | 95Mo    | 98Mo   | 103Rh   | 107Ag   | 109Ag    | 111Cd    | 114Cd    |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 15:31:04 | 92.111% | 0.950   | 0.970  | 92.971% | -0.004  | 0.003    | 0.009    | 0.026    |
| 2    | 15:31:47 | 93.871% | 0.846   | 0.938  | 94.270% | 0.001   | 0.000    | -0.006   | -0.011   |
| 3    | 15:32:30 | 93.791% | 0.820   | 0.797  | 95.040% | -0.002  | -0.004   | 0.021    | -0.006   |
| X    |          | 93.257% | 0.872   | 0.901  | 94.094% | -0.002  | -0.000   | 0.008    | 0.003    |
| σ    |          | 0.994%  | 0.069   | 0.092  | 1.046%  | 0.002   | 0.004    | 0.013    | 0.020    |
| %RSD |          | 1.066   | 7.860   | 10.240 | 1.111   | 159.200 | 1128.000 | 166.600  | 682.100  |
| Run  | Time     | 115In   | 118Sn   | 121Sb  | 123Sb   | 135Ba   | 137Ba    | 159Tb    | 165Ho    |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 15:31:04 | 93.679% | 0.048   | -0.046 | -0.025  | 0.007   | -0.000   | 97.190%  | 97.428%  |
| 2    | 15:31:47 | 96.431% | -0.062  | -0.040 | -0.031  | 0.003   | 0.011    | 100.350% | 100.543% |
| 3    | 15:32:30 | 97.171% | -0.038  | -0.033 | -0.034  | 0.009   | -0.005   | 101.410% | 102.274% |
| X    |          | 95.760% | -0.017  | -0.039 | -0.030  | 0.006   | 0.002    | 99.650%  | 100.082% |
| σ    |          | 1.840%  | 0.057   | 0.007  | 0.004   | 0.003   | 0.008    | 2.196%   | 2.456%   |
| %RSD |          | 1.922   | 331.400 | 16.540 | 14.850  | 51.990  | 457.000  | 2.203    | 2.454    |
| Run  | Time     | 203Tl   | 205Tl   | 206Pb  | 207Pb   | 208Pb   | 209Bi    |          |          |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb      |          |          |
| 1    | 15:31:04 | 0.007   | 0.004   | 0.028  | 0.021   | 0.018   | 101.984% |          |          |
| 2    | 15:31:47 | 0.006   | 0.008   | 0.010  | 0.021   | 0.014   | 104.972% |          |          |
| 3    | 15:32:30 | -0.000  | 0.001   | 0.013  | 0.014   | 0.011   | 106.048% |          |          |
| X    |          | 0.004   | 0.005   | 0.017  | 0.019   | 0.014   | 104.335% |          |          |
| σ    |          | 0.004   | 0.003   | 0.010  | 0.004   | 0.004   | 2.106%   |          |          |
| %RSD |          | 88.480  | 72.400  | 58.410 | 23.370  | 27.540  | 2.018    |          |          |

MB 180-59037/1-A

12/21/2012 3:34:40 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be     | 10B     | 11B     | 13C    | 23Na     | 25Mg     | 26Mg    |
|------|----------|---------|---------|---------|---------|--------|----------|----------|---------|
|      |          | ppb     | ppb     | ppb     | ppb     | ppb    | ppb      | ppb      | ppb     |
| 1    | 15:35:23 | 92.432% | -0.035  | 0.340   | 0.357   | 0.000  | 15.480   | 5.512    | 6.031   |
| 2    | 15:36:06 | 90.211% | -0.007  | 0.503   | 0.377   | 0.000  | 12.960   | 6.010    | 6.423   |
| 3    | 15:36:49 | 88.209% | -0.020  | 0.253   | 0.312   | 0.000  | 12.590   | 7.189    | 7.514   |
| X    |          | 90.284% | -0.020  | 0.366   | 0.349   | 0.000  | 13.680   | 6.237    | 6.656   |
| σ    |          | 2.112%  | 0.014   | 0.127   | 0.033   | 0.000  | 1.570    | 0.861    | 0.768   |
| %RSD |          | 2.340   | 68.170  | 34.690  | 9.554   | 0.000  | 11.480   | 13.810   | 11.540  |
| Run  | Time     | 27Al    | 28Si    | 37Cl    | 39K     | 43Ca   | 44Ca     | 45Sc     | 47Ti    |
|      |          | ppb     | ppb     | ppb     | ppb     | ppb    | ppb      | ppb      | ppb     |
| 1    | 15:35:23 | 11.190  | 2.849   | 0.000   | 1.986   | 15.850 | 8.746    | 114.631% | 0.137   |
| 2    | 15:36:06 | 13.450  | 2.906   | 0.000   | -1.339  | 19.630 | 10.240   | 111.802% | 0.570   |
| 3    | 15:36:49 | 15.430  | 4.914   | 0.000   | 3.209   | 20.330 | 15.650   | 97.972%  | 0.173   |
| X    |          | 13.360  | 3.556   | 0.000   | 1.286   | 18.600 | 11.550   | 108.135% | 0.293   |
| σ    |          | 2.121   | 1.176   | 0.000   | 2.353   | 2.410  | 3.635    | 8.914%   | 0.240   |
| %RSD |          | 15.880  | 33.080  | 0.000   | 183.100 | 12.960 | 31.480   | 8.244    | 81.940  |
| Run  | Time     | 51V     | 52Cr    | 55Mn    | 56Fe    | 57Fe   | 59Co     | 60Ni     | 63Cu    |
|      |          | ppb     | ppb     | ppb     | ppb     | ppb    | ppb      | ppb      | ppb     |
| 1    | 15:35:23 | -0.102  | 0.171   | 0.267   | 19.810  | 34.080 | -0.012   | 0.076    | 0.046   |
| 2    | 15:36:06 | 0.173   | 0.178   | 0.333   | 21.150  | 33.870 | -0.009   | 0.086    | 0.073   |
| 3    | 15:36:49 | 0.250   | 0.188   | 0.407   | 28.280  | 38.090 | -0.008   | 0.053    | 0.086   |
| X    |          | 0.107   | 0.179   | 0.336   | 23.080  | 35.350 | -0.010   | 0.072    | 0.069   |
| σ    |          | 0.185   | 0.008   | 0.070   | 4.554   | 2.377  | 0.002    | 0.017    | 0.020   |
| %RSD |          | 172.600 | 4.621   | 20.890  | 19.730  | 6.724  | 21.300   | 23.760   | 29.570  |
| Run  | Time     | 65Cu    | 66Zn    | 68Zn    | 75As    | 78Se   | 82Se     | 83Kr     | 88Sr    |
|      |          | ppb     | ppb     | ppb     | ppb     | ppb    | ppb      | ppb      | ppb     |
| 1    | 15:35:23 | 0.067   | 0.202   | 0.126   | -0.401  | -0.426 | -1.209   | 0.000    | 0.051   |
| 2    | 15:36:06 | 0.057   | 0.283   | 0.092   | -0.487  | -0.473 | -1.648   | 0.000    | 0.052   |
| 3    | 15:36:49 | 0.077   | 0.522   | 0.568   | -0.295  | -0.572 | -1.569   | 0.000    | 0.058   |
| X    |          | 0.067   | 0.336   | 0.262   | -0.395  | -0.490 | -1.475   | 0.000    | 0.054   |
| σ    |          | 0.010   | 0.166   | 0.265   | 0.096   | 0.074  | 0.234    | 0.000    | 0.004   |
| %RSD |          | 14.910  | 49.560  | 101.300 | 24.370  | 15.180 | 15.840   | 0.000    | 6.820   |
| Run  | Time     | 89Y     | 95Mo    | 98Mo    | 103Rh   | 107Ag  | 109Ag    | 111Cd    | 114Cd   |
|      |          | ppb     | ppb     | ppb     | ppb     | ppb    | ppb      | ppb      | ppb     |
| 1    | 15:35:23 | 97.168% | 1.013   | 1.021   | 90.166% | 0.055  | 0.061    | -0.044   | -0.042  |
| 2    | 15:36:06 | 97.138% | 0.982   | 0.961   | 88.892% | 0.049  | 0.053    | -0.060   | -0.046  |
| 3    | 15:36:49 | 94.871% | 0.862   | 0.894   | 87.574% | 0.058  | 0.054    | -0.036   | -0.026  |
| X    |          | 96.393% | 0.953   | 0.959   | 88.877% | 0.054  | 0.056    | -0.047   | -0.038  |
| σ    |          | 1.318%  | 0.080   | 0.063   | 1.296%  | 0.005  | 0.005    | 0.012    | 0.011   |
| %RSD |          | 1.367   | 8.387   | 6.608   | 1.458   | 8.683  | 8.210    | 26.420   | 28.340  |
| Run  | Time     | 115In   | 118Sn   | 121Sb   | 123Sb   | 135Ba  | 137Ba    | 159Tb    | 165Ho   |
|      |          | ppb     | ppb     | ppb     | ppb     | ppb    | ppb      | ppb      | ppb     |
| 1    | 15:35:23 | 91.265% | 4.540   | 0.052   | 0.062   | 0.165  | 0.165    | 95.822%  | 96.252% |
| 2    | 15:36:06 | 91.899% | 4.122   | 0.086   | 0.060   | 0.124  | 0.161    | 97.284%  | 97.970% |
| 3    | 15:36:49 | 89.972% | 4.122   | 0.042   | 0.065   | 0.171  | 0.157    | 95.216%  | 95.871% |
| X    |          | 91.046% | 4.261   | 0.060   | 0.062   | 0.153  | 0.161    | 96.107%  | 96.697% |
| σ    |          | 0.982%  | 0.241   | 0.023   | 0.003   | 0.025  | 0.004    | 1.063%   | 1.118%  |
| %RSD |          | 1.079   | 5.658   | 39.110  | 4.562   | 16.570 | 2.604    | 1.106    | 1.157   |
| Run  | Time     | 203Tl   | 205Tl   | 206Pb   | 207Pb   | 208Pb  | 209Bi    |          |         |
|      |          | ppb     | ppb     | ppb     | ppb     | ppb    | ppb      |          |         |
| 1    | 15:35:23 | 0.001   | 0.009   | 0.060   | 0.055   | 0.053  | 100.275% |          |         |
| 2    | 15:36:06 | 0.002   | 0.003   | 0.042   | 0.062   | 0.051  | 100.561% |          |         |
| 3    | 15:36:49 | -0.001  | 0.001   | 0.048   | 0.046   | 0.048  | 99.720%  |          |         |
| X    |          | 0.001   | 0.004   | 0.050   | 0.054   | 0.051  | 100.185% |          |         |
| σ    |          | 0.001   | 0.004   | 0.009   | 0.008   | 0.003  | 0.428%   |          |         |
| %RSD |          | 203.100 | 109.500 | 18.050  | 15.030  | 5.063  | 0.427    |          |         |



LCS 180-59037/2-A

12/21/2012 3:38:57 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li      | 9Be     | 10B     | 11B      | 13C      | 23Na     | 25Mg     | 26Mg     |
|------|----------|----------|---------|---------|----------|----------|----------|----------|----------|
|      |          | ppb      | ppb     | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 15:39:40 | 71.182%  | 854.000 | 83.290  | 84.060   | 0.000    | 9009.000 | 8997.000 | 9166.000 |
| 2    | 15:40:23 | 73.048%  | 849.300 | 82.890  | 82.110   | 0.000    | 8669.000 | 8651.000 | 8886.000 |
| 3    | 15:41:06 | 73.060%  | 834.500 | 81.890  | 84.870   | 0.000    | 8962.000 | 8834.000 | 9065.000 |
| x    |          | 72.430%  | 845.900 | 82.690  | 83.680   | 0.000    | 8880.000 | 8828.000 | 9039.000 |
| σ    |          | 1.081%   | 10.170  | 0.722   | 1.416    | 0.000    | 184.300  | 173.100  | 141.600  |
| %RSD |          | 1.492    | 1.203   | 0.873   | 1.693    | 0.000    | 2.075    | 1.960    | 1.567    |
| Run  | Time     | 27Al     | 28Si    | 37Cl    | 39K      | 43Ca     | 44Ca     | 45Sc     | 47Ti     |
|      |          | ppb      | ppb     | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 15:39:40 | 8942.000 | 54.210  | 0.000   | 8745.000 | 9724.000 | 9041.000 | 77.157%  | 95.190   |
| 2    | 15:40:23 | 8762.000 | 52.630  | 0.000   | 8620.000 | 9583.000 | 9018.000 | 77.382%  | 94.660   |
| 3    | 15:41:06 | 8879.000 | 51.620  | 0.000   | 8680.000 | 9771.000 | 9140.000 | 77.337%  | 96.950   |
| x    |          | 8861.000 | 52.820  | 0.000   | 8682.000 | 9693.000 | 9067.000 | 77.292%  | 95.600   |
| σ    |          | 91.170   | 1.306   | 0.000   | 62.470   | 97.720   | 64.880   | 0.119%   | 1.200    |
| %RSD |          | 1.029    | 2.472   | 0.000   | 0.720    | 1.008    | 0.716    | 0.154    | 1.255    |
| Run  | Time     | 51V      | 52Cr    | 55Mn    | 56Fe     | 57Fe     | 59Co     | 60Ni     | 63Cu     |
|      |          | ppb      | ppb     | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 15:39:40 | 945.200  | 964.100 | 945.700 | 9390.000 | 8931.000 | 952.600  | 943.700  | 941.400  |
| 2    | 15:40:23 | 948.400  | 962.600 | 950.800 | 9358.000 | 8995.000 | 950.700  | 944.800  | 952.800  |
| 3    | 15:41:06 | 957.000  | 975.600 | 960.600 | 9555.000 | 9131.000 | 968.400  | 948.600  | 962.900  |
| x    |          | 950.200  | 967.400 | 952.400 | 9434.000 | 9019.000 | 957.300  | 945.700  | 952.400  |
| σ    |          | 6.086    | 7.095   | 7.536   | 105.800  | 102.000  | 9.722    | 2.558    | 10.790   |
| %RSD |          | 0.641    | 0.733   | 0.791   | 1.121    | 1.131    | 1.016    | 0.271    | 1.133    |
| Run  | Time     | 65Cu     | 66Zn    | 68Zn    | 75As     | 78Se     | 82Se     | 83Kr     | 88Sr     |
|      |          | ppb      | ppb     | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 15:39:40 | 942.700  | 871.700 | 870.300 | 842.200  | 810.300  | 816.600  | 0.000    | 938.900  |
| 2    | 15:40:23 | 944.300  | 870.200 | 868.900 | 847.300  | 812.900  | 824.800  | 0.000    | 939.500  |
| 3    | 15:41:06 | 953.600  | 880.000 | 882.100 | 852.100  | 814.400  | 822.900  | 0.000    | 952.000  |
| x    |          | 946.900  | 874.000 | 873.800 | 847.200  | 812.500  | 821.400  | 0.000    | 943.400  |
| σ    |          | 5.870    | 5.278   | 7.256   | 4.927    | 2.086    | 4.291    | 0.000    | 7.395    |
| %RSD |          | 0.620    | 0.604   | 0.830   | 0.582    | 0.257    | 0.522    | 0.000    | 0.784    |
| Run  | Time     | 89Y      | 95Mo    | 98Mo    | 103Rh    | 107Ag    | 109Ag    | 111Cd    | 114Cd    |
|      |          | ppb      | ppb     | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 15:39:40 | 76.533%  | 91.800  | 90.330  | 78.755%  | 90.910   | 91.120   | 834.800  | 841.400  |
| 2    | 15:40:23 | 77.076%  | 92.050  | 91.430  | 79.376%  | 91.660   | 91.910   | 842.900  | 849.900  |
| 3    | 15:41:06 | 77.733%  | 93.170  | 93.280  | 79.485%  | 93.010   | 93.510   | 856.500  | 864.800  |
| x    |          | 77.114%  | 92.340  | 91.680  | 79.205%  | 91.860   | 92.180   | 844.700  | 852.100  |
| σ    |          | 0.601%   | 0.729   | 1.491   | 0.393%   | 1.068    | 1.219    | 10.950   | 11.860   |
| %RSD |          | 0.779    | 0.789   | 1.626   | 0.497    | 1.163    | 1.322    | 1.296    | 1.392    |
| Run  | Time     | 115In    | 118Sn   | 121Sb   | 123Sb    | 135Ba    | 137Ba    | 159Tb    | 165Ho    |
|      |          | ppb      | ppb     | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 15:39:40 | 82.374%  | 98.680  | 81.320  | 81.790   | 840.300  | 835.500  | 88.055%  | 89.261%  |
| 2    | 15:40:23 | 83.108%  | 99.860  | 82.180  | 82.260   | 846.700  | 844.700  | 89.834%  | 91.015%  |
| 3    | 15:41:06 | 83.364%  | 99.990  | 83.860  | 83.590   | 864.400  | 865.400  | 90.450%  | 91.528%  |
| x    |          | 82.948%  | 99.510  | 82.450  | 82.550   | 850.500  | 848.500  | 89.446%  | 90.601%  |
| σ    |          | 0.514%   | 0.722   | 1.295   | 0.930    | 12.480   | 15.320   | 1.244%   | 1.189%   |
| %RSD |          | 0.620    | 0.725   | 1.571   | 1.127    | 1.468    | 1.806    | 1.391    | 1.312    |
| Run  | Time     | 203Tl    | 205Tl   | 206Pb   | 207Pb    | 208Pb    | 209Bi    |          |          |
|      |          | ppb      | ppb     | ppb     | ppb      | ppb      | ppb      |          |          |
| 1    | 15:39:40 | 210.500  | 210.300 | 835.200 | 884.600  | 877.700  | 83.687%  |          |          |
| 2    | 15:40:23 | 217.200  | 215.700 | 855.200 | 905.000  | 895.700  | 84.216%  |          |          |
| 3    | 15:41:06 | 216.100  | 217.100 | 855.800 | 905.200  | 896.700  | 85.555%  |          |          |
| x    |          | 214.600  | 214.400 | 848.700 | 898.300  | 890.000  | 84.486%  |          |          |
| σ    |          | 3.604    | 3.608   | 11.720  | 11.850   | 10.740   | 0.963%   |          |          |
| %RSD |          | 1.679    | 1.683   | 1.381   | 1.320    | 1.206    | 1.140    |          |          |

240-17467-Q-2-A 12/21/2012 3:46:53 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li       | 9Be      | 10B       | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|-----------|----------|-----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 15:47:35 | 78.933%   | 6.385    | 46.140    | 46.220     | 0.000      | 521.100   | 18730.000 | 19180.000 |
| 2    | 15:48:18 | 77.454%   | 5.891    | 46.070    | 46.700     | 0.000      | 516.700   | 18850.000 | 19430.000 |
| 3    | 15:49:01 | 76.503%   | 5.946    | 44.050    | 45.680     | 0.000      | 492.700   | 17820.000 | 18200.000 |
| X    |          | 77.630%   | 6.074    | 45.420    | 46.200     | 0.000      | 510.200   | 18470.000 | 18930.000 |
| σ    |          | 1.225%    | 0.271    | 1.185     | 0.510      | 0.000      | 15.250    | 565.600   | 651.600   |
| %RSD |          | 1.577     | 4.459    | 2.608     | 1.104      | 0.000      | 2.989     | 3.063     | 3.442     |
| Run  | Time     | 27Al      | 28Si     | 37Cl      | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 15:47:35 | 80900.000 | 2154.000 | 0.000     | 9543.000   | 43290.000  | 44640.000 | 84.181%   | 589.800   |
| 2    | 15:48:18 | 81990.000 | 2196.000 | 0.000     | 9654.000   | 43800.000  | 44910.000 | 82.796%   | 594.500   |
| 3    | 15:49:01 | 77690.000 | 2067.000 | 0.000     | 8877.000   | 40410.000  | 40890.000 | 89.220%   | 544.400   |
| X    |          | 80190.000 | 2139.000 | 0.000     | 9358.000   | 42500.000  | 43480.000 | 85.399%   | 576.200   |
| σ    |          | 2235.000  | 65.760   | 0.000     | 420.300    | 1826.000   | 2250.000  | 3.381%    | 27.700    |
| %RSD |          | 2.787     | 3.074    | 0.000     | 4.491      | 4.296      | 5.175     | 3.959     | 4.807     |
| Run  | Time     | 51V       | 52Cr     | 55Mn      | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 15:47:35 | 137.600   | 105.500  | 15110.000 | 140200.000 | 139200.000 | 66.490    | 144.300   | 114.300   |
| 2    | 15:48:18 | 136.800   | 105.800  | 15160.000 | 139500.000 | 140900.000 | 66.690    | 146.200   | 114.900   |
| 3    | 15:49:01 | 128.400   | 98.180   | 13910.000 | 129400.000 | 130700.000 | 62.630    | 136.100   | 108.300   |
| X    |          | 134.200   | 103.100  | 14730.000 | 136300.000 | 136900.000 | 65.270    | 142.200   | 112.500   |
| σ    |          | 5.117     | 4.302    | 709.500   | 6040.000   | 5489.000   | 2.291     | 5.392     | 3.688     |
| %RSD |          | 3.812     | 4.170    | 4.818     | 4.431      | 4.009      | 3.510     | 3.792     | 3.278     |
| Run  | Time     | 65Cu      | 66Zn     | 68Zn      | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 15:47:35 | 114.200   | 947.900  | 949.700   | 65.220     | 6.548      | 9.893     | 0.000     | 177.800   |
| 2    | 15:48:18 | 116.600   | 960.000  | 966.900   | 65.290     | 6.423      | 8.866     | 0.000     | 180.300   |
| 3    | 15:49:01 | 108.600   | 906.500  | 918.400   | 62.400     | 5.645      | 8.554     | 0.000     | 175.000   |
| X    |          | 113.100   | 938.100  | 945.000   | 64.300     | 6.205      | 9.104     | 0.000     | 177.700   |
| σ    |          | 4.116     | 28.020   | 24.600    | 1.648      | 0.489      | 0.701     | 0.000     | 2.689     |
| %RSD |          | 3.639     | 2.987    | 2.603     | 2.563      | 7.878      | 7.696     | 0.000     | 1.513     |
| Run  | Time     | 89Y       | 95Mo     | 98Mo      | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 15:47:35 | 0.000     | 8.610    | 8.547     | 78.847%    | 10.050     | 10.210    | 4.358     | 4.121     |
| 2    | 15:48:18 | 0.000     | 8.795    | 8.603     | 79.820%    | 10.190     | 10.270    | 4.275     | 4.214     |
| 3    | 15:49:01 | 0.000     | 8.510    | 8.497     | 81.096%    | 10.040     | 10.040    | 4.198     | 3.932     |
| X    |          | 0.000     | 8.638    | 8.549     | 79.921%    | 10.090     | 10.170    | 4.277     | 4.089     |
| σ    |          | 0.000     | 0.145    | 0.053     | 1.128%     | 0.087      | 0.120     | 0.080     | 0.144     |
| %RSD |          | 0.000     | 1.676    | 0.620     | 1.411      | 0.858      | 1.181     | 1.870     | 3.515     |
| Run  | Time     | 115In     | 118Sn    | 121Sb     | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 15:47:35 | 81.961%   | 13.520   | 1.428     | 1.473      | 751.700    | 748.600   | 87.195%   | 86.486%   |
| 2    | 15:48:18 | 84.558%   | 13.520   | 1.464     | 1.429      | 750.100    | 746.100   | 90.134%   | 89.403%   |
| 3    | 15:49:01 | 86.228%   | 13.040   | 1.353     | 1.389      | 734.000    | 731.500   | 92.556%   | 92.081%   |
| X    |          | 84.249%   | 13.360   | 1.415     | 1.430      | 745.300    | 742.100   | 89.962%   | 89.324%   |
| σ    |          | 2.150%    | 0.279    | 0.056     | 0.042      | 9.793      | 9.258     | 2.684%    | 2.798%    |
| %RSD |          | 2.552     | 2.091    | 3.987     | 2.927      | 1.314      | 1.248     | 2.984     | 3.133     |
| Run  | Time     | 203Tl     | 205Tl    | 206Pb     | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       |           |           |
| 1    | 15:47:35 | 1.461     | 1.472    | 153.700   | 151.200    | 152.400    | 77.253%   |           |           |
| 2    | 15:48:18 | 1.437     | 1.433    | 155.700   | 152.700    | 153.800    | 80.105%   |           |           |
| 3    | 15:49:01 | 1.359     | 1.361    | 152.200   | 149.900    | 150.500    | 82.023%   |           |           |
| X    |          | 1.419     | 1.422    | 153.800   | 151.300    | 152.300    | 79.794%   |           |           |
| σ    |          | 0.053     | 0.057    | 1.747     | 1.419      | 1.640      | 2.400%    |           |           |
| %RSD |          | 3.750     | 3.990    | 1.135     | 0.938      | 1.077      | 3.008     |           |           |

240-17467-Q-2-A SD@5

12/21/2012 3:51:10 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li       | 9Be     | 10B      | 11B       | 13C       | 23Na     | 25Mg     | 26Mg     |
|------|----------|-----------|---------|----------|-----------|-----------|----------|----------|----------|
|      |          | ppb       | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      | ppb      |
| 1    | 15:51:53 | 85.098%   | 1.400   | 10.720   | 10.350    | 0.000     | 95.340   | 3569.000 | 3636.000 |
| 2    | 15:52:36 | 85.097%   | 1.164   | 9.958    | 10.170    | 0.000     | 95.420   | 3554.000 | 3629.000 |
| 3    | 15:53:18 | 84.049%   | 1.327   | 10.410   | 10.040    | 0.000     | 97.030   | 3592.000 | 3639.000 |
| x    |          | 84.748%   | 1.297   | 10.360   | 10.180    | 0.000     | 95.930   | 3572.000 | 3634.000 |
| σ    |          | 0.605%    | 0.121   | 0.384    | 0.158     | 0.000     | 0.956    | 19.090   | 4.906    |
| %RSD |          | 0.714     | 9.317   | 3.705    | 1.553     | 0.000     | 0.997    | 0.534    | 0.135    |
| Run  | Time     | 27Al      | 28Si    | 37Cl     | 39K       | 43Ca      | 44Ca     | 45Sc     | 47Ti     |
|      |          | ppb       | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      | ppb      |
| 1    | 15:51:53 | 16050.000 | 424.200 | 0.000    | 1854.000  | 8172.000  | 7854.000 | 99.764%  | 111.500  |
| 2    | 15:52:36 | 15740.000 | 429.400 | 0.000    | 1830.000  | 8177.000  | 7849.000 | 98.118%  | 110.900  |
| 3    | 15:53:18 | 16000.000 | 427.100 | 0.000    | 1864.000  | 8419.000  | 7914.000 | 99.157%  | 110.500  |
| x    |          | 15930.000 | 426.900 | 0.000    | 1849.000  | 8256.000  | 7872.000 | 99.013%  | 111.000  |
| σ    |          | 164.200   | 2.577   | 0.000    | 17.790    | 141.600   | 36.290   | 0.833%   | 0.531    |
| %RSD |          | 1.031     | 0.604   | 0.000    | 0.962     | 1.715     | 0.461    | 0.841    | 0.479    |
| Run  | Time     | 51V       | 52Cr    | 55Mn     | 56Fe      | 57Fe      | 59Co     | 60Ni     | 63Cu     |
|      |          | ppb       | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      | ppb      |
| 1    | 15:51:53 | 25.460    | 19.600  | 2795.000 | 26470.000 | 26050.000 | 12.060   | 27.790   | 21.900   |
| 2    | 15:52:36 | 25.290    | 19.770  | 2823.000 | 26590.000 | 26150.000 | 12.510   | 27.350   | 22.720   |
| 3    | 15:53:18 | 25.230    | 19.810  | 2814.000 | 26740.000 | 26290.000 | 12.470   | 28.140   | 22.380   |
| x    |          | 25.330    | 19.720  | 2811.000 | 26600.000 | 26160.000 | 12.350   | 27.760   | 22.330   |
| σ    |          | 0.122     | 0.114   | 14.580   | 134.500   | 119.700   | 0.251    | 0.395    | 0.410    |
| %RSD |          | 0.481     | 0.577   | 0.519    | 0.506     | 0.458     | 2.029    | 1.422    | 1.837    |
| Run  | Time     | 65Cu      | 66Zn    | 68Zn     | 75As      | 78Se      | 82Se     | 83Kr     | 88Sr     |
|      |          | ppb       | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      | ppb      |
| 1    | 15:51:53 | 21.580    | 187.700 | 189.700  | 12.620    | 1.104     | 0.635    | 0.000    | 32.030   |
| 2    | 15:52:36 | 22.160    | 189.900 | 190.000  | 12.530    | 0.842     | 1.384    | 0.000    | 32.000   |
| 3    | 15:53:18 | 22.390    | 191.500 | 192.600  | 12.440    | 0.879     | 0.587    | 0.000    | 32.290   |
| x    |          | 22.040    | 189.700 | 190.800  | 12.530    | 0.942     | 0.869    | 0.000    | 32.110   |
| σ    |          | 0.419     | 1.906   | 1.622    | 0.094     | 0.142     | 0.447    | 0.000    | 0.162    |
| %RSD |          | 1.900     | 1.004   | 0.850    | 0.746     | 15.050    | 51.460   | 0.000    | 0.504    |
| Run  | Time     | 89Y       | 95Mo    | 98Mo     | 103Rh     | 107Ag     | 109Ag    | 111Cd    | 114Cd    |
|      |          | ppb       | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      | ppb      |
| 1    | 15:51:53 | 98.041%   | 1.611   | 1.672    | 90.261%   | 1.990     | 2.078    | 0.774    | 0.810    |
| 2    | 15:52:36 | 99.622%   | 1.713   | 1.677    | 91.397%   | 1.981     | 2.127    | 0.921    | 0.852    |
| 3    | 15:53:18 | 99.797%   | 1.741   | 1.728    | 91.746%   | 2.050     | 2.069    | 0.753    | 0.765    |
| x    |          | 99.153%   | 1.689   | 1.692    | 91.135%   | 2.007     | 2.091    | 0.816    | 0.809    |
| σ    |          | 0.968%    | 0.068   | 0.031    | 0.776%    | 0.037     | 0.031    | 0.092    | 0.044    |
| %RSD |          | 0.976     | 4.051   | 1.846    | 0.852     | 1.864     | 1.489    | 11.240   | 5.403    |
| Run  | Time     | 115In     | 118Sn   | 121Sb    | 123Sb     | 135Ba     | 137Ba    | 159Tb    | 165Ho    |
|      |          | ppb       | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      | ppb      |
| 1    | 15:51:53 | 91.470%   | 2.208   | 0.211    | 0.224     | 149.900   | 148.400  | 93.586%  | 92.834%  |
| 2    | 15:52:36 | 93.434%   | 2.188   | 0.257    | 0.248     | 150.800   | 150.200  | 95.448%  | 95.532%  |
| 3    | 15:53:18 | 94.322%   | 2.251   | 0.222    | 0.233     | 150.800   | 149.800  | 96.584%  | 96.556%  |
| x    |          | 93.075%   | 2.216   | 0.230    | 0.235     | 150.500   | 149.500  | 95.206%  | 94.974%  |
| σ    |          | 1.459%    | 0.032   | 0.024    | 0.012     | 0.518     | 0.979    | 1.513%   | 1.923%   |
| %RSD |          | 1.568     | 1.446   | 10.400   | 5.216     | 0.344     | 0.655    | 1.589    | 2.025    |
| Run  | Time     | 203Tl     | 205Tl   | 206Pb    | 207Pb     | 208Pb     | 209Bi    |          |          |
|      |          | ppb       | ppb     | ppb      | ppb       | ppb       | ppb      |          |          |
| 1    | 15:51:53 | 0.340     | 0.329   | 29.260   | 28.920    | 29.040    | 89.756%  |          |          |
| 2    | 15:52:36 | 0.328     | 0.334   | 29.880   | 29.770    | 29.600    | 91.392%  |          |          |
| 3    | 15:53:18 | 0.306     | 0.322   | 29.730   | 29.290    | 29.380    | 92.960%  |          |          |
| x    |          | 0.325     | 0.328   | 29.620   | 29.330    | 29.340    | 91.369%  |          |          |
| σ    |          | 0.017     | 0.006   | 0.325    | 0.426     | 0.283     | 1.602%   |          |          |
| %RSD |          | 5.356     | 1.907   | 1.096    | 1.452     | 0.965     | 1.754    |          |          |

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User Pre-dilution: 1.000

| Run  | Time     | 6Li       | 9Be      | 10B       | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|-----------|----------|-----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 15:56:10 | 85.479%   | 5.410    | 31.050    | 31.310     | 0.000      | 428.700   | 17500.000 | 17830.000 |
| 2    | 15:56:53 | 83.359%   | 5.186    | 30.610    | 30.710     | 0.000      | 401.500   | 16690.000 | 17110.000 |
| 3    | 15:57:36 | 83.246%   | 5.435    | 32.270    | 31.930     | 0.000      | 330.400   | 17330.000 | 17880.000 |
| X    |          | 84.028%   | 5.344    | 31.310    | 31.320     | 0.000      | 386.900   | 17170.000 | 17600.000 |
| σ    |          | 1.258%    | 0.137    | 0.861     | 0.612      | 0.000      | 50.770    | 428.900   | 431.400   |
| %RSD |          | 1.497     | 2.570    | 2.749     | 1.955      | 0.000      | 13.120    | 2.498     | 2.451     |
| Run  | Time     | 27Al      | 28Si     | 37Cl      | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 15:56:10 | 65240.000 | 3004.000 | 0.000     | 6523.000   | 41640.000  | 43330.000 | 89.228%   | 476.200   |
| 2    | 15:56:53 | 62350.000 | 2878.000 | 0.000     | 6081.000   | 39000.000  | 40010.000 | 94.334%   | 443.600   |
| 3    | 15:57:36 | 65510.000 | 3015.000 | 0.000     | 6570.000   | 43290.000  | 44250.000 | 85.497%   | 481.800   |
| X    |          | 64370.000 | 2966.000 | 0.000     | 6391.000   | 41310.000  | 42530.000 | 89.686%   | 467.200   |
| σ    |          | 1749.000  | 75.740   | 0.000     | 269.900    | 2163.000   | 2234.000  | 4.436%    | 20.620    |
| %RSD |          | 2.718     | 2.554    | 0.000     | 4.223      | 5.237      | 5.253     | 4.946     | 4.414     |
| Run  | Time     | 51V       | 52Cr     | 55Mn      | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 15:56:10 | 112.500   | 88.310   | 15450.000 | 130600.000 | 130700.000 | 64.770    | 137.500   | 109.400   |
| 2    | 15:56:53 | 105.800   | 83.180   | 14680.000 | 123600.000 | 124500.000 | 61.970    | 131.100   | 104.500   |
| 3    | 15:57:36 | 113.500   | 91.020   | 15870.000 | 132300.000 | 132600.000 | 66.970    | 140.500   | 112.500   |
| X    |          | 110.600   | 87.500   | 15330.000 | 128900.000 | 129300.000 | 64.570    | 136.400   | 108.800   |
| σ    |          | 4.177     | 3.980    | 607.000   | 4609.000   | 4260.000   | 2.506     | 4.817     | 4.053     |
| %RSD |          | 3.777     | 4.548    | 3.959     | 3.577      | 3.295      | 3.881     | 3.532     | 3.724     |
| Run  | Time     | 65Cu      | 66Zn     | 68Zn      | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 15:56:10 | 107.500   | 850.400  | 861.300   | 62.280     | 5.409      | 9.276     | 0.000     | 152.100   |
| 2    | 15:56:53 | 106.100   | 825.200  | 835.900   | 60.020     | 5.080      | 8.022     | 0.000     | 151.900   |
| 3    | 15:57:36 | 112.600   | 875.800  | 882.700   | 62.970     | 5.310      | 9.349     | 0.000     | 156.800   |
| X    |          | 108.700   | 850.500  | 860.000   | 61.760     | 5.266      | 8.882     | 0.000     | 153.600   |
| σ    |          | 3.432     | 25.300   | 23.400    | 1.539      | 0.169      | 0.746     | 0.000     | 2.772     |
| %RSD |          | 3.156     | 2.975    | 2.721     | 2.492      | 3.207      | 8.396     | 0.000     | 1.805     |
| Run  | Time     | 89Y       | 95Mo     | 98Mo      | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 15:56:10 | 0.000     | 8.062    | 7.945     | 81.663%    | 10.040     | 10.030    | 4.219     | 4.042     |
| 2    | 15:56:53 | 0.000     | 8.120    | 7.982     | 82.408%    | 10.180     | 10.080    | 4.086     | 4.060     |
| 3    | 15:57:36 | 0.000     | 8.186    | 8.239     | 82.513%    | 10.270     | 10.230    | 4.162     | 3.960     |
| X    |          | 0.000     | 8.123    | 8.056     | 82.194%    | 10.170     | 10.110    | 4.156     | 4.021     |
| σ    |          | 0.000     | 0.062    | 0.160     | 0.463%     | 0.118      | 0.101     | 0.067     | 0.053     |
| %RSD |          | 0.000     | 0.766    | 1.987     | 0.564      | 1.159      | 1.003     | 1.602     | 1.321     |
| Run  | Time     | 115In     | 118Sn    | 121Sb     | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 15:56:10 | 84.691%   | 24.060   | 1.343     | 1.323      | 705.800    | 699.600   | 89.469%   | 88.274%   |
| 2    | 15:56:53 | 86.503%   | 24.350   | 1.324     | 1.372      | 707.100    | 705.500   | 91.758%   | 91.344%   |
| 3    | 15:57:36 | 86.683%   | 24.690   | 1.314     | 1.322      | 720.600    | 715.500   | 92.171%   | 91.651%   |
| X    |          | 85.959%   | 24.360   | 1.327     | 1.339      | 711.200    | 706.900   | 91.133%   | 90.423%   |
| σ    |          | 1.101%    | 0.313    | 0.015     | 0.028      | 8.238      | 8.047     | 1.456%    | 1.867%    |
| %RSD |          | 1.281     | 1.283    | 1.126     | 2.100      | 1.158      | 1.138     | 1.597     | 2.065     |
| Run  | Time     | 203Tl     | 205Tl    | 206Pb     | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       |           |           |
| 1    | 15:56:10 | 1.105     | 1.132    | 153.000   | 150.900    | 151.900    | 77.387%   |           |           |
| 2    | 15:56:53 | 1.102     | 1.154    | 155.600   | 153.300    | 153.800    | 79.939%   |           |           |
| 3    | 15:57:36 | 1.153     | 1.170    | 158.900   | 157.600    | 157.800    | 79.315%   |           |           |
| X    |          | 1.120     | 1.152    | 155.900   | 153.900    | 154.500    | 78.880%   |           |           |
| σ    |          | 0.028     | 0.019    | 2.928     | 3.420      | 3.014      | 1.330%    |           |           |
| %RSD |          | 2.528     | 1.657    | 1.878     | 2.222      | 1.951      | 1.686     |           |           |

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User Pre-dilution: 1.000

| Run  | Time     | 6Li       | 9Be      | 10B       | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|-----------|----------|-----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:00:28 | 79.621%   | 87.590   | 99.480    | 98.690     | 0.000      | 8784.000  | 24920.000 | 25430.000 |
| 2    | 16:01:11 | 78.027%   | 85.020   | 101.600   | 102.000    | 0.000      | 8858.000  | 24900.000 | 25400.000 |
| 3    | 16:01:54 | 74.925%   | 87.630   | 104.300   | 105.400    | 0.000      | 9197.000  | 26120.000 | 26820.000 |
| X    |          | 77.524%   | 86.750   | 101.800   | 102.000    | 0.000      | 8946.000  | 25310.000 | 25880.000 |
| σ    |          | 2.388%    | 1.497    | 2.430     | 3.374      | 0.000      | 220.000   | 698.200   | 811.100   |
| %RSD |          | 3.080     | 1.725    | 2.387     | 3.306      | 0.000      | 2.460     | 2.758     | 3.134     |
| Run  | Time     | 27Al      | 28Si     | 37Cl      | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:00:28 | 76210.000 | 3204.000 | 0.000     | 14650.000  | 43440.000  | 44400.000 | 93.222%   | 481.400   |
| 2    | 16:01:11 | 76520.000 | 3225.000 | 0.000     | 14900.000  | 44670.000  | 45290.000 | 91.506%   | 487.000   |
| 3    | 16:01:54 | 80900.000 | 3399.000 | 0.000     | 15390.000  | 46560.000  | 48080.000 | 83.800%   | 529.800   |
| X    |          | 77880.000 | 3276.000 | 0.000     | 14980.000  | 44890.000  | 45920.000 | 89.509%   | 499.400   |
| σ    |          | 2622.000  | 107.000  | 0.000     | 376.000    | 1571.000   | 1918.000  | 5.019%    | 26.490    |
| %RSD |          | 3.367     | 3.266    | 0.000     | 2.510      | 3.500      | 4.177     | 5.607     | 5.305     |
| Run  | Time     | 51V       | 52Cr     | 55Mn      | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:00:28 | 193.200   | 170.800  | 14680.000 | 128700.000 | 129200.000 | 145.300   | 215.200   | 189.500   |
| 2    | 16:01:11 | 195.800   | 171.900  | 14670.000 | 128400.000 | 130700.000 | 146.000   | 214.900   | 189.800   |
| 3    | 16:01:54 | 212.300   | 184.800  | 15660.000 | 135800.000 | 136700.000 | 153.900   | 226.200   | 200.100   |
| X    |          | 200.400   | 175.900  | 15010.000 | 130900.000 | 132200.000 | 148.400   | 218.800   | 193.100   |
| σ    |          | 10.340    | 7.796    | 569.800   | 4187.000   | 3980.000   | 4.769     | 6.406     | 6.006     |
| %RSD |          | 5.160     | 4.433    | 3.797     | 3.198      | 3.010      | 3.215     | 2.928     | 3.110     |
| Run  | Time     | 65Cu      | 66Zn     | 68Zn      | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:00:28 | 190.400   | 900.900  | 907.200   | 137.300    | 78.200     | 81.930    | 0.000     | 230.600   |
| 2    | 16:01:11 | 190.300   | 914.100  | 923.600   | 139.400    | 77.800     | 83.200    | 0.000     | 234.000   |
| 3    | 16:01:54 | 199.900   | 956.500  | 970.300   | 143.900    | 81.570     | 85.350    | 0.000     | 240.200   |
| X    |          | 193.500   | 923.800  | 933.700   | 140.200    | 79.190     | 83.490    | 0.000     | 234.900   |
| σ    |          | 5.502     | 29.020   | 32.750    | 3.382      | 2.071      | 1.730     | 0.000     | 4.832     |
| %RSD |          | 2.844     | 3.142    | 3.508     | 2.413      | 2.615      | 2.072     | 0.000     | 2.057     |
| Run  | Time     | 89Y       | 95Mo     | 98Mo      | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:00:28 | 0.000     | 92.030   | 92.240    | 80.664%    | 95.770     | 96.300    | 85.370    | 85.480    |
| 2    | 16:01:11 | 0.000     | 93.560   | 93.710    | 81.159%    | 96.020     | 96.970    | 85.320    | 85.650    |
| 3    | 16:01:54 | 0.000     | 95.050   | 95.050    | 80.831%    | 96.680     | 97.340    | 86.510    | 85.780    |
| X    |          | 0.000     | 93.550   | 93.670    | 80.885%    | 96.160     | 96.870    | 85.730    | 85.640    |
| σ    |          | 0.000     | 1.512    | 1.408     | 0.252%     | 0.468      | 0.527     | 0.674     | 0.153     |
| %RSD |          | 0.000     | 1.616    | 1.503     | 0.311      | 0.487      | 0.544     | 0.786     | 0.179     |
| Run  | Time     | 115In     | 118Sn    | 121Sb     | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:00:28 | 83.900%   | 86.730   | 25.750    | 25.750     | 801.100    | 796.700   | 88.984%   | 87.959%   |
| 2    | 16:01:11 | 85.290%   | 86.550   | 26.290    | 26.390     | 811.200    | 802.200   | 91.372%   | 90.352%   |
| 3    | 16:01:54 | 85.905%   | 87.270   | 26.340    | 26.190     | 806.600    | 799.400   | 92.129%   | 90.987%   |
| X    |          | 85.032%   | 86.850   | 26.130    | 26.110     | 806.300    | 799.500   | 90.828%   | 89.766%   |
| σ    |          | 1.027%    | 0.375    | 0.325     | 0.327      | 5.026      | 2.753     | 1.642%    | 1.597%    |
| %RSD |          | 1.208     | 0.431    | 1.244     | 1.253      | 0.623      | 0.344     | 1.807     | 1.779     |
| Run  | Time     | 203Tl     | 205Tl    | 206Pb     | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       |           |           |
| 1    | 16:00:28 | 84.970    | 85.170   | 236.300   | 239.800    | 237.800    | 76.583%   |           |           |
| 2    | 16:01:11 | 86.850    | 86.550   | 240.100   | 243.300    | 241.100    | 78.607%   |           |           |
| 3    | 16:01:54 | 86.400    | 86.480   | 239.800   | 241.300    | 239.500    | 79.878%   |           |           |
| X    |          | 86.070    | 86.070   | 238.700   | 241.500    | 239.500    | 78.356%   |           |           |
| σ    |          | 0.978     | 0.775    | 2.130     | 1.788      | 1.686      | 1.662%    |           |           |
| %RSD |          | 1.137     | 0.900    | 0.892     | 0.740      | 0.704      | 2.121     |           |           |

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12/21/2012 4:04:04 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li       | 9Be       | 10B       | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb       | ppb       | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:04:46 | 73.802%   | 47.660    | 845.900   | 866.700    | 0.000      | 44850.000 | 61700.000 | 62290.000 |
| 2    | 16:05:29 | 73.110%   | 47.380    | 834.200   | 853.700    | 0.000      | 43600.000 | 59430.000 | 61750.000 |
| 3    | 16:06:12 | 70.708%   | 48.180    | 869.300   | 885.900    | 0.000      | 43640.000 | 60420.000 | 62010.000 |
| x    |          | 72.540%   | 47.740    | 849.800   | 868.800    | 0.000      | 44030.000 | 60520.000 | 62010.000 |
| σ    |          | 1.624%    | 0.405     | 17.890    | 16.200     | 0.000      | 711.500   | 1139.000  | 270.800   |
| %RSD |          | 2.239     | 0.849     | 2.105     | 1.865      | 0.000      | 1.616     | 1.881     | 0.437     |
| Run  | Time     | 27Al      | 28Si      | 37Cl      | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb       | ppb       | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:04:46 | 79820.000 | 11480.000 | 0.000     | 53630.000  | 87060.000  | 89430.000 | 79.928%   | 1509.000  |
| 2    | 16:05:29 | 78970.000 | 11300.000 | 0.000     | 53040.000  | 86960.000  | 89120.000 | 77.366%   | 1519.000  |
| 3    | 16:06:12 | 80370.000 | 11370.000 | 0.000     | 52840.000  | 86870.000  | 88870.000 | 76.923%   | 1526.000  |
| x    |          | 79720.000 | 11380.000 | 0.000     | 53170.000  | 86960.000  | 89140.000 | 78.072%   | 1518.000  |
| σ    |          | 703.800   | 88.710    | 0.000     | 411.400    | 98.220     | 279.100   | 1.623%    | 8.739     |
| %RSD |          | 0.883     | 0.779     | 0.000     | 0.774      | 0.113      | 0.313     | 2.078     | 0.576     |
| Run  | Time     | 51V       | 52Cr      | 55Mn      | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb       | ppb       | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:04:46 | 621.000   | 287.100   | 14790.000 | 132800.000 | 134000.000 | 534.100   | 591.800   | 334.600   |
| 2    | 16:05:29 | 624.600   | 289.500   | 15030.000 | 136200.000 | 137000.000 | 536.100   | 594.200   | 334.400   |
| 3    | 16:06:12 | 630.700   | 290.900   | 15000.000 | 135300.000 | 137100.000 | 536.500   | 594.200   | 335.100   |
| x    |          | 625.400   | 289.200   | 14940.000 | 134800.000 | 136100.000 | 535.600   | 593.400   | 334.700   |
| σ    |          | 4.902     | 1.886     | 131.300   | 1727.000   | 1750.000   | 1.271     | 1.389     | 0.345     |
| %RSD |          | 0.784     | 0.652     | 0.879     | 1.281      | 1.287      | 0.237     | 0.234     | 0.103     |
| Run  | Time     | 65Cu      | 66Zn      | 68Zn      | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb       | ppb       | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:04:46 | 334.100   | 1338.000  | 1349.000  | 96.650     | 14.700     | 17.660    | 0.000     | 1139.000  |
| 2    | 16:05:29 | 337.200   | 1353.000  | 1361.000  | 97.610     | 14.620     | 17.630    | 0.000     | 1150.000  |
| 3    | 16:06:12 | 338.400   | 1360.000  | 1371.000  | 98.210     | 14.690     | 17.520    | 0.000     | 1156.000  |
| x    |          | 336.500   | 1350.000  | 1360.000  | 97.490     | 14.670     | 17.600    | 0.000     | 1148.000  |
| σ    |          | 2.238     | 11.710    | 11.100    | 0.790      | 0.042      | 0.074     | 0.000     | 8.443     |
| %RSD |          | 0.665     | 0.867     | 0.816     | 0.810      | 0.288      | 0.420     | 0.000     | 0.735     |
| Run  | Time     | 89Y       | 95Mo      | 98Mo      | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb       | ppb       | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:04:46 | 0.000     | 962.900   | 960.800   | 73.576%    | 54.180     | 54.020    | 48.050    | 42.460    |
| 2    | 16:05:29 | 0.000     | 980.400   | 977.700   | 73.730%    | 54.600     | 54.720    | 48.550    | 43.090    |
| 3    | 16:06:12 | 0.000     | 981.700   | 986.300   | 73.384%    | 55.000     | 54.950    | 48.200    | 42.790    |
| x    |          | 0.000     | 975.000   | 975.000   | 73.563%    | 54.590     | 54.560    | 48.260    | 42.780    |
| σ    |          | 0.000     | 10.480    | 12.960    | 0.173%     | 0.410      | 0.485     | 0.256     | 0.315     |
| %RSD |          | 0.000     | 1.075     | 1.329     | 0.236      | 0.750      | 0.889     | 0.531     | 0.737     |
| Run  | Time     | 115In     | 118Sn     | 121Sb     | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb       | ppb       | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:04:46 | 78.540%   | 1832.000  | 411.900   | 414.900    | 2440.000   | 2419.000  | 84.460%   | 83.854%   |
| 2    | 16:05:29 | 78.783%   | 1847.000  | 421.700   | 421.600    | 2476.000   | 2448.000  | 85.680%   | 85.630%   |
| 3    | 16:06:12 | 78.906%   | 1855.000  | 423.600   | 423.700    | 2465.000   | 2444.000  | 87.441%   | 86.698%   |
| x    |          | 78.743%   | 1845.000  | 419.100   | 420.100    | 2460.000   | 2437.000  | 85.860%   | 85.394%   |
| σ    |          | 0.186%    | 11.540    | 6.266     | 4.586      | 18.220     | 15.770    | 1.499%    | 1.437%    |
| %RSD |          | 0.236     | 0.625     | 1.495     | 1.092      | 0.741      | 0.647     | 1.745     | 1.683     |
| Run  | Time     | 203Tl     | 205Tl     | 206Pb     | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb       | ppb       | ppb       | ppb        | ppb        | ppb       |           |           |
| 1    | 16:04:46 | 47.200    | 47.570    | 169.700   | 168.100    | 169.000    | 72.797%   |           |           |
| 2    | 16:05:29 | 47.720    | 47.810    | 171.300   | 170.300    | 170.900    | 74.599%   |           |           |
| 3    | 16:06:12 | 47.370    | 48.050    | 172.100   | 170.300    | 171.100    | 75.208%   |           |           |
| x    |          | 47.430    | 47.810    | 171.100   | 169.600    | 170.300    | 74.201%   |           |           |
| σ    |          | 0.265     | 0.237     | 1.226     | 1.235      | 1.158      | 1.254%    |           |           |
| %RSD |          | 0.558     | 0.496     | 0.717     | 0.729      | 0.680      | 1.690     |           |           |

240-17467-G-4-A 12/21/2012 4:11:18 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B       | 11B        | 13C        | 23Na       | 25Mg      | 26Mg      |
|------|----------|------------|----------|-----------|------------|------------|------------|-----------|-----------|
|      |          | ppb        | ppb      | ppb       | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 16:12:00 | 67.803%    | 11.180   | 68.030    | 68.210     | 0.000      | 2057.000   | 35890.000 | 36690.000 |
| 2    | 16:12:43 | 66.475%    | 11.310   | 65.030    | 66.500     | 0.000      | 2024.000   | 35440.000 | 36580.000 |
| 3    | 16:13:26 | 66.081%    | 11.330   | 66.730    | 67.310     | 0.000      | 2031.000   | 35870.000 | 37170.000 |
| X    |          | 66.786%    | 11.270   | 66.600    | 67.340     | 0.000      | 2037.000   | 35730.000 | 36820.000 |
| σ    |          | 0.902%     | 0.079    | 1.504     | 0.856      | 0.000      | 17.470     | 254.300   | 315.000   |
| %RSD |          | 1.351      | 0.704    | 2.259     | 1.271      | 0.000      | 0.857      | 0.712     | 0.856     |
| Run  | Time     | 27Al       | 28Si     | 37Cl      | 39K        | 43Ca       | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb       | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 16:12:00 | 104400.000 | 4680.000 | 0.000     | 7761.000   | 312200.000 | 323300.000 | 73.242%   | 875.500   |
| 2    | 16:12:43 | 104800.000 | 4606.000 | 0.000     | 7652.000   | 311400.000 | 328000.000 | 71.481%   | 889.800   |
| 3    | 16:13:26 | 105300.000 | 4680.000 | 0.000     | 7675.000   | 312400.000 | 324700.000 | 68.963%   | 892.200   |
| X    |          | 104800.000 | 4655.000 | 0.000     | 7696.000   | 312000.000 | 325300.000 | 71.229%   | 885.800   |
| σ    |          | 460.600    | 42.750   | 0.000     | 57.320     | 524.700    | 2408.000   | 2.151%    | 9.039     |
| %RSD |          | 0.440      | 0.918    | 0.000     | 0.745      | 0.168      | 0.740      | 3.019     | 1.020     |
| Run  | Time     | 51V        | 52Cr     | 55Mn      | 56Fe       | 57Fe       | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb       | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 16:12:00 | 99.710     | 135.300  | 27610.000 | 125300.000 | 125400.000 | 68.050     | 137.800   | 139.300   |
| 2    | 16:12:43 | 101.100    | 137.800  | 28050.000 | 126800.000 | 127900.000 | 68.830     | 139.500   | 138.900   |
| 3    | 16:13:26 | 101.800    | 139.300  | 28330.000 | 129400.000 | 129700.000 | 70.690     | 143.100   | 143.100   |
| X    |          | 100.900    | 137.400  | 28000.000 | 127100.000 | 127700.000 | 69.190     | 140.100   | 140.400   |
| σ    |          | 1.051      | 2.008    | 364.100   | 2060.000   | 2189.000   | 1.355      | 2.702     | 2.347     |
| %RSD |          | 1.042      | 1.461    | 1.301     | 1.620      | 1.715      | 1.958      | 1.928     | 1.671     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn      | 75As       | 78Se       | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb       | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 16:12:00 | 139.900    | 827.800  | 837.700   | 58.160     | 6.299      | 9.119      | 0.000     | 758.200   |
| 2    | 16:12:43 | 139.500    | 838.700  | 845.100   | 59.510     | 5.654      | 9.689      | 0.000     | 780.100   |
| 3    | 16:13:26 | 143.100    | 855.300  | 865.500   | 60.440     | 6.597      | 9.045      | 0.000     | 786.300   |
| X    |          | 140.800    | 840.600  | 849.400   | 59.370     | 6.184      | 9.285      | 0.000     | 774.900   |
| σ    |          | 1.997      | 13.860   | 14.410    | 1.145      | 0.482      | 0.352      | 0.000     | 14.780    |
| %RSD |          | 1.418      | 1.649    | 1.696     | 1.929      | 7.802      | 3.797      | 0.000     | 1.907     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo      | 103Rh      | 107Ag      | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb       | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 16:12:00 | 0.000      | 8.674    | 8.433     | 68.930%    | 14.750     | 14.550     | 5.351     | 4.902     |
| 2    | 16:12:43 | 0.000      | 8.423    | 8.187     | 69.157%    | 14.980     | 15.070     | 4.891     | 4.912     |
| 3    | 16:13:26 | 0.000      | 7.977    | 8.144     | 69.406%    | 14.980     | 14.850     | 4.772     | 4.813     |
| X    |          | 0.000      | 8.358    | 8.255     | 69.164%    | 14.900     | 14.830     | 5.005     | 4.876     |
| σ    |          | 0.000      | 0.353    | 0.156     | 0.238%     | 0.133      | 0.265      | 0.306     | 0.054     |
| %RSD |          | 0.000      | 4.228    | 1.892     | 0.345      | 0.895      | 1.788      | 6.110     | 1.117     |
| Run  | Time     | 115In      | 118Sn    | 121Sb     | 123Sb      | 135Ba      | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb       | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 16:12:00 | 73.814%    | 19.660   | 3.143     | 3.244      | 850.300    | 847.100    | 80.234%   | 79.554%   |
| 2    | 16:12:43 | 75.167%    | 17.920   | 2.813     | 2.820      | 871.700    | 857.800    | 82.305%   | 82.026%   |
| 3    | 16:13:26 | 75.650%    | 17.340   | 2.567     | 2.638      | 867.800    | 856.900    | 83.504%   | 83.163%   |
| X    |          | 74.877%    | 18.300   | 2.841     | 2.901      | 863.300    | 854.000    | 82.015%   | 81.581%   |
| σ    |          | 0.952%     | 1.206    | 0.289     | 0.311      | 11.380     | 5.936      | 1.654%    | 1.845%    |
| %RSD |          | 1.271      | 6.590    | 10.170    | 10.720     | 1.318      | 0.695      | 2.017     | 2.262     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb     | 207Pb      | 208Pb      | 209Bi      |           |           |
|      |          | ppb        | ppb      | ppb       | ppb        | ppb        | ppb        |           |           |
| 1    | 16:12:00 | 0.982      | 1.005    | 206.900   | 204.600    | 205.100    | 71.303%    |           |           |
| 2    | 16:12:43 | 1.014      | 1.017    | 209.800   | 209.300    | 208.900    | 73.449%    |           |           |
| 3    | 16:13:26 | 1.038      | 1.011    | 213.200   | 209.400    | 210.600    | 73.769%    |           |           |
| X    |          | 1.011      | 1.011    | 210.000   | 207.700    | 208.200    | 72.840%    |           |           |
| σ    |          | 0.028      | 0.006    | 3.134     | 2.752      | 2.833      | 1.341%     |           |           |
| %RSD |          | 2.811      | 0.593    | 1.493     | 1.325      | 1.361      | 1.841      |           |           |

240-17602-F-15-A 12/21/2012 4:15:37 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li       | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|-----------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:16:19 | 80.622%   | 3.057    | 25.470   | 26.960     | 0.000      | 501.800   | 24030.000 | 24580.000 |
| 2    | 16:17:02 | 81.008%   | 3.154    | 26.470   | 27.030     | 0.000      | 505.500   | 24610.000 | 25020.000 |
| 3    | 16:17:45 | 79.775%   | 3.179    | 25.720   | 26.790     | 0.000      | 500.300   | 24110.000 | 24880.000 |
| x    |          | 80.468%   | 3.130    | 25.890   | 26.930     | 0.000      | 502.500   | 24250.000 | 24830.000 |
| σ    |          | 0.631%    | 0.064    | 0.523    | 0.124      | 0.000      | 2.701     | 311.400   | 223.500   |
| %RSD |          | 0.784     | 2.059    | 2.021    | 0.461      | 0.000      | 0.537     | 1.284     | 0.900     |
| Run  | Time     | 27Al      | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:16:19 | 54030.000 | 1626.000 | 0.000    | 8497.000   | 10740.000  | 10380.000 | 97.178%   | 437.700   |
| 2    | 16:17:02 | 54050.000 | 1628.000 | 0.000    | 8760.000   | 11120.000  | 10590.000 | 94.969%   | 433.500   |
| 3    | 16:17:45 | 54160.000 | 1636.000 | 0.000    | 8702.000   | 10900.000  | 10520.000 | 94.254%   | 441.900   |
| x    |          | 54080.000 | 1630.000 | 0.000    | 8653.000   | 10920.000  | 10500.000 | 95.467%   | 437.700   |
| σ    |          | 74.130    | 5.181    | 0.000    | 137.900    | 192.300    | 108.100   | 1.524%    | 4.216     |
| %RSD |          | 0.137     | 0.318    | 0.000    | 1.593      | 1.761      | 1.030     | 1.597     | 0.963     |
| Run  | Time     | 51V       | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:16:19 | 91.540    | 85.240   | 1842.000 | 164400.000 | 167200.000 | 72.270    | 175.400   | 215.300   |
| 2    | 16:17:02 | 94.150    | 87.520   | 1865.000 | 166700.000 | 170800.000 | 73.710    | 176.000   | 219.700   |
| 3    | 16:17:45 | 97.280    | 87.960   | 1852.000 | 167500.000 | 168500.000 | 72.280    | 174.600   | 218.200   |
| x    |          | 94.320    | 86.910   | 1853.000 | 166200.000 | 168800.000 | 72.750    | 175.300   | 217.700   |
| σ    |          | 2.873     | 1.460    | 11.520   | 1583.000   | 1817.000   | 0.832     | 0.696     | 2.236     |
| %RSD |          | 3.046     | 1.680    | 0.622    | 0.953      | 1.076      | 1.143     | 0.397     | 1.027     |
| Run  | Time     | 65Cu      | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:16:19 | 214.300   | 548.500  | 552.400  | 112.900    | 2.242      | 5.225     | 0.000     | 53.930    |
| 2    | 16:17:02 | 218.800   | 561.300  | 564.900  | 115.700    | 2.149      | 5.877     | 0.000     | 55.500    |
| 3    | 16:17:45 | 218.500   | 561.600  | 565.200  | 116.400    | 2.084      | 5.462     | 0.000     | 54.920    |
| x    |          | 217.200   | 557.100  | 560.900  | 115.000    | 2.158      | 5.521     | 0.000     | 54.780    |
| σ    |          | 2.564     | 7.500    | 7.293    | 1.823      | 0.080      | 0.330     | 0.000     | 0.790     |
| %RSD |          | 1.180     | 1.346    | 1.300    | 1.585      | 3.684      | 5.972     | 0.000     | 1.443     |
| Run  | Time     | 89Y       | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:16:19 | 0.000     | 7.729    | 7.730    | 83.515%    | 0.271      | 0.220     | 1.891     | 1.546     |
| 2    | 16:17:02 | 0.000     | 7.724    | 7.839    | 83.922%    | 0.303      | 0.226     | 2.097     | 1.689     |
| 3    | 16:17:45 | 0.000     | 7.700    | 7.724    | 83.713%    | 0.312      | 0.235     | 1.883     | 1.582     |
| x    |          | 0.000     | 7.718    | 7.764    | 83.717%    | 0.296      | 0.227     | 1.957     | 1.606     |
| σ    |          | 0.000     | 0.015    | 0.065    | 0.204%     | 0.022      | 0.007     | 0.122     | 0.074     |
| %RSD |          | 0.000     | 0.200    | 0.831    | 0.243      | 7.301      | 3.266     | 6.213     | 4.620     |
| Run  | Time     | 115In     | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:16:19 | 85.621%   | 9.139    | 0.934    | 0.915      | 242.600    | 241.200   | 92.530%   | 91.389%   |
| 2    | 16:17:02 | 87.233%   | 8.550    | 0.826    | 0.827      | 242.300    | 241.700   | 95.442%   | 93.567%   |
| 3    | 16:17:45 | 87.538%   | 8.402    | 0.709    | 0.708      | 240.800    | 240.500   | 95.084%   | 93.960%   |
| x    |          | 86.797%   | 8.697    | 0.823    | 0.817      | 241.900    | 241.100   | 94.352%   | 92.972%   |
| σ    |          | 1.030%    | 0.390    | 0.112    | 0.104      | 0.944      | 0.590     | 1.588%    | 1.385%    |
| %RSD |          | 1.187     | 4.483    | 13.640   | 12.730     | 0.390      | 0.245     | 1.683     | 1.490     |
| Run  | Time     | 203Tl     | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 16:16:19 | 1.166     | 1.161    | 122.700  | 123.100    | 123.000    | 80.081%   |           |           |
| 2    | 16:17:02 | 1.193     | 1.172    | 124.700  | 123.600    | 124.600    | 81.769%   |           |           |
| 3    | 16:17:45 | 1.209     | 1.215    | 123.600  | 123.800    | 123.800    | 82.205%   |           |           |
| x    |          | 1.189     | 1.183    | 123.700  | 123.500    | 123.800    | 81.352%   |           |           |
| σ    |          | 0.022     | 0.029    | 1.018    | 0.367      | 0.808      | 1.122%    |           |           |
| %RSD |          | 1.837     | 2.417    | 0.823    | 0.297      | 0.652      | 1.379     |           |           |



240-17669-C-8-A

12/21/2012 4:19:55 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li       | 9Be      | 10B     | 11B       | 13C       | 23Na     | 25Mg     | 26Mg     |
|------|----------|-----------|----------|---------|-----------|-----------|----------|----------|----------|
|      |          | ppb       | ppb      | ppb     | ppb       | ppb       | ppb      | ppb      | ppb      |
| 1    | 16:20:38 | 88.308%   | 0.611    | 9.292   | 8.984     | 0.000     | 109.100  | 1203.000 | 1241.000 |
| 2    | 16:21:21 | 85.745%   | 0.672    | 9.434   | 9.322     | 0.000     | 110.900  | 1224.000 | 1273.000 |
| 3    | 16:22:04 | 82.056%   | 0.660    | 9.692   | 8.967     | 0.000     | 112.900  | 1244.000 | 1299.000 |
| X    |          | 85.370%   | 0.648    | 9.472   | 9.091     | 0.000     | 111.000  | 1224.000 | 1271.000 |
| σ    |          | 3.142%    | 0.032    | 0.203   | 0.200     | 0.000     | 1.914    | 20.500   | 28.610   |
| %RSD |          | 3.681     | 5.011    | 2.141   | 2.203     | 0.000     | 1.725    | 1.675    | 2.251    |
| Run  | Time     | 27Al      | 28Si     | 37Cl    | 39K       | 43Ca      | 44Ca     | 45Sc     | 47Ti     |
|      |          | ppb       | ppb      | ppb     | ppb       | ppb       | ppb      | ppb      | ppb      |
| 1    | 16:20:38 | 11350.000 | 1896.000 | 0.000   | 2390.000  | 1840.000  | 1809.000 | 99.332%  | 97.460   |
| 2    | 16:21:21 | 11520.000 | 1928.000 | 0.000   | 2387.000  | 1902.000  | 1830.000 | 96.170%  | 96.640   |
| 3    | 16:22:04 | 11700.000 | 1963.000 | 0.000   | 2391.000  | 1927.000  | 1818.000 | 95.619%  | 100.400  |
| X    |          | 11520.000 | 1929.000 | 0.000   | 2389.000  | 1890.000  | 1819.000 | 97.040%  | 98.150   |
| σ    |          | 177.300   | 33.370   | 0.000   | 1.883     | 44.510    | 10.810   | 2.004%   | 1.949    |
| %RSD |          | 1.539     | 1.730    | 0.000   | 0.079     | 2.355     | 0.594    | 2.065    | 1.985    |
| Run  | Time     | 51V       | 52Cr     | 55Mn    | 56Fe      | 57Fe      | 59Co     | 60Ni     | 63Cu     |
|      |          | ppb       | ppb      | ppb     | ppb       | ppb       | ppb      | ppb      | ppb      |
| 1    | 16:20:38 | 17.880    | 32.790   | 103.000 | 11000.000 | 10270.000 | 4.156    | 13.530   | 18.440   |
| 2    | 16:21:21 | 17.670    | 33.550   | 105.500 | 11250.000 | 10500.000 | 4.181    | 13.940   | 19.180   |
| 3    | 16:22:04 | 20.010    | 33.540   | 105.400 | 11140.000 | 10520.000 | 4.261    | 13.570   | 18.720   |
| X    |          | 18.520    | 33.290   | 104.600 | 11130.000 | 10430.000 | 4.199    | 13.680   | 18.780   |
| σ    |          | 1.293     | 0.434    | 1.426   | 123.600   | 137.300   | 0.055    | 0.231    | 0.377    |
| %RSD |          | 6.981     | 1.305    | 1.363   | 1.110     | 1.317     | 1.313    | 1.685    | 2.007    |
| Run  | Time     | 65Cu      | 66Zn     | 68Zn    | 75As      | 78Se      | 82Se     | 83Kr     | 88Sr     |
|      |          | ppb       | ppb      | ppb     | ppb       | ppb       | ppb      | ppb      | ppb      |
| 1    | 16:20:38 | 18.380    | 36.060   | 36.230  | 5.074     | -0.111    | 0.861    | 0.000    | 12.510   |
| 2    | 16:21:21 | 19.110    | 37.150   | 37.720  | 4.444     | -0.216    | 0.748    | 0.000    | 12.610   |
| 3    | 16:22:04 | 18.970    | 36.950   | 36.940  | 4.097     | -0.094    | 0.696    | 0.000    | 12.590   |
| X    |          | 18.820    | 36.720   | 36.960  | 4.539     | -0.140    | 0.768    | 0.000    | 12.570   |
| σ    |          | 0.385     | 0.579    | 0.744   | 0.495     | 0.066     | 0.084    | 0.000    | 0.052    |
| %RSD |          | 2.045     | 1.576    | 2.013   | 10.910    | 47.300    | 10.970   | 0.000    | 0.416    |
| Run  | Time     | 89Y       | 95Mo     | 98Mo    | 103Rh     | 107Ag     | 109Ag    | 111Cd    | 114Cd    |
|      |          | ppb       | ppb      | ppb     | ppb       | ppb       | ppb      | ppb      | ppb      |
| 1    | 16:20:38 | 100.548%  | 3.629    | 3.893   | 89.374%   | 0.070     | 0.053    | 0.323    | 0.238    |
| 2    | 16:21:21 | 100.341%  | 3.820    | 3.930   | 89.616%   | 0.082     | 0.064    | 0.329    | 0.177    |
| 3    | 16:22:04 | 101.041%  | 3.922    | 3.982   | 89.416%   | 0.089     | 0.051    | 0.190    | 0.082    |
| X    |          | 100.644%  | 3.790    | 3.935   | 89.469%   | 0.080     | 0.056    | 0.281    | 0.166    |
| σ    |          | 0.360%    | 0.148    | 0.045   | 0.129%    | 0.010     | 0.007    | 0.079    | 0.078    |
| %RSD |          | 0.358     | 3.918    | 1.133   | 0.144     | 12.350    | 12.090   | 28.070   | 47.320   |
| Run  | Time     | 115In     | 118Sn    | 121Sb   | 123Sb     | 135Ba     | 137Ba    | 159Tb    | 165Ho    |
|      |          | ppb       | ppb      | ppb     | ppb       | ppb       | ppb      | ppb      | ppb      |
| 1    | 16:20:38 | 89.463%   | 13.780   | 0.296   | 0.266     | 72.290    | 72.950   | 94.274%  | 94.430%  |
| 2    | 16:21:21 | 90.740%   | 13.960   | 0.254   | 0.221     | 74.100    | 73.540   | 97.101%  | 96.682%  |
| 3    | 16:22:04 | 90.900%   | 14.140   | 0.244   | 0.236     | 73.470    | 73.170   | 97.230%  | 97.462%  |
| X    |          | 90.368%   | 13.960   | 0.265   | 0.241     | 73.290    | 73.220   | 96.201%  | 96.191%  |
| σ    |          | 0.788%    | 0.181    | 0.028   | 0.023     | 0.922     | 0.296    | 1.671%   | 1.574%   |
| %RSD |          | 0.872     | 1.296    | 10.480  | 9.596     | 1.258     | 0.405    | 1.737    | 1.636    |
| Run  | Time     | 203Tl     | 205Tl    | 206Pb   | 207Pb     | 208Pb     | 209Bi    |          |          |
|      |          | ppb       | ppb      | ppb     | ppb       | ppb       | ppb      |          |          |
| 1    | 16:20:38 | 0.234     | 0.210    | 44.680  | 44.890    | 44.770    | 88.461%  |          |          |
| 2    | 16:21:21 | 0.219     | 0.218    | 45.590  | 45.590    | 45.780    | 90.484%  |          |          |
| 3    | 16:22:04 | 0.197     | 0.214    | 45.740  | 45.580    | 45.580    | 91.644%  |          |          |
| X    |          | 0.217     | 0.214    | 45.340  | 45.360    | 45.380    | 90.196%  |          |          |
| σ    |          | 0.019     | 0.004    | 0.575   | 0.400     | 0.537     | 1.611%   |          |          |
| %RSD |          | 8.744     | 1.914    | 1.267   | 0.882     | 1.184     | 1.786    |          |          |

CCV 664806 12/21/2012 4:27:09 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B     | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|---------|----------|---------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 16:27:52 | 83.711% | 96.230   | 95.480  | 92.060    | 0.000     | 47860.000 | 48360.000 | 48110.000 |
| 2    | 16:28:35 | 82.350% | 95.930   | 91.770  | 92.620    | 0.000     | 47810.000 | 48450.000 | 47970.000 |
| 3    | 16:29:18 | 78.361% | 97.140   | 97.050  | 96.240    | 0.000     | 49040.000 | 48900.000 | 48420.000 |
| X    |          | 81.474% | 96.434%  | 94.766% | 93.640%   | 0.000     | 96.476%   | 97.135%   | 96.337%   |
| σ    |          | 2.781%  | n/a      | n/a     | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 3.413   | 0.657    | 2.859   | 2.420     | 0.000     | 1.443     | 0.601     | 0.480     |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 16:27:52 | 462.100 | 5111.000 | 0.000   | 45950.000 | 44690.000 | 46460.000 | 101.841%  | 94.790    |
| 2    | 16:28:35 | 460.100 | 5164.000 | 0.000   | 47670.000 | 45670.000 | 46800.000 | 99.941%   | 93.460    |
| 3    | 16:29:18 | 463.100 | 5187.000 | 0.000   | 47900.000 | 45940.000 | 47070.000 | 98.376%   | 96.140    |
| X    |          | 92.351% | 103.080% | 0.000   | 94.349%   | 90.864%   | 93.553%   | 100.053%  | 94.796%   |
| σ    |          | n/a     | n/a      | 0.000   | n/a       | n/a       | n/a       | 1.735%    | n/a       |
| %RSD |          | 0.328   | 0.759    | 0.000   | 2.260     | 1.446     | 0.659     | 1.734     | 1.414     |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 16:27:52 | 91.130  | 91.910   | 471.900 | 23490.000 | 23570.000 | 93.570    | 94.890    | 96.170    |
| 2    | 16:28:35 | 91.270  | 92.350   | 475.300 | 23740.000 | 23840.000 | 94.140    | 94.800    | 96.530    |
| 3    | 16:29:18 | 92.590  | 93.540   | 476.600 | 23830.000 | 24010.000 | 94.630    | 95.700    | 96.090    |
| X    |          | 91.664% | 92.597%  | 94.918% | 94.745%   | 95.219%   | 94.114%   | 95.131%   | 96.263%   |
| σ    |          | n/a     | n/a      | n/a     | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 0.881   | 0.909    | 0.516   | 0.751     | 0.914     | 0.565     | 0.523     | 0.241     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 16:27:52 | 96.680  | 94.910   | 94.920  | 97.420    | 99.570    | 99.070    | 0.000     | 94.600    |
| 2    | 16:28:35 | 96.440  | 96.760   | 97.370  | 98.510    | 99.640    | 100.100   | 0.000     | 95.860    |
| 3    | 16:29:18 | 98.130  | 96.750   | 97.210  | 98.500    | 99.900    | 102.300   | 0.000     | 95.140    |
| X    |          | 97.082% | 96.141%  | 96.500% | 98.142%   | 99.705%   | 100.518%  | 0.000     | 95.198%   |
| σ    |          | n/a     | n/a      | n/a     | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 0.942   | 1.113    | 1.422   | 0.636     | 0.174     | 1.661     | 0.000     | 0.662     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 16:27:52 | 85.595% | 96.390   | 96.310  | 82.572%   | 96.060    | 95.900    | 96.020    | 96.780    |
| 2    | 16:28:35 | 87.440% | 98.650   | 98.980  | 83.577%   | 96.530    | 97.250    | 96.410    | 96.710    |
| 3    | 16:29:18 | 87.278% | 99.660   | 100.900 | 84.269%   | 95.990    | 96.830    | 97.210    | 97.380    |
| X    |          | 86.771% | 98.236%  | 98.739% | 83.472%   | 96.192%   | 96.659%   | 96.546%   | 96.960%   |
| σ    |          | 1.022%  | n/a      | n/a     | 0.853%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 1.177   | 1.706    | 2.346   | 1.022     | 0.305     | 0.712     | 0.627     | 0.378     |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 16:27:52 | 83.424% | 93.490   | 94.190  | 94.600    | 93.880    | 95.120    | 83.623%   | 83.555%   |
| 2    | 16:28:35 | 84.946% | 95.330   | 95.900  | 95.540    | 95.820    | 94.790    | 87.027%   | 87.057%   |
| 3    | 16:29:18 | 86.313% | 94.200   | 94.940  | 94.490    | 95.770    | 93.930    | 88.444%   | 88.389%   |
| X    |          | 84.894% | 94.340%  | 95.012% | 94.874%   | 95.158%   | 94.615%   | 86.365%   | 86.334%   |
| σ    |          | 1.445%  | n/a      | n/a     | n/a       | n/a       | n/a       | 2.478%    | 2.497%    |
| %RSD |          | 1.703   | 0.981    | 0.900   | 0.607     | 1.159     | 0.651     | 2.869     | 2.892     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       |           |           |
| 1    | 16:27:52 | 91.810  | 91.570   | 91.320  | 91.260    | 91.270    | 79.420%   |           |           |
| 2    | 16:28:35 | 93.920  | 94.410   | 94.190  | 93.940    | 94.060    | 80.973%   |           |           |
| 3    | 16:29:18 | 94.360  | 94.050   | 93.100  | 94.500    | 94.120    | 82.375%   |           |           |
| X    |          | 93.362% | 93.341%  | 92.871% | 93.233%   | 93.148%   | 80.923%   |           |           |
| σ    |          | n/a     | n/a      | n/a     | n/a       | n/a       | 1.478%    |           |           |
| %RSD |          | 1.463   | 1.656    | 1.558   | 1.856     | 1.750     | 1.827     |           |           |

CCB2 12/21/2012 4:35:08 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be     | 10B    | 11B     | 13C     | 23Na    | 25Mg     | 26Mg    |
|------|----------|---------|---------|--------|---------|---------|---------|----------|---------|
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb     |
| 1    | 16:35:51 | 87.102% | -0.004  | 1.449  | 1.609   | 0.000   | 2.308   | 1.593    | 1.775   |
| 2    | 16:36:34 | 86.572% | 0.007   | 1.470  | 1.276   | 0.000   | 2.096   | 1.601    | 1.930   |
| 3    | 16:37:17 | 86.225% | -0.007  | 1.071  | 1.166   | 0.000   | 1.826   | 1.552    | 1.863   |
| X    |          | 86.633% | -0.002  | 1.330  | 1.350   | 0.000   | 2.077   | 1.582    | 1.856   |
| σ    |          | 0.442%  | 0.007   | 0.225  | 0.231   | 0.000   | 0.241   | 0.026    | 0.078   |
| %RSD |          | 0.510   | 460.500 | 16.900 | 17.080  | 0.000   | 11.620  | 1.649    | 4.186   |
| Run  | Time     | 27Al    | 28Si    | 37Cl   | 39K     | 43Ca    | 44Ca    | 45Sc     | 47Ti    |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb     |
| 1    | 16:35:51 | 0.703   | 1.787   | 0.000  | 3.543   | -1.223  | 1.893   | 109.138% | 0.003   |
| 2    | 16:36:34 | 0.576   | 1.355   | 0.000  | 1.861   | 0.700   | 2.037   | 106.919% | -0.025  |
| 3    | 16:37:17 | 0.563   | 1.295   | 0.000  | 1.272   | -1.038  | 0.805   | 108.392% | -0.048  |
| X    |          | 0.614   | 1.479   | 0.000  | 2.225   | -0.521  | 1.578   | 108.150% | -0.023  |
| σ    |          | 0.077   | 0.269   | 0.000  | 1.178   | 1.061   | 0.674   | 1.129%   | 0.026   |
| %RSD |          | 12.580  | 18.160  | 0.000  | 52.950  | 203.800 | 42.680  | 1.044    | 109.400 |
| Run  | Time     | 51V     | 52Cr    | 55Mn   | 56Fe    | 57Fe    | 59Co    | 60Ni     | 63Cu    |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb     |
| 1    | 16:35:51 | 0.091   | 0.022   | 0.540  | 7.212   | 11.250  | -0.006  | -0.006   | -0.010  |
| 2    | 16:36:34 | -0.036  | -0.002  | 0.536  | 5.930   | 8.117   | -0.004  | -0.011   | -0.007  |
| 3    | 16:37:17 | -0.024  | -0.004  | 0.532  | 4.028   | 6.954   | -0.008  | -0.006   | -0.016  |
| X    |          | 0.010   | 0.005   | 0.536  | 5.723   | 8.773   | -0.006  | -0.008   | -0.011  |
| σ    |          | 0.070   | 0.014   | 0.004  | 1.602   | 2.221   | 0.002   | 0.003    | 0.004   |
| %RSD |          | 688.300 | 263.100 | 0.710  | 27.990  | 25.310  | 34.740  | 42.430   | 39.840  |
| Run  | Time     | 65Cu    | 66Zn    | 68Zn   | 75As    | 78Se    | 82Se    | 83Kr     | 88Sr    |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb     |
| 1    | 16:35:51 | 0.009   | 0.123   | 0.094  | -0.081  | 0.196   | 0.095   | 0.000    | 0.014   |
| 2    | 16:36:34 | 0.011   | 0.222   | 0.249  | -0.001  | 0.088   | 0.104   | 0.000    | 0.013   |
| 3    | 16:37:17 | -0.006  | 0.347   | 0.222  | 0.029   | 0.089   | 0.273   | 0.000    | 0.008   |
| X    |          | 0.005   | 0.231   | 0.188  | -0.018  | 0.124   | 0.157   | 0.000    | 0.012   |
| σ    |          | 0.009   | 0.112   | 0.083  | 0.057   | 0.062   | 0.100   | 0.000    | 0.004   |
| %RSD |          | 185.700 | 48.600  | 44.030 | 316.300 | 49.790  | 63.730  | 0.000    | 30.410  |
| Run  | Time     | 89Y     | 95Mo    | 98Mo   | 103Rh   | 107Ag   | 109Ag   | 111Cd    | 114Cd   |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb     |
| 1    | 16:35:51 | 91.742% | 0.320   | 0.324  | 94.424% | -0.006  | -0.000  | 0.068    | 0.052   |
| 2    | 16:36:34 | 93.603% | 0.237   | 0.284  | 95.444% | -0.002  | -0.000  | 0.022    | 0.032   |
| 3    | 16:37:17 | 94.410% | 0.237   | 0.196  | 96.939% | -0.005  | -0.004  | 0.067    | 0.053   |
| X    |          | 93.252% | 0.264   | 0.268  | 95.602% | -0.004  | -0.001  | 0.052    | 0.046   |
| σ    |          | 1.368%  | 0.048   | 0.065  | 1.265%  | 0.002   | 0.002   | 0.026    | 0.012   |
| %RSD |          | 1.467   | 18.040  | 24.460 | 1.323   | 42.580  | 164.700 | 50.260   | 25.550  |
| Run  | Time     | 115In   | 118Sn   | 121Sb  | 123Sb   | 135Ba   | 137Ba   | 159Tb    | 165Ho   |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb     |
| 1    | 16:35:51 | 90.104% | -0.004  | -0.057 | -0.030  | 0.017   | -0.006  | 88.156%  | 88.076% |
| 2    | 16:36:34 | 92.340% | -0.091  | -0.030 | -0.020  | 0.008   | 0.002   | 91.300%  | 90.952% |
| 3    | 16:37:17 | 94.422% | -0.117  | -0.031 | -0.016  | 0.000   | 0.006   | 93.558%  | 93.071% |
| X    |          | 92.289% | -0.071  | -0.039 | -0.022  | 0.008   | 0.001   | 91.005%  | 90.700% |
| σ    |          | 2.159%  | 0.059   | 0.015  | 0.007   | 0.008   | 0.006   | 2.713%   | 2.507%  |
| %RSD |          | 2.340   | 83.680  | 38.640 | 32.240  | 96.460  | 651.900 | 2.981    | 2.764   |
| Run  | Time     | 203Tl   | 205Tl   | 206Pb  | 207Pb   | 208Pb   | 209Bi   |          |         |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     |          |         |
| 1    | 16:35:51 | 0.010   | 0.019   | 0.079  | 0.057   | 0.064   | 92.264% |          |         |
| 2    | 16:36:34 | 0.008   | 0.015   | 0.052  | 0.057   | 0.052   | 95.013% |          |         |
| 3    | 16:37:17 | 0.014   | 0.015   | 0.040  | 0.054   | 0.047   | 96.240% |          |         |
| X    |          | 0.011   | 0.016   | 0.057  | 0.056   | 0.054   | 94.506% |          |         |
| σ    |          | 0.003   | 0.002   | 0.020  | 0.002   | 0.009   | 2.036%  |          |         |
| %RSD |          | 26.940  | 14.200  | 35.360 | 3.377   | 16.030  | 2.154   |          |         |

240-17768-F-9-A

12/21/2012 4:39:29 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:40:12 | 73.036%    | 5.959    | 25.090   | 25.000     | 0.000      | 399.400   | 28950.000 | 29570.000 |
| 2    | 16:40:55 | 72.791%    | 6.217    | 25.520   | 24.920     | 0.000      | 381.500   | 28770.000 | 29510.000 |
| 3    | 16:41:38 | 71.901%    | 6.232    | 24.900   | 25.910     | 0.000      | 386.900   | 29860.000 | 30590.000 |
| X    |          | 72.576%    | 6.136    | 25.170   | 25.280     | 0.000      | 389.300   | 29190.000 | 29890.000 |
| σ    |          | 0.597%     | 0.153    | 0.315    | 0.546      | 0.000      | 9.191     | 587.400   | 608.100   |
| %RSD |          | 0.823      | 2.498    | 1.251    | 2.160      | 0.000      | 2.361     | 2.012     | 2.034     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:40:12 | 142800.000 | 1775.000 | 0.000    | 10250.000  | 18010.000  | 18310.000 | 95.515%   | 693.200   |
| 2    | 16:40:55 | 141500.000 | 1795.000 | 0.000    | 10130.000  | 17910.000  | 18390.000 | 91.906%   | 706.800   |
| 3    | 16:41:38 | 149700.000 | 1893.000 | 0.000    | 10910.000  | 19490.000  | 19850.000 | 84.689%   | 767.800   |
| X    |          | 144700.000 | 1821.000 | 0.000    | 10430.000  | 18470.000  | 18850.000 | 90.704%   | 722.600   |
| σ    |          | 4363.000   | 63.030   | 0.000    | 422.200    | 887.400    | 866.500   | 5.512%    | 39.750    |
| %RSD |          | 3.016      | 3.461    | 0.000    | 4.047      | 4.804      | 4.597     | 6.077     | 5.501     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:40:12 | 227.500    | 199.400  | 3808.000 | 266800.000 | 275700.000 | 94.220    | 209.400   | 208.700   |
| 2    | 16:40:55 | 232.400    | 204.200  | 3877.000 | 271500.000 | 280900.000 | 96.140    | 211.600   | 212.200   |
| 3    | 16:41:38 | 250.600    | 218.600  | 4091.000 | 287400.000 | 297200.000 | 101.400   | 222.600   | 222.600   |
| X    |          | 236.800    | 207.400  | 3925.000 | 275200.000 | 284600.000 | 97.240    | 214.500   | 214.500   |
| σ    |          | 12.160     | 9.985    | 147.300  | 10790.000  | 11250.000  | 3.695     | 7.103     | 7.244     |
| %RSD |          | 5.136      | 4.815    | 3.752    | 3.921      | 3.954      | 3.800     | 3.311     | 3.377     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:40:12 | 210.900    | 631.700  | 641.600  | 170.400    | 4.809      | 7.999     | 0.000     | 109.600   |
| 2    | 16:40:55 | 212.300    | 644.100  | 651.000  | 173.200    | 5.255      | 8.062     | 0.000     | 111.600   |
| 3    | 16:41:38 | 223.000    | 677.800  | 685.100  | 179.200    | 5.580      | 8.164     | 0.000     | 113.700   |
| X    |          | 215.400    | 651.200  | 659.200  | 174.300    | 5.215      | 8.075     | 0.000     | 111.600   |
| σ    |          | 6.603      | 23.860   | 22.870   | 4.496      | 0.387      | 0.083     | 0.000     | 2.040     |
| %RSD |          | 3.065      | 3.664    | 3.470    | 2.580      | 7.422      | 1.033     | 0.000     | 1.828     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:40:12 | 0.000      | 12.240   | 12.340   | 78.253%    | 0.338      | 0.317     | 1.660     | 1.425     |
| 2    | 16:40:55 | 0.000      | 12.770   | 12.360   | 78.822%    | 0.352      | 0.300     | 1.623     | 1.370     |
| 3    | 16:41:38 | 0.000      | 13.020   | 12.470   | 78.594%    | 0.325      | 0.295     | 1.899     | 1.591     |
| X    |          | 0.000      | 12.680   | 12.390   | 78.556%    | 0.338      | 0.304     | 1.727     | 1.462     |
| σ    |          | 0.000      | 0.402    | 0.068    | 0.286%     | 0.014      | 0.011     | 0.149     | 0.115     |
| %RSD |          | 0.000      | 3.169    | 0.548    | 0.364      | 4.018      | 3.697     | 8.649     | 7.840     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:40:12 | 81.835%    | 8.626    | 1.189    | 1.223      | 616.200    | 610.600   | 85.938%   | 84.498%   |
| 2    | 16:40:55 | 82.787%    | 8.623    | 1.230    | 1.204      | 617.300    | 613.700   | 88.213%   | 86.705%   |
| 3    | 16:41:38 | 82.412%    | 8.327    | 1.214    | 1.135      | 616.200    | 611.900   | 88.370%   | 86.817%   |
| X    |          | 82.345%    | 8.525    | 1.211    | 1.187      | 616.600    | 612.100   | 87.507%   | 86.007%   |
| σ    |          | 0.480%     | 0.172    | 0.020    | 0.046      | 0.644      | 1.535     | 1.361%    | 1.308%    |
| %RSD |          | 0.582      | 2.014    | 1.680    | 3.886      | 0.105      | 0.251     | 1.555     | 1.521     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 16:40:12 | 1.738      | 1.726    | 163.700  | 160.900    | 161.800    | 76.267%   |           |           |
| 2    | 16:40:55 | 1.761      | 1.756    | 165.200  | 163.800    | 164.400    | 77.937%   |           |           |
| 3    | 16:41:38 | 1.821      | 1.779    | 166.400  | 162.900    | 163.700    | 78.331%   |           |           |
| X    |          | 1.774      | 1.754    | 165.100  | 162.500    | 163.300    | 77.512%   |           |           |
| σ    |          | 0.043      | 0.026    | 1.332    | 1.502      | 1.360      | 1.096%    |           |           |
| %RSD |          | 2.422      | 1.505    | 0.807    | 0.924      | 0.833      | 1.414     |           |           |

240-17768-F-10-A 12/21/2012 4:43:47 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li       | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|-----------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:44:30 | 83.808%   | 3.101    | 15.800   | 15.770     | 0.000      | 236.000   | 14410.000 | 14710.000 |
| 2    | 16:45:13 | 81.081%   | 3.179    | 15.970   | 16.340     | 0.000      | 236.700   | 14430.000 | 14770.000 |
| 3    | 16:45:56 | 80.507%   | 3.221    | 16.900   | 17.000     | 0.000      | 247.500   | 15120.000 | 15440.000 |
| X    |          | 81.799%   | 3.167    | 16.220   | 16.370     | 0.000      | 240.000   | 14650.000 | 14970.000 |
| σ    |          | 1.764%    | 0.061    | 0.591    | 0.615      | 0.000      | 6.471     | 402.700   | 405.500   |
| %RSD |          | 2.157     | 1.931    | 3.642    | 3.759      | 0.000      | 2.696     | 2.749     | 2.708     |
| Run  | Time     | 27Al      | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:44:30 | 65690.000 | 1697.000 | 0.000    | 5285.000   | 14120.000  | 13510.000 | 97.560%   | 531.500   |
| 2    | 16:45:13 | 66200.000 | 1707.000 | 0.000    | 5269.000   | 14070.000  | 13640.000 | 95.684%   | 535.600   |
| 3    | 16:45:56 | 68320.000 | 1774.000 | 0.000    | 5784.000   | 15430.000  | 14870.000 | 87.518%   | 584.000   |
| X    |          | 66740.000 | 1726.000 | 0.000    | 5446.000   | 14540.000  | 14000.000 | 93.587%   | 550.400   |
| σ    |          | 1392.000  | 42.040   | 0.000    | 293.200    | 771.900    | 751.200   | 5.339%    | 29.210    |
| %RSD |          | 2.086     | 2.435    | 0.000    | 5.383      | 5.308      | 5.364     | 5.705     | 5.308     |
| Run  | Time     | 51V       | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:44:30 | 113.800   | 97.060   | 2995.000 | 169400.000 | 173100.000 | 60.590    | 124.000   | 169.800   |
| 2    | 16:45:13 | 112.500   | 97.190   | 3032.000 | 170800.000 | 172400.000 | 60.390    | 122.700   | 169.900   |
| 3    | 16:45:56 | 125.100   | 106.000  | 3243.000 | 182000.000 | 185300.000 | 65.170    | 132.600   | 180.500   |
| X    |          | 117.100   | 100.100  | 3090.000 | 174100.000 | 176900.000 | 62.050    | 126.400   | 173.400   |
| σ    |          | 6.914     | 5.123    | 133.800  | 6925.000   | 7294.000   | 2.705     | 5.409     | 6.136     |
| %RSD |          | 5.903     | 5.119    | 4.330    | 3.979      | 4.122      | 4.359     | 4.278     | 3.539     |
| Run  | Time     | 65Cu      | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:44:30 | 170.400   | 442.500  | 445.800  | 122.400    | 2.754      | 5.349     | 0.000     | 56.290    |
| 2    | 16:45:13 | 170.500   | 444.700  | 450.100  | 124.900    | 2.819      | 6.137     | 0.000     | 57.050    |
| 3    | 16:45:56 | 179.300   | 471.100  | 476.200  | 126.700    | 2.892      | 5.969     | 0.000     | 58.850    |
| X    |          | 173.400   | 452.800  | 457.400  | 124.700    | 2.822      | 5.819     | 0.000     | 57.400    |
| σ    |          | 5.121     | 15.950   | 16.460   | 2.171      | 0.069      | 0.415     | 0.000     | 1.315     |
| %RSD |          | 2.953     | 3.522    | 3.598    | 1.742      | 2.440      | 7.134     | 0.000     | 2.290     |
| Run  | Time     | 89Y       | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:44:30 | 0.000     | 9.292    | 9.357    | 81.459%    | 0.168      | 0.103     | 1.429     | 1.183     |
| 2    | 16:45:13 | 0.000     | 9.425    | 9.480    | 81.377%    | 0.173      | 0.111     | 1.467     | 1.204     |
| 3    | 16:45:56 | 0.000     | 9.686    | 9.583    | 81.059%    | 0.165      | 0.119     | 1.661     | 1.325     |
| X    |          | 0.000     | 9.468    | 9.473    | 81.299%    | 0.169      | 0.111     | 1.519     | 1.237     |
| σ    |          | 0.000     | 0.201    | 0.114    | 0.211%     | 0.004      | 0.008     | 0.124     | 0.077     |
| %RSD |          | 0.000     | 2.117    | 1.198    | 0.260      | 2.321      | 7.450     | 8.184     | 6.184     |
| Run  | Time     | 115In     | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:44:30 | 83.314%   | 7.437    | 0.961    | 0.942      | 273.700    | 270.000   | 89.094%   | 88.142%   |
| 2    | 16:45:13 | 84.111%   | 7.644    | 0.884    | 0.896      | 274.700    | 270.700   | 91.749%   | 90.581%   |
| 3    | 16:45:56 | 83.921%   | 7.542    | 0.903    | 0.906      | 272.500    | 272.400   | 91.624%   | 90.926%   |
| X    |          | 83.782%   | 7.541    | 0.916    | 0.915      | 273.600    | 271.100   | 90.822%   | 89.883%   |
| σ    |          | 0.416%    | 0.103    | 0.040    | 0.024      | 1.076      | 1.230     | 1.498%    | 1.518%    |
| %RSD |          | 0.497     | 1.371    | 4.355    | 2.673      | 0.393      | 0.454     | 1.650     | 1.689     |
| Run  | Time     | 203Tl     | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 16:44:30 | 1.072     | 1.046    | 99.960   | 99.400     | 100.100    | 77.913%   |           |           |
| 2    | 16:45:13 | 1.076     | 1.062    | 101.600  | 101.200    | 101.600    | 79.634%   |           |           |
| 3    | 16:45:56 | 1.057     | 1.081    | 102.200  | 102.000    | 101.900    | 79.521%   |           |           |
| X    |          | 1.068     | 1.063    | 101.300  | 100.900    | 101.200    | 79.023%   |           |           |
| σ    |          | 0.010     | 0.018    | 1.172    | 1.330      | 0.964      | 0.963%    |           |           |
| %RSD |          | 0.948     | 1.672    | 1.158    | 1.318      | 0.952      | 1.218     |           |           |

240-17768-F-11-A 12/21/2012 4:48:04 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na     | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|----------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb      | ppb       | ppb       |
| 1    | 16:48:47 | 79.792%    | 4.527    | 14.200   | 14.350     | 0.000      | 244.000  | 20930.000 | 21500.000 |
| 2    | 16:49:30 | 77.199%    | 4.524    | 15.250   | 14.670     | 0.000      | 246.200  | 21150.000 | 21570.000 |
| 3    | 16:50:13 | 77.795%    | 4.399    | 14.180   | 14.480     | 0.000      | 245.700  | 20920.000 | 21280.000 |
| X    |          | 78.262%    | 4.484    | 14.540   | 14.500     | 0.000      | 245.300  | 21000.000 | 21450.000 |
| σ    |          | 1.358%     | 0.073    | 0.613    | 0.161      | 0.000      | 1.144    | 128.300   | 151.400   |
| %RSD |          | 1.736      | 1.628    | 4.215    | 1.107      | 0.000      | 0.467    | 0.611     | 0.706     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca     | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb      | ppb       | ppb       |
| 1    | 16:48:47 | 100800.000 | 1772.000 | 0.000    | 6022.000   | 9976.000   | 9463.000 | 94.910%   | 653.000   |
| 2    | 16:49:30 | 101200.000 | 1796.000 | 0.000    | 6115.000   | 10250.000  | 9675.000 | 93.087%   | 653.200   |
| 3    | 16:50:13 | 100000.000 | 1762.000 | 0.000    | 6024.000   | 10080.000  | 9516.000 | 91.949%   | 658.300   |
| X    |          | 100700.000 | 1776.000 | 0.000    | 6054.000   | 10100.000  | 9551.000 | 93.315%   | 654.800   |
| σ    |          | 595.700    | 17.340   | 0.000    | 53.270     | 138.500    | 110.600  | 1.494%    | 3.001     |
| %RSD |          | 0.592      | 0.976    | 0.000    | 0.880      | 1.371      | 1.158    | 1.601     | 0.458     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co     | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb      | ppb       | ppb       |
| 1    | 16:48:47 | 169.700    | 136.300  | 3331.000 | 222300.000 | 228300.000 | 90.240   | 169.900   | 188.600   |
| 2    | 16:49:30 | 170.900    | 136.300  | 3341.000 | 222100.000 | 228000.000 | 89.390   | 170.200   | 190.300   |
| 3    | 16:50:13 | 174.000    | 139.300  | 3383.000 | 225900.000 | 231700.000 | 90.760   | 172.200   | 191.500   |
| X    |          | 171.500    | 137.300  | 3352.000 | 223500.000 | 229300.000 | 90.130   | 170.800   | 190.100   |
| σ    |          | 2.204      | 1.758    | 27.540   | 2139.000   | 2077.000   | 0.691    | 1.292     | 1.452     |
| %RSD |          | 1.285      | 1.280    | 0.822    | 0.957      | 0.906      | 0.767    | 0.757     | 0.764     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se     | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb      | ppb       | ppb       |
| 1    | 16:48:47 | 187.600    | 502.500  | 505.200  | 135.500    | 3.548      | 6.926    | 0.000     | 50.480    |
| 2    | 16:49:30 | 186.800    | 502.800  | 510.800  | 136.000    | 3.616      | 6.956    | 0.000     | 51.390    |
| 3    | 16:50:13 | 191.300    | 512.700  | 514.200  | 137.200    | 3.223      | 8.008    | 0.000     | 52.210    |
| X    |          | 188.600    | 506.000  | 510.100  | 136.300    | 3.462      | 7.297    | 0.000     | 51.360    |
| σ    |          | 2.380      | 5.801    | 4.575    | 0.879      | 0.210      | 0.617    | 0.000     | 0.867     |
| %RSD |          | 1.262      | 1.146    | 0.897    | 0.645      | 6.062      | 8.450    | 0.000     | 1.687     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag    | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb      | ppb       | ppb       |
| 1    | 16:48:47 | 0.000      | 11.330   | 11.230   | 79.016%    | 0.281      | 0.180    | 1.920     | 1.495     |
| 2    | 16:49:30 | 0.000      | 11.170   | 11.460   | 79.585%    | 0.243      | 0.165    | 1.852     | 1.561     |
| 3    | 16:50:13 | 0.000      | 11.540   | 11.540   | 79.288%    | 0.256      | 0.169    | 1.700     | 1.338     |
| X    |          | 0.000      | 11.350   | 11.410   | 79.296%    | 0.260      | 0.171    | 1.824     | 1.465     |
| σ    |          | 0.000      | 0.185    | 0.161    | 0.284%     | 0.019      | 0.008    | 0.112     | 0.114     |
| %RSD |          | 0.000      | 1.632    | 1.413    | 0.359      | 7.298      | 4.620    | 6.162     | 7.807     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba    | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb      | ppb       | ppb       |
| 1    | 16:48:47 | 81.077%    | 9.220    | 0.844    | 0.838      | 422.100    | 420.900  | 87.570%   | 85.742%   |
| 2    | 16:49:30 | 82.499%    | 9.524    | 0.897    | 0.903      | 426.300    | 423.900  | 89.537%   | 88.076%   |
| 3    | 16:50:13 | 83.082%    | 9.254    | 0.787    | 0.827      | 429.800    | 426.600  | 90.128%   | 88.915%   |
| X    |          | 82.219%    | 9.333    | 0.842    | 0.856      | 426.100    | 423.800  | 89.078%   | 87.577%   |
| σ    |          | 1.031%     | 0.167    | 0.055    | 0.041      | 3.839      | 2.847    | 1.339%    | 1.644%    |
| %RSD |          | 1.255      | 1.787    | 6.542    | 4.824      | 0.901      | 0.672    | 1.503     | 1.877     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi    |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb      |           |           |
| 1    | 16:48:47 | 1.422      | 1.411    | 137.100  | 136.400    | 137.300    | 75.310%  |           |           |
| 2    | 16:49:30 | 1.399      | 1.454    | 139.700  | 137.700    | 139.100    | 77.397%  |           |           |
| 3    | 16:50:13 | 1.445      | 1.482    | 139.700  | 138.200    | 139.100    | 77.716%  |           |           |
| X    |          | 1.422      | 1.449    | 138.800  | 137.400    | 138.500    | 76.807%  |           |           |
| σ    |          | 0.023      | 0.036    | 1.529    | 0.953      | 1.048      | 1.307%   |           |           |
| %RSD |          | 1.623      | 2.457    | 1.101    | 0.693      | 0.756      | 1.701    |           |           |

240-17768-F-12-A 12/21/2012 4:52:22 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:53:05 | 74.735%    | 5.656    | 29.570   | 29.050     | 0.000      | 575.100   | 26120.000 | 26410.000 |
| 2    | 16:53:47 | 73.330%    | 5.682    | 29.200   | 30.150     | 0.000      | 567.100   | 25660.000 | 26410.000 |
| 3    | 16:54:30 | 71.983%    | 5.557    | 28.040   | 29.590     | 0.000      | 577.000   | 26350.000 | 27290.000 |
| X    |          | 73.350%    | 5.632    | 28.940   | 29.600     | 0.000      | 573.100   | 26040.000 | 26700.000 |
| σ    |          | 1.376%     | 0.066    | 0.796    | 0.552      | 0.000      | 5.257     | 350.200   | 506.200   |
| %RSD |          | 1.876      | 1.167    | 2.750    | 1.865      | 0.000      | 0.917     | 1.345     | 1.895     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:53:05 | 122300.000 | 1888.000 | 0.000    | 9861.000   | 33490.000  | 34840.000 | 93.592%   | 641.500   |
| 2    | 16:53:47 | 124700.000 | 1889.000 | 0.000    | 9793.000   | 33420.000  | 34820.000 | 91.694%   | 655.200   |
| 3    | 16:54:30 | 126200.000 | 1936.000 | 0.000    | 10260.000  | 35900.000  | 37430.000 | 82.883%   | 683.900   |
| X    |          | 124400.000 | 1904.000 | 0.000    | 9972.000   | 34270.000  | 35690.000 | 89.390%   | 660.200   |
| σ    |          | 1979.000   | 27.200   | 0.000    | 253.700    | 1411.000   | 1502.000  | 5.714%    | 21.650    |
| %RSD |          | 1.591      | 1.428    | 0.000    | 2.544      | 4.117      | 4.207     | 6.393     | 3.279     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:53:05 | 194.200    | 228.300  | 2467.000 | 236900.000 | 243600.000 | 74.140    | 198.400   | 205.600   |
| 2    | 16:53:47 | 197.900    | 230.100  | 2520.000 | 236200.000 | 245600.000 | 75.400    | 199.800   | 208.300   |
| 3    | 16:54:30 | 206.700    | 242.300  | 2651.000 | 251100.000 | 254700.000 | 78.060    | 208.100   | 216.100   |
| X    |          | 199.600    | 233.600  | 2546.000 | 241400.000 | 248000.000 | 75.870    | 202.100   | 210.000   |
| σ    |          | 6.376      | 7.612    | 94.350   | 8409.000   | 5936.000   | 2.002     | 5.253     | 5.450     |
| %RSD |          | 3.195      | 3.259    | 3.705    | 3.483      | 2.394      | 2.639     | 2.599     | 2.595     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:53:05 | 207.800    | 593.200  | 602.800  | 171.100    | 4.602      | 7.186     | 0.000     | 139.800   |
| 2    | 16:53:47 | 208.300    | 603.500  | 607.700  | 173.100    | 4.415      | 8.211     | 0.000     | 142.900   |
| 3    | 16:54:30 | 216.700    | 627.900  | 631.100  | 176.100    | 4.907      | 7.777     | 0.000     | 143.500   |
| X    |          | 210.900    | 608.200  | 613.800  | 173.400    | 4.641      | 7.725     | 0.000     | 142.000   |
| σ    |          | 5.007      | 17.840   | 15.110   | 2.506      | 0.249      | 0.515     | 0.000     | 1.990     |
| %RSD |          | 2.374      | 2.934    | 2.461    | 1.445      | 5.355      | 6.662     | 0.000     | 1.401     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:53:05 | 0.000      | 12.420   | 12.540   | 76.819%    | 0.331      | 0.264     | 1.856     | 1.377     |
| 2    | 16:53:47 | 0.000      | 12.700   | 12.850   | 77.383%    | 0.303      | 0.272     | 1.868     | 1.419     |
| 3    | 16:54:30 | 0.000      | 12.760   | 12.900   | 78.771%    | 0.296      | 0.241     | 1.774     | 1.440     |
| X    |          | 0.000      | 12.630   | 12.770   | 77.658%    | 0.310      | 0.259     | 1.833     | 1.412     |
| σ    |          | 0.000      | 0.181    | 0.195    | 1.005%     | 0.018      | 0.016     | 0.051     | 0.032     |
| %RSD |          | 0.000      | 1.437    | 1.525    | 1.294      | 5.930      | 6.249     | 2.804     | 2.297     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:53:05 | 78.578%    | 8.706    | 1.105    | 1.031      | 499.100    | 489.400   | 85.587%   | 83.789%   |
| 2    | 16:53:47 | 80.682%    | 9.131    | 1.034    | 1.138      | 499.300    | 490.200   | 88.477%   | 85.730%   |
| 3    | 16:54:30 | 82.196%    | 8.967    | 1.048    | 1.124      | 490.000    | 483.200   | 90.713%   | 89.203%   |
| X    |          | 80.485%    | 8.935    | 1.062    | 1.098      | 496.200    | 487.600   | 88.259%   | 86.241%   |
| σ    |          | 1.817%     | 0.214    | 0.038    | 0.058      | 5.309      | 3.816     | 2.570%    | 2.743%    |
| %RSD |          | 2.258      | 2.400    | 3.562    | 5.294      | 1.070      | 0.783     | 2.911     | 3.180     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 16:53:05 | 1.595      | 1.615    | 147.700  | 147.000    | 147.300    | 74.972%   |           |           |
| 2    | 16:53:47 | 1.664      | 1.678    | 148.900  | 148.400    | 148.800    | 76.728%   |           |           |
| 3    | 16:54:30 | 1.603      | 1.575    | 143.800  | 142.700    | 144.000    | 80.809%   |           |           |
| X    |          | 1.620      | 1.623    | 146.800  | 146.000    | 146.700    | 77.503%   |           |           |
| σ    |          | 0.038      | 0.052    | 2.664    | 2.954      | 2.490      | 2.995%    |           |           |
| %RSD |          | 2.323      | 3.211    | 1.815    | 2.023      | 1.697      | 3.864     |           |           |

240-17768-F-13-A 12/21/2012 4:56:39 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:57:22 | 73.530%    | 4.935    | 27.090   | 27.290     | 0.000      | 351.200   | 24320.000 | 25080.000 |
| 2    | 16:58:05 | 73.237%    | 4.863    | 27.620   | 27.420     | 0.000      | 357.200   | 24790.000 | 25060.000 |
| 3    | 16:58:48 | 70.527%    | 4.984    | 28.170   | 28.610     | 0.000      | 356.100   | 25350.000 | 25790.000 |
| X    |          | 72.432%    | 4.927    | 27.620   | 27.770     | 0.000      | 354.800   | 24820.000 | 25310.000 |
| σ    |          | 1.656%     | 0.061    | 0.541    | 0.730      | 0.000      | 3.200     | 516.500   | 414.900   |
| %RSD |          | 2.286      | 1.237    | 1.958    | 2.627      | 0.000      | 0.902     | 2.081     | 1.639     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:57:22 | 132600.000 | 1753.000 | 0.000    | 9516.000   | 13180.000  | 12610.000 | 91.933%   | 816.700   |
| 2    | 16:58:05 | 130800.000 | 1756.000 | 0.000    | 9594.000   | 13430.000  | 12830.000 | 90.999%   | 812.400   |
| 3    | 16:58:48 | 135200.000 | 1787.000 | 0.000    | 9719.000   | 13690.000  | 13130.000 | 88.496%   | 830.200   |
| X    |          | 132900.000 | 1765.000 | 0.000    | 9610.000   | 13430.000  | 12860.000 | 90.476%   | 819.700   |
| σ    |          | 2184.000   | 18.830   | 0.000    | 102.200    | 251.600    | 262.200   | 1.777%    | 9.306     |
| %RSD |          | 1.644      | 1.067    | 0.000    | 1.064      | 1.873      | 2.040     | 1.964     | 1.135     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:57:22 | 235.900    | 193.900  | 3138.000 | 251000.000 | 257600.000 | 76.390    | 171.900   | 187.000   |
| 2    | 16:58:05 | 233.700    | 193.600  | 3167.000 | 252600.000 | 258600.000 | 77.690    | 174.700   | 185.600   |
| 3    | 16:58:48 | 238.600    | 196.800  | 3241.000 | 257200.000 | 264100.000 | 77.850    | 176.500   | 190.200   |
| X    |          | 236.100    | 194.800  | 3182.000 | 253600.000 | 260100.000 | 77.310    | 174.400   | 187.600   |
| σ    |          | 2.473      | 1.745    | 53.290   | 3185.000   | 3509.000   | 0.799     | 2.345     | 2.349     |
| %RSD |          | 1.048      | 0.896    | 1.675    | 1.256      | 1.349      | 1.034     | 1.345     | 1.252     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:57:22 | 187.200    | 543.500  | 547.200  | 165.400    | 5.062      | 7.655     | 0.000     | 82.200    |
| 2    | 16:58:05 | 186.200    | 545.000  | 549.200  | 164.300    | 5.170      | 6.798     | 0.000     | 83.430    |
| 3    | 16:58:48 | 189.500    | 554.400  | 561.600  | 167.200    | 5.592      | 7.665     | 0.000     | 84.540    |
| X    |          | 187.700    | 547.600  | 552.700  | 165.700    | 5.275      | 7.373     | 0.000     | 83.390    |
| σ    |          | 1.684      | 5.947    | 7.817    | 1.495      | 0.280      | 0.498     | 0.000     | 1.174     |
| %RSD |          | 0.897      | 1.086    | 1.414    | 0.902      | 5.305      | 6.747     | 0.000     | 1.407     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:57:22 | 0.000      | 13.100   | 13.300   | 76.393%    | 0.321      | 0.275     | 1.504     | 1.257     |
| 2    | 16:58:05 | 0.000      | 13.060   | 13.420   | 77.145%    | 0.344      | 0.274     | 1.555     | 1.182     |
| 3    | 16:58:48 | 0.000      | 13.570   | 13.780   | 76.487%    | 0.375      | 0.286     | 1.567     | 1.212     |
| X    |          | 0.000      | 13.240   | 13.500   | 76.675%    | 0.347      | 0.278     | 1.542     | 1.217     |
| σ    |          | 0.000      | 0.287    | 0.248    | 0.410%     | 0.027      | 0.007     | 0.033     | 0.038     |
| %RSD |          | 0.000      | 2.164    | 1.838    | 0.535      | 7.713      | 2.350     | 2.162     | 3.089     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 16:57:22 | 78.810%    | 10.230   | 1.147    | 1.234      | 470.500    | 466.300   | 82.126%   | 81.469%   |
| 2    | 16:58:05 | 79.918%    | 10.210   | 1.219    | 1.215      | 472.000    | 467.300   | 85.234%   | 83.893%   |
| 3    | 16:58:48 | 79.827%    | 10.540   | 1.145    | 1.218      | 477.700    | 470.000   | 85.498%   | 84.246%   |
| X    |          | 79.518%    | 10.330   | 1.170    | 1.222      | 473.400    | 467.900   | 84.286%   | 83.203%   |
| σ    |          | 0.615%     | 0.186    | 0.042    | 0.010      | 3.828      | 1.864     | 1.875%    | 1.512%    |
| %RSD |          | 0.773      | 1.797    | 3.588    | 0.839      | 0.809      | 0.398     | 2.225     | 1.817     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 16:57:22 | 1.745      | 1.737    | 149.200  | 146.100    | 147.900    | 75.000%   |           |           |
| 2    | 16:58:05 | 1.725      | 1.766    | 151.200  | 148.100    | 149.000    | 76.728%   |           |           |
| 3    | 16:58:48 | 1.831      | 1.802    | 154.800  | 150.800    | 152.700    | 76.960%   |           |           |
| X    |          | 1.767      | 1.768    | 151.700  | 148.300    | 149.900    | 76.229%   |           |           |
| σ    |          | 0.056      | 0.032    | 2.797    | 2.385      | 2.545      | 1.071%    |           |           |
| %RSD |          | 3.191      | 1.832    | 1.844    | 1.608      | 1.698      | 1.405     |           |           |



240-17768-F-14-A 12/21/2012 5:00:57 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li       | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|-----------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:01:40 | 76.616%   | 4.171    | 20.690   | 21.540     | 0.000      | 269.700   | 21030.000 | 21400.000 |
| 2    | 17:02:23 | 77.934%   | 4.290    | 21.240   | 20.820     | 0.000      | 266.500   | 20530.000 | 21120.000 |
| 3    | 17:03:06 | 76.769%   | 4.134    | 20.650   | 21.320     | 0.000      | 269.000   | 20940.000 | 21470.000 |
| x    |          | 77.106%   | 4.198    | 20.860   | 21.230     | 0.000      | 268.400   | 20830.000 | 21330.000 |
| σ    |          | 0.721%    | 0.082    | 0.328    | 0.369      | 0.000      | 1.678     | 263.300   | 185.200   |
| %RSD |          | 0.935     | 1.946    | 1.571    | 1.738      | 0.000      | 0.625     | 1.264     | 0.868     |
| Run  | Time     | 27Al      | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:01:40 | 81340.000 | 2179.000 | 0.000    | 6904.000   | 15010.000  | 14260.000 | 94.393%   | 721.500   |
| 2    | 17:02:23 | 82240.000 | 2156.000 | 0.000    | 6918.000   | 15520.000  | 14750.000 | 91.813%   | 738.500   |
| 3    | 17:03:06 | 83230.000 | 2204.000 | 0.000    | 6971.000   | 15710.000  | 14890.000 | 90.451%   | 748.200   |
| x    |          | 82270.000 | 2180.000 | 0.000    | 6931.000   | 15410.000  | 14630.000 | 92.219%   | 736.100   |
| σ    |          | 947.400   | 24.310   | 0.000    | 35.640     | 362.600    | 332.600   | 2.002%    | 13.540    |
| %RSD |          | 1.152     | 1.115    | 0.000    | 0.514      | 2.353      | 2.273     | 2.171     | 1.839     |
| Run  | Time     | 51V       | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:01:40 | 136.700   | 115.000  | 4885.000 | 222800.000 | 226600.000 | 87.320    | 176.800   | 210.500   |
| 2    | 17:02:23 | 138.900   | 119.100  | 4983.000 | 226100.000 | 232600.000 | 89.590    | 179.600   | 214.800   |
| 3    | 17:03:06 | 139.100   | 119.500  | 5067.000 | 230300.000 | 235600.000 | 90.730    | 182.100   | 215.100   |
| x    |          | 138.200   | 117.900  | 4978.000 | 226400.000 | 231600.000 | 89.210    | 179.500   | 213.500   |
| σ    |          | 1.334     | 2.483    | 91.360   | 3759.000   | 4570.000   | 1.739     | 2.661     | 2.561     |
| %RSD |          | 0.965     | 2.106    | 1.835    | 1.661      | 1.973      | 1.949     | 1.482     | 1.200     |
| Run  | Time     | 65Cu      | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:01:40 | 211.300   | 539.300  | 543.300  | 155.000    | 2.800      | 6.519     | 0.000     | 74.690    |
| 2    | 17:02:23 | 216.400   | 556.600  | 563.900  | 158.900    | 2.869      | 6.595     | 0.000     | 76.160    |
| 3    | 17:03:06 | 214.500   | 559.100  | 567.100  | 161.700    | 3.249      | 6.530     | 0.000     | 77.390    |
| x    |          | 214.100   | 551.700  | 558.100  | 158.500    | 2.973      | 6.548     | 0.000     | 76.080    |
| σ    |          | 2.604     | 10.790   | 12.950   | 3.387      | 0.242      | 0.041     | 0.000     | 1.351     |
| %RSD |          | 1.216     | 1.956    | 2.320    | 2.136      | 8.130      | 0.629     | 0.000     | 1.775     |
| Run  | Time     | 89Y       | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:01:40 | 0.000     | 10.650   | 10.790   | 77.983%    | 0.231      | 0.133     | 1.841     | 1.492     |
| 2    | 17:02:23 | 0.000     | 10.720   | 10.920   | 77.880%    | 0.225      | 0.127     | 1.651     | 1.364     |
| 3    | 17:03:06 | 0.000     | 11.040   | 10.880   | 77.408%    | 0.227      | 0.164     | 2.050     | 1.552     |
| x    |          | 0.000     | 10.800   | 10.870   | 77.757%    | 0.228      | 0.141     | 1.847     | 1.469     |
| σ    |          | 0.000     | 0.212    | 0.066    | 0.306%     | 0.003      | 0.020     | 0.200     | 0.096     |
| %RSD |          | 0.000     | 1.962    | 0.609    | 0.394      | 1.409      | 13.940    | 10.810    | 6.556     |
| Run  | Time     | 115In     | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:01:40 | 79.382%   | 9.345    | 0.846    | 0.908      | 367.600    | 364.000   | 87.124%   | 85.387%   |
| 2    | 17:02:23 | 80.476%   | 9.373    | 0.838    | 0.921      | 369.200    | 366.400   | 89.187%   | 88.168%   |
| 3    | 17:03:06 | 79.104%   | 9.734    | 0.944    | 0.866      | 379.200    | 374.100   | 88.602%   | 87.721%   |
| x    |          | 79.654%   | 9.484    | 0.876    | 0.899      | 372.000    | 368.200   | 88.305%   | 87.092%   |
| σ    |          | 0.725%    | 0.217    | 0.059    | 0.029      | 6.258      | 5.280     | 1.063%    | 1.494%    |
| %RSD |          | 0.911     | 2.288    | 6.701    | 3.210      | 1.682      | 1.434     | 1.204     | 1.715     |
| Run  | Time     | 203Tl     | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 17:01:40 | 1.143     | 1.174    | 130.600  | 129.400    | 130.600    | 74.906%   |           |           |
| 2    | 17:02:23 | 1.186     | 1.191    | 132.600  | 131.400    | 132.100    | 76.378%   |           |           |
| 3    | 17:03:06 | 1.227     | 1.208    | 135.100  | 134.700    | 135.100    | 75.941%   |           |           |
| x    |          | 1.185     | 1.191    | 132.800  | 131.900    | 132.600    | 75.742%   |           |           |
| σ    |          | 0.042     | 0.017    | 2.253    | 2.678      | 2.267      | 0.756%    |           |           |
| %RSD |          | 3.569     | 1.422    | 1.697    | 2.031      | 1.710      | 0.998     |           |           |

240-17768-F-15-A 12/21/2012 5:05:15 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li       | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|-----------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:05:58 | 78.592%   | 4.783    | 21.430   | 22.560     | 0.000      | 532.100   | 21090.000 | 21350.000 |
| 2    | 17:06:41 | 76.660%   | 5.001    | 22.310   | 22.170     | 0.000      | 524.900   | 20980.000 | 21420.000 |
| 3    | 17:07:24 | 75.137%   | 5.003    | 21.680   | 23.550     | 0.000      | 562.900   | 22140.000 | 22900.000 |
| x    |          | 76.796%   | 4.929    | 21.810   | 22.760     | 0.000      | 540.000   | 21400.000 | 21890.000 |
| σ    |          | 1.732%    | 0.126    | 0.455    | 0.712      | 0.000      | 20.210    | 637.000   | 874.000   |
| %RSD |          | 2.255     | 2.562    | 2.084    | 3.126      | 0.000      | 3.743     | 2.976     | 3.993     |
| Run  | Time     | 27Al      | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:05:58 | 89350.000 | 2069.000 | 0.000    | 7919.000   | 25940.000  | 27450.000 | 94.372%   | 645.700   |
| 2    | 17:06:41 | 88590.000 | 2070.000 | 0.000    | 7851.000   | 25880.000  | 27440.000 | 92.489%   | 651.400   |
| 3    | 17:07:24 | 96260.000 | 2227.000 | 0.000    | 8771.000   | 29200.000  | 30420.000 | 83.161%   | 724.700   |
| x    |          | 91400.000 | 2122.000 | 0.000    | 8180.000   | 27010.000  | 28440.000 | 90.008%   | 673.900   |
| σ    |          | 4229.000  | 90.970   | 0.000    | 512.700    | 1898.000   | 1719.000  | 6.003%    | 44.080    |
| %RSD |          | 4.627     | 4.286    | 0.000    | 6.267      | 7.027      | 6.044     | 6.670     | 6.541     |
| Run  | Time     | 51V       | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:05:58 | 149.500   | 147.700  | 4150.000 | 226300.000 | 231400.000 | 78.760    | 166.800   | 198.500   |
| 2    | 17:06:41 | 150.800   | 148.500  | 4184.000 | 228300.000 | 234200.000 | 79.640    | 169.100   | 203.600   |
| 3    | 17:07:24 | 167.700   | 164.500  | 4559.000 | 248100.000 | 253700.000 | 86.610    | 179.200   | 214.500   |
| x    |          | 156.000   | 153.500  | 4298.000 | 234300.000 | 239800.000 | 81.670    | 171.700   | 205.500   |
| σ    |          | 10.150    | 9.458    | 226.500  | 12070.000  | 12160.000  | 4.300     | 6.621     | 8.189     |
| %RSD |          | 6.509     | 6.160    | 5.270    | 5.154      | 5.071      | 5.265     | 3.856     | 3.984     |
| Run  | Time     | 65Cu      | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:05:58 | 200.200   | 546.100  | 552.000  | 161.400    | 3.535      | 7.095     | 0.000     | 111.800   |
| 2    | 17:06:41 | 202.100   | 559.600  | 567.000  | 164.700    | 3.844      | 7.404     | 0.000     | 115.000   |
| 3    | 17:07:24 | 214.500   | 599.200  | 606.000  | 173.100    | 3.860      | 7.965     | 0.000     | 118.400   |
| x    |          | 205.600   | 568.300  | 575.000  | 166.400    | 3.746      | 7.488     | 0.000     | 115.100   |
| σ    |          | 7.748     | 27.630   | 27.870   | 6.042      | 0.183      | 0.441     | 0.000     | 3.298     |
| %RSD |          | 3.769     | 4.861    | 4.846    | 3.632      | 4.885      | 5.895     | 0.000     | 2.865     |
| Run  | Time     | 89Y       | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:05:58 | 0.000     | 12.550   | 12.480   | 76.980%    | 0.325      | 0.234     | 1.985     | 1.622     |
| 2    | 17:06:41 | 0.000     | 13.060   | 12.750   | 76.616%    | 0.335      | 0.228     | 1.997     | 1.627     |
| 3    | 17:07:24 | 0.000     | 13.330   | 12.780   | 77.375%    | 0.336      | 0.264     | 2.043     | 1.607     |
| x    |          | 0.000     | 12.980   | 12.670   | 76.990%    | 0.332      | 0.242     | 2.008     | 1.619     |
| σ    |          | 0.000     | 0.395    | 0.165    | 0.379%     | 0.006      | 0.019     | 0.031     | 0.010     |
| %RSD |          | 0.000     | 3.046    | 1.299    | 0.493      | 1.818      | 7.914     | 1.539     | 0.615     |
| Run  | Time     | 115In     | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:05:58 | 77.658%   | 8.584    | 0.944    | 0.935      | 420.100    | 413.200   | 85.120%   | 83.535%   |
| 2    | 17:06:41 | 78.789%   | 8.789    | 0.929    | 0.968      | 427.100    | 422.000   | 86.666%   | 86.185%   |
| 3    | 17:07:24 | 79.754%   | 8.570    | 0.965    | 0.977      | 423.900    | 420.800   | 88.124%   | 86.624%   |
| x    |          | 78.734%   | 8.648    | 0.946    | 0.960      | 423.700    | 418.700   | 86.637%   | 85.448%   |
| σ    |          | 1.050%    | 0.123    | 0.018    | 0.022      | 3.531      | 4.754     | 1.502%    | 1.671%    |
| %RSD |          | 1.333     | 1.417    | 1.875    | 2.307      | 0.833      | 1.135     | 1.734     | 1.956     |
| Run  | Time     | 203Tl     | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 17:05:58 | 1.291     | 1.274    | 146.200  | 145.000    | 145.600    | 73.370%   |           |           |
| 2    | 17:06:41 | 1.249     | 1.288    | 147.600  | 147.100    | 147.900    | 75.478%   |           |           |
| 3    | 17:07:24 | 1.301     | 1.308    | 148.100  | 147.300    | 148.000    | 76.756%   |           |           |
| x    |          | 1.280     | 1.290    | 147.300  | 146.500    | 147.200    | 75.201%   |           |           |
| σ    |          | 0.027     | 0.017    | 1.000    | 1.288      | 1.351      | 1.710%    |           |           |
| %RSD |          | 2.143     | 1.319    | 0.679    | 0.879      | 0.918      | 2.274     |           |           |

240-17768-F-17-A 12/21/2012 5:09:34 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:10:16 | 75.047%    | 5.876    | 30.640   | 31.350     | 0.000      | 493.800   | 24620.000 | 25130.000 |
| 2    | 17:10:59 | 72.445%    | 6.272    | 30.480   | 33.070     | 0.000      | 513.400   | 25910.000 | 26670.000 |
| 3    | 17:11:42 | 74.256%    | 5.861    | 32.450   | 33.380     | 0.000      | 509.500   | 25600.000 | 26390.000 |
| X    |          | 73.916%    | 6.003    | 31.190   | 32.600     | 0.000      | 505.600   | 25380.000 | 26060.000 |
| σ    |          | 1.334%     | 0.233    | 1.094    | 1.090      | 0.000      | 10.350    | 674.900   | 820.200   |
| %RSD |          | 1.805      | 3.883    | 3.508    | 3.343      | 0.000      | 2.048     | 2.659     | 3.147     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:10:16 | 102000.000 | 2400.000 | 0.000    | 8407.000   | 34060.000  | 35870.000 | 91.551%   | 686.800   |
| 2    | 17:10:59 | 108200.000 | 2540.000 | 0.000    | 9161.000   | 37460.000  | 39570.000 | 81.824%   | 772.200   |
| 3    | 17:11:42 | 107800.000 | 2542.000 | 0.000    | 9158.000   | 37800.000  | 39820.000 | 81.849%   | 771.000   |
| X    |          | 106000.000 | 2494.000 | 0.000    | 8909.000   | 36440.000  | 38420.000 | 85.075%   | 743.400   |
| σ    |          | 3452.000   | 81.790   | 0.000    | 434.500    | 2067.000   | 2209.000  | 5.609%    | 48.960    |
| %RSD |          | 3.256      | 3.279    | 0.000    | 4.878      | 5.673      | 5.749     | 6.593     | 6.586     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:10:16 | 182.300    | 192.100  | 4832.000 | 239400.000 | 246000.000 | 100.400   | 216.300   | 165.500   |
| 2    | 17:10:59 | 201.400    | 209.500  | 5204.000 | 259400.000 | 265400.000 | 108.000   | 235.200   | 177.900   |
| 3    | 17:11:42 | 201.300    | 211.500  | 5165.000 | 260300.000 | 267900.000 | 108.100   | 234.500   | 178.100   |
| X    |          | 195.000    | 204.400  | 5067.000 | 253000.000 | 259800.000 | 105.500   | 228.700   | 173.800   |
| σ    |          | 11.020     | 10.680   | 204.200  | 11800.000  | 11950.000  | 4.384     | 10.760    | 7.234     |
| %RSD |          | 5.652      | 5.224    | 4.030    | 4.662      | 4.601      | 4.155     | 4.705     | 4.162     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:10:16 | 166.700    | 581.000  | 586.400  | 302.500    | 4.342      | 6.962     | 0.000     | 146.700   |
| 2    | 17:10:59 | 177.500    | 627.700  | 631.300  | 320.200    | 4.707      | 8.887     | 0.000     | 153.000   |
| 3    | 17:11:42 | 177.600    | 629.400  | 634.200  | 318.500    | 4.638      | 7.459     | 0.000     | 153.000   |
| X    |          | 173.900    | 612.700  | 617.300  | 313.700    | 4.562      | 7.769     | 0.000     | 150.900   |
| σ    |          | 6.245      | 27.450   | 26.790   | 9.777      | 0.194      | 0.999     | 0.000     | 3.650     |
| %RSD |          | 3.590      | 4.480    | 4.339    | 3.116      | 4.250      | 12.860    | 0.000     | 2.419     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:10:16 | 0.000      | 14.850   | 14.570   | 76.622%    | 0.531      | 0.458     | 2.439     | 2.075     |
| 2    | 17:10:59 | 0.000      | 15.090   | 15.210   | 76.728%    | 0.586      | 0.480     | 2.453     | 2.042     |
| 3    | 17:11:42 | 0.000      | 15.280   | 15.240   | 76.960%    | 0.550      | 0.422     | 2.533     | 2.089     |
| X    |          | 0.000      | 15.070   | 15.010   | 76.770%    | 0.556      | 0.453     | 2.475     | 2.069     |
| σ    |          | 0.000      | 0.217    | 0.378    | 0.173%     | 0.028      | 0.029     | 0.050     | 0.024     |
| %RSD |          | 0.000      | 1.441    | 2.520    | 0.225      | 5.010      | 6.386     | 2.039     | 1.165     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:10:16 | 77.882%    | 8.423    | 5.719    | 5.651      | 645.900    | 643.900   | 84.781%   | 83.812%   |
| 2    | 17:10:59 | 79.249%    | 8.706    | 5.791    | 5.802      | 652.200    | 645.500   | 86.923%   | 85.857%   |
| 3    | 17:11:42 | 79.685%    | 8.722    | 5.734    | 5.850      | 657.600    | 651.700   | 87.226%   | 86.095%   |
| X    |          | 78.939%    | 8.617    | 5.748    | 5.768      | 651.900    | 647.100   | 86.310%   | 85.255%   |
| σ    |          | 0.941%     | 0.168    | 0.038    | 0.104      | 5.853      | 4.129     | 1.333%    | 1.255%    |
| %RSD |          | 1.192      | 1.954    | 0.667    | 1.800      | 0.898      | 0.638     | 1.544     | 1.472     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 17:10:16 | 1.615      | 1.638    | 242.900  | 243.100    | 242.700    | 74.818%   |           |           |
| 2    | 17:10:59 | 1.595      | 1.664    | 245.500  | 246.800    | 245.100    | 76.870%   |           |           |
| 3    | 17:11:42 | 1.662      | 1.677    | 248.500  | 248.800    | 248.100    | 76.499%   |           |           |
| X    |          | 1.624      | 1.660    | 245.600  | 246.200    | 245.300    | 76.062%   |           |           |
| σ    |          | 0.035      | 0.019    | 2.846    | 2.884      | 2.679      | 1.093%    |           |           |
| %RSD |          | 2.125      | 1.171    | 1.158    | 1.171      | 1.092      | 1.438     |           |           |

240-17768-F-18-A 12/21/2012 5:13:52 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:14:35 | 74.056%    | 5.774    | 27.720   | 27.490     | 0.000      | 480.300   | 25270.000 | 25790.000 |
| 2    | 17:15:18 | 70.544%    | 5.588    | 26.600   | 28.560     | 0.000      | 503.300   | 26690.000 | 26980.000 |
| 3    | 17:16:01 | 70.099%    | 5.776    | 28.890   | 30.010     | 0.000      | 503.900   | 26590.000 | 27280.000 |
| X    |          | 71.567%    | 5.712    | 27.740   | 28.690     | 0.000      | 495.800   | 26180.000 | 26680.000 |
| σ    |          | 2.167%     | 0.108    | 1.141    | 1.263      | 0.000      | 13.500    | 792.100   | 790.200   |
| %RSD |          | 3.029      | 1.888    | 4.114    | 4.403      | 0.000      | 2.723     | 3.025     | 2.962     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:14:35 | 109000.000 | 1942.000 | 0.000    | 9994.000   | 13410.000  | 12820.000 | 90.432%   | 803.700   |
| 2    | 17:15:18 | 114500.000 | 2012.000 | 0.000    | 10910.000  | 14900.000  | 14240.000 | 79.991%   | 890.200   |
| 3    | 17:16:01 | 116600.000 | 2031.000 | 0.000    | 10980.000  | 14880.000  | 14260.000 | 79.245%   | 900.500   |
| X    |          | 113400.000 | 1995.000 | 0.000    | 10630.000  | 14400.000  | 13780.000 | 83.223%   | 864.800   |
| σ    |          | 3913.000   | 46.690   | 0.000    | 551.700    | 854.800    | 825.900   | 6.254%    | 53.190    |
| %RSD |          | 3.452      | 2.340    | 0.000    | 5.190      | 5.937      | 5.995     | 7.515     | 6.150     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:14:35 | 199.100    | 175.100  | 4941.000 | 239900.000 | 246900.000 | 87.950    | 211.200   | 181.600   |
| 2    | 17:15:18 | 215.400    | 193.200  | 5438.000 | 261600.000 | 268200.000 | 96.100    | 229.300   | 198.200   |
| 3    | 17:16:01 | 219.500    | 194.000  | 5492.000 | 268600.000 | 272600.000 | 97.060    | 232.400   | 201.700   |
| X    |          | 211.300    | 187.400  | 5290.000 | 256700.000 | 262600.000 | 93.710    | 224.300   | 193.800   |
| σ    |          | 10.780     | 10.710   | 304.000  | 14980.000  | 13770.000  | 5.006     | 11.480    | 10.760    |
| %RSD |          | 5.099      | 5.714    | 5.746    | 5.838      | 5.245      | 5.342     | 5.118     | 5.553     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:14:35 | 182.400    | 633.900  | 636.700  | 154.500    | 3.448      | 6.490     | 0.000     | 96.200    |
| 2    | 17:15:18 | 198.400    | 682.400  | 691.000  | 165.800    | 3.955      | 6.838     | 0.000     | 99.960    |
| 3    | 17:16:01 | 201.100    | 692.700  | 696.700  | 165.900    | 3.598      | 6.508     | 0.000     | 101.200   |
| X    |          | 194.000    | 669.700  | 674.800  | 162.100    | 3.667      | 6.612     | 0.000     | 99.130    |
| σ    |          | 10.120     | 31.400   | 33.130   | 6.537      | 0.261      | 0.196     | 0.000     | 2.621     |
| %RSD |          | 5.219      | 4.688    | 4.909    | 4.033      | 7.109      | 2.969     | 0.000     | 2.644     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:14:35 | 0.000      | 13.990   | 13.770   | 75.580%    | 0.289      | 0.200     | 1.994     | 1.722     |
| 2    | 17:15:18 | 0.000      | 14.530   | 14.150   | 75.506%    | 0.290      | 0.210     | 2.083     | 1.688     |
| 3    | 17:16:01 | 0.000      | 14.330   | 14.650   | 75.036%    | 0.262      | 0.237     | 2.202     | 1.825     |
| X    |          | 0.000      | 14.280   | 14.190   | 75.374%    | 0.281      | 0.216     | 2.093     | 1.745     |
| σ    |          | 0.000      | 0.272    | 0.444    | 0.295%     | 0.016      | 0.019     | 0.104     | 0.071     |
| %RSD |          | 0.000      | 1.905    | 3.129    | 0.391      | 5.662      | 8.897     | 4.984     | 4.075     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:14:35 | 76.839%    | 7.669    | 1.100    | 1.148      | 674.000    | 665.100   | 83.649%   | 82.994%   |
| 2    | 17:15:18 | 77.922%    | 7.769    | 1.147    | 1.167      | 676.900    | 669.300   | 86.464%   | 85.043%   |
| 3    | 17:16:01 | 77.508%    | 8.193    | 1.184    | 1.140      | 689.000    | 681.200   | 85.759%   | 85.056%   |
| X    |          | 77.423%    | 7.877    | 1.143    | 1.152      | 680.000    | 671.900   | 85.291%   | 84.365%   |
| σ    |          | 0.546%     | 0.278    | 0.042    | 0.014      | 7.975      | 8.322     | 1.465%    | 1.187%    |
| %RSD |          | 0.705      | 3.531    | 3.682    | 1.211      | 1.173      | 1.239     | 1.718     | 1.407     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 17:14:35 | 1.801      | 1.704    | 138.100  | 137.100    | 137.800    | 75.112%   |           |           |
| 2    | 17:15:18 | 1.740      | 1.760    | 139.600  | 137.900    | 139.100    | 77.004%   |           |           |
| 3    | 17:16:01 | 1.756      | 1.785    | 141.800  | 139.600    | 140.600    | 76.942%   |           |           |
| X    |          | 1.766      | 1.750    | 139.800  | 138.200    | 139.200    | 76.353%   |           |           |
| σ    |          | 0.032      | 0.042    | 1.867    | 1.285      | 1.399      | 1.075%    |           |           |
| %RSD |          | 1.801      | 2.378    | 1.336    | 0.929      | 1.005      | 1.408     |           |           |

240-17768-F-19-A 12/21/2012 5:18:11 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:18:54 | 71.184%    | 6.063    | 29.820   | 29.750     | 0.000      | 613.400   | 20250.000 | 20700.000 |
| 2    | 17:19:37 | 70.795%    | 5.961    | 30.100   | 29.610     | 0.000      | 599.700   | 19900.000 | 20550.000 |
| 3    | 17:20:20 | 68.858%    | 6.095    | 29.790   | 31.650     | 0.000      | 616.200   | 20330.000 | 21050.000 |
| X    |          | 70.279%    | 6.039    | 29.900   | 30.340     | 0.000      | 609.800   | 20160.000 | 20770.000 |
| σ    |          | 1.246%     | 0.070    | 0.175    | 1.138      | 0.000      | 8.797     | 227.200   | 251.700   |
| %RSD |          | 1.773      | 1.159    | 0.585    | 3.752      | 0.000      | 1.443     | 1.127     | 1.212     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:18:54 | 97890.000  | 1870.000 | 0.000    | 9106.000   | 18730.000  | 17640.000 | 80.088%   | 771.100   |
| 2    | 17:19:37 | 97800.000  | 1953.000 | 0.000    | 9335.000   | 18800.000  | 17700.000 | 79.423%   | 773.200   |
| 3    | 17:20:20 | 100800.000 | 1974.000 | 0.000    | 9229.000   | 18870.000  | 18190.000 | 77.828%   | 782.800   |
| X    |          | 98840.000  | 1932.000 | 0.000    | 9223.000   | 18800.000  | 17840.000 | 79.113%   | 775.700   |
| σ    |          | 1708.000   | 55.170   | 0.000    | 114.400    | 69.680     | 303.500   | 1.161%    | 6.224     |
| %RSD |          | 1.729      | 2.855    | 0.000    | 1.240      | 0.371      | 1.701     | 1.468     | 0.802     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:18:54 | 186.300    | 390.800  | 8162.000 | 300500.000 | 308200.000 | 90.140    | 309.400   | 174.200   |
| 2    | 17:19:37 | 190.700    | 396.500  | 8144.000 | 302000.000 | 310300.000 | 91.030    | 315.000   | 175.700   |
| 3    | 17:20:20 | 190.600    | 401.800  | 8378.000 | 305000.000 | 312100.000 | 91.120    | 315.200   | 180.100   |
| X    |          | 189.200    | 396.300  | 8228.000 | 302500.000 | 310200.000 | 90.760    | 313.200   | 176.700   |
| σ    |          | 2.529      | 5.505    | 130.400  | 2283.000   | 1984.000   | 0.541     | 3.265     | 3.066     |
| %RSD |          | 1.337      | 1.389    | 1.585    | 0.755      | 0.639      | 0.596     | 1.043     | 1.735     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:18:54 | 173.800    | 2010.000 | 2032.000 | 164.900    | 4.232      | 6.993     | 0.000     | 96.050    |
| 2    | 17:19:37 | 175.700    | 2024.000 | 2045.000 | 164.900    | 3.999      | 7.756     | 0.000     | 97.510    |
| 3    | 17:20:20 | 179.200    | 2060.000 | 2072.000 | 167.100    | 4.280      | 7.725     | 0.000     | 98.870    |
| X    |          | 176.200    | 2031.000 | 2050.000 | 165.600    | 4.170      | 7.491     | 0.000     | 97.480    |
| σ    |          | 2.710      | 25.750   | 20.480   | 1.286      | 0.150      | 0.432     | 0.000     | 1.410     |
| %RSD |          | 1.537      | 1.268    | 0.999    | 0.776      | 3.600      | 5.766     | 0.000     | 1.446     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:18:54 | 0.000      | 18.580   | 18.460   | 74.334%    | 0.306      | 0.278     | 6.102     | 5.685     |
| 2    | 17:19:37 | 0.000      | 19.300   | 18.770   | 74.492%    | 0.328      | 0.278     | 5.769     | 5.731     |
| 3    | 17:20:20 | 0.000      | 19.260   | 19.410   | 74.253%    | 0.321      | 0.290     | 5.908     | 5.803     |
| X    |          | 0.000      | 19.050   | 18.880   | 74.360%    | 0.319      | 0.282     | 5.926     | 5.740     |
| σ    |          | 0.000      | 0.407    | 0.485    | 0.121%     | 0.011      | 0.007     | 0.167     | 0.060     |
| %RSD |          | 0.000      | 2.139    | 2.568    | 0.163      | 3.598      | 2.442     | 2.821     | 1.038     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:18:54 | 76.296%    | 9.387    | 1.303    | 1.354      | 620.000    | 613.100   | 83.411%   | 82.096%   |
| 2    | 17:19:37 | 76.723%    | 9.604    | 1.285    | 1.373      | 624.500    | 620.600   | 84.724%   | 83.748%   |
| 3    | 17:20:20 | 76.420%    | 9.521    | 1.380    | 1.375      | 628.200    | 625.000   | 85.117%   | 83.737%   |
| X    |          | 76.479%    | 9.504    | 1.323    | 1.367      | 624.200    | 619.600   | 84.417%   | 83.194%   |
| σ    |          | 0.220%     | 0.110    | 0.050    | 0.011      | 4.095      | 6.017     | 0.893%    | 0.951%    |
| %RSD |          | 0.287      | 1.155    | 3.800    | 0.822      | 0.656      | 0.971     | 1.058     | 1.143     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 17:18:54 | 1.753      | 1.683    | 175.000  | 175.200    | 174.800    | 75.056%   |           |           |
| 2    | 17:19:37 | 1.660      | 1.746    | 177.100  | 177.300    | 177.000    | 76.208%   |           |           |
| 3    | 17:20:20 | 1.824      | 1.790    | 180.100  | 180.500    | 179.800    | 75.756%   |           |           |
| X    |          | 1.746      | 1.740    | 177.400  | 177.700    | 177.200    | 75.673%   |           |           |
| σ    |          | 0.082      | 0.054    | 2.551    | 2.668      | 2.510      | 0.580%    |           |           |
| %RSD |          | 4.704      | 3.095    | 1.438    | 1.502      | 1.416      | 0.767     |           |           |

CCV 664806 12/21/2012 5:25:25 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B     | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|---------|----------|---------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 17:26:08 | 79.129% | 95.050   | 88.400  | 90.390    | 0.000     | 47580.000 | 47720.000 | 47800.000 |
| 2    | 17:26:51 | 73.177% | 103.400  | 97.800  | 98.390    | 0.000     | 52750.000 | 52120.000 | 52160.000 |
| 3    | 17:27:34 | 74.252% | 96.330   | 95.540  | 94.440    | 0.000     | 47780.000 | 48040.000 | 48500.000 |
| X    |          | 75.519% | 98.277%  | 93.914% | 94.407%   | 0.000     | 98.738%   | 98.583%   | 98.974%   |
| σ    |          | 3.172%  | n/a      | n/a     | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 4.200   | 4.600    | 5.227   | 4.235     | 0.000     | 5.933     | 4.984     | 4.729     |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 17:26:08 | 455.400 | 5098.000 | 0.000   | 47200.000 | 45090.000 | 47090.000 | 93.759%   | 93.460    |
| 2    | 17:26:51 | 497.100 | 5604.000 | 0.000   | 52920.000 | 50890.000 | 54000.000 | 81.864%   | 105.300   |
| 3    | 17:27:34 | 459.800 | 5085.000 | 0.000   | 46810.000 | 44790.000 | 46990.000 | 91.472%   | 93.450    |
| X    |          | 94.152% | 105.248% | 0.000   | 97.953%   | 93.849%   | 98.720%   | 89.032%   | 97.416%   |
| σ    |          | n/a     | n/a      | 0.000   | n/a       | n/a       | n/a       | 6.312%    | n/a       |
| %RSD |          | 4.874   | 5.616    | 0.000   | 6.990     | 7.333     | 8.137     | 7.090     | 7.047     |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 17:26:08 | 88.960  | 90.640   | 474.400 | 23940.000 | 24020.000 | 90.960    | 92.970    | 93.400    |
| 2    | 17:26:51 | 102.100 | 103.500  | 537.800 | 26600.000 | 26930.000 | 103.600   | 103.500   | 104.800   |
| 3    | 17:27:34 | 89.530  | 91.020   | 482.500 | 24110.000 | 24030.000 | 91.590    | 92.810    | 93.800    |
| X    |          | 93.546% | 95.048%  | 99.644% | 99.529%   | 99.976%   | 95.374%   | 96.416%   | 97.344%   |
| σ    |          | n/a     | n/a      | n/a     | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 7.961   | 7.687    | 6.927   | 5.979     | 6.717     | 7.448     | 6.334     | 6.667     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 17:26:08 | 92.850  | 93.200   | 94.980  | 96.940    | 97.630    | 100.000   | 0.000     | 94.910    |
| 2    | 17:26:51 | 103.800 | 105.900  | 104.700 | 105.000   | 104.900   | 105.800   | 0.000     | 100.600   |
| 3    | 17:27:34 | 94.300  | 95.330   | 96.170  | 96.880    | 98.680    | 99.860    | 0.000     | 94.910    |
| X    |          | 96.992% | 98.133%  | 98.603% | 99.591%   | 100.405%  | 101.895%  | 0.000     | 96.800%   |
| σ    |          | n/a     | n/a      | n/a     | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 6.151   | 6.915    | 5.354   | 4.661     | 3.920     | 3.316     | 0.000     | 3.386     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 17:26:08 | 79.308% | 95.380   | 94.390  | 78.093%   | 93.310    | 94.480    | 94.180    | 95.250    |
| 2    | 17:26:51 | 78.776% | 102.500  | 102.800 | 77.027%   | 99.250    | 99.500    | 101.700   | 101.100   |
| 3    | 17:27:34 | 81.572% | 98.930   | 99.490  | 79.648%   | 94.220    | 95.490    | 95.290    | 95.930    |
| X    |          | 79.885% | 98.935%  | 98.910% | 78.256%   | 95.593%   | 96.490%   | 97.070%   | 97.431%   |
| σ    |          | 1.485%  | n/a      | n/a     | 1.318%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 1.859   | 3.592    | 4.306   | 1.684     | 3.346     | 2.750     | 4.202     | 3.292     |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 17:26:08 | 77.704% | 93.560   | 94.000  | 93.690    | 93.790    | 92.920    | 80.136%   | 79.987%   |
| 2    | 17:26:51 | 78.283% | 99.300   | 98.810  | 98.770    | 98.360    | 98.490    | 80.649%   | 81.327%   |
| 3    | 17:27:34 | 81.160% | 94.250   | 94.370  | 93.610    | 93.800    | 93.210    | 84.061%   | 84.859%   |
| X    |          | 79.049% | 95.703%  | 95.724% | 95.357%   | 95.318%   | 94.873%   | 81.615%   | 82.058%   |
| σ    |          | 1.851%  | n/a      | n/a     | n/a       | n/a       | n/a       | 2.134%    | 2.516%    |
| %RSD |          | 2.342   | 3.274    | 2.796   | 3.100     | 2.766     | 3.304     | 2.615     | 3.067     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       |           |           |
| 1    | 17:26:08 | 90.290  | 90.230   | 89.810  | 89.200    | 89.650    | 78.230%   |           |           |
| 2    | 17:26:51 | 95.700  | 96.160   | 95.560  | 96.080    | 95.640    | 79.088%   |           |           |
| 3    | 17:27:34 | 91.600  | 91.030   | 91.270  | 91.580    | 91.410    | 82.535%   |           |           |
| X    |          | 92.529% | 92.475%  | 92.213% | 92.287%   | 92.233%   | 79.951%   |           |           |
| σ    |          | n/a     | n/a      | n/a     | n/a       | n/a       | 2.278%    |           |           |
| %RSD |          | 3.050   | 3.483    | 3.237   | 3.788     | 3.336     | 2.850     |           |           |

CCB3 12/21/2012 5:33:25 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be    | 10B    | 11B      | 13C       | 23Na    | 25Mg     | 26Mg     |
|------|----------|---------|--------|--------|----------|-----------|---------|----------|----------|
|      |          | ppb     | ppb    | ppb    | ppb      | ppb       | ppb     | ppb      | ppb      |
| 1    | 17:34:08 | 90.289% | -0.041 | 0.685  | 0.708    | 0.000     | 1.629   | 1.791    | 1.791    |
| 2    | 17:34:51 | 90.924% | -0.030 | 0.542  | 0.641    | 0.000     | 1.294   | 1.415    | 1.578    |
| 3    | 17:35:34 | 87.690% | -0.041 | 0.599  | 0.551    | 0.000     | 1.244   | 1.452    | 2.060    |
| X    |          | 89.634% | -0.037 | 0.609  | 0.633    | 0.000     | 1.389   | 1.553    | 1.809    |
| σ    |          | 1.713%  | 0.007  | 0.072  | 0.079    | 0.000     | 0.209   | 0.207    | 0.241    |
| %RSD |          | 1.911   | 17.850 | 11.840 | 12.430   | 0.000     | 15.060  | 13.330   | 13.350   |
| Run  | Time     | 27Al    | 28Si   | 37Cl   | 39K      | 43Ca      | 44Ca    | 45Sc     | 47Ti     |
|      |          | ppb     | ppb    | ppb    | ppb      | ppb       | ppb     | ppb      | ppb      |
| 1    | 17:34:08 | 0.390   | -0.658 | 0.000  | -3.667   | -1.731    | 0.324   | 100.832% | 0.046    |
| 2    | 17:34:51 | 0.386   | -1.050 | 0.000  | -4.567   | 1.863     | 0.436   | 100.281% | -0.060   |
| 3    | 17:35:34 | 0.330   | -1.010 | 0.000  | -4.250   | -0.114    | 1.451   | 98.538%  | 0.005    |
| X    |          | 0.369   | -0.906 | 0.000  | -4.161   | 0.006     | 0.737   | 99.884%  | -0.003   |
| σ    |          | 0.034   | 0.216  | 0.000  | 0.456    | 1.800     | 0.621   | 1.198%   | 0.053    |
| %RSD |          | 9.122   | 23.810 | 0.000  | 10.960   | 30000.000 | 84.250  | 1.199    | 1968.000 |
| Run  | Time     | 51V     | 52Cr   | 55Mn   | 56Fe     | 57Fe      | 59Co    | 60Ni     | 63Cu     |
|      |          | ppb     | ppb    | ppb    | ppb      | ppb       | ppb     | ppb      | ppb      |
| 1    | 17:34:08 | 0.007   | -0.019 | 0.480  | 2.899    | 10.640    | -0.008  | -0.031   | -0.014   |
| 2    | 17:34:51 | -0.001  | -0.033 | 0.458  | 0.299    | 8.587     | -0.010  | -0.016   | -0.029   |
| 3    | 17:35:34 | 0.008   | -0.023 | 0.443  | -2.424   | 6.073     | -0.008  | -0.041   | -0.012   |
| X    |          | 0.005   | -0.025 | 0.460  | 0.258    | 8.433     | -0.009  | -0.029   | -0.018   |
| σ    |          | 0.005   | 0.007  | 0.019  | 2.662    | 2.287     | 0.001   | 0.012    | 0.009    |
| %RSD |          | 99.270  | 28.540 | 4.089  | 1032.000 | 27.120    | 15.730  | 41.740   | 50.800   |
| Run  | Time     | 65Cu    | 66Zn   | 68Zn   | 75As     | 78Se      | 82Se    | 83Kr     | 88Sr     |
|      |          | ppb     | ppb    | ppb    | ppb      | ppb       | ppb     | ppb      | ppb      |
| 1    | 17:34:08 | -0.009  | -0.161 | -0.011 | -0.249   | -0.119    | -0.976  | 0.000    | 0.010    |
| 2    | 17:34:51 | -0.007  | -0.105 | -0.143 | -0.158   | -0.221    | -0.769  | 0.000    | 0.005    |
| 3    | 17:35:34 | -0.024  | -0.049 | -0.215 | -0.255   | -0.429    | -1.063  | 0.000    | 0.011    |
| X    |          | -0.013  | -0.105 | -0.123 | -0.221   | -0.256    | -0.936  | 0.000    | 0.009    |
| σ    |          | 0.009   | 0.056  | 0.104  | 0.054    | 0.158     | 0.151   | 0.000    | 0.003    |
| %RSD |          | 71.310  | 53.020 | 84.430 | 24.580   | 61.500    | 16.160  | 0.000    | 38.010   |
| Run  | Time     | 89Y     | 95Mo   | 98Mo   | 103Rh    | 107Ag     | 109Ag   | 111Cd    | 114Cd    |
|      |          | ppb     | ppb    | ppb    | ppb      | ppb       | ppb     | ppb      | ppb      |
| 1    | 17:34:08 | 89.851% | 0.207  | 0.218  | 88.241%  | -0.009    | -0.002  | 0.070    | 0.060    |
| 2    | 17:34:51 | 91.862% | 0.184  | 0.174  | 88.752%  | -0.005    | -0.002  | -0.007   | 0.014    |
| 3    | 17:35:34 | 92.706% | 0.138  | 0.154  | 90.031%  | -0.004    | -0.001  | -0.017   | 0.000    |
| X    |          | 91.473% | 0.176  | 0.182  | 89.008%  | -0.006    | -0.002  | 0.015    | 0.025    |
| σ    |          | 1.467%  | 0.035  | 0.033  | 0.922%   | 0.002     | 0.001   | 0.048    | 0.032    |
| %RSD |          | 1.603   | 19.960 | 17.920 | 1.036    | 43.340    | 36.490  | 313.700  | 127.700  |
| Run  | Time     | 115In   | 118Sn  | 121Sb  | 123Sb    | 135Ba     | 137Ba   | 159Tb    | 165Ho    |
|      |          | ppb     | ppb    | ppb    | ppb      | ppb       | ppb     | ppb      | ppb      |
| 1    | 17:34:08 | 83.956% | -0.161 | -0.056 | -0.061   | 0.015     | 0.015   | 84.901%  | 85.040%  |
| 2    | 17:34:51 | 86.024% | -0.103 | -0.039 | -0.037   | 0.006     | 0.021   | 87.945%  | 87.948%  |
| 3    | 17:35:34 | 87.121% | -0.209 | -0.061 | -0.050   | -0.002    | 0.003   | 89.072%  | 89.490%  |
| X    |          | 85.700% | -0.158 | -0.052 | -0.050   | 0.007     | 0.013   | 87.306%  | 87.493%  |
| σ    |          | 1.607%  | 0.053  | 0.012  | 0.012    | 0.008     | 0.009   | 2.158%   | 2.260%   |
| %RSD |          | 1.876   | 33.460 | 22.530 | 23.920   | 127.900   | 68.770  | 2.471    | 2.583    |
| Run  | Time     | 203Tl   | 205Tl  | 206Pb  | 207Pb    | 208Pb     | 209Bi   |          |          |
|      |          | ppb     | ppb    | ppb    | ppb      | ppb       | ppb     |          |          |
| 1    | 17:34:08 | 0.005   | 0.003  | 0.080  | 0.090    | 0.086     | 92.984% |          |          |
| 2    | 17:34:51 | 0.003   | 0.002  | 0.070  | 0.076    | 0.070     | 95.007% |          |          |
| 3    | 17:35:34 | -0.002  | 0.000  | 0.065  | 0.060    | 0.063     | 97.504% |          |          |
| X    |          | 0.002   | 0.002  | 0.072  | 0.075    | 0.073     | 95.165% |          |          |
| σ    |          | 0.003   | 0.002  | 0.008  | 0.015    | 0.011     | 2.264%  |          |          |
| %RSD |          | 154.200 | 80.810 | 11.050 | 19.990   | 15.440    | 2.379   |          |          |

240-17768-F-20-A 12/21/2012 5:37:46 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:38:28 | 71.529%    | 6.087    | 29.420   | 29.390     | 0.000      | 385.100   | 27360.000 | 28080.000 |
| 2    | 17:39:11 | 68.982%    | 6.388    | 30.840   | 30.770     | 0.000      | 381.200   | 27870.000 | 28530.000 |
| 3    | 17:39:54 | 67.967%    | 6.624    | 31.610   | 31.930     | 0.000      | 409.600   | 28390.000 | 29040.000 |
| X    |          | 69.493%    | 6.366    | 30.630   | 30.700     | 0.000      | 392.000   | 27870.000 | 28550.000 |
| σ    |          | 1.835%     | 0.269    | 1.110    | 1.274      | 0.000      | 15.390    | 513.100   | 477.800   |
| %RSD |          | 2.641      | 4.231    | 3.624    | 4.149      | 0.000      | 3.926     | 1.841     | 1.674     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:38:28 | 131100.000 | 1827.000 | 0.000    | 10960.000  | 16190.000  | 15350.000 | 79.991%   | 959.900   |
| 2    | 17:39:11 | 131400.000 | 1834.000 | 0.000    | 11060.000  | 16630.000  | 15780.000 | 77.412%   | 996.500   |
| 3    | 17:39:54 | 133100.000 | 1839.000 | 0.000    | 11070.000  | 16640.000  | 15790.000 | 77.294%   | 995.000   |
| X    |          | 131900.000 | 1833.000 | 0.000    | 11030.000  | 16490.000  | 15640.000 | 78.233%   | 983.800   |
| σ    |          | 1079.000   | 5.865    | 0.000    | 62.190     | 257.000    | 251.900   | 1.524%    | 20.700    |
| %RSD |          | 0.819      | 0.320    | 0.000    | 0.564      | 1.559      | 1.611     | 1.949     | 2.104     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:38:28 | 235.800    | 317.300  | 4763.000 | 277000.000 | 285200.000 | 100.300   | 259.800   | 170.000   |
| 2    | 17:39:11 | 244.900    | 329.200  | 4839.000 | 279700.000 | 287300.000 | 102.200   | 264.200   | 173.800   |
| 3    | 17:39:54 | 246.700    | 332.900  | 4909.000 | 284500.000 | 293800.000 | 105.000   | 266.700   | 175.200   |
| X    |          | 242.500    | 326.500  | 4837.000 | 280400.000 | 288700.000 | 102.500   | 263.600   | 173.000   |
| σ    |          | 5.843      | 8.160    | 72.810   | 3787.000   | 4474.000   | 2.332     | 3.493     | 2.711     |
| %RSD |          | 2.410      | 2.499    | 1.505    | 1.351      | 1.549      | 2.275     | 1.325     | 1.567     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:38:28 | 170.000    | 612.400  | 610.700  | 160.000    | 4.736      | 8.500     | 0.000     | 113.600   |
| 2    | 17:39:11 | 172.100    | 623.000  | 628.500  | 163.800    | 5.252      | 7.878     | 0.000     | 116.200   |
| 3    | 17:39:54 | 176.400    | 637.500  | 644.400  | 166.700    | 5.187      | 8.132     | 0.000     | 119.400   |
| X    |          | 172.800    | 624.300  | 627.800  | 163.500    | 5.058      | 8.170     | 0.000     | 116.400   |
| σ    |          | 3.223      | 12.580   | 16.880   | 3.389      | 0.281      | 0.313     | 0.000     | 2.883     |
| %RSD |          | 1.865      | 2.015    | 2.688    | 2.073      | 5.556      | 3.825     | 0.000     | 2.477     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:38:28 | 0.000      | 17.530   | 17.330   | 74.954%    | 0.293      | 0.285     | 1.778     | 1.504     |
| 2    | 17:39:11 | 0.000      | 17.610   | 17.440   | 74.829%    | 0.295      | 0.258     | 1.829     | 1.595     |
| 3    | 17:39:54 | 0.000      | 18.690   | 18.280   | 73.337%    | 0.321      | 0.294     | 1.636     | 1.506     |
| X    |          | 0.000      | 17.940   | 17.680   | 74.373%    | 0.303      | 0.279     | 1.748     | 1.535     |
| σ    |          | 0.000      | 0.650    | 0.520    | 0.900%     | 0.015      | 0.019     | 0.100     | 0.052     |
| %RSD |          | 0.000      | 3.625    | 2.940    | 1.210      | 5.071      | 6.852     | 5.724     | 3.389     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:38:28 | 75.860%    | 8.203    | 1.263    | 1.269      | 648.800    | 640.400   | 81.229%   | 80.084%   |
| 2    | 17:39:11 | 77.006%    | 7.918    | 1.322    | 1.321      | 646.900    | 644.300   | 83.248%   | 82.177%   |
| 3    | 17:39:54 | 75.780%    | 8.311    | 1.282    | 1.352      | 666.600    | 665.200   | 82.659%   | 81.504%   |
| X    |          | 76.215%    | 8.144    | 1.289    | 1.314      | 654.100    | 650.000   | 82.379%   | 81.255%   |
| σ    |          | 0.686%     | 0.203    | 0.030    | 0.042      | 10.900     | 13.310    | 1.038%    | 1.068%    |
| %RSD |          | 0.900      | 2.491    | 2.340    | 3.197      | 1.666      | 2.048     | 1.260     | 1.315     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 17:38:28 | 1.845      | 1.865    | 139.100  | 136.400    | 137.500    | 76.167%   |           |           |
| 2    | 17:39:11 | 1.935      | 1.936    | 141.800  | 139.100    | 140.200    | 77.483%   |           |           |
| 3    | 17:39:54 | 2.003      | 2.028    | 146.100  | 144.400    | 144.900    | 75.950%   |           |           |
| X    |          | 1.928      | 1.943    | 142.300  | 140.000    | 140.900    | 76.534%   |           |           |
| σ    |          | 0.079      | 0.082    | 3.516    | 4.080      | 3.727      | 0.830%    |           |           |
| %RSD |          | 4.116      | 4.204    | 2.470    | 2.915      | 2.646      | 1.084     |           |           |



240-17768-F-21-A 12/21/2012 5:42:05 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:42:48 | 72.444%    | 7.597    | 35.690   | 34.030     | 0.000      | 526.400   | 30240.000 | 30790.000 |
| 2    | 17:43:31 | 74.501%    | 7.157    | 32.320   | 31.200     | 0.000      | 490.900   | 28610.000 | 29180.000 |
| 3    | 17:44:14 | 71.720%    | 7.191    | 33.720   | 34.330     | 0.000      | 534.400   | 30880.000 | 31910.000 |
| X    |          | 72.888%    | 7.315    | 33.910   | 33.190     | 0.000      | 517.200   | 29910.000 | 30630.000 |
| σ    |          | 1.443%     | 0.245    | 1.694    | 1.731      | 0.000      | 23.130    | 1171.000  | 1375.000  |
| %RSD |          | 1.979      | 3.344    | 4.997    | 5.216      | 0.000      | 4.473     | 3.916     | 4.491     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:42:48 | 132800.000 | 1695.000 | 0.000    | 10320.000  | 33710.000  | 35520.000 | 90.567%   | 1030.000  |
| 2    | 17:43:31 | 126000.000 | 1597.000 | 0.000    | 9776.000   | 32880.000  | 34620.000 | 90.181%   | 995.300   |
| 3    | 17:44:14 | 136100.000 | 1773.000 | 0.000    | 11080.000  | 37710.000  | 39500.000 | 80.095%   | 1131.000  |
| X    |          | 131600.000 | 1688.000 | 0.000    | 10390.000  | 34770.000  | 36550.000 | 86.947%   | 1052.000  |
| σ    |          | 5121.000   | 88.110   | 0.000    | 654.100    | 2587.000   | 2596.000  | 5.938%    | 70.490    |
| %RSD |          | 3.890      | 5.219    | 0.000    | 6.295      | 7.440      | 7.103     | 6.829     | 6.699     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:42:48 | 247.600    | 209.600  | 6256.000 | 237400.000 | 243900.000 | 118.200   | 228.000   | 174.900   |
| 2    | 17:43:31 | 240.100    | 203.000  | 6051.000 | 229400.000 | 236100.000 | 114.200   | 220.800   | 168.400   |
| 3    | 17:44:14 | 271.000    | 231.800  | 6865.000 | 257400.000 | 263900.000 | 129.500   | 248.300   | 190.400   |
| X    |          | 252.900    | 214.800  | 6391.000 | 241400.000 | 248000.000 | 120.600   | 232.400   | 177.900   |
| σ    |          | 16.100     | 15.050   | 423.200  | 14380.000  | 14360.000  | 7.901     | 14.260    | 11.280    |
| %RSD |          | 6.366      | 7.006    | 6.621    | 5.957      | 5.791      | 6.550     | 6.134     | 6.341     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:42:48 | 175.300    | 583.800  | 586.300  | 132.200    | 4.940      | 7.757     | 0.000     | 176.600   |
| 2    | 17:43:31 | 167.600    | 565.900  | 571.500  | 128.000    | 4.615      | 7.670     | 0.000     | 172.600   |
| 3    | 17:44:14 | 187.900    | 631.000  | 640.500  | 138.800    | 5.237      | 8.772     | 0.000     | 184.600   |
| X    |          | 176.900    | 593.500  | 599.400  | 133.000    | 4.930      | 8.066     | 0.000     | 177.900   |
| σ    |          | 10.240     | 33.630   | 36.300   | 5.466      | 0.311      | 0.613     | 0.000     | 6.125     |
| %RSD |          | 5.787      | 5.666    | 6.057    | 4.110      | 6.308      | 7.595     | 0.000     | 3.443     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:42:48 | 0.000      | 13.490   | 13.670   | 74.205%    | 0.339      | 0.246     | 2.511     | 2.023     |
| 2    | 17:43:31 | 0.000      | 13.470   | 13.280   | 76.195%    | 0.314      | 0.252     | 2.297     | 1.898     |
| 3    | 17:44:14 | 0.000      | 14.350   | 13.980   | 75.175%    | 0.304      | 0.248     | 2.315     | 1.873     |
| X    |          | 0.000      | 13.770   | 13.650   | 75.191%    | 0.319      | 0.248     | 2.374     | 1.931     |
| σ    |          | 0.000      | 0.500    | 0.349    | 0.995%     | 0.018      | 0.003     | 0.118     | 0.080     |
| %RSD |          | 0.000      | 3.631    | 2.558    | 1.323      | 5.666      | 1.239     | 4.983     | 4.151     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:42:48 | 75.141%    | 8.413    | 1.425    | 1.362      | 954.900    | 944.500   | 82.594%   | 81.634%   |
| 2    | 17:43:31 | 78.730%    | 8.265    | 1.311    | 1.397      | 920.200    | 912.300   | 86.482%   | 85.530%   |
| 3    | 17:44:14 | 77.824%    | 8.675    | 1.381    | 1.453      | 953.400    | 946.400   | 86.037%   | 84.920%   |
| X    |          | 77.232%    | 8.451    | 1.372    | 1.404      | 942.800    | 934.400   | 85.038%   | 84.028%   |
| σ    |          | 1.866%     | 0.208    | 0.057    | 0.046      | 19.620     | 19.200    | 2.128%    | 2.096%    |
| %RSD |          | 2.417      | 2.456    | 4.168    | 3.300      | 2.081      | 2.055     | 2.502     | 2.494     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 17:42:48 | 1.945      | 1.950    | 173.800  | 171.500    | 172.200    | 73.558%   |           |           |
| 2    | 17:43:31 | 1.908      | 1.884    | 166.300  | 163.700    | 164.900    | 78.291%   |           |           |
| 3    | 17:44:14 | 2.000      | 2.011    | 175.000  | 170.700    | 172.500    | 77.698%   |           |           |
| X    |          | 1.951      | 1.949    | 171.700  | 168.600    | 169.800    | 76.516%   |           |           |
| σ    |          | 0.046      | 0.063    | 4.714    | 4.268      | 4.317      | 2.579%    |           |           |
| %RSD |          | 2.379      | 3.258    | 2.746    | 2.531      | 2.542      | 3.370     |           |           |

240-17768-F-22-A 12/21/2012 5:46:25 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:47:08 | 74.141%    | 7.462    | 31.020   | 30.290     | 0.000      | 469.700   | 32980.000 | 33850.000 |
| 2    | 17:47:51 | 74.619%    | 7.420    | 31.250   | 30.130     | 0.000      | 457.400   | 32290.000 | 33610.000 |
| 3    | 17:48:34 | 73.118%    | 7.547    | 31.870   | 31.530     | 0.000      | 495.800   | 35190.000 | 35600.000 |
| X    |          | 73.959%    | 7.476    | 31.380   | 30.650     | 0.000      | 474.300   | 33490.000 | 34350.000 |
| σ    |          | 0.767%     | 0.065    | 0.441    | 0.764      | 0.000      | 19.590    | 1517.000  | 1087.000  |
| %RSD |          | 1.037      | 0.869    | 1.406    | 2.494      | 0.000      | 4.130     | 4.530     | 3.164     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:47:08 | 124600.000 | 2666.000 | 0.000    | 10030.000  | 26860.000  | 28240.000 | 93.353%   | 987.000   |
| 2    | 17:47:51 | 124100.000 | 2647.000 | 0.000    | 10020.000  | 26520.000  | 27970.000 | 92.251%   | 999.900   |
| 3    | 17:48:34 | 132200.000 | 2794.000 | 0.000    | 11100.000  | 29880.000  | 31370.000 | 82.050%   | 1109.000  |
| X    |          | 127000.000 | 2702.000 | 0.000    | 10380.000  | 27750.000  | 29190.000 | 89.218%   | 1032.000  |
| σ    |          | 4560.000   | 79.730   | 0.000    | 621.900    | 1847.000   | 1889.000  | 6.232%    | 66.940    |
| %RSD |          | 3.591      | 2.950    | 0.000    | 5.989      | 6.654      | 6.471     | 6.985     | 6.487     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:47:08 | 230.000    | 227.500  | 6826.000 | 282600.000 | 291000.000 | 120.300   | 279.300   | 241.600   |
| 2    | 17:47:51 | 238.500    | 231.200  | 6825.000 | 283800.000 | 295400.000 | 122.500   | 281.300   | 245.500   |
| 3    | 17:48:34 | 261.400    | 255.000  | 7488.000 | 308000.000 | 319300.000 | 132.400   | 304.600   | 264.400   |
| X    |          | 243.300    | 237.900  | 7046.000 | 291500.000 | 301900.000 | 125.100   | 288.400   | 250.500   |
| σ    |          | 16.230     | 14.930   | 382.600  | 14340.000  | 15190.000  | 6.451     | 14.080    | 12.180    |
| %RSD |          | 6.671      | 6.276    | 5.429    | 4.921      | 5.032      | 5.158     | 4.880     | 4.860     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:47:08 | 242.400    | 786.100  | 799.600  | 170.700    | 5.152      | 9.893     | 0.000     | 152.100   |
| 2    | 17:47:51 | 244.500    | 795.300  | 803.300  | 172.700    | 4.940      | 9.655     | 0.000     | 154.600   |
| 3    | 17:48:34 | 262.800    | 851.700  | 866.600  | 182.300    | 5.290      | 10.890    | 0.000     | 158.500   |
| X    |          | 249.900    | 811.000  | 823.200  | 175.300    | 5.127      | 10.150    | 0.000     | 155.100   |
| σ    |          | 11.210     | 35.530   | 37.670   | 6.200      | 0.176      | 0.656     | 0.000     | 3.206     |
| %RSD |          | 4.486      | 4.381    | 4.576    | 3.538      | 3.440      | 6.463     | 0.000     | 2.068     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:47:08 | 0.000      | 18.390   | 18.500   | 74.418%    | 0.346      | 0.215     | 3.415     | 2.728     |
| 2    | 17:47:51 | 0.000      | 18.490   | 18.790   | 74.796%    | 0.371      | 0.217     | 3.570     | 2.965     |
| 3    | 17:48:34 | 0.000      | 18.880   | 19.080   | 74.929%    | 0.377      | 0.202     | 3.567     | 2.784     |
| X    |          | 0.000      | 18.590   | 18.790   | 74.714%    | 0.365      | 0.211     | 3.517     | 2.826     |
| σ    |          | 0.000      | 0.256    | 0.291    | 0.265%     | 0.016      | 0.008     | 0.088     | 0.124     |
| %RSD |          | 0.000      | 1.376    | 1.548    | 0.355      | 4.389      | 3.976     | 2.510     | 4.392     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:47:08 | 75.905%    | 11.190   | 1.682    | 1.767      | 1045.000   | 1036.000  | 85.654%   | 84.598%   |
| 2    | 17:47:51 | 76.764%    | 11.460   | 1.661    | 1.681      | 1055.000   | 1040.000  | 88.485%   | 86.982%   |
| 3    | 17:48:34 | 77.421%    | 11.190   | 1.631    | 1.688      | 1049.000   | 1044.000  | 89.059%   | 87.742%   |
| X    |          | 76.696%    | 11.280   | 1.658    | 1.712      | 1050.000   | 1040.000  | 87.733%   | 86.441%   |
| σ    |          | 0.760%     | 0.157    | 0.025    | 0.048      | 4.910      | 4.342     | 1.823%    | 1.641%    |
| %RSD |          | 0.991      | 1.387    | 1.537    | 2.807      | 0.468      | 0.417     | 2.078     | 1.898     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 17:47:08 | 2.137      | 2.145    | 243.400  | 242.100    | 243.300    | 72.057%   |           |           |
| 2    | 17:47:51 | 2.233      | 2.249    | 249.400  | 244.900    | 246.900    | 73.647%   |           |           |
| 3    | 17:48:34 | 2.175      | 2.224    | 248.200  | 245.700    | 248.100    | 74.240%   |           |           |
| X    |          | 2.181      | 2.206    | 247.000  | 244.200    | 246.100    | 73.315%   |           |           |
| σ    |          | 0.048      | 0.054    | 3.194    | 1.864      | 2.524      | 1.129%    |           |           |
| %RSD |          | 2.215      | 2.464    | 1.293    | 0.763      | 1.026      | 1.540     |           |           |

240-17768-F-23-A 12/21/2012 5:50:44 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:51:27 | 76.533%    | 4.990    | 24.830   | 24.960     | 0.000      | 590.100   | 26180.000 | 27000.000 |
| 2    | 17:52:10 | 75.493%    | 5.065    | 25.460   | 25.970     | 0.000      | 614.100   | 27500.000 | 28520.000 |
| 3    | 17:52:53 | 77.311%    | 5.293    | 25.620   | 26.050     | 0.000      | 596.700   | 27230.000 | 28290.000 |
| X    |          | 76.445%    | 5.116    | 25.300   | 25.660     | 0.000      | 600.300   | 26970.000 | 27940.000 |
| σ    |          | 0.912%     | 0.158    | 0.419    | 0.607      | 0.000      | 12.390    | 694.300   | 820.700   |
| %RSD |          | 1.193      | 3.078    | 1.654    | 2.364      | 0.000      | 2.065     | 2.574     | 2.938     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:51:27 | 105500.000 | 2252.000 | 0.000    | 9547.000   | 11440.000  | 10880.000 | 94.058%   | 741.500   |
| 2    | 17:52:10 | 111800.000 | 2348.000 | 0.000    | 10330.000  | 12550.000  | 12120.000 | 82.814%   | 827.400   |
| 3    | 17:52:53 | 111100.000 | 2354.000 | 0.000    | 10270.000  | 12590.000  | 12250.000 | 81.703%   | 834.400   |
| X    |          | 109500.000 | 2318.000 | 0.000    | 10050.000  | 12190.000  | 11750.000 | 86.192%   | 801.100   |
| σ    |          | 3458.000   | 57.350   | 0.000    | 436.200    | 655.900    | 756.700   | 6.835%    | 51.760    |
| %RSD |          | 3.158      | 2.474    | 0.000    | 4.340      | 5.380      | 6.438     | 7.930     | 6.461     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:51:27 | 190.100    | 186.000  | 3829.000 | 262500.000 | 270800.000 | 89.780    | 229.200   | 219.200   |
| 2    | 17:52:10 | 209.000    | 205.100  | 4208.000 | 285500.000 | 293600.000 | 96.760    | 248.100   | 236.800   |
| 3    | 17:52:53 | 210.800    | 205.900  | 4291.000 | 288300.000 | 295400.000 | 97.880    | 249.600   | 237.900   |
| X    |          | 203.300    | 199.000  | 4109.000 | 278800.000 | 286600.000 | 94.810    | 242.300   | 231.300   |
| σ    |          | 11.460     | 11.260   | 246.400  | 14130.000  | 13670.000  | 4.387     | 11.380    | 10.480    |
| %RSD |          | 5.639      | 5.658    | 5.996    | 5.069      | 4.769      | 4.627     | 4.698     | 4.533     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:51:27 | 218.000    | 586.000  | 593.600  | 155.100    | 3.367      | 6.590     | 0.000     | 73.270    |
| 2    | 17:52:10 | 234.700    | 635.200  | 639.400  | 165.000    | 3.574      | 6.767     | 0.000     | 76.210    |
| 3    | 17:52:53 | 236.900    | 638.900  | 645.200  | 167.300    | 3.716      | 7.460     | 0.000     | 76.460    |
| X    |          | 229.900    | 620.000  | 626.000  | 162.500    | 3.552      | 6.939     | 0.000     | 75.310    |
| σ    |          | 10.320     | 29.520   | 28.260   | 6.510      | 0.176      | 0.459     | 0.000     | 1.772     |
| %RSD |          | 4.488      | 4.761    | 4.515    | 4.007      | 4.947      | 6.621     | 0.000     | 2.353     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:51:27 | 0.000      | 13.080   | 13.040   | 74.631%    | 0.307      | 0.166     | 2.099     | 1.733     |
| 2    | 17:52:10 | 0.000      | 13.590   | 13.540   | 75.138%    | 0.311      | 0.148     | 2.498     | 1.905     |
| 3    | 17:52:53 | 0.000      | 13.580   | 13.410   | 75.098%    | 0.302      | 0.188     | 2.130     | 1.722     |
| X    |          | 0.000      | 13.420   | 13.330   | 74.955%    | 0.307      | 0.167     | 2.242     | 1.787     |
| σ    |          | 0.000      | 0.288    | 0.262    | 0.282%     | 0.004      | 0.020     | 0.222     | 0.102     |
| %RSD |          | 0.000      | 2.147    | 1.963    | 0.376      | 1.392      | 11.900    | 9.897     | 5.733     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 17:51:27 | 75.001%    | 10.080   | 1.093    | 1.006      | 544.200    | 538.700   | 81.781%   | 80.628%   |
| 2    | 17:52:10 | 75.813%    | 10.230   | 1.091    | 1.096      | 548.200    | 542.000   | 83.772%   | 82.083%   |
| 3    | 17:52:53 | 76.251%    | 10.380   | 1.119    | 1.092      | 547.500    | 541.700   | 83.724%   | 82.574%   |
| X    |          | 75.688%    | 10.230   | 1.101    | 1.065      | 546.600    | 540.800   | 83.092%   | 81.762%   |
| σ    |          | 0.634%     | 0.148    | 0.016    | 0.051      | 2.128      | 1.807     | 1.136%    | 1.012%    |
| %RSD |          | 0.838      | 1.449    | 1.426    | 4.787      | 0.389      | 0.334     | 1.367     | 1.238     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 17:51:27 | 1.671      | 1.707    | 143.500  | 141.600    | 143.200    | 71.315%   |           |           |
| 2    | 17:52:10 | 1.747      | 1.770    | 146.200  | 144.000    | 145.100    | 72.729%   |           |           |
| 3    | 17:52:53 | 1.756      | 1.763    | 146.800  | 144.400    | 145.700    | 72.700%   |           |           |
| X    |          | 1.725      | 1.747    | 145.500  | 143.300    | 144.700    | 72.248%   |           |           |
| σ    |          | 0.046      | 0.035    | 1.765    | 1.491      | 1.316      | 0.808%    |           |           |
| %RSD |          | 2.693      | 1.985    | 1.213    | 1.040      | 0.910      | 1.118     |           |           |

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User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be    | 10B    | 11B     | 13C    | 23Na    | 25Mg     | 26Mg    |
|------|----------|---------|--------|--------|---------|--------|---------|----------|---------|
|      |          | ppb     | ppb    | ppb    | ppb     | ppb    | ppb     | ppb      | ppb     |
| 1    | 18:00:06 | 89.093% | -0.040 | 0.530  | 0.388   | 0.000  | 7.124   | 6.759    | 7.258   |
| 2    | 18:00:49 | 89.360% | -0.038 | 0.412  | 0.405   | 0.000  | 6.761   | 7.420    | 7.601   |
| 3    | 18:01:32 | 89.325% | -0.029 | 0.378  | 0.400   | 0.000  | 6.736   | 7.429    | 7.487   |
| X    |          | 89.259% | -0.036 | 0.440  | 0.397   | 0.000  | 6.874   | 7.203    | 7.449   |
| σ    |          | 0.145%  | 0.006  | 0.080  | 0.009   | 0.000  | 0.217   | 0.384    | 0.174   |
| %RSD |          | 0.162   | 17.560 | 18.130 | 2.240   | 0.000  | 3.155   | 5.334    | 2.343   |
| Run  | Time     | 27Al    | 28Si   | 37Cl   | 39K     | 43Ca   | 44Ca    | 45Sc     | 47Ti    |
|      |          | ppb     | ppb    | ppb    | ppb     | ppb    | ppb     | ppb      | ppb     |
| 1    | 18:00:06 | 4.908   | 4.978  | 0.000  | -0.753  | 28.710 | 31.940  | 101.208% | 0.225   |
| 2    | 18:00:49 | 4.990   | 4.454  | 0.000  | -2.005  | 34.280 | 29.690  | 99.191%  | 0.102   |
| 3    | 18:01:32 | 5.029   | 4.526  | 0.000  | -2.140  | 36.680 | 31.670  | 96.912%  | 0.085   |
| X    |          | 4.976   | 4.653  | 0.000  | -1.633  | 33.220 | 31.100  | 99.104%  | 0.137   |
| σ    |          | 0.062   | 0.284  | 0.000  | 0.765   | 4.091  | 1.226   | 2.150%   | 0.077   |
| %RSD |          | 1.245   | 6.112  | 0.000  | 46.830  | 12.310 | 3.942   | 2.169    | 55.750  |
| Run  | Time     | 51V     | 52Cr   | 55Mn   | 56Fe    | 57Fe   | 59Co    | 60Ni     | 63Cu    |
|      |          | ppb     | ppb    | ppb    | ppb     | ppb    | ppb     | ppb      | ppb     |
| 1    | 18:00:06 | 0.069   | 0.228  | 0.222  | 28.380  | 35.250 | -0.016  | 0.002    | 0.151   |
| 2    | 18:00:49 | 0.336   | 0.234  | 0.266  | 20.040  | 26.920 | -0.011  | 0.030    | 0.127   |
| 3    | 18:01:32 | 0.132   | 0.233  | 0.288  | 17.640  | 25.520 | -0.013  | 0.016    | 0.118   |
| X    |          | 0.179   | 0.232  | 0.259  | 22.020  | 29.230 | -0.014  | 0.016    | 0.132   |
| σ    |          | 0.140   | 0.003  | 0.034  | 5.637   | 5.262  | 0.003   | 0.014    | 0.017   |
| %RSD |          | 78.100  | 1.360  | 13.000 | 25.600  | 18.000 | 19.560  | 87.920   | 13.110  |
| Run  | Time     | 65Cu    | 66Zn   | 68Zn   | 75As    | 78Se   | 82Se    | 83Kr     | 88Sr    |
|      |          | ppb     | ppb    | ppb    | ppb     | ppb    | ppb     | ppb      | ppb     |
| 1    | 18:00:06 | 0.120   | 0.653  | 0.923  | -0.074  | -0.477 | -0.896  | 0.000    | 0.066   |
| 2    | 18:00:49 | 0.155   | 0.709  | 0.467  | -0.039  | -0.404 | -0.520  | 0.000    | 0.063   |
| 3    | 18:01:32 | 0.133   | 0.668  | 0.671  | -0.171  | -0.605 | -0.624  | 0.000    | 0.063   |
| X    |          | 0.136   | 0.677  | 0.687  | -0.095  | -0.495 | -0.680  | 0.000    | 0.064   |
| σ    |          | 0.017   | 0.029  | 0.229  | 0.068   | 0.102  | 0.194   | 0.000    | 0.002   |
| %RSD |          | 12.780  | 4.279  | 33.290 | 72.230  | 20.520 | 28.580  | 0.000    | 2.359   |
| Run  | Time     | 89Y     | 95Mo   | 98Mo   | 103Rh   | 107Ag  | 109Ag   | 111Cd    | 114Cd   |
|      |          | ppb     | ppb    | ppb    | ppb     | ppb    | ppb     | ppb      | ppb     |
| 1    | 18:00:06 | 84.098% | 0.042  | 0.013  | 85.210% | -0.010 | -0.014  | 0.093    | 0.071   |
| 2    | 18:00:49 | 85.254% | 0.054  | 0.032  | 85.977% | -0.016 | -0.008  | -0.035   | -0.021  |
| 3    | 18:01:32 | 85.126% | 0.032  | 0.046  | 85.964% | -0.015 | -0.012  | -0.049   | -0.030  |
| X    |          | 84.826% | 0.043  | 0.030  | 85.717% | -0.014 | -0.011  | 0.003    | 0.007   |
| σ    |          | 0.634%  | 0.011  | 0.017  | 0.439%  | 0.003  | 0.003   | 0.078    | 0.055   |
| %RSD |          | 0.747   | 26.210 | 54.370 | 0.512   | 25.050 | 28.000  | 2638.000 | 811.400 |
| Run  | Time     | 115In   | 118Sn  | 121Sb  | 123Sb   | 135Ba  | 137Ba   | 159Tb    | 165Ho   |
|      |          | ppb     | ppb    | ppb    | ppb     | ppb    | ppb     | ppb      | ppb     |
| 1    | 18:00:06 | 80.305% | 3.685  | -0.073 | -0.063  | 0.234  | 0.261   | 82.271%  | 82.136% |
| 2    | 18:00:49 | 82.279% | 3.536  | -0.072 | -0.075  | 0.243  | 0.214   | 85.144%  | 85.034% |
| 3    | 18:01:32 | 82.806% | 3.504  | -0.071 | -0.073  | 0.242  | 0.231   | 85.420%  | 85.605% |
| X    |          | 81.797% | 3.575  | -0.072 | -0.070  | 0.240  | 0.235   | 84.278%  | 84.258% |
| σ    |          | 1.319%  | 0.097  | 0.001  | 0.007   | 0.005  | 0.024   | 1.744%   | 1.860%  |
| %RSD |          | 1.612   | 2.711  | 1.717  | 9.753   | 1.938  | 10.060  | 2.069    | 2.208   |
| Run  | Time     | 203Tl   | 205Tl  | 206Pb  | 207Pb   | 208Pb  | 209Bi   |          |         |
|      |          | ppb     | ppb    | ppb    | ppb     | ppb    | ppb     |          |         |
| 1    | 18:00:06 | -0.004  | -0.007 | 0.050  | 0.055   | 0.051  | 89.085% |          |         |
| 2    | 18:00:49 | -0.009  | -0.002 | 0.043  | 0.042   | 0.041  | 91.192% |          |         |
| 3    | 18:01:32 | -0.005  | -0.001 | 0.031  | 0.051   | 0.040  | 92.180% |          |         |
| X    |          | -0.006  | -0.003 | 0.041  | 0.049   | 0.044  | 90.819% |          |         |
| σ    |          | 0.003   | 0.003  | 0.009  | 0.007   | 0.006  | 1.581%  |          |         |
| %RSD |          | 45.310  | 93.770 | 22.680 | 13.910  | 13.460 | 1.740   |          |         |

LCS 180-59046/2-A 12/21/2012 6:03:40 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li      | 9Be      | 10B     | 11B      | 13C      | 23Na     | 25Mg     | 26Mg     |
|------|----------|----------|----------|---------|----------|----------|----------|----------|----------|
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 18:04:23 | 78.266%  | 834.900  | 79.750  | 79.820   | 0.000    | 8573.000 | 8555.000 | 8749.000 |
| 2    | 18:05:06 | 75.468%  | 850.400  | 81.770  | 83.700   | 0.000    | 9228.000 | 9281.000 | 9425.000 |
| 3    | 18:05:49 | 75.161%  | 844.900  | 82.770  | 82.660   | 0.000    | 9036.000 | 9066.000 | 9323.000 |
| x    |          | 76.298%  | 843.400  | 81.430  | 82.060   | 0.000    | 8946.000 | 8967.000 | 9166.000 |
| σ    |          | 1.711%   | 7.847    | 1.537   | 2.005    | 0.000    | 336.600  | 372.700  | 364.800  |
| %RSD |          | 2.243    | 0.930    | 1.888   | 2.443    | 0.000    | 3.763    | 4.157    | 3.980    |
| Run  | Time     | 27Al     | 28Si     | 37Cl    | 39K      | 43Ca     | 44Ca     | 45Sc     | 47Ti     |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 18:04:23 | 8615.000 | 25.490   | 0.000   | 8436.000 | 8547.000 | 8086.000 | 90.296%  | 85.170   |
| 2    | 18:05:06 | 9228.000 | 27.620   | 0.000   | 9401.000 | 9964.000 | 9317.000 | 76.778%  | 96.450   |
| 3    | 18:05:49 | 9103.000 | 26.920   | 0.000   | 9463.000 | 9996.000 | 9305.000 | 77.334%  | 97.050   |
| x    |          | 8982.000 | 26.680   | 0.000   | 9100.000 | 9502.000 | 8903.000 | 81.469%  | 92.890   |
| σ    |          | 323.900  | 1.088    | 0.000   | 575.700  | 827.300  | 707.600  | 7.649%   | 6.690    |
| %RSD |          | 3.606    | 4.080    | 0.000   | 6.327    | 8.706    | 7.948    | 9.389    | 7.202    |
| Run  | Time     | 51V      | 52Cr     | 55Mn    | 56Fe     | 57Fe     | 59Co     | 60Ni     | 63Cu     |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 18:04:23 | 894.700  | 898.200  | 888.700 | 8981.000 | 8211.000 | 914.600  | 847.600  | 867.300  |
| 2    | 18:05:06 | 1007.000 | 1006.000 | 987.100 | 9889.000 | 9087.000 | 1001.000 | 947.500  | 953.800  |
| 3    | 18:05:49 | 1014.000 | 1009.000 | 983.200 | 9839.000 | 9052.000 | 993.900  | 940.300  | 952.800  |
| x    |          | 971.800  | 971.100  | 953.000 | 9570.000 | 8783.000 | 970.000  | 911.800  | 924.600  |
| σ    |          | 66.880   | 63.190   | 55.690  | 510.500  | 496.000  | 48.090   | 55.730   | 49.630   |
| %RSD |          | 6.882    | 6.507    | 5.844   | 5.334    | 5.647    | 4.958    | 6.112    | 5.368    |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn    | 75As     | 78Se     | 82Se     | 83Kr     | 88Sr     |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 18:04:23 | 880.600  | 805.700  | 806.200 | 808.200  | 782.900  | 805.200  | 0.000    | 955.300  |
| 2    | 18:05:06 | 955.000  | 872.600  | 874.000 | 842.300  | 806.600  | 810.400  | 0.000    | 955.100  |
| 3    | 18:05:49 | 942.700  | 873.700  | 872.800 | 842.500  | 808.200  | 818.400  | 0.000    | 963.000  |
| x    |          | 926.100  | 850.700  | 851.000 | 831.000  | 799.200  | 811.300  | 0.000    | 957.800  |
| σ    |          | 39.840   | 38.940   | 38.810  | 19.740   | 14.140   | 6.675    | 0.000    | 4.545    |
| %RSD |          | 4.302    | 4.578    | 4.560   | 2.375    | 1.769    | 0.823    | 0.000    | 0.475    |
| Run  | Time     | 89Y      | 95Mo     | 98Mo    | 103Rh    | 107Ag    | 109Ag    | 111Cd    | 114Cd    |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 18:04:23 | 74.941%  | 87.040   | 85.760  | 79.411%  | 88.410   | 90.370   | 837.300  | 864.800  |
| 2    | 18:05:06 | 76.430%  | 87.980   | 87.770  | 79.605%  | 89.080   | 90.890   | 845.400  | 867.100  |
| 3    | 18:05:49 | 76.186%  | 88.480   | 88.120  | 79.273%  | 89.620   | 91.310   | 850.500  | 875.300  |
| x    |          | 75.852%  | 87.830   | 87.210  | 79.429%  | 89.040   | 90.860   | 844.400  | 869.100  |
| σ    |          | 0.799%   | 0.729    | 1.275   | 0.167%   | 0.606    | 0.473    | 6.654    | 5.517    |
| %RSD |          | 1.053    | 0.830    | 1.462   | 0.210    | 0.681    | 0.520    | 0.788    | 0.635    |
| Run  | Time     | 115In    | 118Sn    | 121Sb   | 123Sb    | 135Ba    | 137Ba    | 159Tb    | 165Ho    |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 18:04:23 | 73.794%  | 95.920   | 83.370  | 83.220   | 864.700  | 856.400  | 80.660%  | 81.509%  |
| 2    | 18:05:06 | 75.635%  | 96.480   | 83.630  | 83.910   | 861.400  | 857.800  | 83.305%  | 83.622%  |
| 3    | 18:05:49 | 75.718%  | 97.610   | 84.300  | 84.400   | 859.700  | 855.600  | 84.377%  | 85.286%  |
| x    |          | 75.049%  | 96.670   | 83.770  | 83.850   | 861.900  | 856.600  | 82.780%  | 83.472%  |
| σ    |          | 1.088%   | 0.863    | 0.481   | 0.592    | 2.525    | 1.083    | 1.913%   | 1.893%   |
| %RSD |          | 1.449    | 0.893    | 0.575   | 0.706    | 0.293    | 0.126    | 2.311    | 2.268    |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb   | 207Pb    | 208Pb    | 209Bi    |          |          |
|      |          | ppb      | ppb      | ppb     | ppb      | ppb      | ppb      |          |          |
| 1    | 18:04:23 | 205.800  | 206.100  | 821.900 | 871.900  | 890.000  | 76.744%  |          |          |
| 2    | 18:05:06 | 211.800  | 210.100  | 830.800 | 877.700  | 894.200  | 79.281%  |          |          |
| 3    | 18:05:49 | 212.100  | 211.400  | 829.200 | 885.100  | 897.200  | 80.158%  |          |          |
| x    |          | 209.900  | 209.200  | 827.300 | 878.200  | 893.800  | 78.728%  |          |          |
| σ    |          | 3.529    | 2.756    | 4.749   | 6.646    | 3.628    | 1.773%   |          |          |
| %RSD |          | 1.681    | 1.317    | 0.574   | 0.757    | 0.406    | 2.252    |          |          |

240-17525-Q-1-A 12/21/2012 6:07:58 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:08:41 | 71.373%    | 9.389    | 47.390   | 46.570     | 0.000      | 586.200   | 41940.000 | 43530.000 |
| 2    | 18:09:24 | 69.966%    | 9.300    | 47.690   | 48.520     | 0.000      | 620.400   | 44640.000 | 45920.000 |
| 3    | 18:10:07 | 70.805%    | 8.786    | 46.210   | 46.580     | 0.000      | 585.800   | 42600.000 | 43190.000 |
| X    |          | 70.715%    | 9.158    | 47.090   | 47.220     | 0.000      | 597.500   | 43060.000 | 44210.000 |
| σ    |          | 0.708%     | 0.326    | 0.784    | 1.123      | 0.000      | 19.840    | 1405.000  | 1490.000  |
| %RSD |          | 1.001      | 3.559    | 1.665    | 2.377      | 0.000      | 3.321     | 3.262     | 3.370     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:08:41 | 156800.000 | 2176.000 | 0.000    | 16240.000  | 54290.000  | 57410.000 | 89.892%   | 615.400   |
| 2    | 18:09:24 | 166600.000 | 2311.000 | 0.000    | 17570.000  | 60170.000  | 63230.000 | 80.258%   | 682.800   |
| 3    | 18:10:07 | 155400.000 | 2103.000 | 0.000    | 16240.000  | 54760.000  | 58000.000 | 90.408%   | 618.500   |
| X    |          | 159600.000 | 2197.000 | 0.000    | 16680.000  | 56410.000  | 59550.000 | 86.853%   | 638.900   |
| σ    |          | 6083.000   | 105.700  | 0.000    | 765.400    | 3266.000   | 3206.000  | 5.717%    | 38.040    |
| %RSD |          | 3.811      | 4.809    | 0.000    | 4.587      | 5.790      | 5.384     | 6.582     | 5.954     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:08:41 | 226.400    | 260.200  | 4610.000 | 264200.000 | 272200.000 | 118.800   | 296.000   | 203.400   |
| 2    | 18:09:24 | 250.200    | 285.500  | 5100.000 | 291000.000 | 298500.000 | 130.900   | 324.100   | 222.100   |
| 3    | 18:10:07 | 226.200    | 263.000  | 4656.000 | 264100.000 | 272000.000 | 120.400   | 299.700   | 206.000   |
| X    |          | 234.300    | 269.600  | 4789.000 | 273100.000 | 280900.000 | 123.400   | 306.600   | 210.500   |
| σ    |          | 13.810     | 13.890   | 270.100  | 15540.000  | 15280.000  | 6.565     | 15.260    | 10.140    |
| %RSD |          | 5.894      | 5.153    | 5.641    | 5.690      | 5.439      | 5.321     | 4.978     | 4.815     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:08:41 | 206.200    | 853.200  | 863.600  | 111.900    | 6.945      | 9.521     | 0.000     | 170.100   |
| 2    | 18:09:24 | 221.000    | 925.200  | 931.500  | 120.400    | 6.165      | 9.046     | 0.000     | 178.100   |
| 3    | 18:10:07 | 204.700    | 859.500  | 872.400  | 112.900    | 4.876      | 7.717     | 0.000     | 174.700   |
| X    |          | 210.600    | 879.300  | 889.100  | 115.000    | 5.996      | 8.761     | 0.000     | 174.300   |
| σ    |          | 9.024      | 39.870   | 36.920   | 4.642      | 1.045      | 0.935     | 0.000     | 3.999     |
| %RSD |          | 4.284      | 4.535    | 4.152    | 4.035      | 17.430     | 10.670    | 0.000     | 2.295     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:08:41 | 0.000      | 15.880   | 15.740   | 78.355%    | 0.366      | 0.287     | 3.334     | 2.954     |
| 2    | 18:09:24 | 0.000      | 16.340   | 15.900   | 78.946%    | 0.388      | 0.302     | 3.352     | 2.956     |
| 3    | 18:10:07 | 0.000      | 16.270   | 16.040   | 79.275%    | 0.383      | 0.287     | 3.107     | 2.761     |
| X    |          | 0.000      | 16.160   | 15.890   | 78.859%    | 0.379      | 0.292     | 3.264     | 2.890     |
| σ    |          | 0.000      | 0.249    | 0.152    | 0.466%     | 0.011      | 0.008     | 0.137     | 0.112     |
| %RSD |          | 0.000      | 1.543    | 0.954    | 0.591      | 2.950      | 2.896     | 4.186     | 3.883     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:08:41 | 74.683%    | 11.240   | 1.542    | 1.636      | 855.500    | 847.200   | 81.103%   | 79.570%   |
| 2    | 18:09:24 | 76.960%    | 11.560   | 1.528    | 1.575      | 856.300    | 846.100   | 83.763%   | 82.464%   |
| 3    | 18:10:07 | 77.226%    | 10.980   | 1.494    | 1.511      | 859.200    | 850.800   | 83.671%   | 82.214%   |
| X    |          | 76.290%    | 11.260   | 1.521    | 1.574      | 857.000    | 848.000   | 82.846%   | 81.416%   |
| σ    |          | 1.398%     | 0.293    | 0.025    | 0.063      | 1.980      | 2.481     | 1.510%    | 1.603%    |
| %RSD |          | 1.832      | 2.604    | 1.625    | 3.972      | 0.231      | 0.292     | 1.822     | 1.969     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 18:08:41 | 2.918      | 2.877    | 208.000  | 204.700    | 205.900    | 73.114%   |           |           |
| 2    | 18:09:24 | 2.630      | 2.545    | 209.600  | 208.800    | 208.700    | 74.482%   |           |           |
| 3    | 18:10:07 | 2.441      | 2.440    | 208.400  | 207.100    | 207.500    | 75.507%   |           |           |
| X    |          | 2.663      | 2.621    | 208.700  | 206.900    | 207.400    | 74.367%   |           |           |
| σ    |          | 0.240      | 0.228    | 0.818    | 2.081      | 1.389      | 1.201%    |           |           |
| %RSD |          | 9.022      | 8.709    | 0.392    | 1.006      | 0.669      | 1.614     |           |           |

240-17525-Q-1-A SD@5

12/21/2012 6:12:17 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li       | 9Be     | 10B     | 11B       | 13C       | 23Na      | 25Mg     | 26Mg     |
|------|----------|-----------|---------|---------|-----------|-----------|-----------|----------|----------|
|      |          | ppb       | ppb     | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 18:13:00 | 80.802%   | 1.807   | 10.300  | 10.270    | 0.000     | 102.000   | 8494.000 | 8600.000 |
| 2    | 18:13:42 | 78.308%   | 1.792   | 9.972   | 10.440    | 0.000     | 105.700   | 8598.000 | 8820.000 |
| 3    | 18:14:25 | 77.574%   | 1.854   | 10.260  | 10.340    | 0.000     | 101.800   | 8302.000 | 8664.000 |
| X    |          | 78.895%   | 1.818   | 10.180  | 10.350    | 0.000     | 103.200   | 8465.000 | 8695.000 |
| σ    |          | 1.692%    | 0.032   | 0.181   | 0.083     | 0.000     | 2.205     | 150.300  | 113.300  |
| %RSD |          | 2.145     | 1.780   | 1.776   | 0.798     | 0.000     | 2.138     | 1.776    | 1.303    |
| Run  | Time     | 27Al      | 28Si    | 37Cl    | 39K       | 43Ca      | 44Ca      | 45Sc     | 47Ti     |
|      |          | ppb       | ppb     | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 18:13:00 | 31890.000 | 398.500 | 0.000   | 3252.000  | 11050.000 | 10460.000 | 98.708%  | 122.200  |
| 2    | 18:13:42 | 32420.000 | 413.100 | 0.000   | 3297.000  | 11290.000 | 10790.000 | 96.199%  | 125.600  |
| 3    | 18:14:25 | 31970.000 | 409.700 | 0.000   | 3240.000  | 11140.000 | 10530.000 | 95.357%  | 126.600  |
| X    |          | 32100.000 | 407.100 | 0.000   | 3263.000  | 11160.000 | 10590.000 | 96.755%  | 124.800  |
| σ    |          | 287.900   | 7.642   | 0.000   | 30.050    | 119.400   | 174.600   | 1.743%   | 2.289    |
| %RSD |          | 0.897     | 1.877   | 0.000   | 0.921     | 1.069     | 1.648     | 1.802    | 1.834    |
| Run  | Time     | 51V       | 52Cr    | 55Mn    | 56Fe      | 57Fe      | 59Co      | 60Ni     | 63Cu     |
|      |          | ppb       | ppb     | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 18:13:00 | 44.290    | 51.770  | 921.700 | 55360.000 | 54080.000 | 23.530    | 59.190   | 41.200   |
| 2    | 18:13:42 | 45.930    | 53.660  | 945.600 | 56410.000 | 55460.000 | 24.160    | 61.500   | 43.300   |
| 3    | 18:14:25 | 45.920    | 52.550  | 930.500 | 55830.000 | 54960.000 | 23.950    | 60.050   | 42.550   |
| X    |          | 45.380    | 52.660  | 932.600 | 55870.000 | 54830.000 | 23.880    | 60.240   | 42.350   |
| σ    |          | 0.942     | 0.951   | 12.070  | 526.800   | 696.000   | 0.322     | 1.169    | 1.064    |
| %RSD |          | 2.077     | 1.806   | 1.295   | 0.943     | 1.269     | 1.348     | 1.940    | 2.513    |
| Run  | Time     | 65Cu      | 66Zn    | 68Zn    | 75As      | 78Se      | 82Se      | 83Kr     | 88Sr     |
|      |          | ppb       | ppb     | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 18:13:00 | 41.070    | 181.700 | 183.100 | 22.450    | 0.776     | 0.176     | 0.000    | 31.460   |
| 2    | 18:13:42 | 42.580    | 184.400 | 185.800 | 23.080    | 0.603     | -0.116    | 0.000    | 31.750   |
| 3    | 18:14:25 | 42.880    | 185.200 | 183.800 | 22.550    | 0.488     | 0.801     | 0.000    | 31.430   |
| X    |          | 42.180    | 183.700 | 184.200 | 22.690    | 0.622     | 0.287     | 0.000    | 31.550   |
| σ    |          | 0.971     | 1.840   | 1.415   | 0.339     | 0.145     | 0.469     | 0.000    | 0.175    |
| %RSD |          | 2.303     | 1.001   | 0.768   | 1.493     | 23.300    | 163.200   | 0.000    | 0.554    |
| Run  | Time     | 89Y       | 95Mo    | 98Mo    | 103Rh     | 107Ag     | 109Ag     | 111Cd    | 114Cd    |
|      |          | ppb       | ppb     | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 18:13:00 | 97.574%   | 2.959   | 3.111   | 85.852%   | 0.071     | 0.058     | 0.669    | 0.608    |
| 2    | 18:13:42 | 99.007%   | 3.027   | 3.073   | 86.428%   | 0.070     | 0.056     | 0.636    | 0.540    |
| 3    | 18:14:25 | 99.414%   | 2.991   | 3.049   | 87.186%   | 0.066     | 0.059     | 0.606    | 0.556    |
| X    |          | 98.665%   | 2.992   | 3.078   | 86.489%   | 0.069     | 0.058     | 0.637    | 0.568    |
| σ    |          | 0.967%    | 0.034   | 0.031   | 0.669%    | 0.003     | 0.002     | 0.032    | 0.035    |
| %RSD |          | 0.980     | 1.149   | 1.012   | 0.774     | 4.104     | 3.393     | 4.946    | 6.206    |
| Run  | Time     | 115In     | 118Sn   | 121Sb   | 123Sb     | 135Ba     | 137Ba     | 159Tb    | 165Ho    |
|      |          | ppb       | ppb     | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 18:13:00 | 84.004%   | 1.892   | 0.273   | 0.320     | 171.700   | 169.800   | 86.473%  | 86.262%  |
| 2    | 18:13:42 | 84.603%   | 1.977   | 0.270   | 0.265     | 177.200   | 174.500   | 88.010%  | 88.054%  |
| 3    | 18:14:25 | 86.309%   | 1.790   | 0.250   | 0.279     | 170.900   | 172.000   | 90.176%  | 89.807%  |
| X    |          | 84.972%   | 1.886   | 0.264   | 0.288     | 173.200   | 172.100   | 88.220%  | 88.041%  |
| σ    |          | 1.196%    | 0.093   | 0.013   | 0.029     | 3.432     | 2.336     | 1.860%   | 1.772%   |
| %RSD |          | 1.407     | 4.947   | 4.744   | 9.976     | 1.981     | 1.357     | 2.109    | 2.013    |
| Run  | Time     | 203Tl     | 205Tl   | 206Pb   | 207Pb     | 208Pb     | 209Bi     |          |          |
|      |          | ppb       | ppb     | ppb     | ppb       | ppb       | ppb       |          |          |
| 1    | 18:13:00 | 0.588     | 0.577   | 39.210  | 38.790    | 38.760    | 86.711%   |          |          |
| 2    | 18:13:42 | 0.543     | 0.560   | 39.780  | 39.330    | 39.460    | 89.667%   |          |          |
| 3    | 18:14:25 | 0.509     | 0.527   | 39.850  | 39.000    | 39.200    | 91.399%   |          |          |
| X    |          | 0.547     | 0.555   | 39.610  | 39.040    | 39.140    | 89.259%   |          |          |
| σ    |          | 0.040     | 0.025   | 0.350   | 0.272     | 0.354     | 2.370%    |          |          |
| %RSD |          | 7.242     | 4.538   | 0.884   | 0.696     | 0.905     | 2.656     |          |          |

240-17525-Q-1-B DU

12/21/2012 6:16:35 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:17:18 | 73.228%    | 8.854    | 48.720   | 49.200     | 0.000      | 649.700   | 44690.000 | 46110.000 |
| 2    | 18:18:01 | 71.802%    | 9.138    | 51.610   | 50.860     | 0.000      | 663.000   | 44980.000 | 46150.000 |
| 3    | 18:18:44 | 69.249%    | 8.937    | 51.390   | 52.200     | 0.000      | 688.600   | 47150.000 | 48000.000 |
| X    |          | 71.426%    | 8.976    | 50.570   | 50.750     | 0.000      | 667.100   | 45610.000 | 46750.000 |
| σ    |          | 2.016%     | 0.146    | 1.607    | 1.504      | 0.000      | 19.790    | 1341.000  | 1083.000  |
| %RSD |          | 2.823      | 1.625    | 3.177    | 2.964      | 0.000      | 2.967     | 2.940     | 2.317     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:17:18 | 166700.000 | 2348.000 | 0.000    | 17870.000  | 69270.000  | 72770.000 | 82.619%   | 705.100   |
| 2    | 18:18:01 | 164800.000 | 2347.000 | 0.000    | 17760.000  | 69310.000  | 73160.000 | 82.928%   | 712.800   |
| 3    | 18:18:44 | 171400.000 | 2410.000 | 0.000    | 18560.000  | 71040.000  | 74980.000 | 80.270%   | 723.000   |
| X    |          | 167700.000 | 2369.000 | 0.000    | 18060.000  | 69870.000  | 73640.000 | 81.939%   | 713.600   |
| σ    |          | 3404.000   | 35.840   | 0.000    | 434.100    | 1007.000   | 1180.000  | 1.454%    | 8.971     |
| %RSD |          | 2.031      | 1.513    | 0.000    | 2.403      | 1.441      | 1.603     | 1.774     | 1.257     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:17:18 | 252.000    | 280.500  | 4979.000 | 287300.000 | 294500.000 | 132.100   | 320.700   | 230.300   |
| 2    | 18:18:01 | 251.800    | 280.300  | 4910.000 | 282700.000 | 293800.000 | 131.900   | 316.700   | 228.600   |
| 3    | 18:18:44 | 259.900    | 291.800  | 5175.000 | 296000.000 | 304200.000 | 136.300   | 331.000   | 236.400   |
| X    |          | 254.600    | 284.200  | 5021.000 | 288700.000 | 297500.000 | 133.400   | 322.800   | 231.800   |
| σ    |          | 4.618      | 6.602    | 137.200  | 6758.000   | 5834.000   | 2.494     | 7.378     | 4.078     |
| %RSD |          | 1.814      | 2.323    | 2.732    | 2.341      | 1.961      | 1.869     | 2.285     | 1.759     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:17:18 | 226.900    | 895.800  | 894.100  | 118.100    | 4.812      | 7.897     | 0.000     | 201.700   |
| 2    | 18:18:01 | 228.100    | 893.400  | 906.100  | 118.700    | 4.894      | 8.431     | 0.000     | 201.900   |
| 3    | 18:18:44 | 234.800    | 929.000  | 936.300  | 122.700    | 4.898      | 8.251     | 0.000     | 207.600   |
| X    |          | 230.000    | 906.100  | 912.100  | 119.800    | 4.868      | 8.193     | 0.000     | 203.700   |
| σ    |          | 4.265      | 19.890   | 21.760   | 2.466      | 0.048      | 0.272     | 0.000     | 3.381     |
| %RSD |          | 1.854      | 2.196    | 2.386    | 2.058      | 0.990      | 3.316     | 0.000     | 1.659     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:17:18 | 0.000      | 15.310   | 15.170   | 74.910%    | 0.350      | 0.269     | 3.198     | 2.679     |
| 2    | 18:18:01 | 0.000      | 15.320   | 15.410   | 75.725%    | 0.352      | 0.263     | 3.051     | 2.500     |
| 3    | 18:18:44 | 0.000      | 15.610   | 15.800   | 75.432%    | 0.362      | 0.259     | 3.061     | 2.626     |
| X    |          | 0.000      | 15.420   | 15.460   | 75.356%    | 0.355      | 0.264     | 3.104     | 2.602     |
| σ    |          | 0.000      | 0.170    | 0.318    | 0.413%     | 0.006      | 0.005     | 0.082     | 0.092     |
| %RSD |          | 0.000      | 1.103    | 2.054    | 0.548      | 1.732      | 1.828     | 2.652     | 3.553     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:17:18 | 76.091%    | 10.720   | 1.347    | 1.452      | 838.400    | 832.900   | 81.083%   | 79.640%   |
| 2    | 18:18:01 | 77.749%    | 10.980   | 1.309    | 1.408      | 839.900    | 839.700   | 82.737%   | 81.530%   |
| 3    | 18:18:44 | 77.218%    | 11.390   | 1.352    | 1.456      | 863.100    | 853.300   | 82.679%   | 81.525%   |
| X    |          | 77.019%    | 11.030   | 1.336    | 1.439      | 847.100    | 842.000   | 82.166%   | 80.898%   |
| σ    |          | 0.846%     | 0.340    | 0.023    | 0.026      | 13.860     | 10.350    | 0.939%    | 1.090%    |
| %RSD |          | 1.099      | 3.084    | 1.740    | 1.838      | 1.636      | 1.230     | 1.143     | 1.347     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 18:17:18 | 2.039      | 2.035    | 198.300  | 195.600    | 196.800    | 72.941%   |           |           |
| 2    | 18:18:01 | 2.098      | 2.058    | 200.800  | 199.600    | 199.600    | 74.271%   |           |           |
| 3    | 18:18:44 | 2.084      | 2.148    | 204.500  | 202.200    | 203.000    | 73.886%   |           |           |
| X    |          | 2.074      | 2.080    | 201.200  | 199.100    | 199.800    | 73.699%   |           |           |
| σ    |          | 0.031      | 0.060    | 3.139    | 3.323      | 3.095      | 0.684%    |           |           |
| %RSD |          | 1.486      | 2.882    | 1.560    | 1.669      | 1.549      | 0.929     |           |           |



240-17525-Q-1-C MS

12/21/2012 6:20:54 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:21:37 | 68.773%    | 93.910   | 115.800  | 117.100    | 0.000      | 9415.000  | 53150.000 | 53650.000 |
| 2    | 18:22:20 | 70.459%    | 92.830   | 119.000  | 118.900    | 0.000      | 9788.000  | 54680.000 | 55580.000 |
| 3    | 18:23:03 | 68.504%    | 94.830   | 122.300  | 118.400    | 0.000      | 9407.000  | 52960.000 | 54420.000 |
| X    |          | 69.245%    | 93.860   | 119.000  | 118.100    | 0.000      | 9536.000  | 53600.000 | 54550.000 |
| σ    |          | 1.060%     | 1.002    | 3.278    | 0.929      | 0.000      | 217.700   | 943.600   | 972.600   |
| %RSD |          | 1.531      | 1.067    | 2.754    | 0.787      | 0.000      | 2.283     | 1.760     | 1.783     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:21:37 | 176300.000 | 3243.000 | 0.000    | 24710.000  | 64840.000  | 68120.000 | 93.477%   | 757.900   |
| 2    | 18:22:20 | 181900.000 | 3320.000 | 0.000    | 26670.000  | 70930.000  | 75660.000 | 83.302%   | 838.400   |
| 3    | 18:23:03 | 177800.000 | 3281.000 | 0.000    | 24720.000  | 63980.000  | 68390.000 | 92.297%   | 761.800   |
| X    |          | 178700.000 | 3281.000 | 0.000    | 25370.000  | 66580.000  | 70720.000 | 89.692%   | 786.100   |
| σ    |          | 2888.000   | 38.560   | 0.000    | 1130.000   | 3790.000   | 4276.000  | 5.565%    | 45.380    |
| %RSD |          | 1.617      | 1.175    | 0.000    | 4.453      | 5.693      | 6.047     | 6.205     | 5.774     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:21:37 | 325.300    | 344.800  | 4875.000 | 274900.000 | 285000.000 | 202.400   | 390.900   | 275.800   |
| 2    | 18:22:20 | 363.700    | 379.200  | 5312.000 | 298300.000 | 310000.000 | 222.400   | 424.000   | 297.900   |
| 3    | 18:23:03 | 323.400    | 342.000  | 4903.000 | 276700.000 | 285100.000 | 204.500   | 389.200   | 278.900   |
| X    |          | 337.500    | 355.300  | 5030.000 | 283300.000 | 293400.000 | 209.800   | 401.400   | 284.200   |
| σ    |          | 22.760     | 20.760   | 244.200  | 13060.000  | 14390.000  | 11.000    | 19.640    | 11.970    |
| %RSD |          | 6.744      | 5.841    | 4.855    | 4.608      | 4.904      | 5.246     | 4.892     | 4.213     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:21:37 | 278.200    | 868.500  | 877.200  | 182.600    | 68.660     | 71.460    | 0.000     | 273.700   |
| 2    | 18:22:20 | 299.700    | 933.700  | 937.900  | 193.400    | 71.780     | 75.530    | 0.000     | 282.900   |
| 3    | 18:23:03 | 280.100    | 872.800  | 885.900  | 183.700    | 68.670     | 72.730    | 0.000     | 278.600   |
| X    |          | 286.000    | 891.700  | 900.300  | 186.600    | 69.700     | 73.240    | 0.000     | 278.400   |
| σ    |          | 11.900     | 36.480   | 32.830   | 5.983      | 1.796      | 2.086     | 0.000     | 4.594     |
| %RSD |          | 4.159      | 4.091    | 3.646    | 3.207      | 2.577      | 2.849     | 0.000     | 1.650     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:21:37 | 0.000      | 95.180   | 95.140   | 73.194%    | 81.040     | 81.770    | 81.760    | 81.250    |
| 2    | 18:22:20 | 0.000      | 98.280   | 96.670   | 74.281%    | 82.180     | 82.760    | 82.070    | 81.810    |
| 3    | 18:23:03 | 0.000      | 97.280   | 97.520   | 73.992%    | 82.330     | 82.800    | 82.550    | 81.320    |
| X    |          | 0.000      | 96.920   | 96.440   | 73.822%    | 81.850     | 82.450    | 82.130    | 81.460    |
| σ    |          | 0.000      | 1.583    | 1.204    | 0.563%     | 0.706      | 0.584     | 0.398     | 0.304     |
| %RSD |          | 0.000      | 1.633    | 1.248    | 0.763      | 0.863      | 0.709     | 0.485     | 0.373     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:21:37 | 74.374%    | 81.560   | 23.640   | 23.720     | 936.100    | 926.800   | 79.489%   | 77.303%   |
| 2    | 18:22:20 | 75.538%    | 82.530   | 23.790   | 23.710     | 945.700    | 935.800   | 81.273%   | 79.888%   |
| 3    | 18:23:03 | 76.136%    | 81.840   | 23.520   | 23.710     | 943.700    | 939.000   | 81.882%   | 80.041%   |
| X    |          | 75.349%    | 81.970   | 23.650   | 23.710     | 941.900    | 933.900   | 80.881%   | 79.077%   |
| σ    |          | 0.896%     | 0.500    | 0.134    | 0.006      | 5.080      | 6.332     | 1.243%    | 1.538%    |
| %RSD |          | 1.189      | 0.610    | 0.565    | 0.024      | 0.539      | 0.678     | 1.537     | 1.945     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 18:21:37 | 85.220     | 86.030   | 293.100  | 294.400    | 293.800    | 66.663%   |           |           |
| 2    | 18:22:20 | 87.030     | 86.920   | 296.500  | 297.800    | 297.000    | 67.992%   |           |           |
| 3    | 18:23:03 | 87.240     | 87.080   | 296.100  | 297.900    | 296.900    | 68.801%   |           |           |
| X    |          | 86.500     | 86.680   | 295.200  | 296.700    | 295.900    | 67.819%   |           |           |
| σ    |          | 1.106      | 0.570    | 1.865    | 1.984      | 1.848      | 1.079%    |           |           |
| %RSD |          | 1.279      | 0.658    | 0.632    | 0.669      | 0.624      | 1.591     |           |           |

CCV 664806 12/21/2012 6:28:09 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B      | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|---------|----------|----------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 18:28:52 | 75.206% | 99.620   | 94.370   | 94.160    | 0.000     | 52230.000 | 52410.000 | 53030.000 |
| 2    | 18:29:34 | 73.095% | 100.700  | 94.040   | 94.610    | 0.000     | 49840.000 | 49400.000 | 49750.000 |
| 3    | 18:30:17 | 71.249% | 97.710   | 92.400   | 91.630    | 0.000     | 48600.000 | 48920.000 | 49100.000 |
| x    |          | 73.183% | 99.336%  | 93.604%  | 93.464%   | 0.000     | 100.446%  | 100.482%  | 101.250%  |
| σ    |          | 1.980%  | n/a      | n/a      | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 2.706   | 1.517    | 1.128    | 1.717     | 0.000     | 3.681     | 3.763     | 4.159     |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 18:28:52 | 504.000 | 5700.000 | 0.000    | 54810.000 | 52040.000 | 55280.000 | 79.038%   | 107.800   |
| 2    | 18:29:34 | 467.100 | 5323.000 | 0.000    | 49600.000 | 46780.000 | 49310.000 | 86.369%   | 98.550    |
| 3    | 18:30:17 | 457.600 | 5205.000 | 0.000    | 48720.000 | 45730.000 | 48640.000 | 86.703%   | 96.030    |
| x    |          | 95.248% | 108.183% | 0.000    | 102.088%  | 96.369%   | 102.152%  | 84.037%   | 100.804%  |
| σ    |          | n/a     | n/a      | 0.000    | n/a       | n/a       | n/a       | 4.332%    | n/a       |
| %RSD |          | 5.137   | 4.776    | 0.000    | 6.446     | 7.009     | 7.153     | 5.155     | 6.168     |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 18:28:52 | 102.700 | 102.400  | 546.500  | 27130.000 | 27190.000 | 102.400   | 103.200   | 102.700   |
| 2    | 18:29:34 | 92.900  | 93.200   | 509.400  | 25010.000 | 24990.000 | 95.410    | 95.320    | 95.900    |
| 3    | 18:30:17 | 90.050  | 91.790   | 491.700  | 24410.000 | 24400.000 | 92.590    | 92.660    | 93.470    |
| x    |          | 95.203% | 95.793%  | 103.170% | 102.065%  | 102.119%  | 96.791%   | 97.068%   | 97.348%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 6.943   | 6.008    | 5.423    | 5.618     | 5.764     | 5.207     | 5.656     | 4.898     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 18:28:52 | 103.000 | 103.100  | 104.000  | 102.300   | 101.800   | 104.200   | 0.000     | 94.630    |
| 2    | 18:29:34 | 95.040  | 98.520   | 97.950   | 97.330    | 99.550    | 100.800   | 0.000     | 95.400    |
| 3    | 18:30:17 | 93.100  | 94.740   | 94.460   | 94.370    | 96.280    | 96.060    | 0.000     | 93.300    |
| x    |          | 97.060% | 98.791%  | 98.812%  | 98.007%   | 99.212%   | 100.354%  | 0.000     | 94.448%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 5.421   | 4.246    | 4.899    | 4.099     | 2.798     | 4.068     | 0.000     | 1.125     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 18:28:52 | 81.469% | 95.050   | 94.140   | 80.577%   | 92.340    | 94.060    | 94.620    | 95.720    |
| 2    | 18:29:34 | 81.932% | 96.260   | 96.320   | 80.851%   | 93.000    | 94.060    | 94.430    | 95.840    |
| 3    | 18:30:17 | 82.318% | 96.290   | 95.920   | 80.953%   | 91.810    | 92.520    | 93.120    | 94.260    |
| x    |          | 81.906% | 95.868%  | 95.462%  | 80.794%   | 92.384%   | 93.546%   | 94.057%   | 95.276%   |
| σ    |          | 0.425%  | n/a      | n/a      | 0.194%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 0.519   | 0.737    | 1.213    | 0.240     | 0.643     | 0.952     | 0.869     | 0.920     |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 18:28:52 | 79.936% | 93.400   | 93.400   | 92.630    | 93.250    | 93.080    | 82.319%   | 82.370%   |
| 2    | 18:29:34 | 80.672% | 94.290   | 93.860   | 93.830    | 94.230    | 92.930    | 84.179%   | 84.802%   |
| 3    | 18:30:17 | 81.975% | 92.680   | 92.450   | 92.160    | 92.370    | 91.260    | 86.040%   | 86.889%   |
| x    |          | 80.861% | 93.455%  | 93.235%  | 92.874%   | 93.284%   | 92.424%   | 84.179%   | 84.687%   |
| σ    |          | 1.033%  | n/a      | n/a      | n/a       | n/a       | n/a       | 1.861%    | 2.262%    |
| %RSD |          | 1.277   | 0.863    | 0.769    | 0.924     | 1.001     | 1.095     | 2.210     | 2.671     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 18:28:52 | 93.630  | 93.370   | 93.300   | 93.500    | 93.690    | 76.984%   |           |           |
| 2    | 18:29:34 | 94.760  | 94.730   | 94.860   | 95.490    | 95.230    | 78.394%   |           |           |
| 3    | 18:30:17 | 92.510  | 92.430   | 92.800   | 92.380    | 92.350    | 81.088%   |           |           |
| x    |          | 93.634% | 93.511%  | 93.651%  | 93.791%   | 93.754%   | 78.822%   |           |           |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | 2.085%    |           |           |
| %RSD |          | 1.204   | 1.240    | 1.148    | 1.680     | 1.536     | 2.645     |           |           |

CCB4 12/21/2012 6:36:08 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be     | 10B    | 11B     | 13C    | 23Na     | 25Mg     | 26Mg     |
|------|----------|---------|---------|--------|---------|--------|----------|----------|----------|
|      |          | ppb     | ppb     | ppb    | ppb     | ppb    | ppb      | ppb      | ppb      |
| 1    | 18:36:51 | 90.477% | -0.018  | 0.872  | 0.789   | 0.000  | 1.632    | 2.076    | 2.397    |
| 2    | 18:37:35 | 88.238% | -0.032  | 0.771  | 0.712   | 0.000  | 1.427    | 2.215    | 2.305    |
| 3    | 18:38:17 | 86.795% | -0.027  | 0.626  | 0.642   | 0.000  | 1.131    | 1.800    | 2.155    |
| X    |          | 88.503% | -0.026  | 0.756  | 0.714   | 0.000  | 1.397    | 2.030    | 2.286    |
| σ    |          | 1.855%  | 0.007   | 0.124  | 0.074   | 0.000  | 0.252    | 0.211    | 0.122    |
| %RSD |          | 2.096   | 27.570  | 16.350 | 10.330  | 0.000  | 18.020   | 10.390   | 5.351    |
| Run  | Time     | 27Al    | 28Si    | 37Cl   | 39K     | 43Ca   | 44Ca     | 45Sc     | 47Ti     |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb    | ppb      | ppb      | ppb      |
| 1    | 18:36:51 | 0.662   | -1.412  | 0.000  | -6.107  | -5.678 | 0.892    | 105.693% | -0.066   |
| 2    | 18:37:35 | 0.634   | 1.438   | 0.000  | -7.126  | -1.299 | 0.057    | 105.293% | -0.022   |
| 3    | 18:38:17 | 0.624   | -1.284  | 0.000  | -7.308  | -3.929 | -1.947   | 104.376% | -0.032   |
| X    |          | 0.640   | -0.419  | 0.000  | -6.847  | -3.635 | -0.332   | 105.120% | -0.040   |
| σ    |          | 0.020   | 1.609   | 0.000  | 0.647   | 2.204  | 1.459    | 0.675%   | 0.023    |
| %RSD |          | 3.091   | 383.800 | 0.000  | 9.455   | 60.640 | 439.000  | 0.642    | 57.080   |
| Run  | Time     | 51V     | 52Cr    | 55Mn   | 56Fe    | 57Fe   | 59Co     | 60Ni     | 63Cu     |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb    | ppb      | ppb      | ppb      |
| 1    | 18:36:51 | 0.018   | -0.019  | 0.483  | 1.380   | 10.390 | -0.005   | -0.029   | -0.024   |
| 2    | 18:37:35 | 0.014   | -0.034  | 0.444  | -1.051  | 8.794  | -0.007   | -0.027   | -0.015   |
| 3    | 18:38:17 | 0.008   | -0.004  | 0.443  | -3.366  | 5.796  | -0.010   | -0.011   | -0.024   |
| X    |          | 0.013   | -0.019  | 0.457  | -1.012  | 8.327  | -0.007   | -0.022   | -0.021   |
| σ    |          | 0.005   | 0.015   | 0.023  | 2.374   | 2.332  | 0.002    | 0.010    | 0.005    |
| %RSD |          | 39.750  | 77.590  | 5.025  | 234.500 | 28.010 | 29.810   | 43.780   | 25.110   |
| Run  | Time     | 65Cu    | 66Zn    | 68Zn   | 75As    | 78Se   | 82Se     | 83Kr     | 88Sr     |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb    | ppb      | ppb      | ppb      |
| 1    | 18:36:51 | -0.013  | -0.173  | -0.185 | -0.057  | -0.051 | -0.245   | 0.000    | 0.010    |
| 2    | 18:37:35 | -0.010  | -0.068  | -0.307 | -0.066  | -0.246 | -0.199   | 0.000    | 0.016    |
| 3    | 18:38:17 | -0.001  | -0.095  | -0.335 | -0.100  | -0.195 | -0.493   | 0.000    | 0.009    |
| X    |          | -0.008  | -0.112  | -0.275 | -0.074  | -0.164 | -0.312   | 0.000    | 0.011    |
| σ    |          | 0.007   | 0.054   | 0.080  | 0.022   | 0.101  | 0.159    | 0.000    | 0.004    |
| %RSD |          | 82.670  | 48.590  | 29.000 | 29.810  | 61.490 | 50.760   | 0.000    | 32.580   |
| Run  | Time     | 89Y     | 95Mo    | 98Mo   | 103Rh   | 107Ag  | 109Ag    | 111Cd    | 114Cd    |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb    | ppb      | ppb      | ppb      |
| 1    | 18:36:51 | 88.431% | 0.219   | 0.228  | 89.489% | -0.011 | -0.000   | 0.051    | 0.054    |
| 2    | 18:37:35 | 89.029% | 0.196   | 0.176  | 89.956% | -0.004 | 0.000    | -0.088   | -0.049   |
| 3    | 18:38:17 | 90.459% | 0.187   | 0.168  | 90.481% | -0.008 | 0.001    | -0.050   | -0.017   |
| X    |          | 89.306% | 0.200   | 0.191  | 89.975% | -0.008 | 0.000    | -0.029   | -0.004   |
| σ    |          | 1.042%  | 0.016   | 0.033  | 0.496%  | 0.003  | 0.001    | 0.072    | 0.053    |
| %RSD |          | 1.167   | 8.172   | 17.190 | 0.551   | 42.710 | 315.800  | 248.900  | 1323.000 |
| Run  | Time     | 115In   | 118Sn   | 121Sb  | 123Sb   | 135Ba  | 137Ba    | 159Tb    | 165Ho    |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb    | ppb      | ppb      | ppb      |
| 1    | 18:36:51 | 83.979% | -0.081  | -0.060 | -0.033  | 0.007  | 0.017    | 86.287%  | 86.324%  |
| 2    | 18:37:35 | 86.081% | -0.151  | -0.046 | -0.050  | 0.010  | 0.014    | 89.088%  | 88.703%  |
| 3    | 18:38:17 | 87.381% | -0.140  | -0.045 | -0.044  | 0.009  | 0.003    | 90.557%  | 91.075%  |
| X    |          | 85.814% | -0.124  | -0.051 | -0.042  | 0.009  | 0.012    | 88.644%  | 88.701%  |
| σ    |          | 1.717%  | 0.037   | 0.009  | 0.008   | 0.002  | 0.008    | 2.169%   | 2.376%   |
| %RSD |          | 2.001   | 30.120  | 16.880 | 19.660  | 17.970 | 65.410   | 2.447    | 2.678    |
| Run  | Time     | 203Tl   | 205Tl   | 206Pb  | 207Pb   | 208Pb  | 209Bi    |          |          |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb    | ppb      |          |          |
| 1    | 18:36:51 | 0.042   | 0.050   | 0.074  | 0.079   | 0.077  | 97.049%  |          |          |
| 2    | 18:37:35 | 0.060   | 0.048   | 0.073  | 0.067   | 0.065  | 98.761%  |          |          |
| 3    | 18:38:17 | 0.048   | 0.050   | 0.055  | 0.065   | 0.055  | 100.938% |          |          |
| X    |          | 0.050   | 0.050   | 0.068  | 0.071   | 0.066  | 98.916%  |          |          |
| σ    |          | 0.009   | 0.001   | 0.011  | 0.008   | 0.011  | 1.949%   |          |          |
| %RSD |          | 18.660  | 2.224   | 15.600 | 10.870  | 16.700 | 1.970    |          |          |

## 240-17525-Q-1-A PDS

12/21/2012 6:40:29 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be       | 10B      | 11B        | 13C        | 23Na       | 25Mg      | 26Mg      |
|------|----------|------------|-----------|----------|------------|------------|------------|-----------|-----------|
|      |          | ppb        | ppb       | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 18:41:12 | 66.952%    | 54.290    | 882.800  | 889.500    | 0.000      | 49510.000  | 91630.000 | 92740.000 |
| 2    | 18:41:55 | 65.881%    | 54.130    | 900.500  | 895.900    | 0.000      | 47510.000  | 87570.000 | 90340.000 |
| 3    | 18:42:38 | 65.326%    | 54.800    | 921.600  | 896.000    | 0.000      | 47290.000  | 89110.000 | 90970.000 |
| X    |          | 66.053%    | 54.410    | 901.600  | 893.800    | 0.000      | 48100.000  | 89440.000 | 91350.000 |
| σ    |          | 0.827%     | 0.351     | 19.410   | 3.717      | 0.000      | 1224.000   | 2049.000  | 1244.000  |
| %RSD |          | 1.252      | 0.645     | 2.153    | 0.416      | 0.000      | 2.544      | 2.291     | 1.361     |
| Run  | Time     | 27Al       | 28Si      | 37Cl     | 39K        | 43Ca       | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb        | ppb       | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 18:41:12 | 166400.000 | 12730.000 | 0.000    | 67960.000  | 109300.000 | 115100.000 | 74.790%   | 1683.000  |
| 2    | 18:41:55 | 162700.000 | 12410.000 | 0.000    | 64280.000  | 104200.000 | 109300.000 | 76.955%   | 1626.000  |
| 3    | 18:42:38 | 161600.000 | 12320.000 | 0.000    | 64040.000  | 104400.000 | 109900.000 | 76.045%   | 1611.000  |
| X    |          | 163600.000 | 12480.000 | 0.000    | 65430.000  | 106000.000 | 111400.000 | 75.930%   | 1640.000  |
| σ    |          | 2541.000   | 214.300   | 0.000    | 2194.000   | 2899.000   | 3219.000   | 1.087%    | 38.040    |
| %RSD |          | 1.553      | 1.717     | 0.000    | 3.353      | 2.736      | 2.889      | 1.432     | 2.319     |
| Run  | Time     | 51V        | 52Cr      | 55Mn     | 56Fe       | 57Fe       | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb        | ppb       | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 18:41:12 | 795.400    | 475.500   | 5558.000 | 291100.000 | 299800.000 | 640.000    | 775.500   | 441.700   |
| 2    | 18:41:55 | 763.600    | 459.100   | 5393.000 | 282800.000 | 290600.000 | 622.600    | 760.200   | 434.800   |
| 3    | 18:42:38 | 759.100    | 461.300   | 5461.000 | 285800.000 | 292800.000 | 618.400    | 761.200   | 440.600   |
| X    |          | 772.700    | 465.300   | 5470.000 | 286600.000 | 294400.000 | 627.000    | 765.700   | 439.000   |
| σ    |          | 19.800     | 8.942     | 83.110   | 4212.000   | 4786.000   | 11.460     | 8.575     | 3.719     |
| %RSD |          | 2.562      | 1.922     | 1.519    | 1.470      | 1.626      | 1.828      | 1.120     | 0.847     |
| Run  | Time     | 65Cu       | 66Zn      | 68Zn     | 75As       | 78Se       | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb        | ppb       | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 18:41:12 | 440.800    | 1338.000  | 1345.000 | 154.300    | 13.830     | 17.180     | 0.000     | 1192.000  |
| 2    | 18:41:55 | 431.100    | 1311.000  | 1320.000 | 150.700    | 13.350     | 16.850     | 0.000     | 1187.000  |
| 3    | 18:42:38 | 438.000    | 1329.000  | 1343.000 | 153.500    | 12.980     | 16.520     | 0.000     | 1204.000  |
| X    |          | 436.600    | 1326.000  | 1336.000 | 152.800    | 13.390     | 16.850     | 0.000     | 1194.000  |
| σ    |          | 4.974      | 13.570    | 13.530   | 1.893      | 0.427      | 0.334      | 0.000     | 8.871     |
| %RSD |          | 1.139      | 1.023     | 1.013    | 1.239      | 3.187      | 1.982      | 0.000     | 0.743     |
| Run  | Time     | 89Y        | 95Mo      | 98Mo     | 103Rh      | 107Ag      | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb        | ppb       | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 18:41:12 | 0.000      | 976.500   | 976.300  | 69.352%    | 43.110     | 43.810     | 45.640    | 37.480    |
| 2    | 18:41:55 | 0.000      | 996.900   | 986.100  | 69.434%    | 43.730     | 44.360     | 47.090    | 38.910    |
| 3    | 18:42:38 | 0.000      | 1009.000  | 1005.000 | 69.249%    | 44.520     | 44.160     | 46.870    | 39.210    |
| X    |          | 0.000      | 994.100   | 989.000  | 69.345%    | 43.790     | 44.110     | 46.530    | 38.530    |
| σ    |          | 0.000      | 16.380    | 14.330   | 0.093%     | 0.708      | 0.280      | 0.783     | 0.925     |
| %RSD |          | 0.000      | 1.647     | 1.449    | 0.133      | 1.616      | 0.634      | 1.683     | 2.401     |
| Run  | Time     | 115In      | 118Sn     | 121Sb    | 123Sb      | 135Ba      | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb        | ppb       | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 18:41:12 | 70.451%    | 1973.000  | 428.200  | 429.000    | 2585.000   | 2555.000   | 76.226%   | 75.076%   |
| 2    | 18:41:55 | 71.224%    | 1973.000  | 434.600  | 434.800    | 2591.000   | 2586.000   | 78.234%   | 77.204%   |
| 3    | 18:42:38 | 71.499%    | 1995.000  | 438.400  | 439.000    | 2609.000   | 2594.000   | 78.851%   | 77.236%   |
| X    |          | 71.058%    | 1980.000  | 433.700  | 434.300    | 2595.000   | 2578.000   | 77.771%   | 76.505%   |
| σ    |          | 0.543%     | 12.420    | 5.132    | 5.019      | 12.700     | 20.900     | 1.372%    | 1.238%    |
| %RSD |          | 0.765      | 0.627     | 1.183    | 1.156      | 0.489      | 0.811      | 1.765     | 1.618     |
| Run  | Time     | 203Tl      | 205Tl     | 206Pb    | 207Pb      | 208Pb      | 209Bi      |           |           |
|      |          | ppb        | ppb       | ppb      | ppb        | ppb        | ppb        |           |           |
| 1    | 18:41:12 | 44.980     | 45.150    | 218.800  | 216.900    | 217.400    | 68.729%    |           |           |
| 2    | 18:41:55 | 46.020     | 46.340    | 223.100  | 220.700    | 221.100    | 69.553%    |           |           |
| 3    | 18:42:38 | 46.610     | 47.030    | 224.700  | 221.900    | 223.300    | 70.165%    |           |           |
| X    |          | 45.870     | 46.170    | 222.200  | 219.800    | 220.600    | 69.483%    |           |           |
| σ    |          | 0.824      | 0.951     | 3.028    | 2.599      | 2.962      | 0.721%     |           |           |
| %RSD |          | 1.795      | 2.059     | 1.363    | 1.182      | 1.343      | 1.037      |           |           |

240-17525-G-2-A 12/21/2012 6:47:45 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:48:28 | 76.850%    | 7.812    | 41.740   | 40.600     | 0.000      | 540.100   | 38980.000 | 39510.000 |
| 2    | 18:49:11 | 76.363%    | 7.997    | 40.000   | 41.560     | 0.000      | 545.800   | 39670.000 | 40450.000 |
| 3    | 18:49:54 | 77.127%    | 8.074    | 39.760   | 40.960     | 0.000      | 553.700   | 39670.000 | 40320.000 |
| X    |          | 76.780%    | 7.961    | 40.500   | 41.040     | 0.000      | 546.500   | 39440.000 | 40090.000 |
| σ    |          | 0.387%     | 0.134    | 1.080    | 0.484      | 0.000      | 6.826     | 400.300   | 509.900   |
| %RSD |          | 0.504      | 1.688    | 2.667    | 1.180      | 0.000      | 1.249     | 1.015     | 1.272     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:48:28 | 135900.000 | 3402.000 | 0.000    | 12300.000  | 48720.000  | 51770.000 | 95.194%   | 677.100   |
| 2    | 18:49:11 | 138200.000 | 3468.000 | 0.000    | 12540.000  | 49790.000  | 52680.000 | 94.353%   | 679.900   |
| 3    | 18:49:54 | 138100.000 | 3467.000 | 0.000    | 12670.000  | 50920.000  | 54000.000 | 92.751%   | 698.700   |
| X    |          | 137400.000 | 3446.000 | 0.000    | 12500.000  | 49810.000  | 52820.000 | 94.099%   | 685.200   |
| σ    |          | 1297.000   | 37.640   | 0.000    | 187.800    | 1103.000   | 1121.000  | 1.241%    | 11.780    |
| %RSD |          | 0.944      | 1.092    | 0.000    | 1.502      | 2.214      | 2.122     | 1.319     | 1.719     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:48:28 | 209.000    | 196.500  | 4977.000 | 249300.000 | 257900.000 | 117.100   | 253.600   | 313.900   |
| 2    | 18:49:11 | 213.100    | 198.900  | 5024.000 | 252500.000 | 260300.000 | 117.300   | 252.100   | 314.600   |
| 3    | 18:49:54 | 221.500    | 206.900  | 5173.000 | 259900.000 | 270500.000 | 122.700   | 265.500   | 326.600   |
| X    |          | 214.500    | 200.700  | 5058.000 | 253900.000 | 262900.000 | 119.000   | 257.100   | 318.300   |
| σ    |          | 6.374      | 5.450    | 102.200  | 5413.000   | 6711.000   | 3.187     | 7.312     | 7.127     |
| %RSD |          | 2.971      | 2.715    | 2.021    | 2.132      | 2.553      | 2.678     | 2.845     | 2.239     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:48:28 | 312.800    | 807.800  | 815.900  | 103.700    | 4.142      | 7.080     | 0.000     | 153.400   |
| 2    | 18:49:11 | 316.900    | 819.200  | 833.900  | 105.600    | 3.829      | 7.339     | 0.000     | 155.900   |
| 3    | 18:49:54 | 328.000    | 843.500  | 857.000  | 108.900    | 4.490      | 8.091     | 0.000     | 160.400   |
| X    |          | 319.200    | 823.500  | 835.600  | 106.000    | 4.154      | 7.503     | 0.000     | 156.600   |
| σ    |          | 7.896      | 18.210   | 20.590   | 2.634      | 0.330      | 0.525     | 0.000     | 3.512     |
| %RSD |          | 2.473      | 2.212    | 2.464    | 2.483      | 7.954      | 7.004     | 0.000     | 2.243     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:48:28 | 0.000      | 18.820   | 18.470   | 75.824%    | 0.367      | 0.255     | 2.886     | 2.380     |
| 2    | 18:49:11 | 0.000      | 18.330   | 18.310   | 76.488%    | 0.359      | 0.261     | 2.750     | 2.541     |
| 3    | 18:49:54 | 0.000      | 18.200   | 18.260   | 75.743%    | 0.396      | 0.255     | 2.992     | 2.645     |
| X    |          | 0.000      | 18.450   | 18.350   | 76.018%    | 0.374      | 0.257     | 2.876     | 2.522     |
| σ    |          | 0.000      | 0.329    | 0.108    | 0.409%     | 0.019      | 0.003     | 0.122     | 0.133     |
| %RSD |          | 0.000      | 1.781    | 0.591    | 0.537      | 5.141      | 1.242     | 4.228     | 5.282     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:48:28 | 75.938%    | 16.130   | 1.732    | 1.760      | 774.000    | 762.000   | 80.141%   | 78.980%   |
| 2    | 18:49:11 | 76.758%    | 14.160   | 1.681    | 1.636      | 780.900    | 778.700   | 81.755%   | 80.089%   |
| 3    | 18:49:54 | 76.314%    | 13.400   | 1.626    | 1.708      | 804.100    | 800.400   | 81.433%   | 80.059%   |
| X    |          | 76.337%    | 14.560   | 1.679    | 1.701      | 786.300    | 780.400   | 81.110%   | 79.709%   |
| σ    |          | 0.411%     | 1.408    | 0.053    | 0.063      | 15.730     | 19.270    | 0.854%    | 0.632%    |
| %RSD |          | 0.538      | 9.669    | 3.147    | 3.675      | 2.000      | 2.469     | 1.053     | 0.793     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 18:48:28 | 1.925      | 1.926    | 199.300  | 197.600    | 198.300    | 71.967%   |           |           |
| 2    | 18:49:11 | 1.874      | 1.907    | 203.100  | 201.400    | 201.800    | 72.711%   |           |           |
| 3    | 18:49:54 | 1.935      | 1.971    | 209.800  | 208.200    | 208.700    | 71.962%   |           |           |
| X    |          | 1.911      | 1.935    | 204.000  | 202.400    | 202.900    | 72.213%   |           |           |
| σ    |          | 0.032      | 0.033    | 5.316    | 5.363      | 5.285      | 0.431%    |           |           |
| %RSD |          | 1.696      | 1.682    | 2.605    | 2.650      | 2.604      | 0.597     |           |           |

240-17525-F-3-A

12/21/2012 6:52:05 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:52:47 | 77.648%    | 7.418    | 32.560   | 31.900     | 0.000      | 546.600   | 31920.000 | 32550.000 |
| 2    | 18:53:30 | 77.509%    | 7.486    | 32.270   | 32.970     | 0.000      | 561.400   | 33630.000 | 34620.000 |
| 3    | 18:54:13 | 76.104%    | 7.385    | 32.060   | 31.830     | 0.000      | 542.600   | 32470.000 | 33090.000 |
| X    |          | 77.087%    | 7.429    | 32.300   | 32.230     | 0.000      | 550.200   | 32680.000 | 33420.000 |
| σ    |          | 0.854%     | 0.052    | 0.254    | 0.637      | 0.000      | 9.873     | 874.200   | 1072.000  |
| %RSD |          | 1.108      | 0.695    | 0.787    | 1.975      | 0.000      | 1.794     | 2.676     | 3.209     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:52:47 | 124400.000 | 3981.000 | 0.000    | 9486.000   | 81890.000  | 86660.000 | 92.793%   | 643.600   |
| 2    | 18:53:30 | 131800.000 | 4170.000 | 0.000    | 10360.000  | 90420.000  | 96570.000 | 82.377%   | 720.900   |
| 3    | 18:54:13 | 125100.000 | 3996.000 | 0.000    | 9561.000   | 83650.000  | 88150.000 | 90.938%   | 645.900   |
| X    |          | 127100.000 | 4049.000 | 0.000    | 9802.000   | 85320.000  | 90460.000 | 88.703%   | 670.100   |
| σ    |          | 4108.000   | 104.900  | 0.000    | 483.900    | 4500.000   | 5344.000  | 5.556%    | 43.980    |
| %RSD |          | 3.233      | 2.591    | 0.000    | 4.936      | 5.275      | 5.908     | 6.263     | 6.563     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:52:47 | 208.900    | 190.900  | 6509.000 | 228000.000 | 234600.000 | 93.150    | 188.200   | 130.500   |
| 2    | 18:53:30 | 229.600    | 210.900  | 7140.000 | 250800.000 | 257800.000 | 101.300   | 202.400   | 141.400   |
| 3    | 18:54:13 | 209.000    | 191.700  | 6583.000 | 228800.000 | 235200.000 | 93.060    | 190.200   | 132.800   |
| X    |          | 215.800    | 197.800  | 6744.000 | 235900.000 | 242500.000 | 95.830    | 193.600   | 134.900   |
| σ    |          | 11.910     | 11.330   | 344.800  | 12970.000  | 13200.000  | 4.725     | 7.652     | 5.780     |
| %RSD |          | 5.518      | 5.729    | 5.113    | 5.498      | 5.444      | 4.930     | 3.953     | 4.285     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:52:47 | 131.900    | 475.100  | 478.800  | 100.300    | 4.893      | 8.131     | 0.000     | 222.700   |
| 2    | 18:53:30 | 142.500    | 510.500  | 513.800  | 105.900    | 5.286      | 9.112     | 0.000     | 231.500   |
| 3    | 18:54:13 | 131.800    | 478.800  | 489.600  | 99.940     | 5.028      | 7.985     | 0.000     | 227.900   |
| X    |          | 135.400    | 488.100  | 494.100  | 102.000    | 5.069      | 8.409     | 0.000     | 227.400   |
| σ    |          | 6.133      | 19.480   | 17.920   | 3.326      | 0.200      | 0.613     | 0.000     | 4.400     |
| %RSD |          | 4.531      | 3.991    | 3.626    | 3.260      | 3.942      | 7.292     | 0.000     | 1.935     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:52:47 | 0.000      | 16.020   | 16.140   | 75.080%    | 0.355      | 0.327     | 2.222     | 1.962     |
| 2    | 18:53:30 | 0.000      | 16.240   | 16.340   | 75.920%    | 0.368      | 0.325     | 2.181     | 1.872     |
| 3    | 18:54:13 | 0.000      | 16.170   | 16.170   | 76.129%    | 0.394      | 0.354     | 2.165     | 1.846     |
| X    |          | 0.000      | 16.150   | 16.220   | 75.710%    | 0.372      | 0.335     | 2.189     | 1.893     |
| σ    |          | 0.000      | 0.113    | 0.109    | 0.555%     | 0.020      | 0.016     | 0.030     | 0.061     |
| %RSD |          | 0.000      | 0.699    | 0.671    | 0.733      | 5.400      | 4.837     | 1.361     | 3.220     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 18:52:47 | 75.181%    | 11.290   | 1.899    | 1.888      | 777.300    | 762.800   | 78.241%   | 77.159%   |
| 2    | 18:53:30 | 76.528%    | 11.390   | 1.880    | 1.968      | 777.300    | 771.100   | 80.034%   | 79.273%   |
| 3    | 18:54:13 | 76.715%    | 11.070   | 1.862    | 1.849      | 781.500    | 773.300   | 81.034%   | 79.880%   |
| X    |          | 76.141%    | 11.250   | 1.880    | 1.902      | 778.700    | 769.100   | 79.770%   | 78.771%   |
| σ    |          | 0.837%     | 0.164    | 0.019    | 0.061      | 2.397      | 5.540     | 1.415%    | 1.428%    |
| %RSD |          | 1.099      | 1.457    | 0.990    | 3.199      | 0.308      | 0.720     | 1.774     | 1.813     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 18:52:47 | 1.778      | 1.751    | 219.300  | 217.400    | 218.300    | 70.852%   |           |           |
| 2    | 18:53:30 | 1.730      | 1.732    | 221.100  | 217.300    | 219.500    | 73.083%   |           |           |
| 3    | 18:54:13 | 1.795      | 1.756    | 221.700  | 217.900    | 218.900    | 74.327%   |           |           |
| X    |          | 1.768      | 1.746    | 220.700  | 217.500    | 218.900    | 72.754%   |           |           |
| σ    |          | 0.034      | 0.013    | 1.238    | 0.301      | 0.589      | 1.761%    |           |           |
| %RSD |          | 1.916      | 0.733    | 0.561    | 0.139      | 0.269      | 2.420     |           |           |

240-17525-F-4-A

12/21/2012 6:56:24 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na       | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|------------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 18:57:07 | 67.460%    | 10.420   | 59.970   | 60.190     | 0.000      | 1120.000   | 59060.000 | 60740.000 |
| 2    | 18:57:50 | 65.381%    | 10.180   | 61.740   | 61.950     | 0.000      | 1101.000   | 57650.000 | 59810.000 |
| 3    | 18:58:33 | 65.018%    | 10.370   | 58.540   | 60.710     | 0.000      | 1108.000   | 57800.000 | 60320.000 |
| X    |          | 65.953%    | 10.320   | 60.080   | 60.950     | 0.000      | 1109.000   | 58170.000 | 60290.000 |
| σ    |          | 1.318%     | 0.125    | 1.602    | 0.904      | 0.000      | 9.572      | 772.400   | 467.100   |
| %RSD |          | 1.998      | 1.206    | 2.666    | 1.484      | 0.000      | 0.863      | 1.328     | 0.775     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 18:57:07 | 174900.000 | 3491.000 | 0.000    | 18680.000  | 298000.000 | 316400.000 | 73.264%   | 836.500   |
| 2    | 18:57:50 | 175100.000 | 3451.000 | 0.000    | 18590.000  | 297300.000 | 317100.000 | 71.550%   | 838.500   |
| 3    | 18:58:33 | 172200.000 | 3372.000 | 0.000    | 18420.000  | 298500.000 | 316700.000 | 69.189%   | 834.400   |
| X    |          | 174100.000 | 3438.000 | 0.000    | 18560.000  | 297900.000 | 316700.000 | 71.334%   | 836.500   |
| σ    |          | 1605.000   | 60.300   | 0.000    | 128.700    | 607.400    | 348.800    | 2.046%    | 2.043     |
| %RSD |          | 0.922      | 1.754    | 0.000    | 0.694      | 0.204      | 0.110      | 2.868     | 0.244     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 18:57:07 | 268.700    | 271.600  | 6986.000 | 302800.000 | 314200.000 | 138.600    | 326.700   | 213.200   |
| 2    | 18:57:50 | 269.600    | 274.900  | 7057.000 | 305000.000 | 315600.000 | 139.500    | 325.500   | 214.800   |
| 3    | 18:58:33 | 270.800    | 275.700  | 7127.000 | 307000.000 | 317900.000 | 139.500    | 329.800   | 216.300   |
| X    |          | 269.700    | 274.100  | 7057.000 | 304900.000 | 315900.000 | 139.200    | 327.300   | 214.800   |
| σ    |          | 1.025      | 2.176    | 70.820   | 2069.000   | 1878.000   | 0.502      | 2.196     | 1.570     |
| %RSD |          | 0.380      | 0.794    | 1.004    | 0.679      | 0.595      | 0.361      | 0.671     | 0.731     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 18:57:07 | 212.200    | 797.800  | 801.200  | 122.900    | 5.519      | 9.080      | 0.000     | 725.900   |
| 2    | 18:57:50 | 214.900    | 803.500  | 809.900  | 123.000    | 5.231      | 9.364      | 0.000     | 731.800   |
| 3    | 18:58:33 | 216.500    | 810.800  | 822.900  | 124.500    | 5.604      | 9.872      | 0.000     | 736.400   |
| X    |          | 214.500    | 804.100  | 811.300  | 123.500    | 5.451      | 9.439      | 0.000     | 731.400   |
| σ    |          | 2.173      | 6.523    | 10.910   | 0.906      | 0.195      | 0.401      | 0.000     | 5.299     |
| %RSD |          | 1.013      | 0.811    | 1.345    | 0.734      | 3.579      | 4.252      | 0.000     | 0.725     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 18:57:07 | 0.000      | 17.440   | 17.480   | 67.188%    | 0.548      | 0.481      | 4.296     | 3.741     |
| 2    | 18:57:50 | 0.000      | 17.440   | 17.980   | 66.985%    | 0.568      | 0.456      | 4.034     | 3.556     |
| 3    | 18:58:33 | 0.000      | 17.610   | 17.840   | 66.906%    | 0.588      | 0.483      | 3.787     | 3.363     |
| X    |          | 0.000      | 17.500   | 17.770   | 67.026%    | 0.568      | 0.473      | 4.039     | 3.553     |
| σ    |          | 0.000      | 0.098    | 0.258    | 0.145%     | 0.020      | 0.015      | 0.255     | 0.189     |
| %RSD |          | 0.000      | 0.562    | 1.450    | 0.217      | 3.565      | 3.217      | 6.302     | 5.323     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 18:57:07 | 68.642%    | 12.920   | 1.650    | 1.693      | 1300.000   | 1287.000   | 75.528%   | 74.372%   |
| 2    | 18:57:50 | 69.473%    | 12.790   | 1.725    | 1.661      | 1308.000   | 1292.000   | 77.581%   | 76.248%   |
| 3    | 18:58:33 | 69.943%    | 12.880   | 1.631    | 1.682      | 1300.000   | 1288.000   | 77.859%   | 76.739%   |
| X    |          | 69.353%    | 12.860   | 1.669    | 1.678      | 1302.000   | 1289.000   | 76.989%   | 75.786%   |
| σ    |          | 0.659%     | 0.064    | 0.050    | 0.016      | 4.540      | 2.482      | 1.273%    | 1.249%    |
| %RSD |          | 0.950      | 0.499    | 2.991    | 0.949      | 0.349      | 0.193      | 1.654     | 1.648     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi      |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        |           |           |
| 1    | 18:57:07 | 2.092      | 2.092    | 357.300  | 353.400    | 355.200    | 66.808%    |           |           |
| 2    | 18:57:50 | 2.153      | 2.084    | 361.300  | 356.500    | 358.400    | 68.517%    |           |           |
| 3    | 18:58:33 | 2.082      | 2.098    | 359.800  | 357.800    | 358.800    | 69.235%    |           |           |
| X    |          | 2.109      | 2.091    | 359.500  | 355.900    | 357.500    | 68.187%    |           |           |
| σ    |          | 0.039      | 0.007    | 2.048    | 2.277      | 1.980      | 1.247%     |           |           |
| %RSD |          | 1.826      | 0.348    | 0.570    | 0.640      | 0.554      | 1.829      |           |           |

240-17525-Q-5-A 12/21/2012 7:00:45 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:01:28 | 76.883%    | 5.845    | 28.240   | 28.460     | 0.000      | 344.500   | 33160.000 | 33910.000 |
| 2    | 19:02:11 | 77.156%    | 5.366    | 27.630   | 27.570     | 0.000      | 374.100   | 34440.000 | 35370.000 |
| 3    | 19:02:54 | 76.249%    | 5.614    | 26.910   | 27.230     | 0.000      | 350.400   | 33050.000 | 33980.000 |
| X    |          | 76.763%    | 5.608    | 27.600   | 27.750     | 0.000      | 356.400   | 33550.000 | 34420.000 |
| σ    |          | 0.465%     | 0.240    | 0.666    | 0.636      | 0.000      | 15.670    | 774.900   | 822.500   |
| %RSD |          | 0.606      | 4.273    | 2.412    | 2.292      | 0.000      | 4.396     | 2.310     | 2.389     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:01:28 | 98100.000  | 2107.000 | 0.000    | 9811.000   | 48880.000  | 51710.000 | 91.118%   | 608.300   |
| 2    | 19:02:11 | 103000.000 | 2243.000 | 0.000    | 10590.000  | 54370.000  | 57940.000 | 81.638%   | 672.900   |
| 3    | 19:02:54 | 96440.000  | 2090.000 | 0.000    | 9667.000   | 49160.000  | 52560.000 | 90.428%   | 609.700   |
| X    |          | 99170.000  | 2147.000 | 0.000    | 10020.000  | 50800.000  | 54070.000 | 87.728%   | 630.300   |
| σ    |          | 3392.000   | 83.690   | 0.000    | 497.400    | 3094.000   | 3380.000  | 5.285%    | 36.930    |
| %RSD |          | 3.421      | 3.898    | 0.000    | 4.962      | 6.089      | 6.251     | 6.025     | 5.860     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:01:28 | 180.700    | 211.600  | 6386.000 | 260800.000 | 267900.000 | 86.520    | 282.800   | 190.000   |
| 2    | 19:02:11 | 201.600    | 236.400  | 6949.000 | 282400.000 | 289700.000 | 94.440    | 303.000   | 204.400   |
| 3    | 19:02:54 | 182.900    | 213.100  | 6423.000 | 262100.000 | 270400.000 | 87.940    | 283.500   | 189.800   |
| X    |          | 188.400    | 220.400  | 6586.000 | 268400.000 | 276000.000 | 89.630    | 289.800   | 194.800   |
| σ    |          | 11.510     | 13.900   | 315.100  | 12140.000  | 11940.000  | 4.222     | 11.480    | 8.380     |
| %RSD |          | 6.108      | 6.307    | 4.784    | 4.521      | 4.326      | 4.710     | 3.963     | 4.303     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:01:28 | 188.300    | 735.500  | 744.800  | 146.700    | 4.100      | 6.975     | 0.000     | 122.700   |
| 2    | 19:02:11 | 204.200    | 794.600  | 798.500  | 155.900    | 4.269      | 7.451     | 0.000     | 127.100   |
| 3    | 19:02:54 | 190.200    | 740.000  | 748.800  | 148.000    | 4.029      | 5.888     | 0.000     | 123.800   |
| X    |          | 194.300    | 756.700  | 764.100  | 150.200    | 4.132      | 6.771     | 0.000     | 124.600   |
| σ    |          | 8.685      | 32.890   | 29.920   | 4.956      | 0.123      | 0.801     | 0.000     | 2.315     |
| %RSD |          | 4.471      | 4.346    | 3.916    | 3.300      | 2.987      | 11.830    | 0.000     | 1.859     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:01:28 | 0.000      | 15.710   | 15.850   | 76.038%    | 0.325      | 0.335     | 2.380     | 2.273     |
| 2    | 19:02:11 | 0.000      | 16.280   | 16.380   | 76.648%    | 0.322      | 0.321     | 2.322     | 2.186     |
| 3    | 19:02:54 | 0.000      | 16.050   | 16.040   | 77.001%    | 0.348      | 0.328     | 2.278     | 2.256     |
| X    |          | 0.000      | 16.020   | 16.090   | 76.562%    | 0.331      | 0.328     | 2.327     | 2.238     |
| σ    |          | 0.000      | 0.284    | 0.272    | 0.487%     | 0.014      | 0.007     | 0.051     | 0.046     |
| %RSD |          | 0.000      | 1.773    | 1.692    | 0.637      | 4.288      | 2.261     | 2.210     | 2.054     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:01:28 | 75.100%    | 9.190    | 2.471    | 2.409      | 595.700    | 587.800   | 81.332%   | 80.011%   |
| 2    | 19:02:11 | 76.968%    | 9.152    | 2.409    | 2.588      | 593.400    | 589.300   | 83.425%   | 81.820%   |
| 3    | 19:02:54 | 77.388%    | 9.103    | 2.354    | 2.499      | 596.500    | 592.700   | 83.773%   | 82.844%   |
| X    |          | 76.485%    | 9.148    | 2.411    | 2.499      | 595.200    | 589.900   | 82.843%   | 81.558%   |
| σ    |          | 1.218%     | 0.044    | 0.058    | 0.090      | 1.598      | 2.500     | 1.320%    | 1.435%    |
| %RSD |          | 1.592      | 0.479    | 2.421    | 3.588      | 0.268      | 0.424     | 1.594     | 1.759     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 19:01:28 | 1.565      | 1.619    | 267.900  | 267.500    | 267.100    | 73.088%   |           |           |
| 2    | 19:02:11 | 1.575      | 1.636    | 269.000  | 270.500    | 269.100    | 74.507%   |           |           |
| 3    | 19:02:54 | 1.553      | 1.639    | 269.000  | 270.300    | 269.200    | 75.950%   |           |           |
| X    |          | 1.564      | 1.632    | 268.600  | 269.400    | 268.400    | 74.515%   |           |           |
| σ    |          | 0.011      | 0.011    | 0.616    | 1.687      | 1.202      | 1.431%    |           |           |
| %RSD |          | 0.718      | 0.658    | 0.229    | 0.626      | 0.448      | 1.921     |           |           |



240-17525-Q-5-A SD@5

12/21/2012 7:05:04 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li       | 9Be     | 10B      | 11B       | 13C       | 23Na     | 25Mg     | 26Mg     |
|------|----------|-----------|---------|----------|-----------|-----------|----------|----------|----------|
|      |          | ppb       | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      | ppb      |
| 1    | 19:05:46 | 83.598%   | 1.052   | 6.842    | 6.918     | 0.000     | 71.730   | 6731.000 | 6921.000 |
| 2    | 19:06:29 | 81.132%   | 1.264   | 6.862    | 6.775     | 0.000     | 69.810   | 6650.000 | 6887.000 |
| 3    | 19:07:12 | 81.129%   | 1.184   | 6.230    | 6.752     | 0.000     | 69.480   | 6562.000 | 6887.000 |
| X    |          | 81.953%   | 1.167   | 6.645    | 6.815     | 0.000     | 70.340   | 6647.000 | 6898.000 |
| σ    |          | 1.425%    | 0.107   | 0.359    | 0.090     | 0.000     | 1.215    | 84.590   | 19.780   |
| %RSD |          | 1.738     | 9.170   | 5.410    | 1.317     | 0.000     | 1.727    | 1.273    | 0.287    |
| Run  | Time     | 27Al      | 28Si    | 37Cl     | 39K       | 43Ca      | 44Ca     | 45Sc     | 47Ti     |
|      |          | ppb       | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      | ppb      |
| 1    | 19:05:46 | 20060.000 | 406.000 | 0.000    | 1991.000  | 10050.000 | 9529.000 | 99.034%  | 122.500  |
| 2    | 19:06:29 | 20360.000 | 407.700 | 0.000    | 1982.000  | 9958.000  | 9537.000 | 97.578%  | 121.000  |
| 3    | 19:07:12 | 20170.000 | 406.100 | 0.000    | 1971.000  | 9988.000  | 9408.000 | 96.487%  | 122.300  |
| X    |          | 20190.000 | 406.600 | 0.000    | 1982.000  | 9999.000  | 9491.000 | 97.700%  | 121.900  |
| σ    |          | 151.000   | 0.983   | 0.000    | 9.913     | 47.780    | 72.080   | 1.278%   | 0.813    |
| %RSD |          | 0.748     | 0.242   | 0.000    | 0.500     | 0.478     | 0.759    | 1.308    | 0.667    |
| Run  | Time     | 51V       | 52Cr    | 55Mn     | 56Fe      | 57Fe      | 59Co     | 60Ni     | 63Cu     |
|      |          | ppb       | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      | ppb      |
| 1    | 19:05:46 | 36.680    | 42.710  | 1278.000 | 55230.000 | 53990.000 | 16.910   | 56.100   | 37.980   |
| 2    | 19:06:29 | 36.180    | 42.420  | 1284.000 | 54950.000 | 54190.000 | 17.060   | 56.040   | 38.570   |
| 3    | 19:07:12 | 35.910    | 42.240  | 1300.000 | 55000.000 | 53640.000 | 16.970   | 55.980   | 38.880   |
| X    |          | 36.260    | 42.450  | 1287.000 | 55060.000 | 53940.000 | 16.980   | 56.040   | 38.480   |
| σ    |          | 0.392     | 0.236   | 10.920   | 149.400   | 280.200   | 0.076    | 0.058    | 0.454    |
| %RSD |          | 1.081     | 0.557   | 0.848    | 0.271     | 0.519     | 0.447    | 0.103    | 1.180    |
| Run  | Time     | 65Cu      | 66Zn    | 68Zn     | 75As      | 78Se      | 82Se     | 83Kr     | 88Sr     |
|      |          | ppb       | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      | ppb      |
| 1    | 19:05:46 | 38.510    | 157.200 | 158.400  | 29.810    | 0.399     | 0.479    | 0.000    | 22.120   |
| 2    | 19:06:29 | 38.440    | 158.000 | 159.800  | 30.320    | 0.271     | 0.249    | 0.000    | 22.110   |
| 3    | 19:07:12 | 38.310    | 159.500 | 159.900  | 30.320    | 0.604     | 0.341    | 0.000    | 22.070   |
| X    |          | 38.420    | 158.200 | 159.400  | 30.150    | 0.425     | 0.356    | 0.000    | 22.100   |
| σ    |          | 0.105     | 1.173   | 0.835    | 0.295     | 0.168     | 0.116    | 0.000    | 0.028    |
| %RSD |          | 0.272     | 0.741   | 0.524    | 0.980     | 39.610    | 32.510   | 0.000    | 0.129    |
| Run  | Time     | 89Y       | 95Mo    | 98Mo     | 103Rh     | 107Ag     | 109Ag    | 111Cd    | 114Cd    |
|      |          | ppb       | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      | ppb      |
| 1    | 19:05:46 | 97.423%   | 2.898   | 2.989    | 88.570%   | 0.042     | 0.041    | 0.486    | 0.466    |
| 2    | 19:06:29 | 98.912%   | 2.983   | 2.937    | 89.138%   | 0.038     | 0.066    | 0.398    | 0.458    |
| 3    | 19:07:12 | 98.806%   | 2.984   | 3.008    | 89.345%   | 0.058     | 0.046    | 0.487    | 0.409    |
| X    |          | 98.380%   | 2.955   | 2.978    | 89.017%   | 0.046     | 0.051    | 0.457    | 0.444    |
| σ    |          | 0.831%    | 0.049   | 0.037    | 0.401%    | 0.011     | 0.013    | 0.051    | 0.031    |
| %RSD |          | 0.845     | 1.669   | 1.230    | 0.451     | 23.530    | 26.570   | 11.120   | 6.957    |
| Run  | Time     | 115In     | 118Sn   | 121Sb    | 123Sb     | 135Ba     | 137Ba    | 159Tb    | 165Ho    |
|      |          | ppb       | ppb     | ppb      | ppb       | ppb       | ppb      | ppb      | ppb      |
| 1    | 19:05:46 | 84.239%   | 1.552   | 0.464    | 0.455     | 120.600   | 120.400  | 86.560%  | 86.274%  |
| 2    | 19:06:29 | 86.775%   | 1.504   | 0.502    | 0.443     | 120.300   | 120.800  | 89.778%  | 89.937%  |
| 3    | 19:07:12 | 87.123%   | 1.539   | 0.475    | 0.484     | 120.800   | 121.000  | 90.778%  | 90.834%  |
| X    |          | 86.046%   | 1.532   | 0.481    | 0.461     | 120.600   | 120.700  | 89.039%  | 89.015%  |
| σ    |          | 1.574%    | 0.025   | 0.020    | 0.021     | 0.236     | 0.300    | 2.204%   | 2.416%   |
| %RSD |          | 1.830     | 1.616   | 4.070    | 4.621     | 0.196     | 0.248    | 2.475    | 2.714    |
| Run  | Time     | 203Tl     | 205Tl   | 206Pb    | 207Pb     | 208Pb     | 209Bi    |          |          |
|      |          | ppb       | ppb     | ppb      | ppb       | ppb       | ppb      |          |          |
| 1    | 19:05:46 | 0.340     | 0.317   | 50.370   | 50.170    | 50.070    | 89.847%  |          |          |
| 2    | 19:06:29 | 0.317     | 0.331   | 51.700   | 51.500    | 51.140    | 91.580%  |          |          |
| 3    | 19:07:12 | 0.294     | 0.332   | 51.210   | 50.730    | 50.630    | 93.079%  |          |          |
| X    |          | 0.317     | 0.327   | 51.090   | 50.800    | 50.610    | 91.502%  |          |          |
| σ    |          | 0.023     | 0.008   | 0.676    | 0.667     | 0.534     | 1.618%   |          |          |
| %RSD |          | 7.253     | 2.530   | 1.323    | 1.312     | 1.055     | 1.768    |          |          |

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User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:10:04 | 77.107%    | 5.640    | 28.190   | 27.940     | 0.000      | 498.400   | 38910.000 | 39690.000 |
| 2    | 19:10:47 | 74.990%    | 5.579    | 28.430   | 28.280     | 0.000      | 461.400   | 36180.000 | 37150.000 |
| 3    | 19:11:30 | 72.119%    | 5.974    | 29.190   | 29.200     | 0.000      | 463.300   | 36610.000 | 38310.000 |
| X    |          | 74.739%    | 5.731    | 28.600   | 28.470     | 0.000      | 474.400   | 37230.000 | 38380.000 |
| σ    |          | 2.504%     | 0.212    | 0.519    | 0.651      | 0.000      | 20.810    | 1470.000  | 1271.000  |
| %RSD |          | 3.350      | 3.708    | 1.815    | 2.286      | 0.000      | 4.386     | 3.947     | 3.312     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:10:04 | 110600.000 | 1729.000 | 0.000    | 11370.000  | 66750.000  | 71660.000 | 82.030%   | 739.100   |
| 2    | 19:10:47 | 102900.000 | 1603.000 | 0.000    | 10320.000  | 61020.000  | 64850.000 | 89.274%   | 665.800   |
| 3    | 19:11:30 | 105700.000 | 1625.000 | 0.000    | 10400.000  | 60780.000  | 64760.000 | 89.758%   | 676.600   |
| X    |          | 106400.000 | 1653.000 | 0.000    | 10700.000  | 62850.000  | 67090.000 | 87.020%   | 693.800   |
| σ    |          | 3867.000   | 67.400   | 0.000    | 587.300    | 3382.000   | 3957.000  | 4.329%    | 39.610    |
| %RSD |          | 3.634      | 4.078    | 0.000    | 5.490      | 5.382      | 5.897     | 4.975     | 5.710     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:10:04 | 192.800    | 264.100  | 6625.000 | 250100.000 | 257200.000 | 95.210    | 332.800   | 203.200   |
| 2    | 19:10:47 | 183.300    | 244.400  | 6121.000 | 231100.000 | 239100.000 | 88.600    | 308.000   | 192.700   |
| 3    | 19:11:30 | 180.400    | 242.500  | 6157.000 | 232900.000 | 237300.000 | 88.750    | 312.500   | 193.900   |
| X    |          | 185.500    | 250.300  | 6301.000 | 238000.000 | 244500.000 | 90.850    | 317.800   | 196.600   |
| σ    |          | 6.495      | 11.970   | 281.200  | 10470.000  | 10980.000  | 3.771     | 13.250    | 5.739     |
| %RSD |          | 3.501      | 4.783    | 4.462    | 4.400      | 4.490      | 4.151     | 4.168     | 2.919     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:10:04 | 205.000    | 832.900  | 839.500  | 146.900    | 4.478      | 7.615     | 0.000     | 148.200   |
| 2    | 19:10:47 | 194.100    | 798.000  | 805.600  | 142.200    | 4.236      | 6.797     | 0.000     | 146.700   |
| 3    | 19:11:30 | 194.400    | 794.700  | 806.500  | 141.500    | 4.099      | 7.026     | 0.000     | 147.800   |
| X    |          | 197.800    | 808.500  | 817.200  | 143.500    | 4.271      | 7.146     | 0.000     | 147.500   |
| σ    |          | 6.219      | 21.200   | 19.280   | 2.936      | 0.192      | 0.422     | 0.000     | 0.777     |
| %RSD |          | 3.144      | 2.622    | 2.359    | 2.046      | 4.486      | 5.903     | 0.000     | 0.527     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:10:04 | 0.000      | 14.300   | 14.160   | 76.509%    | 0.355      | 0.321     | 2.353     | 2.194     |
| 2    | 19:10:47 | 0.000      | 14.180   | 14.270   | 77.008%    | 0.354      | 0.327     | 2.461     | 2.206     |
| 3    | 19:11:30 | 0.000      | 14.320   | 14.310   | 76.510%    | 0.342      | 0.334     | 2.573     | 2.340     |
| X    |          | 0.000      | 14.270   | 14.250   | 76.676%    | 0.350      | 0.327     | 2.462     | 2.247     |
| σ    |          | 0.000      | 0.078    | 0.077    | 0.288%     | 0.007      | 0.007     | 0.110     | 0.081     |
| %RSD |          | 0.000      | 0.548    | 0.539    | 0.375      | 1.986      | 2.064     | 4.477     | 3.616     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:10:04 | 75.612%    | 16.620   | 1.673    | 1.672      | 603.300    | 603.900   | 80.590%   | 79.171%   |
| 2    | 19:10:47 | 77.035%    | 16.650   | 1.640    | 1.741      | 611.800    | 608.200   | 82.781%   | 81.455%   |
| 3    | 19:11:30 | 77.517%    | 16.920   | 1.749    | 1.789      | 610.200    | 610.400   | 83.963%   | 82.287%   |
| X    |          | 76.721%    | 16.730   | 1.687    | 1.734      | 608.500    | 607.500   | 82.444%   | 80.971%   |
| σ    |          | 0.991%     | 0.167    | 0.056    | 0.059      | 4.541      | 3.293     | 1.712%    | 1.613%    |
| %RSD |          | 1.291      | 0.998    | 3.299    | 3.406      | 0.746      | 0.542     | 2.076     | 1.992     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 19:10:04 | 1.566      | 1.521    | 290.300  | 292.200    | 290.900    | 74.047%   |           |           |
| 2    | 19:10:47 | 1.549      | 1.572    | 294.200  | 297.900    | 295.400    | 76.576%   |           |           |
| 3    | 19:11:30 | 1.574      | 1.562    | 298.600  | 297.000    | 296.800    | 77.115%   |           |           |
| X    |          | 1.563      | 1.552    | 294.400  | 295.700    | 294.400    | 75.913%   |           |           |
| σ    |          | 0.013      | 0.027    | 4.162    | 3.041      | 3.105      | 1.638%    |           |           |
| %RSD |          | 0.806      | 1.757    | 1.414    | 1.028      | 1.055      | 2.157     |           |           |

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User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:14:21 | 70.869%    | 91.590   | 112.800  | 111.100    | 0.000      | 9577.000  | 47480.000 | 48870.000 |
| 2    | 19:15:04 | 70.929%    | 89.250   | 109.300  | 110.900    | 0.000      | 9151.000  | 45260.000 | 46190.000 |
| 3    | 19:15:47 | 71.379%    | 87.400   | 107.900  | 110.600    | 0.000      | 9239.000  | 46220.000 | 47750.000 |
| X    |          | 71.059%    | 89.410   | 110.000  | 110.900    | 0.000      | 9322.000  | 46320.000 | 47600.000 |
| σ    |          | 0.278%     | 2.102    | 2.512    | 0.247      | 0.000      | 224.700   | 1113.000  | 1343.000  |
| %RSD |          | 0.392      | 2.351    | 2.284    | 0.223      | 0.000      | 2.410     | 2.402     | 2.821     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:14:21 | 138100.000 | 2775.000 | 0.000    | 22810.000  | 68190.000  | 72030.000 | 82.065%   | 953.100   |
| 2    | 19:15:04 | 129100.000 | 2532.000 | 0.000    | 20970.000  | 61520.000  | 64760.000 | 90.696%   | 848.200   |
| 3    | 19:15:47 | 135300.000 | 2688.000 | 0.000    | 22910.000  | 69140.000  | 73320.000 | 80.142%   | 954.100   |
| X    |          | 134100.000 | 2665.000 | 0.000    | 22230.000  | 66290.000  | 70040.000 | 84.301%   | 918.400   |
| σ    |          | 4615.000   | 123.300  | 0.000    | 1096.000   | 4155.000   | 4614.000  | 5.621%    | 60.850    |
| %RSD |          | 3.440      | 4.627    | 0.000    | 4.930      | 6.268      | 6.588     | 6.668     | 6.626     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:14:21 | 316.000    | 343.100  | 6689.000 | 270500.000 | 278300.000 | 182.900   | 394.400   | 528.900   |
| 2    | 19:15:04 | 282.700    | 310.900  | 6130.000 | 248900.000 | 254800.000 | 167.300   | 363.400   | 492.300   |
| 3    | 19:15:47 | 318.900    | 350.400  | 6697.000 | 269700.000 | 280700.000 | 182.400   | 392.400   | 524.600   |
| X    |          | 305.900    | 334.800  | 6506.000 | 263000.000 | 271300.000 | 177.600   | 383.400   | 515.300   |
| σ    |          | 20.130     | 21.040   | 325.300  | 12220.000  | 14350.000  | 8.861     | 17.380    | 19.980    |
| %RSD |          | 6.581      | 6.283    | 5.001    | 4.644      | 5.289      | 4.990     | 4.533     | 3.878     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:14:21 | 520.800    | 853.300  | 861.400  | 228.900    | 74.000     | 78.070    | 0.000     | 230.300   |
| 2    | 19:15:04 | 489.800    | 809.600  | 819.200  | 220.000    | 71.820     | 76.220    | 0.000     | 228.200   |
| 3    | 19:15:47 | 523.200    | 869.900  | 877.400  | 234.500    | 76.550     | 82.030    | 0.000     | 236.200   |
| X    |          | 511.300    | 844.300  | 852.700  | 227.800    | 74.120     | 78.770    | 0.000     | 231.600   |
| σ    |          | 18.630     | 31.170   | 30.090   | 7.290      | 2.365      | 2.969     | 0.000     | 4.172     |
| %RSD |          | 3.645      | 3.692    | 3.529    | 3.200      | 3.191      | 3.769     | 0.000     | 1.801     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:14:21 | 0.000      | 94.580   | 94.280   | 75.052%    | 80.680     | 81.410    | 81.280    | 81.130    |
| 2    | 19:15:04 | 0.000      | 95.130   | 94.600   | 75.461%    | 81.690     | 82.140    | 81.650    | 81.580    |
| 3    | 19:15:47 | 0.000      | 96.580   | 96.420   | 75.007%    | 82.120     | 82.840    | 82.470    | 82.310    |
| X    |          | 0.000      | 95.430   | 95.100   | 75.173%    | 81.500     | 82.130    | 81.800    | 81.670    |
| σ    |          | 0.000      | 1.034    | 1.154    | 0.250%     | 0.738      | 0.714     | 0.609     | 0.595     |
| %RSD |          | 0.000      | 1.083    | 1.214    | 0.332      | 0.906      | 0.869     | 0.744     | 0.729     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:14:21 | 75.224%    | 83.370   | 23.220   | 22.920     | 713.200    | 705.700   | 80.159%   | 78.641%   |
| 2    | 19:15:04 | 76.219%    | 83.350   | 23.310   | 23.680     | 716.900    | 711.100   | 82.301%   | 80.819%   |
| 3    | 19:15:47 | 76.192%    | 84.360   | 23.620   | 23.330     | 712.900    | 706.400   | 83.473%   | 81.807%   |
| X    |          | 75.879%    | 83.690   | 23.380   | 23.310     | 714.300    | 707.700   | 81.978%   | 80.422%   |
| σ    |          | 0.567%     | 0.577    | 0.209    | 0.384      | 2.208      | 2.927     | 1.680%    | 1.620%    |
| %RSD |          | 0.747      | 0.689    | 0.893    | 1.646      | 0.309      | 0.414     | 2.050     | 2.014     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 19:14:21 | 84.070     | 84.380   | 364.400  | 368.200    | 367.800    | 69.090%   |           |           |
| 2    | 19:15:04 | 85.410     | 85.910   | 370.500  | 375.600    | 372.600    | 71.227%   |           |           |
| 3    | 19:15:47 | 85.740     | 86.230   | 370.000  | 375.500    | 372.600    | 71.918%   |           |           |
| X    |          | 85.070     | 85.510   | 368.300  | 373.100    | 371.000    | 70.745%   |           |           |
| σ    |          | 0.885      | 0.987    | 3.375    | 4.206      | 2.790      | 1.474%    |           |           |
| %RSD |          | 1.040      | 1.154    | 0.916    | 1.127      | 0.752      | 2.084     |           |           |

240-17525-Q-5-A PDS

12/21/2012 7:17:56 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be       | 10B      | 11B        | 13C        | 23Na       | 25Mg      | 26Mg      |
|------|----------|------------|-----------|----------|------------|------------|------------|-----------|-----------|
|      |          | ppb        | ppb       | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:18:39 | 72.740%    | 47.360    | 833.300  | 846.700    | 0.000      | 45780.000  | 77730.000 | 78750.000 |
| 2    | 19:19:22 | 69.434%    | 49.260    | 878.500  | 868.600    | 0.000      | 46380.000  | 78990.000 | 80460.000 |
| 3    | 19:20:05 | 69.044%    | 48.910    | 857.900  | 857.300    | 0.000      | 45930.000  | 77590.000 | 80710.000 |
| X    |          | 70.406%    | 48.510    | 856.600  | 857.500    | 0.000      | 46030.000  | 78100.000 | 79970.000 |
| σ    |          | 2.031%     | 1.014     | 22.600   | 10.980     | 0.000      | 314.900    | 768.500   | 1067.000  |
| %RSD |          | 2.885      | 2.090     | 2.638    | 1.280      | 0.000      | 0.684      | 0.984     | 1.334     |
| Run  | Time     | 27Al       | 28Si      | 37Cl     | 39K        | 43Ca       | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb        | ppb       | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:18:39 | 101100.000 | 11960.000 | 0.000    | 56980.000  | 97990.000  | 104500.000 | 78.051%   | 1603.000  |
| 2    | 19:19:22 | 103000.000 | 12060.000 | 0.000    | 58490.000  | 101100.000 | 106800.000 | 74.599%   | 1645.000  |
| 3    | 19:20:05 | 103900.000 | 12000.000 | 0.000    | 57990.000  | 99050.000  | 105100.000 | 74.501%   | 1633.000  |
| X    |          | 102700.000 | 12010.000 | 0.000    | 57820.000  | 99360.000  | 105500.000 | 75.717%   | 1627.000  |
| σ    |          | 1469.000   | 52.330    | 0.000    | 764.500    | 1556.000   | 1164.000   | 2.022%    | 21.630    |
| %RSD |          | 1.431      | 0.436     | 0.000    | 1.322      | 1.566      | 1.103      | 2.671     | 1.330     |
| Run  | Time     | 51V        | 52Cr      | 55Mn     | 56Fe       | 57Fe       | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb        | ppb       | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:18:39 | 715.900    | 409.100   | 7181.000 | 275000.000 | 283000.000 | 575.600    | 722.400   | 408.900   |
| 2    | 19:19:22 | 741.800    | 420.400   | 7374.000 | 281900.000 | 291200.000 | 593.100    | 745.600   | 420.700   |
| 3    | 19:20:05 | 715.800    | 412.800   | 7360.000 | 280000.000 | 289600.000 | 582.500    | 740.400   | 417.400   |
| X    |          | 724.500    | 414.100   | 7305.000 | 279000.000 | 287900.000 | 583.700    | 736.200   | 415.700   |
| σ    |          | 14.960     | 5.745     | 107.700  | 3536.000   | 4336.000   | 8.832      | 12.150    | 6.110     |
| %RSD |          | 2.064      | 1.387     | 1.474    | 1.268      | 1.506      | 1.513      | 1.650     | 1.470     |
| Run  | Time     | 65Cu       | 66Zn      | 68Zn     | 75As       | 78Se       | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb        | ppb       | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:18:39 | 406.800    | 1150.000  | 1161.000 | 183.200    | 12.790     | 15.660     | 0.000     | 1116.000  |
| 2    | 19:19:22 | 418.100    | 1186.000  | 1193.000 | 184.700    | 12.820     | 16.330     | 0.000     | 1138.000  |
| 3    | 19:20:05 | 420.300    | 1179.000  | 1189.000 | 187.100    | 12.760     | 15.950     | 0.000     | 1142.000  |
| X    |          | 415.100    | 1172.000  | 1181.000 | 185.000    | 12.790     | 15.980     | 0.000     | 1132.000  |
| σ    |          | 7.247      | 19.470    | 17.480   | 1.974      | 0.027      | 0.340      | 0.000     | 14.020    |
| %RSD |          | 1.746      | 1.662     | 1.480    | 1.067      | 0.208      | 2.124      | 0.000     | 1.239     |
| Run  | Time     | 89Y        | 95Mo      | 98Mo     | 103Rh      | 107Ag      | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb        | ppb       | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:18:39 | 0.000      | 948.400   | 942.400  | 70.146%    | 43.210     | 43.740     | 44.520    | 36.290    |
| 2    | 19:19:22 | 0.000      | 967.000   | 970.200  | 69.833%    | 43.940     | 43.980     | 44.360    | 37.210    |
| 3    | 19:20:05 | 0.000      | 976.600   | 978.800  | 69.222%    | 43.980     | 44.570     | 44.300    | 37.520    |
| X    |          | 0.000      | 964.000   | 963.800  | 69.734%    | 43.710     | 44.100     | 44.390    | 37.010    |
| σ    |          | 0.000      | 14.320    | 19.060   | 0.470%     | 0.434      | 0.428      | 0.111     | 0.638     |
| %RSD |          | 0.000      | 1.485     | 1.978    | 0.674      | 0.993      | 0.971      | 0.251     | 1.725     |
| Run  | Time     | 115In      | 118Sn     | 121Sb    | 123Sb      | 135Ba      | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb        | ppb       | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:18:39 | 69.769%    | 1957.000  | 417.800  | 417.000    | 2305.000   | 2284.000   | 76.610%   | 75.466%   |
| 2    | 19:19:22 | 70.675%    | 1963.000  | 422.500  | 418.900    | 2322.000   | 2307.000   | 78.282%   | 77.644%   |
| 3    | 19:20:05 | 70.266%    | 1985.000  | 428.300  | 427.600    | 2363.000   | 2332.000   | 78.020%   | 77.364%   |
| X    |          | 70.237%    | 1968.000  | 422.800  | 421.200    | 2330.000   | 2308.000   | 77.637%   | 76.825%   |
| σ    |          | 0.454%     | 14.690    | 5.241    | 5.650      | 30.320     | 23.790     | 0.899%    | 1.185%    |
| %RSD |          | 0.647      | 0.747     | 1.239    | 1.342      | 1.301      | 1.031      | 1.159     | 1.543     |
| Run  | Time     | 203Tl      | 205Tl     | 206Pb    | 207Pb      | 208Pb      | 209Bi      |           |           |
|      |          | ppb        | ppb       | ppb      | ppb        | ppb        | ppb        |           |           |
| 1    | 19:18:39 | 45.100     | 45.410    | 280.800  | 280.100    | 279.600    | 67.886%    |           |           |
| 2    | 19:19:22 | 45.980     | 45.870    | 281.800  | 284.600    | 282.200    | 69.331%    |           |           |
| 3    | 19:20:05 | 47.140     | 47.250    | 292.500  | 289.700    | 291.300    | 68.974%    |           |           |
| X    |          | 46.070     | 46.180    | 285.000  | 284.800    | 284.400    | 68.730%    |           |           |
| σ    |          | 1.026      | 0.954     | 6.511    | 4.831      | 6.124      | 0.752%     |           |           |
| %RSD |          | 2.226      | 2.066     | 2.284    | 1.696      | 2.153      | 1.095      |           |           |

240-17525-G-6-A 12/21/2012 7:25:11 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li       | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|-----------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:25:54 | 77.293%   | 4.790    | 26.590   | 25.750     | 0.000      | 376.400   | 30240.000 | 31100.000 |
| 2    | 19:26:37 | 76.810%   | 4.576    | 24.540   | 25.010     | 0.000      | 371.300   | 30150.000 | 30990.000 |
| 3    | 19:27:20 | 78.547%   | 4.760    | 23.160   | 24.310     | 0.000      | 335.400   | 28220.000 | 29460.000 |
| X    |          | 77.550%   | 4.708    | 24.760   | 25.020     | 0.000      | 361.000   | 29530.000 | 30520.000 |
| σ    |          | 0.897%    | 0.116    | 1.726    | 0.721      | 0.000      | 22.300    | 1140.000  | 915.600   |
| %RSD |          | 1.156     | 2.455    | 6.972    | 2.881      | 0.000      | 6.177     | 3.861     | 3.000     |
| Run  | Time     | 27Al      | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:25:54 | 88870.000 | 1940.000 | 0.000    | 8546.000   | 56120.000  | 60030.000 | 81.231%   | 651.800   |
| 2    | 19:26:37 | 87100.000 | 1895.000 | 0.000    | 8509.000   | 56250.000  | 60440.000 | 81.146%   | 646.300   |
| 3    | 19:27:20 | 84170.000 | 1813.000 | 0.000    | 7901.000   | 51300.000  | 54780.000 | 90.570%   | 594.000   |
| X    |          | 86710.000 | 1883.000 | 0.000    | 8319.000   | 54560.000  | 58420.000 | 84.316%   | 630.700   |
| σ    |          | 2373.000  | 64.300   | 0.000    | 362.100    | 2822.000   | 3159.000  | 5.416%    | 31.920    |
| %RSD |          | 2.737     | 3.415    | 0.000    | 4.352      | 5.172      | 5.408     | 6.424     | 5.061     |
| Run  | Time     | 51V       | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:25:54 | 172.400   | 174.000  | 5907.000 | 227800.000 | 233000.000 | 86.910    | 310.800   | 197.900   |
| 2    | 19:26:37 | 173.600   | 176.000  | 5979.000 | 228800.000 | 232300.000 | 88.500    | 318.100   | 201.000   |
| 3    | 19:27:20 | 158.200   | 161.000  | 5540.000 | 213100.000 | 218600.000 | 83.500    | 298.400   | 187.800   |
| X    |          | 168.100   | 170.400  | 5808.000 | 223200.000 | 227900.000 | 86.300    | 309.100   | 195.500   |
| σ    |          | 8.562     | 8.131    | 235.400  | 8767.000   | 8112.000   | 2.553     | 9.939     | 6.925     |
| %RSD |          | 5.095     | 4.773    | 4.053    | 3.927      | 3.559      | 2.958     | 3.215     | 3.542     |
| Run  | Time     | 65Cu      | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:25:54 | 194.500   | 694.600  | 703.600  | 156.900    | 3.438      | 6.787     | 0.000     | 135.100   |
| 2    | 19:26:37 | 200.900   | 707.600  | 710.700  | 158.500    | 3.476      | 5.550     | 0.000     | 137.000   |
| 3    | 19:27:20 | 187.300   | 664.500  | 674.100  | 152.400    | 3.524      | 5.537     | 0.000     | 136.500   |
| X    |          | 194.200   | 688.900  | 696.100  | 155.900    | 3.480      | 5.958     | 0.000     | 136.200   |
| σ    |          | 6.788     | 22.110   | 19.420   | 3.201      | 0.043      | 0.718     | 0.000     | 0.974     |
| %RSD |          | 3.495     | 3.209    | 2.789    | 2.053      | 1.244      | 12.050    | 0.000     | 0.715     |
| Run  | Time     | 89Y       | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:25:54 | 0.000     | 15.090   | 14.890   | 77.277%    | 0.350      | 0.298     | 2.392     | 2.157     |
| 2    | 19:26:37 | 0.000     | 15.010   | 14.850   | 77.694%    | 0.335      | 0.280     | 2.294     | 2.100     |
| 3    | 19:27:20 | 0.000     | 14.910   | 14.670   | 77.428%    | 0.320      | 0.333     | 2.122     | 2.009     |
| X    |          | 0.000     | 15.000   | 14.810   | 77.466%    | 0.335      | 0.304     | 2.270     | 2.089     |
| σ    |          | 0.000     | 0.089    | 0.117    | 0.211%     | 0.015      | 0.027     | 0.137     | 0.075     |
| %RSD |          | 0.000     | 0.594    | 0.794    | 0.273      | 4.472      | 8.882     | 6.029     | 3.572     |
| Run  | Time     | 115In     | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:25:54 | 75.637%   | 13.160   | 1.996    | 1.927      | 542.300    | 537.700   | 80.842%   | 79.833%   |
| 2    | 19:26:37 | 77.248%   | 11.330   | 1.899    | 2.015      | 546.700    | 542.100   | 82.829%   | 82.471%   |
| 3    | 19:27:20 | 77.064%   | 10.760   | 1.900    | 1.861      | 547.300    | 546.000   | 83.304%   | 82.263%   |
| X    |          | 76.649%   | 11.750   | 1.931    | 1.934      | 545.400    | 541.900   | 82.325%   | 81.522%   |
| σ    |          | 0.882%    | 1.251    | 0.056    | 0.077      | 2.711      | 4.171     | 1.306%    | 1.466%    |
| %RSD |          | 1.150     | 10.640   | 2.888    | 3.983      | 0.497      | 0.770     | 1.587     | 1.799     |
| Run  | Time     | 203Tl     | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb       | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 19:25:54 | 1.549     | 1.558    | 232.600  | 233.200    | 232.300    | 74.621%   |           |           |
| 2    | 19:26:37 | 1.500     | 1.572    | 236.800  | 236.000    | 235.300    | 76.220%   |           |           |
| 3    | 19:27:20 | 1.545     | 1.551    | 237.600  | 237.000    | 237.100    | 76.514%   |           |           |
| X    |          | 1.532     | 1.560    | 235.700  | 235.400    | 234.900    | 75.785%   |           |           |
| σ    |          | 0.028     | 0.011    | 2.682    | 1.955      | 2.418      | 1.019%    |           |           |
| %RSD |          | 1.800     | 0.683    | 1.138    | 0.830      | 1.029      | 1.344     |           |           |

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User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B      | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|---------|----------|----------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 19:33:08 | 76.356% | 98.590   | 96.580   | 96.910    | 0.000     | 49580.000 | 48480.000 | 48640.000 |
| 2    | 19:33:51 | 73.841% | 100.200  | 98.620   | 96.090    | 0.000     | 49020.000 | 47860.000 | 48830.000 |
| 3    | 19:34:34 | 71.026% | 103.200  | 98.910   | 98.120    | 0.000     | 49670.000 | 48660.000 | 49960.000 |
| X    |          | 73.741% | 100.657% | 98.035%  | 97.038%   | 0.000     | 98.844%   | 96.665%   | 98.294%   |
| σ    |          | 2.666%  | n/a      | n/a      | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 3.616   | 2.297    | 1.294    | 1.050     | 0.000     | 0.711     | 0.860     | 1.449     |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 19:33:08 | 459.900 | 5277.000 | 0.000    | 48510.000 | 45600.000 | 48700.000 | 90.571%   | 96.160    |
| 2    | 19:33:51 | 462.100 | 5290.000 | 0.000    | 48910.000 | 45370.000 | 49400.000 | 86.724%   | 98.310    |
| 3    | 19:34:34 | 470.900 | 5373.000 | 0.000    | 49560.000 | 46640.000 | 50260.000 | 85.241%   | 98.480    |
| X    |          | 92.858% | 106.263% | 0.000    | 97.981%   | 91.743%   | 98.909%   | 87.512%   | 97.652%   |
| σ    |          | n/a     | n/a      | 0.000    | n/a       | n/a       | n/a       | 2.751%    | n/a       |
| %RSD |          | 1.249   | 0.977    | 0.000    | 1.077     | 1.473     | 1.587     | 3.144     | 1.324     |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 19:33:08 | 91.720  | 92.080   | 492.900  | 24620.000 | 24490.000 | 92.010    | 91.980    | 93.860    |
| 2    | 19:33:51 | 94.070  | 94.600   | 506.100  | 25240.000 | 25120.000 | 93.020    | 93.750    | 95.090    |
| 3    | 19:34:34 | 93.800  | 94.320   | 514.700  | 25770.000 | 25680.000 | 94.910    | 94.050    | 96.310    |
| X    |          | 93.196% | 93.667%  | 100.908% | 100.837%  | 100.385%  | 93.313%   | 93.262%   | 95.086%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 1.378   | 1.477    | 2.176    | 2.287     | 2.374     | 1.573     | 1.200     | 1.287     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 19:33:08 | 94.230  | 94.360   | 94.480   | 97.210    | 97.630    | 97.590    | 0.000     | 95.300    |
| 2    | 19:33:51 | 94.130  | 95.560   | 95.850   | 98.060    | 99.180    | 101.200   | 0.000     | 95.110    |
| 3    | 19:34:34 | 96.510  | 96.980   | 97.160   | 98.810    | 100.400   | 103.800   | 0.000     | 97.100    |
| X    |          | 94.959% | 95.633%  | 95.828%  | 98.027%   | 99.058%   | 100.851%  | 0.000     | 95.836%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 1.418   | 1.371    | 1.394    | 0.815     | 1.383     | 3.091     | 0.000     | 1.143     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 19:33:08 | 80.600% | 94.270   | 93.110   | 81.178%   | 91.200    | 92.320    | 93.070    | 95.030    |
| 2    | 19:33:51 | 81.225% | 96.440   | 97.000   | 81.208%   | 92.710    | 93.320    | 94.070    | 96.280    |
| 3    | 19:34:34 | 80.712% | 99.320   | 97.930   | 80.732%   | 92.630    | 94.180    | 95.690    | 96.770    |
| X    |          | 80.846% | 96.678%  | 96.012%  | 81.039%   | 92.179%   | 93.273%   | 94.280%   | 96.026%   |
| σ    |          | 0.333%  | n/a      | n/a      | 0.266%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 0.412   | 2.620    | 2.665    | 0.329     | 0.922     | 0.995     | 1.403     | 0.936     |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 19:33:08 | 78.961% | 93.360   | 92.880   | 93.780    | 94.040    | 93.260    | 81.454%   | 81.266%   |
| 2    | 19:33:51 | 79.853% | 94.650   | 93.700   | 93.620    | 93.390    | 94.480    | 83.197%   | 83.822%   |
| 3    | 19:34:34 | 79.889% | 95.480   | 94.580   | 94.600    | 95.310    | 94.990    | 83.282%   | 84.202%   |
| X    |          | 79.568% | 94.499%  | 93.722%  | 93.998%   | 94.246%   | 94.245%   | 82.644%   | 83.097%   |
| σ    |          | 0.526%  | n/a      | n/a      | n/a       | n/a       | n/a       | 1.032%    | 1.597%    |
| %RSD |          | 0.661   | 1.130    | 0.907    | 0.558     | 1.040     | 0.944     | 1.249     | 1.922     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 19:33:08 | 93.020  | 93.620   | 93.420   | 93.660    | 93.220    | 76.247%   |           |           |
| 2    | 19:33:51 | 94.340  | 94.650   | 93.920   | 95.000    | 94.690    | 78.136%   |           |           |
| 3    | 19:34:34 | 96.580  | 96.470   | 96.840   | 96.650    | 96.850    | 77.435%   |           |           |
| X    |          | 94.646% | 94.912%  | 94.726%  | 95.104%   | 94.921%   | 77.273%   |           |           |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | 0.955%    |           |           |
| %RSD |          | 1.902   | 1.522    | 1.949    | 1.579     | 1.927     | 1.236     |           |           |

CCB5 12/21/2012 7:40:26 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be     | 10B    | 11B     | 13C     | 23Na     | 25Mg     | 26Mg     |
|------|----------|---------|---------|--------|---------|---------|----------|----------|----------|
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 19:41:08 | 90.579% | -0.018  | 1.581  | 1.541   | 0.000   | 1.723    | 2.617    | 2.665    |
| 2    | 19:41:51 | 87.091% | -0.027  | 1.638  | 1.415   | 0.000   | 1.849    | 2.789    | 3.060    |
| 3    | 19:42:34 | 87.630% | -0.051  | 1.438  | 1.360   | 0.000   | 1.208    | 2.321    | 2.756    |
| X    |          | 88.433% | -0.032  | 1.552  | 1.439   | 0.000   | 1.593    | 2.576    | 2.827    |
| σ    |          | 1.878%  | 0.017   | 0.103  | 0.093   | 0.000   | 0.340    | 0.237    | 0.207    |
| %RSD |          | 2.123   | 53.420  | 6.640  | 6.461   | 0.000   | 21.310   | 9.199    | 7.310    |
| Run  | Time     | 27Al    | 28Si    | 37Cl   | 39K     | 43Ca    | 44Ca     | 45Sc     | 47Ti     |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 19:41:08 | 0.749   | -1.319  | 0.000  | -5.859  | 1.958   | 0.371    | 101.755% | -0.011   |
| 2    | 19:41:51 | 0.787   | -0.790  | 0.000  | -5.511  | 2.913   | 1.141    | 98.592%  | -0.034   |
| 3    | 19:42:34 | 0.551   | -1.456  | 0.000  | -6.874  | -2.980  | 1.282    | 100.003% | -0.014   |
| X    |          | 0.696   | -1.188  | 0.000  | -6.081  | 0.630   | 0.931    | 100.116% | -0.020   |
| σ    |          | 0.127   | 0.352   | 0.000  | 0.708   | 3.163   | 0.490    | 1.585%   | 0.013    |
| %RSD |          | 18.230  | 29.590  | 0.000  | 11.640  | 501.700 | 52.650   | 1.583    | 64.550   |
| Run  | Time     | 51V     | 52Cr    | 55Mn   | 56Fe    | 57Fe    | 59Co     | 60Ni     | 63Cu     |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 19:41:08 | 0.009   | -0.022  | 0.548  | 4.048   | 10.980  | -0.001   | -0.027   | -0.027   |
| 2    | 19:41:51 | 0.010   | -0.015  | 0.510  | 3.057   | 10.060  | -0.008   | -0.026   | -0.016   |
| 3    | 19:42:34 | 0.019   | 0.003   | 0.495  | 0.303   | 6.376   | 0.001    | -0.008   | -0.024   |
| X    |          | 0.013   | -0.011  | 0.517  | 2.469   | 9.137   | -0.003   | -0.020   | -0.022   |
| σ    |          | 0.005   | 0.013   | 0.027  | 1.941   | 2.436   | 0.005    | 0.011    | 0.006    |
| %RSD |          | 40.410  | 111.700 | 5.256  | 78.590  | 26.660  | 166.500  | 51.710   | 25.250   |
| Run  | Time     | 65Cu    | 66Zn    | 68Zn   | 75As    | 78Se    | 82Se     | 83Kr     | 88Sr     |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 19:41:08 | -0.006  | -0.238  | -0.236 | -0.101  | 0.045   | -0.245   | 0.000    | 0.015    |
| 2    | 19:41:51 | -0.007  | 0.018   | -0.000 | -0.116  | -0.275  | -0.211   | 0.000    | 0.017    |
| 3    | 19:42:34 | -0.018  | -0.030  | -0.142 | -0.119  | -0.333  | -0.239   | 0.000    | 0.010    |
| X    |          | -0.010  | -0.083  | -0.126 | -0.112  | -0.188  | -0.232   | 0.000    | 0.014    |
| σ    |          | 0.007   | 0.136   | 0.119  | 0.010   | 0.203   | 0.018    | 0.000    | 0.003    |
| %RSD |          | 63.580  | 163.500 | 94.320 | 8.782   | 108.300 | 7.664    | 0.000    | 24.070   |
| Run  | Time     | 89Y     | 95Mo    | 98Mo   | 103Rh   | 107Ag   | 109Ag    | 111Cd    | 114Cd    |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 19:41:08 | 85.889% | 0.269   | 0.220  | 88.744% | -0.011  | -0.011   | 0.018    | 0.049    |
| 2    | 19:41:51 | 85.021% | 0.222   | 0.221  | 87.385% | -0.009  | -0.003   | -0.035   | -0.017   |
| 3    | 19:42:34 | 87.152% | 0.180   | 0.185  | 89.951% | -0.014  | -0.010   | -0.071   | -0.039   |
| X    |          | 86.021% | 0.224   | 0.209  | 88.693% | -0.011  | -0.008   | -0.029   | -0.002   |
| σ    |          | 1.072%  | 0.045   | 0.020  | 1.284%  | 0.003   | 0.004    | 0.045    | 0.046    |
| %RSD |          | 1.246   | 20.010  | 9.783  | 1.447   | 22.760  | 50.340   | 151.500  | 1978.000 |
| Run  | Time     | 115In   | 118Sn   | 121Sb  | 123Sb   | 135Ba   | 137Ba    | 159Tb    | 165Ho    |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb      | ppb      | ppb      |
| 1    | 19:41:08 | 81.792% | -0.054  | -0.052 | -0.036  | 0.012   | 0.005    | 83.835%  | 84.088%  |
| 2    | 19:41:51 | 82.810% | -0.136  | -0.036 | -0.039  | -0.004  | 0.025    | 84.753%  | 85.631%  |
| 3    | 19:42:34 | 85.402% | -0.204  | -0.052 | -0.030  | 0.018   | 0.008    | 87.950%  | 88.348%  |
| X    |          | 83.335% | -0.132  | -0.047 | -0.035  | 0.008   | 0.012    | 85.513%  | 86.022%  |
| σ    |          | 1.861%  | 0.075   | 0.009  | 0.005   | 0.012   | 0.011    | 2.160%   | 2.157%   |
| %RSD |          | 2.233   | 56.900  | 19.810 | 13.400  | 137.600 | 86.790   | 2.526    | 2.507    |
| Run  | Time     | 203Tl   | 205Tl   | 206Pb  | 207Pb   | 208Pb   | 209Bi    |          |          |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb      |          |          |
| 1    | 19:41:08 | 0.026   | 0.024   | 0.085  | 0.081   | 0.083   | 96.662%  |          |          |
| 2    | 19:41:51 | 0.023   | 0.025   | 0.076  | 0.068   | 0.070   | 97.919%  |          |          |
| 3    | 19:42:34 | 0.019   | 0.028   | 0.084  | 0.068   | 0.066   | 100.544% |          |          |
| X    |          | 0.023   | 0.026   | 0.081  | 0.072   | 0.073   | 98.375%  |          |          |
| σ    |          | 0.004   | 0.002   | 0.005  | 0.007   | 0.009   | 1.981%   |          |          |
| %RSD |          | 15.690  | 7.094   | 6.157  | 10.160  | 12.530  | 2.013    |          |          |

240-17602-F-1-A

12/21/2012 7:44:46 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:45:29 | 76.253%    | 8.328    | 35.110   | 35.060     | 0.000      | 601.400   | 49310.000 | 49770.000 |
| 2    | 19:46:12 | 73.071%    | 8.416    | 36.990   | 37.210     | 0.000      | 640.700   | 53750.000 | 54940.000 |
| 3    | 19:46:55 | 75.311%    | 8.506    | 36.760   | 36.190     | 0.000      | 639.900   | 52870.000 | 54250.000 |
| X    |          | 74.878%    | 8.417    | 36.290   | 36.150     | 0.000      | 627.300   | 51980.000 | 52990.000 |
| σ    |          | 1.635%     | 0.089    | 1.028    | 1.079      | 0.000      | 22.470    | 2352.000  | 2809.000  |
| %RSD |          | 2.183      | 1.058    | 2.834    | 2.983      | 0.000      | 3.582     | 4.525     | 5.302     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:45:29 | 160900.000 | 2174.000 | 0.000    | 14940.000  | 64360.000  | 68720.000 | 94.769%   | 648.900   |
| 2    | 19:46:12 | 176500.000 | 2369.000 | 0.000    | 16850.000  | 73360.000  | 77800.000 | 82.476%   | 742.400   |
| 3    | 19:46:55 | 173000.000 | 2325.000 | 0.000    | 16880.000  | 74610.000  | 79550.000 | 81.769%   | 742.400   |
| X    |          | 170100.000 | 2289.000 | 0.000    | 16220.000  | 70780.000  | 75360.000 | 86.338%   | 711.200   |
| σ    |          | 8174.000   | 102.100  | 0.000    | 1111.000   | 5590.000   | 5812.000  | 7.310%    | 53.990    |
| %RSD |          | 4.805      | 4.459    | 0.000    | 6.848      | 7.899      | 7.713     | 8.467     | 7.592     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:45:29 | 252.300    | 220.500  | 3606.000 | 296400.000 | 310700.000 | 119.700   | 286.200   | 193.500   |
| 2    | 19:46:12 | 288.200    | 249.800  | 4022.000 | 331200.000 | 344500.000 | 133.700   | 317.400   | 213.800   |
| 3    | 19:46:55 | 287.800    | 253.500  | 4059.000 | 332400.000 | 348500.000 | 135.400   | 320.700   | 217.000   |
| X    |          | 276.100    | 241.300  | 3895.000 | 320000.000 | 334600.000 | 129.600   | 308.100   | 208.100   |
| σ    |          | 20.590     | 18.090   | 251.300  | 20450.000  | 20760.000  | 8.645     | 19.040    | 12.730    |
| %RSD |          | 7.458      | 7.500    | 6.451    | 6.392      | 6.206      | 6.670     | 6.179     | 6.118     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:45:29 | 194.200    | 527.300  | 534.200  | 119.400    | 3.964      | 7.273     | 0.000     | 176.800   |
| 2    | 19:46:12 | 213.400    | 580.600  | 587.100  | 129.000    | 4.540      | 8.513     | 0.000     | 187.500   |
| 3    | 19:46:55 | 216.600    | 591.400  | 590.000  | 130.900    | 4.340      | 9.226     | 0.000     | 189.200   |
| X    |          | 208.100    | 566.400  | 570.500  | 126.500    | 4.281      | 8.338     | 0.000     | 184.500   |
| σ    |          | 12.140     | 34.280   | 31.450   | 6.150      | 0.292      | 0.988     | 0.000     | 6.692     |
| %RSD |          | 5.836      | 6.052    | 5.513    | 4.864      | 6.831      | 11.850    | 0.000     | 3.627     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:45:29 | 0.000      | 16.860   | 16.820   | 74.083%    | 0.385      | 0.229     | 2.283     | 1.703     |
| 2    | 19:46:12 | 0.000      | 17.440   | 17.470   | 74.330%    | 0.403      | 0.243     | 2.121     | 1.609     |
| 3    | 19:46:55 | 0.000      | 17.560   | 17.460   | 74.674%    | 0.393      | 0.266     | 2.161     | 1.551     |
| X    |          | 0.000      | 17.290   | 17.250   | 74.362%    | 0.394      | 0.246     | 2.188     | 1.621     |
| σ    |          | 0.000      | 0.378    | 0.375    | 0.297%     | 0.009      | 0.019     | 0.085     | 0.077     |
| %RSD |          | 0.000      | 2.185    | 2.176    | 0.399      | 2.371      | 7.610     | 3.861     | 4.740     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 19:45:29 | 73.053%    | 11.440   | 1.297    | 1.337      | 1051.000   | 1031.000  | 78.858%   | 76.930%   |
| 2    | 19:46:12 | 74.610%    | 11.060   | 1.299    | 1.322      | 1049.000   | 1044.000  | 81.560%   | 79.944%   |
| 3    | 19:46:55 | 74.562%    | 11.050   | 1.359    | 1.366      | 1063.000   | 1050.000  | 81.411%   | 79.155%   |
| X    |          | 74.075%    | 11.180   | 1.318    | 1.342      | 1054.000   | 1042.000  | 80.610%   | 78.676%   |
| σ    |          | 0.886%     | 0.224    | 0.035    | 0.022      | 7.691      | 9.485     | 1.519%    | 1.563%    |
| %RSD |          | 1.196      | 2.003    | 2.683    | 1.651      | 0.730      | 0.911     | 1.884     | 1.986     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb       |           |           |
| 1    | 19:45:29 | 2.149      | 2.135    | 147.700  | 145.900    | 146.100    | 69.560%   |           |           |
| 2    | 19:46:12 | 2.141      | 2.268    | 149.000  | 146.500    | 147.400    | 71.313%   |           |           |
| 3    | 19:46:55 | 2.195      | 2.209    | 149.300  | 147.600    | 148.300    | 71.376%   |           |           |
| X    |          | 2.161      | 2.204    | 148.700  | 146.600    | 147.300    | 70.750%   |           |           |
| σ    |          | 0.029      | 0.067    | 0.860    | 0.857      | 1.075      | 1.031%    |           |           |
| %RSD |          | 1.346      | 3.028    | 0.579    | 0.585      | 0.730      | 1.457     |           |           |



240-17602-F-2-A

12/21/2012 7:49:05 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na       | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|------------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:49:48 | 68.009%    | 6.585    | 73.260   | 75.140     | 0.000      | 970.300    | 74420.000 | 77410.000 |
| 2    | 19:50:31 | 63.750%    | 6.913    | 76.530   | 76.470     | 0.000      | 962.800    | 74390.000 | 78410.000 |
| 3    | 19:51:15 | 64.598%    | 6.807    | 76.080   | 74.030     | 0.000      | 943.200    | 74370.000 | 78280.000 |
| X    |          | 65.452%    | 6.768    | 75.290   | 75.210     | 0.000      | 958.800    | 74390.000 | 78030.000 |
| σ    |          | 2.255%     | 0.167    | 1.772    | 1.221      | 0.000      | 13.980     | 22.070    | 544.900   |
| %RSD |          | 3.445      | 2.473    | 2.353    | 1.624      | 0.000      | 1.458      | 0.030     | 0.698     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:49:48 | 135700.000 | 2019.000 | 0.000    | 23090.000  | 278500.000 | 303100.000 | 73.062%   | 863.400   |
| 2    | 19:50:31 | 139300.000 | 2035.000 | 0.000    | 23120.000  | 282300.000 | 306000.000 | 69.658%   | 868.400   |
| 3    | 19:51:15 | 138800.000 | 2019.000 | 0.000    | 23150.000  | 288300.000 | 310100.000 | 68.522%   | 865.000   |
| X    |          | 137900.000 | 2024.000 | 0.000    | 23120.000  | 283100.000 | 306400.000 | 70.414%   | 865.600   |
| σ    |          | 1950.000   | 8.901    | 0.000    | 31.150     | 4914.000   | 3496.000   | 2.363%    | 2.536     |
| %RSD |          | 1.414      | 0.440    | 0.000    | 0.135      | 1.736      | 1.141      | 3.355     | 0.293     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:49:48 | 232.600    | 218.800  | 4330.000 | 294900.000 | 307700.000 | 125.600    | 305.500   | 198.900   |
| 2    | 19:50:31 | 232.900    | 219.500  | 4392.000 | 298900.000 | 307800.000 | 126.100    | 307.400   | 201.700   |
| 3    | 19:51:15 | 228.500    | 217.800  | 4372.000 | 299700.000 | 307600.000 | 126.200    | 306.300   | 202.100   |
| X    |          | 231.400    | 218.700  | 4364.000 | 297800.000 | 307700.000 | 126.000    | 306.400   | 200.900   |
| σ    |          | 2.457      | 0.853    | 31.640   | 2549.000   | 77.700     | 0.349      | 0.939     | 1.745     |
| %RSD |          | 1.062      | 0.390    | 0.725    | 0.856      | 0.025      | 0.277      | 0.307     | 0.869     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:49:48 | 200.700    | 577.000  | 580.900  | 121.800    | 2.772      | 6.060      | 0.000     | 436.000   |
| 2    | 19:50:31 | 201.500    | 591.400  | 593.500  | 123.700    | 2.354      | 5.143      | 0.000     | 447.800   |
| 3    | 19:51:15 | 202.800    | 586.300  | 592.100  | 124.100    | 2.453      | 6.050      | 0.000     | 452.100   |
| X    |          | 201.700    | 584.900  | 588.800  | 123.200    | 2.526      | 5.751      | 0.000     | 445.300   |
| σ    |          | 1.098      | 7.310    | 6.933    | 1.247      | 0.219      | 0.527      | 0.000     | 8.324     |
| %RSD |          | 0.544      | 1.250    | 1.177    | 1.012      | 8.662      | 9.164      | 0.000     | 1.869     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:49:48 | 0.000      | 15.890   | 16.060   | 67.478%    | 0.398      | 0.307      | 2.342     | 1.745     |
| 2    | 19:50:31 | 0.000      | 16.280   | 16.300   | 67.067%    | 0.414      | 0.288      | 2.239     | 1.736     |
| 3    | 19:51:15 | 0.000      | 16.440   | 16.560   | 66.239%    | 0.411      | 0.296      | 2.106     | 1.690     |
| X    |          | 0.000      | 16.200   | 16.310   | 66.928%    | 0.408      | 0.297      | 2.229     | 1.724     |
| σ    |          | 0.000      | 0.281    | 0.247    | 0.631%     | 0.009      | 0.009      | 0.118     | 0.030     |
| %RSD |          | 0.000      | 1.737    | 1.516    | 0.943      | 2.154      | 3.096      | 5.314     | 1.736     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:49:48 | 68.530%    | 10.730   | 0.844    | 0.750      | 764.400    | 756.300    | 75.065%   | 73.875%   |
| 2    | 19:50:31 | 69.380%    | 10.800   | 0.810    | 0.781      | 767.700    | 762.200    | 76.936%   | 75.729%   |
| 3    | 19:51:15 | 69.276%    | 11.090   | 0.821    | 0.831      | 770.300    | 762.900    | 78.171%   | 76.342%   |
| X    |          | 69.062%    | 10.870   | 0.825    | 0.787      | 767.500    | 760.400    | 76.724%   | 75.315%   |
| σ    |          | 0.464%     | 0.189    | 0.017    | 0.040      | 2.949      | 3.616      | 1.564%    | 1.285%    |
| %RSD |          | 0.671      | 1.736    | 2.068    | 5.139      | 0.384      | 0.475      | 2.038     | 1.706     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi      |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        |           |           |
| 1    | 19:49:48 | 1.898      | 1.856    | 123.400  | 121.100    | 121.900    | 66.574%    |           |           |
| 2    | 19:50:31 | 1.920      | 1.936    | 124.600  | 122.000    | 123.100    | 68.803%    |           |           |
| 3    | 19:51:15 | 2.009      | 1.914    | 125.000  | 123.200    | 124.000    | 69.302%    |           |           |
| X    |          | 1.942      | 1.902    | 124.300  | 122.100    | 123.000    | 68.226%    |           |           |
| σ    |          | 0.059      | 0.041    | 0.829    | 1.051      | 1.090      | 1.452%     |           |           |
| %RSD |          | 3.036      | 2.170    | 0.667    | 0.861      | 0.886      | 2.129      |           |           |

240-17602-F-3-A

12/21/2012 7:53:25 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na       | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|------------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:54:08 | 65.192%    | 6.675    | 67.770   | 71.240     | 0.000      | 925.600    | 78510.000 | 81460.000 |
| 2    | 19:54:51 | 62.323%    | 6.680    | 71.080   | 72.460     | 0.000      | 906.800    | 78230.000 | 82150.000 |
| 3    | 19:55:34 | 64.081%    | 6.473    | 70.130   | 71.110     | 0.000      | 881.900    | 76750.000 | 81420.000 |
| X    |          | 63.865%    | 6.609    | 69.660   | 71.600     | 0.000      | 904.700    | 77830.000 | 81680.000 |
| σ    |          | 1.447%     | 0.118    | 1.703    | 0.743      | 0.000      | 21.940     | 946.100   | 413.000   |
| %RSD |          | 2.266      | 1.781    | 2.445    | 1.038      | 0.000      | 2.425      | 1.216     | 0.506     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:54:08 | 142600.000 | 1691.000 | 0.000    | 23250.000  | 321800.000 | 349600.000 | 67.325%   | 829.700   |
| 2    | 19:54:51 | 144200.000 | 1612.000 | 0.000    | 23030.000  | 320800.000 | 346000.000 | 65.251%   | 848.500   |
| 3    | 19:55:34 | 143500.000 | 1733.000 | 0.000    | 23120.000  | 325800.000 | 350900.000 | 65.498%   | 846.000   |
| X    |          | 143400.000 | 1679.000 | 0.000    | 23130.000  | 322800.000 | 348900.000 | 66.025%   | 841.400   |
| σ    |          | 805.900    | 61.190   | 0.000    | 110.800    | 2658.000   | 2534.000   | 1.133%    | 10.200    |
| %RSD |          | 0.562      | 3.645    | 0.000    | 0.479      | 0.824      | 0.726      | 1.716     | 1.212     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:54:08 | 243.000    | 238.700  | 3985.000 | 302600.000 | 311900.000 | 125.600    | 311.400   | 195.000   |
| 2    | 19:54:51 | 244.900    | 239.600  | 4076.000 | 305600.000 | 313900.000 | 126.500    | 313.400   | 198.600   |
| 3    | 19:55:34 | 243.500    | 242.400  | 4072.000 | 308700.000 | 317100.000 | 127.300    | 312.300   | 199.300   |
| X    |          | 243.800    | 240.200  | 4044.000 | 305700.000 | 314300.000 | 126.500    | 312.400   | 197.700   |
| σ    |          | 0.997      | 1.943    | 51.380   | 3046.000   | 2658.000   | 0.816      | 1.018     | 2.309     |
| %RSD |          | 0.409      | 0.809    | 1.270    | 0.997      | 0.846      | 0.645      | 0.326     | 1.168     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:54:08 | 194.400    | 568.100  | 575.300  | 112.100    | 2.708      | 6.322      | 0.000     | 519.200   |
| 2    | 19:54:51 | 197.800    | 580.500  | 584.200  | 113.900    | 2.856      | 6.541      | 0.000     | 583.700   |
| 3    | 19:55:34 | 200.600    | 579.900  | 581.700  | 114.800    | 2.891      | 6.894      | 0.000     | 596.500   |
| X    |          | 197.600    | 576.100  | 580.400  | 113.600    | 2.819      | 6.585      | 0.000     | 566.400   |
| σ    |          | 3.137      | 7.001    | 4.566    | 1.365      | 0.097      | 0.289      | 0.000     | 41.440    |
| %RSD |          | 1.588      | 1.215    | 0.787    | 1.202      | 3.443      | 4.382      | 0.000     | 7.315     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:54:08 | 0.000      | 16.620   | 16.340   | 65.477%    | 0.366      | 0.242      | 2.346     | 1.648     |
| 2    | 19:54:51 | 0.000      | 16.630   | 17.030   | 64.863%    | 0.384      | 0.226      | 2.082     | 1.538     |
| 3    | 19:55:34 | 0.000      | 17.230   | 16.930   | 64.606%    | 0.401      | 0.237      | 2.295     | 1.811     |
| X    |          | 0.000      | 16.830   | 16.770   | 64.982%    | 0.384      | 0.235      | 2.241     | 1.666     |
| σ    |          | 0.000      | 0.346    | 0.372    | 0.448%     | 0.018      | 0.008      | 0.140     | 0.137     |
| %RSD |          | 0.000      | 2.056    | 2.216    | 0.689      | 4.629      | 3.350      | 6.248     | 8.239     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:54:08 | 66.947%    | 8.998    | 0.790    | 0.869      | 829.900    | 823.200    | 73.397%   | 72.441%   |
| 2    | 19:54:51 | 67.510%    | 9.127    | 0.799    | 0.818      | 828.100    | 825.500    | 75.879%   | 74.476%   |
| 3    | 19:55:34 | 67.324%    | 9.183    | 0.794    | 0.802      | 837.300    | 830.600    | 75.560%   | 74.323%   |
| X    |          | 67.260%    | 9.103    | 0.794    | 0.830      | 831.800    | 826.500    | 74.945%   | 73.747%   |
| σ    |          | 0.286%     | 0.095    | 0.004    | 0.035      | 4.887      | 3.813      | 1.350%    | 1.133%    |
| %RSD |          | 0.426      | 1.042    | 0.533    | 4.247      | 0.588      | 0.461      | 1.802     | 1.537     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi      |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        |           |           |
| 1    | 19:54:08 | 1.862      | 1.928    | 120.500  | 116.800    | 119.000    | 66.503%    |           |           |
| 2    | 19:54:51 | 1.923      | 1.977    | 121.500  | 120.100    | 120.300    | 68.165%    |           |           |
| 3    | 19:55:34 | 1.985      | 1.953    | 122.900  | 119.400    | 121.200    | 68.456%    |           |           |
| X    |          | 1.923      | 1.953    | 121.600  | 118.800    | 120.200    | 67.708%    |           |           |
| σ    |          | 0.062      | 0.024    | 1.221    | 1.724      | 1.081      | 1.053%     |           |           |
| %RSD |          | 3.206      | 1.251    | 1.004    | 1.452      | 0.900      | 1.556      |           |           |

240-17602-F-4-A

12/21/2012 7:57:44 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na       | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|------------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:58:27 | 66.258%    | 7.138    | 75.220   | 75.330     | 0.000      | 828.400    | 65520.000 | 68130.000 |
| 2    | 19:59:10 | 65.222%    | 6.936    | 77.140   | 76.730     | 0.000      | 833.300    | 65390.000 | 68160.000 |
| 3    | 19:59:53 | 65.286%    | 7.003    | 74.960   | 78.030     | 0.000      | 824.200    | 65210.000 | 67790.000 |
| X    |          | 65.589%    | 7.026    | 75.780   | 76.700     | 0.000      | 828.600    | 65370.000 | 68030.000 |
| σ    |          | 0.580%     | 0.103    | 1.192    | 1.352      | 0.000      | 4.573      | 153.800   | 203.800   |
| %RSD |          | 0.885      | 1.464    | 1.573    | 1.762      | 0.000      | 0.552      | 0.235     | 0.299     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:58:27 | 141500.000 | 1588.000 | 0.000    | 24530.000  | 227600.000 | 246700.000 | 68.542%   | 713.300   |
| 2    | 19:59:10 | 140100.000 | 1560.000 | 0.000    | 24010.000  | 224600.000 | 241600.000 | 68.696%   | 694.300   |
| 3    | 19:59:53 | 140700.000 | 1642.000 | 0.000    | 24350.000  | 225800.000 | 243200.000 | 66.889%   | 705.900   |
| X    |          | 140800.000 | 1597.000 | 0.000    | 24300.000  | 226000.000 | 243800.000 | 68.042%   | 704.500   |
| σ    |          | 685.100    | 41.830   | 0.000    | 266.900    | 1528.000   | 2625.000   | 1.002%    | 9.587     |
| %RSD |          | 0.487      | 2.620    | 0.000    | 1.098      | 0.676      | 1.077      | 1.473     | 1.361     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:58:27 | 231.600    | 213.300  | 3839.000 | 280200.000 | 286500.000 | 121.700    | 295.800   | 181.000   |
| 2    | 19:59:10 | 224.900    | 212.100  | 3772.000 | 276900.000 | 285100.000 | 119.300    | 286.100   | 180.000   |
| 3    | 19:59:53 | 229.700    | 213.100  | 3780.000 | 279900.000 | 286000.000 | 122.100    | 292.800   | 181.600   |
| X    |          | 228.700    | 212.800  | 3797.000 | 279000.000 | 285900.000 | 121.000    | 291.600   | 180.900   |
| σ    |          | 3.474      | 0.612    | 36.780   | 1816.000   | 710.600    | 1.518      | 4.964     | 0.808     |
| %RSD |          | 1.519      | 0.287    | 0.969    | 0.651      | 0.249      | 1.254      | 1.702     | 0.447     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:58:27 | 181.800    | 555.000  | 558.900  | 111.400    | 2.458      | 5.970      | 0.000     | 378.900   |
| 2    | 19:59:10 | 180.900    | 549.500  | 557.000  | 110.000    | 2.308      | 5.521      | 0.000     | 378.500   |
| 3    | 19:59:53 | 183.100    | 558.800  | 560.800  | 112.800    | 2.535      | 6.832      | 0.000     | 385.000   |
| X    |          | 181.900    | 554.400  | 558.900  | 111.400    | 2.434      | 6.107      | 0.000     | 380.800   |
| σ    |          | 1.097      | 4.655    | 1.892    | 1.427      | 0.115      | 0.666      | 0.000     | 3.614     |
| %RSD |          | 0.603      | 0.840    | 0.339    | 1.281      | 4.735      | 10.910     | 0.000     | 0.949     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:58:27 | 0.000      | 12.470   | 12.490   | 67.214%    | 0.351      | 0.212      | 1.969     | 1.528     |
| 2    | 19:59:10 | 0.000      | 12.420   | 12.450   | 67.282%    | 0.356      | 0.243      | 1.800     | 1.404     |
| 3    | 19:59:53 | 0.000      | 12.750   | 12.660   | 67.218%    | 0.347      | 0.248      | 1.798     | 1.344     |
| X    |          | 0.000      | 12.550   | 12.530   | 67.238%    | 0.351      | 0.234      | 1.856     | 1.425     |
| σ    |          | 0.000      | 0.176    | 0.116    | 0.038%     | 0.004      | 0.020      | 0.098     | 0.094     |
| %RSD |          | 0.000      | 1.405    | 0.925    | 0.057      | 1.251      | 8.411      | 5.300     | 6.600     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 19:58:27 | 67.869%    | 10.130   | 0.681    | 0.708      | 741.300    | 735.400    | 74.518%   | 73.210%   |
| 2    | 19:59:10 | 68.877%    | 10.400   | 0.741    | 0.749      | 749.200    | 740.800    | 76.399%   | 75.543%   |
| 3    | 19:59:53 | 69.284%    | 10.060   | 0.717    | 0.743      | 745.500    | 737.000    | 76.948%   | 75.679%   |
| X    |          | 68.677%    | 10.200   | 0.713    | 0.733      | 745.400    | 737.700    | 75.955%   | 74.810%   |
| σ    |          | 0.728%     | 0.178    | 0.030    | 0.022      | 3.944      | 2.744      | 1.274%    | 1.388%    |
| %RSD |          | 1.061      | 1.750    | 4.209    | 3.034      | 0.529      | 0.372      | 1.677     | 1.855     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi      |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        |           |           |
| 1    | 19:58:27 | 1.721      | 1.689    | 105.200  | 103.600    | 104.500    | 68.156%    |           |           |
| 2    | 19:59:10 | 1.787      | 1.811    | 107.600  | 104.700    | 106.000    | 69.927%    |           |           |
| 3    | 19:59:53 | 1.778      | 1.813    | 107.000  | 105.100    | 105.800    | 70.598%    |           |           |
| X    |          | 1.762      | 1.771    | 106.600  | 104.500    | 105.400    | 69.561%    |           |           |
| σ    |          | 0.036      | 0.071    | 1.214    | 0.753      | 0.774      | 1.262%     |           |           |
| %RSD |          | 2.028      | 4.001    | 1.138    | 0.721      | 0.734      | 1.814      |           |           |

240-17602-F-5-A

12/21/2012 8:02:05 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na       | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|------------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:02:48 | 68.345%    | 6.008    | 46.280   | 48.640     | 0.000      | 654.500    | 54180.000 | 56470.000 |
| 2    | 20:03:30 | 67.334%    | 5.986    | 49.450   | 47.540     | 0.000      | 649.300    | 54320.000 | 57070.000 |
| 3    | 20:04:13 | 66.302%    | 5.798    | 49.590   | 48.510     | 0.000      | 652.300    | 55810.000 | 58770.000 |
| X    |          | 67.327%    | 5.931    | 48.440   | 48.230     | 0.000      | 652.000    | 54770.000 | 57440.000 |
| σ    |          | 1.021%     | 0.116    | 1.869    | 0.602      | 0.000      | 2.590      | 904.900   | 1192.000  |
| %RSD |          | 1.517      | 1.947    | 3.859    | 1.248      | 0.000      | 0.397      | 1.652     | 2.076     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:02:48 | 123200.000 | 2133.000 | 0.000    | 16550.000  | 182700.000 | 199800.000 | 71.792%   | 723.200   |
| 2    | 20:03:30 | 122400.000 | 2127.000 | 0.000    | 16740.000  | 183400.000 | 200900.000 | 69.509%   | 723.200   |
| 3    | 20:04:13 | 126800.000 | 2159.000 | 0.000    | 16960.000  | 186300.000 | 202800.000 | 68.666%   | 734.300   |
| X    |          | 124100.000 | 2140.000 | 0.000    | 16750.000  | 184100.000 | 201200.000 | 69.989%   | 726.900   |
| σ    |          | 2319.000   | 17.350   | 0.000    | 204.500    | 1930.000   | 1552.000   | 1.617%    | 6.420     |
| %RSD |          | 1.868      | 0.811    | 0.000    | 1.221      | 1.048      | 0.772      | 2.311     | 0.883     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:02:48 | 211.500    | 209.200  | 3394.000 | 273500.000 | 281000.000 | 112.900    | 267.100   | 194.500   |
| 2    | 20:03:30 | 210.700    | 210.200  | 3443.000 | 277600.000 | 283700.000 | 115.400    | 276.600   | 201.700   |
| 3    | 20:04:13 | 215.000    | 210.500  | 3443.000 | 280600.000 | 284800.000 | 115.100    | 275.700   | 200.800   |
| X    |          | 212.400    | 209.900  | 3427.000 | 277300.000 | 283200.000 | 114.500    | 273.200   | 199.000   |
| σ    |          | 2.308      | 0.687    | 28.420   | 3538.000   | 1936.000   | 1.351      | 5.223     | 3.944     |
| %RSD |          | 1.087      | 0.327    | 0.829    | 1.276      | 0.684      | 1.180      | 1.912     | 1.982     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:02:48 | 196.400    | 520.600  | 524.000  | 122.900    | 2.460      | 5.887      | 0.000     | 282.400   |
| 2    | 20:03:30 | 198.700    | 535.000  | 539.100  | 126.700    | 2.856      | 6.146      | 0.000     | 293.400   |
| 3    | 20:04:13 | 199.500    | 536.600  | 540.000  | 126.300    | 2.655      | 6.901      | 0.000     | 292.000   |
| X    |          | 198.200    | 530.800  | 534.400  | 125.300    | 2.657      | 6.311      | 0.000     | 289.300   |
| σ    |          | 1.562      | 8.808    | 8.979    | 2.072      | 0.198      | 0.526      | 0.000     | 6.003     |
| %RSD |          | 0.788      | 1.659    | 1.680    | 1.653      | 7.447      | 8.341      | 0.000     | 2.075     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:02:48 | 0.000      | 14.670   | 14.570   | 69.046%    | 0.359      | 0.219      | 1.915     | 1.447     |
| 2    | 20:03:30 | 0.000      | 14.760   | 14.950   | 69.010%    | 0.341      | 0.252      | 1.869     | 1.450     |
| 3    | 20:04:13 | 0.000      | 15.030   | 14.910   | 68.763%    | 0.358      | 0.207      | 1.863     | 1.469     |
| X    |          | 0.000      | 14.820   | 14.810   | 68.940%    | 0.353      | 0.226      | 1.882     | 1.455     |
| σ    |          | 0.000      | 0.190    | 0.211    | 0.154%     | 0.010      | 0.023      | 0.028     | 0.012     |
| %RSD |          | 0.000      | 1.284    | 1.428    | 0.223      | 2.830      | 10.240     | 1.497     | 0.792     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:02:48 | 69.419%    | 8.819    | 0.943    | 0.906      | 650.400    | 640.600    | 77.033%   | 76.221%   |
| 2    | 20:03:30 | 70.455%    | 8.946    | 0.918    | 0.898      | 649.600    | 640.800    | 78.849%   | 77.562%   |
| 3    | 20:04:13 | 70.969%    | 8.779    | 0.858    | 0.853      | 645.700    | 644.500    | 78.823%   | 77.689%   |
| X    |          | 70.281%    | 8.848    | 0.907    | 0.885      | 648.500    | 642.000    | 78.235%   | 77.157%   |
| σ    |          | 0.789%     | 0.087    | 0.044    | 0.029      | 2.523      | 2.210      | 1.041%    | 0.813%    |
| %RSD |          | 1.123      | 0.984    | 4.813    | 3.236      | 0.389      | 0.344      | 1.331     | 1.054     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi      |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        |           |           |
| 1    | 20:02:48 | 1.604      | 1.674    | 118.500  | 116.300    | 117.200    | 70.138%    |           |           |
| 2    | 20:03:30 | 1.672      | 1.654    | 118.900  | 117.300    | 117.900    | 71.822%    |           |           |
| 3    | 20:04:13 | 1.674      | 1.669    | 118.100  | 115.500    | 116.700    | 73.303%    |           |           |
| X    |          | 1.650      | 1.666    | 118.500  | 116.400    | 117.300    | 71.755%    |           |           |
| σ    |          | 0.040      | 0.010    | 0.410    | 0.857      | 0.586      | 1.584%     |           |           |
| %RSD |          | 2.415      | 0.600    | 0.346    | 0.737      | 0.499      | 2.207      |           |           |

240-17602-F-6-A

12/21/2012 8:06:25 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na       | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|------------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:07:08 | 70.610%    | 6.225    | 38.240   | 39.520     | 0.000      | 904.400    | 59590.000 | 60820.000 |
| 2    | 20:07:51 | 69.274%    | 6.367    | 37.760   | 39.370     | 0.000      | 890.800    | 58240.000 | 60130.000 |
| 3    | 20:08:34 | 66.877%    | 6.425    | 39.340   | 39.700     | 0.000      | 857.600    | 56810.000 | 60600.000 |
| x    |          | 68.920%    | 6.339    | 38.440   | 39.530     | 0.000      | 884.300    | 58220.000 | 60520.000 |
| σ    |          | 1.891%     | 0.103    | 0.807    | 0.167      | 0.000      | 24.070     | 1389.000  | 351.900   |
| %RSD |          | 2.744      | 1.627    | 2.100    | 0.423      | 0.000      | 2.722      | 2.386     | 0.581     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:07:08 | 126800.000 | 1725.000 | 0.000    | 16810.000  | 197000.000 | 214100.000 | 69.677%   | 766.000   |
| 2    | 20:07:51 | 125500.000 | 1615.000 | 0.000    | 16440.000  | 198200.000 | 212700.000 | 69.700%   | 739.300   |
| 3    | 20:08:34 | 127000.000 | 1673.000 | 0.000    | 16390.000  | 195600.000 | 212300.000 | 68.834%   | 744.600   |
| x    |          | 126400.000 | 1671.000 | 0.000    | 16550.000  | 196900.000 | 213000.000 | 69.404%   | 749.900   |
| σ    |          | 813.300    | 55.000   | 0.000    | 230.000    | 1273.000   | 921.900    | 0.493%    | 14.130    |
| %RSD |          | 0.643      | 3.291    | 0.000    | 1.390      | 0.646      | 0.433      | 0.711     | 1.883     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:07:08 | 226.200    | 203.900  | 4118.000 | 286200.000 | 296800.000 | 125.400    | 293.100   | 186.400   |
| 2    | 20:07:51 | 219.500    | 202.600  | 4151.000 | 286600.000 | 292900.000 | 123.000    | 289.200   | 185.800   |
| 3    | 20:08:34 | 221.400    | 200.000  | 4115.000 | 284700.000 | 293100.000 | 123.000    | 292.300   | 184.600   |
| x    |          | 222.400    | 202.200  | 4128.000 | 285800.000 | 294300.000 | 123.800    | 291.500   | 185.600   |
| σ    |          | 3.411      | 1.973    | 20.090   | 1047.000   | 2180.000   | 1.376      | 2.072     | 0.941     |
| %RSD |          | 1.534      | 0.976    | 0.487    | 0.366      | 0.741      | 1.111      | 0.711     | 0.507     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:07:08 | 185.100    | 516.300  | 521.400  | 105.900    | 2.355      | 6.656      | 0.000     | 316.500   |
| 2    | 20:07:51 | 184.500    | 522.100  | 525.500  | 104.300    | 2.258      | 6.340      | 0.000     | 320.600   |
| 3    | 20:08:34 | 185.200    | 519.300  | 523.400  | 105.800    | 2.550      | 6.144      | 0.000     | 325.300   |
| x    |          | 184.900    | 519.200  | 523.400  | 105.300    | 2.388      | 6.380      | 0.000     | 320.800   |
| σ    |          | 0.394      | 2.920    | 2.032    | 0.884      | 0.149      | 0.258      | 0.000     | 4.393     |
| %RSD |          | 0.213      | 0.562    | 0.388    | 0.839      | 6.227      | 4.051      | 0.000     | 1.369     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:07:08 | 0.000      | 15.700   | 15.200   | 67.987%    | 0.351      | 0.183      | 2.038     | 1.589     |
| 2    | 20:07:51 | 0.000      | 15.560   | 15.660   | 68.134%    | 0.330      | 0.194      | 2.308     | 1.678     |
| 3    | 20:08:34 | 0.000      | 15.920   | 15.830   | 67.851%    | 0.349      | 0.176      | 2.187     | 1.644     |
| x    |          | 0.000      | 15.720   | 15.560   | 67.991%    | 0.343      | 0.184      | 2.178     | 1.637     |
| σ    |          | 0.000      | 0.181    | 0.330    | 0.141%     | 0.012      | 0.009      | 0.135     | 0.045     |
| %RSD |          | 0.000      | 1.150    | 2.117    | 0.208      | 3.480      | 4.885      | 6.220     | 2.753     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:07:08 | 67.790%    | 8.024    | 0.785    | 0.747      | 763.700    | 755.500    | 74.212%   | 73.310%   |
| 2    | 20:07:51 | 68.572%    | 8.365    | 0.731    | 0.758      | 769.200    | 759.800    | 76.498%   | 75.419%   |
| 3    | 20:08:34 | 69.298%    | 8.072    | 0.796    | 0.832      | 773.500    | 765.100    | 76.254%   | 75.522%   |
| x    |          | 68.554%    | 8.154    | 0.771    | 0.779      | 768.800    | 760.100    | 75.655%   | 74.751%   |
| σ    |          | 0.755%     | 0.185    | 0.035    | 0.046      | 4.892      | 4.823      | 1.255%    | 1.249%    |
| %RSD |          | 1.101      | 2.263    | 4.478    | 5.875      | 0.636      | 0.634      | 1.659     | 1.671     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi      |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        |           |           |
| 1    | 20:07:08 | 1.700      | 1.667    | 118.300  | 116.600    | 117.000    | 67.713%    |           |           |
| 2    | 20:07:51 | 1.658      | 1.712    | 120.500  | 118.200    | 119.000    | 69.377%    |           |           |
| 3    | 20:08:34 | 1.683      | 1.661    | 120.800  | 117.700    | 118.900    | 70.168%    |           |           |
| x    |          | 1.681      | 1.680    | 119.800  | 117.500    | 118.300    | 69.086%    |           |           |
| σ    |          | 0.021      | 0.028    | 1.386    | 0.838      | 1.128      | 1.253%     |           |           |
| %RSD |          | 1.243      | 1.660    | 1.157    | 0.713      | 0.954      | 1.814      |           |           |

240-17602-F-7-A

12/21/2012 8:10:46 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na       | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|------------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:11:29 | 73.669%    | 6.327    | 36.340   | 35.850     | 0.000      | 604.600    | 52110.000 | 53840.000 |
| 2    | 20:12:12 | 72.477%    | 6.256    | 36.310   | 35.220     | 0.000      | 581.900    | 50080.000 | 52360.000 |
| 3    | 20:12:55 | 73.310%    | 5.944    | 34.880   | 36.240     | 0.000      | 597.000    | 50240.000 | 51960.000 |
| x    |          | 73.152%    | 6.176    | 35.850   | 35.770     | 0.000      | 594.500    | 50810.000 | 52720.000 |
| σ    |          | 0.612%     | 0.204    | 0.837    | 0.516      | 0.000      | 11.560     | 1127.000  | 992.400   |
| %RSD |          | 0.836      | 3.301    | 2.336    | 1.443      | 0.000      | 1.945      | 2.219     | 1.882     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:11:29 | 142300.000 | 2159.000 | 0.000    | 16340.000  | 111600.000 | 119400.000 | 72.478%   | 852.200   |
| 2    | 20:12:12 | 137100.000 | 2057.000 | 0.000    | 15310.000  | 105200.000 | 112800.000 | 77.308%   | 805.500   |
| 3    | 20:12:55 | 134600.000 | 1997.000 | 0.000    | 15280.000  | 104900.000 | 113600.000 | 77.514%   | 778.800   |
| x    |          | 138000.000 | 2071.000 | 0.000    | 15640.000  | 107200.000 | 115200.000 | 75.767%   | 812.200   |
| σ    |          | 3976.000   | 82.150   | 0.000    | 600.000    | 3760.000   | 3595.000   | 2.850%    | 37.150    |
| %RSD |          | 2.881      | 3.967    | 0.000    | 3.836      | 3.507      | 3.120      | 3.762     | 4.574     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:11:29 | 248.000    | 240.200  | 4355.000 | 307900.000 | 314700.000 | 125.600    | 311.400   | 199.500   |
| 2    | 20:12:12 | 235.700    | 226.500  | 4125.000 | 292900.000 | 302300.000 | 121.300    | 299.300   | 191.700   |
| 3    | 20:12:55 | 232.900    | 230.400  | 4154.000 | 291200.000 | 300800.000 | 121.400    | 300.100   | 192.100   |
| x    |          | 238.900    | 232.300  | 4211.000 | 297300.000 | 305900.000 | 122.800    | 303.600   | 194.500   |
| σ    |          | 7.986      | 7.067    | 125.200  | 9171.000   | 7613.000   | 2.463      | 6.761     | 4.405     |
| %RSD |          | 3.343      | 3.042    | 2.972    | 3.084      | 2.489      | 2.005      | 2.227     | 2.265     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:11:29 | 198.600    | 587.500  | 590.100  | 116.900    | 2.966      | 6.862      | 0.000     | 187.400   |
| 2    | 20:12:12 | 192.200    | 567.100  | 570.300  | 114.000    | 2.469      | 6.883      | 0.000     | 186.500   |
| 3    | 20:12:55 | 190.600    | 567.000  | 570.600  | 113.500    | 2.745      | 6.538      | 0.000     | 186.700   |
| x    |          | 193.800    | 573.900  | 577.000  | 114.800    | 2.727      | 6.761      | 0.000     | 186.900   |
| σ    |          | 4.224      | 11.820   | 11.350   | 1.863      | 0.249      | 0.193      | 0.000     | 0.492     |
| %RSD |          | 2.179      | 2.060    | 1.967    | 1.623      | 9.127      | 2.858      | 0.000     | 0.264     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:11:29 | 0.000      | 14.790   | 14.890   | 71.990%    | 0.396      | 0.223      | 2.303     | 1.772     |
| 2    | 20:12:12 | 0.000      | 15.310   | 15.070   | 72.686%    | 0.392      | 0.222      | 2.091     | 1.697     |
| 3    | 20:12:55 | 0.000      | 15.360   | 15.190   | 72.766%    | 0.381      | 0.222      | 2.208     | 1.793     |
| x    |          | 0.000      | 15.150   | 15.050   | 72.481%    | 0.390      | 0.223      | 2.201     | 1.754     |
| σ    |          | 0.000      | 0.318    | 0.152    | 0.427%     | 0.008      | 0.000      | 0.106     | 0.051     |
| %RSD |          | 0.000      | 2.099    | 1.009    | 0.589      | 1.947      | 0.202      | 4.828     | 2.880     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:11:29 | 71.000%    | 8.718    | 0.961    | 0.934      | 786.300    | 779.200    | 76.168%   | 74.941%   |
| 2    | 20:12:12 | 72.321%    | 8.648    | 0.887    | 0.997      | 785.300    | 783.500    | 78.507%   | 76.740%   |
| 3    | 20:12:55 | 72.594%    | 8.690    | 1.001    | 0.909      | 789.200    | 785.300    | 78.735%   | 76.952%   |
| x    |          | 71.971%    | 8.685    | 0.950    | 0.947      | 786.900    | 782.600    | 77.803%   | 76.211%   |
| σ    |          | 0.853%     | 0.035    | 0.058    | 0.046      | 2.048      | 3.149      | 1.421%    | 1.105%    |
| %RSD |          | 1.185      | 0.405    | 6.060    | 4.829      | 0.260      | 0.402      | 1.826     | 1.450     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi      |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        |           |           |
| 1    | 20:11:29 | 1.868      | 1.829    | 131.800  | 129.800    | 130.100    | 70.021%    |           |           |
| 2    | 20:12:12 | 1.865      | 1.866    | 135.100  | 132.500    | 133.600    | 70.929%    |           |           |
| 3    | 20:12:55 | 1.894      | 1.854    | 133.600  | 130.700    | 132.700    | 72.111%    |           |           |
| x    |          | 1.875      | 1.849    | 133.500  | 131.000    | 132.100    | 71.020%    |           |           |
| σ    |          | 0.016      | 0.019    | 1.691    | 1.344      | 1.830      | 1.048%     |           |           |
| %RSD |          | 0.849      | 1.014    | 1.267    | 1.027      | 1.385      | 1.476      |           |           |

240-17602-F-8-A

12/21/2012 8:15:05 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na       | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|------------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:15:48 | 75.385%    | 7.268    | 34.120   | 34.490     | 0.000      | 573.300    | 49540.000 | 50060.000 |
| X    |          | 75.385%    | 7.268    | 34.120   | 34.490     | 0.000      | 573.300    | 49540.000 | 50060.000 |
| σ    |          | n/a        | 0.000    | 0.000    | 0.000      | 0.000      | 0.000      | 0.000     | 0.000     |
| %RSD |          | n/a        | 0.000    | 0.000    | 0.000      | 0.000      | 0.000      | 0.000     | 0.000     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:15:48 | 140600.000 | 1954.000 | 0.000    | 15470.000  | 109600.000 | 116700.000 | 79.451%   | 715.200   |
| X    |          | 140600.000 | 1954.000 | 0.000    | 15470.000  | 109600.000 | 116700.000 | 79.451%   | 715.200   |
| σ    |          | 0.000      | 0.000    | 0.000    | 0.000      | 0.000      | 0.000      | n/a       | 0.000     |
| %RSD |          | 0.000      | 0.000    | 0.000    | 0.000      | 0.000      | 0.000      | n/a       | 0.000     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:15:48 | 228.900    | 220.700  | 3174.000 | 303200.000 | 313500.000 | 126.600    | 303.500   | 217.700   |
| X    |          | 228.900    | 220.700  | 3174.000 | 303200.000 | 313500.000 | 126.600    | 303.500   | 217.700   |
| σ    |          | 0.000      | 0.000    | 0.000    | 0.000      | 0.000      | 0.000      | 0.000     | 0.000     |
| %RSD |          | 0.000      | 0.000    | 0.000    | 0.000      | 0.000      | 0.000      | 0.000     | 0.000     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:15:48 | 217.400    | 624.600  | 629.200  | 127.500    | 3.072      | 7.239      | 0.000     | 187.200   |
| X    |          | 217.400    | 624.600  | 629.200  | 127.500    | 3.072      | 7.239      | 0.000     | 187.200   |
| σ    |          | 0.000      | 0.000    | 0.000    | 0.000      | 0.000      | 0.000      | 0.000     | 0.000     |
| %RSD |          | 0.000      | 0.000    | 0.000    | 0.000      | 0.000      | 0.000      | 0.000     | 0.000     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:15:48 | 0.000      | 16.750   | 16.450   | 72.423%    | 0.352      | 0.185      | 2.394     | 1.873     |
| X    |          | 0.000      | 16.750   | 16.450   | 72.423%    | 0.352      | 0.185      | 2.394     | 1.873     |
| σ    |          | 0.000      | 0.000    | 0.000    | n/a        | 0.000      | 0.000      | 0.000     | 0.000     |
| %RSD |          | 0.000      | 0.000    | 0.000    | n/a        | 0.000      | 0.000      | 0.000     | 0.000     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:15:48 | 71.099%    | 14.120   | 0.936    | 0.956      | 779.200    | 776.100    | 76.999%   | 74.917%   |
| X    |          | 71.099%    | 14.120   | 0.936    | 0.956      | 779.200    | 776.100    | 76.999%   | 74.917%   |
| σ    |          | n/a        | 0.000    | 0.000    | 0.000      | 0.000      | 0.000      | n/a       | n/a       |
| %RSD |          | n/a        | 0.000    | 0.000    | 0.000      | 0.000      | 0.000      | n/a       | n/a       |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi      |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        |           |           |
| 1    | 20:15:48 | 1.883      | 1.904    | 142.600  | 142.300    | 142.300    | 68.499%    |           |           |
| X    |          | 1.883      | 1.904    | 142.600  | 142.300    | 142.300    | 68.499%    |           |           |
| σ    |          | 0.000      | 0.000    | 0.000    | 0.000      | 0.000      | n/a        |           |           |
| %RSD |          | 0.000      | 0.000    | 0.000    | 0.000      | 0.000      | n/a        |           |           |

240-17602-F-9-A

12/21/2012 8:17:57 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na       | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|------------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:18:40 | 74.566%    | 5.587    | 40.370   | 41.370     | 0.000      | 852.800    | 51490.000 | 52880.000 |
| 2    | 20:19:23 | 73.670%    | 5.393    | 39.820   | 40.530     | 0.000      | 845.500    | 51190.000 | 53200.000 |
| 3    | 20:20:06 | 73.703%    | 5.536    | 40.590   | 41.600     | 0.000      | 852.700    | 50980.000 | 52970.000 |
| X    |          | 73.980%    | 5.505    | 40.260   | 41.170     | 0.000      | 850.300    | 51220.000 | 53020.000 |
| σ    |          | 0.508%     | 0.101    | 0.396    | 0.567      | 0.000      | 4.200      | 258.800   | 166.400   |
| %RSD |          | 0.686      | 1.832    | 0.983    | 1.377      | 0.000      | 0.494      | 0.505     | 0.314     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:18:40 | 106100.000 | 1889.000 | 0.000    | 16650.000  | 102200.000 | 109300.000 | 78.147%   | 477.400   |
| 2    | 20:19:23 | 107200.000 | 1856.000 | 0.000    | 16210.000  | 102200.000 | 110800.000 | 77.461%   | 480.000   |
| 3    | 20:20:06 | 105200.000 | 1845.000 | 0.000    | 16490.000  | 102600.000 | 110400.000 | 77.588%   | 478.200   |
| X    |          | 106200.000 | 1863.000 | 0.000    | 16450.000  | 102300.000 | 110200.000 | 77.732%   | 478.500   |
| σ    |          | 988.700    | 22.830   | 0.000    | 220.200    | 232.500    | 755.800    | 0.365%    | 1.317     |
| %RSD |          | 0.931      | 1.226    | 0.000    | 1.339      | 0.227      | 0.686      | 0.470     | 0.275     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:18:40 | 164.700    | 170.800  | 3551.000 | 285500.000 | 294200.000 | 115.200    | 272.300   | 200.600   |
| 2    | 20:19:23 | 164.900    | 169.600  | 3530.000 | 281100.000 | 289700.000 | 114.400    | 269.100   | 199.800   |
| 3    | 20:20:06 | 164.500    | 172.000  | 3535.000 | 281600.000 | 290600.000 | 112.500    | 269.300   | 198.900   |
| X    |          | 164.700    | 170.800  | 3539.000 | 282800.000 | 291500.000 | 114.000    | 270.200   | 199.800   |
| σ    |          | 0.201      | 1.205    | 11.020   | 2376.000   | 2372.000   | 1.366      | 1.802     | 0.838     |
| %RSD |          | 0.122      | 0.706    | 0.311    | 0.841      | 0.814      | 1.198      | 0.667     | 0.420     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:18:40 | 198.500    | 592.400  | 596.900  | 147.500    | 1.739      | 5.234      | 0.000     | 182.500   |
| 2    | 20:19:23 | 199.100    | 592.100  | 596.200  | 147.900    | 1.745      | 5.821      | 0.000     | 185.800   |
| 3    | 20:20:06 | 199.000    | 595.000  | 601.000  | 147.600    | 2.061      | 4.558      | 0.000     | 186.600   |
| X    |          | 198.900    | 593.200  | 598.000  | 147.700    | 1.848      | 5.204      | 0.000     | 185.000   |
| σ    |          | 0.359      | 1.612    | 2.622    | 0.175      | 0.184      | 0.632      | 0.000     | 2.182     |
| %RSD |          | 0.180      | 0.272    | 0.438    | 0.118      | 9.970      | 12.150     | 0.000     | 1.180     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:18:40 | 0.000      | 11.550   | 11.300   | 73.084%    | 0.299      | 0.159      | 1.760     | 1.352     |
| 2    | 20:19:23 | 0.000      | 11.670   | 11.370   | 73.755%    | 0.318      | 0.199      | 1.826     | 1.388     |
| 3    | 20:20:06 | 0.000      | 11.770   | 11.700   | 73.822%    | 0.313      | 0.187      | 1.954     | 1.449     |
| X    |          | 0.000      | 11.660   | 11.460   | 73.554%    | 0.310      | 0.182      | 1.847     | 1.396     |
| σ    |          | 0.000      | 0.109    | 0.214    | 0.408%     | 0.010      | 0.021      | 0.099     | 0.049     |
| %RSD |          | 0.000      | 0.937    | 1.871    | 0.555      | 3.244      | 11.370     | 5.364     | 3.509     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:18:40 | 71.708%    | 7.057    | 0.569    | 0.590      | 428.700    | 423.700    | 77.421%   | 75.599%   |
| 2    | 20:19:23 | 72.604%    | 7.368    | 0.569    | 0.624      | 434.300    | 429.800    | 79.013%   | 78.051%   |
| 3    | 20:20:06 | 73.241%    | 7.289    | 0.564    | 0.545      | 432.000    | 428.300    | 79.648%   | 78.114%   |
| X    |          | 72.518%    | 7.238    | 0.567    | 0.586      | 431.600    | 427.300    | 78.694%   | 77.255%   |
| σ    |          | 0.770%     | 0.162    | 0.003    | 0.040      | 2.812      | 3.171      | 1.147%    | 1.434%    |
| %RSD |          | 1.062      | 2.237    | 0.485    | 6.811      | 0.651      | 0.742      | 1.458     | 1.856     |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi      |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        |           |           |
| 1    | 20:18:40 | 1.373      | 1.365    | 108.600  | 107.000    | 108.000    | 70.483%    |           |           |
| 2    | 20:19:23 | 1.374      | 1.390    | 109.800  | 108.900    | 109.400    | 72.345%    |           |           |
| 3    | 20:20:06 | 1.378      | 1.388    | 112.000  | 110.900    | 111.200    | 72.265%    |           |           |
| X    |          | 1.375      | 1.381    | 110.100  | 108.900    | 109.500    | 71.698%    |           |           |
| σ    |          | 0.003      | 0.014    | 1.754    | 1.963      | 1.613      | 1.053%     |           |           |
| %RSD |          | 0.211      | 1.009    | 1.593    | 1.802      | 1.473      | 1.469      |           |           |



240-17602-F-10-A 12/21/2012 8:22:16 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li        | 9Be      | 10B      | 11B        | 13C        | 23Na       | 25Mg      | 26Mg      |
|------|----------|------------|----------|----------|------------|------------|------------|-----------|-----------|
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:22:58 | 72.914%    | 6.649    | 65.870   | 66.130     | 0.000      | 761.300    | 58630.000 | 60460.000 |
| X    |          | 72.914%    | 6.649    | 65.870   | 66.130     | 0.000      | 761.300    | 58630.000 | 60460.000 |
| σ    |          | n/a        | 0.000    | 0.000    | 0.000      | 0.000      | 0.000      | 0.000     | 0.000     |
| %RSD |          | n/a        | 0.000    | 0.000    | 0.000      | 0.000      | 0.000      | 0.000     | 0.000     |
| Run  | Time     | 27Al       | 28Si     | 37Cl     | 39K        | 43Ca       | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:22:58 | 129300.000 | 3684.000 | 0.000    | 21400.000  | 144300.000 | 154800.000 | 77.072%   | 825.400   |
| X    |          | 129300.000 | 3684.000 | 0.000    | 21400.000  | 144300.000 | 154800.000 | 77.072%   | 825.400   |
| σ    |          | 0.000      | 0.000    | 0.000    | 0.000      | 0.000      | 0.000      | n/a       | 0.000     |
| %RSD |          | 0.000      | 0.000    | 0.000    | 0.000      | 0.000      | 0.000      | n/a       | 0.000     |
| Run  | Time     | 51V        | 52Cr     | 55Mn     | 56Fe       | 57Fe       | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:22:58 | 208.100    | 210.400  | 3943.000 | 306200.000 | 316800.000 | 131.800    | 318.400   | 201.100   |
| X    |          | 208.100    | 210.400  | 3943.000 | 306200.000 | 316800.000 | 131.800    | 318.400   | 201.100   |
| σ    |          | 0.000      | 0.000    | 0.000    | 0.000      | 0.000      | 0.000      | 0.000     | 0.000     |
| %RSD |          | 0.000      | 0.000    | 0.000    | 0.000      | 0.000      | 0.000      | 0.000     | 0.000     |
| Run  | Time     | 65Cu       | 66Zn     | 68Zn     | 75As       | 78Se       | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:22:58 | 200.700    | 615.500  | 626.300  | 141.000    | 2.388      | 6.052      | 0.000     | 239.900   |
| X    |          | 200.700    | 615.500  | 626.300  | 141.000    | 2.388      | 6.052      | 0.000     | 239.900   |
| σ    |          | 0.000      | 0.000    | 0.000    | 0.000      | 0.000      | 0.000      | 0.000     | 0.000     |
| %RSD |          | 0.000      | 0.000    | 0.000    | 0.000      | 0.000      | 0.000      | 0.000     | 0.000     |
| Run  | Time     | 89Y        | 95Mo     | 98Mo     | 103Rh      | 107Ag      | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:22:58 | 0.000      | 11.620   | 11.340   | 70.422%    | 0.385      | 0.203      | 2.095     | 1.634     |
| X    |          | 0.000      | 11.620   | 11.340   | 70.422%    | 0.385      | 0.203      | 2.095     | 1.634     |
| σ    |          | 0.000      | 0.000    | 0.000    | n/a        | 0.000      | 0.000      | 0.000     | 0.000     |
| %RSD |          | 0.000      | 0.000    | 0.000    | n/a        | 0.000      | 0.000      | 0.000     | 0.000     |
| Run  | Time     | 115In      | 118Sn    | 121Sb    | 123Sb      | 135Ba      | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        | ppb       | ppb       |
| 1    | 20:22:58 | 69.149%    | 20.840   | 0.862    | 0.815      | 667.200    | 661.400    | 75.174%   | 73.336%   |
| X    |          | 69.149%    | 20.840   | 0.862    | 0.815      | 667.200    | 661.400    | 75.174%   | 73.336%   |
| σ    |          | n/a        | 0.000    | 0.000    | 0.000      | 0.000      | 0.000      | n/a       | n/a       |
| %RSD |          | n/a        | 0.000    | 0.000    | 0.000      | 0.000      | 0.000      | n/a       | n/a       |
| Run  | Time     | 203Tl      | 205Tl    | 206Pb    | 207Pb      | 208Pb      | 209Bi      |           |           |
|      |          | ppb        | ppb      | ppb      | ppb        | ppb        | ppb        |           |           |
| 1    | 20:22:58 | 1.629      | 1.617    | 139.800  | 137.500    | 138.600    | 67.147%    |           |           |
| X    |          | 1.629      | 1.617    | 139.800  | 137.500    | 138.600    | 67.147%    |           |           |
| σ    |          | 0.000      | 0.000    | 0.000    | 0.000      | 0.000      | n/a        |           |           |
| %RSD |          | 0.000      | 0.000    | 0.000    | 0.000      | 0.000      | n/a        |           |           |

CCV 664806 12/21/2012 8:25:08 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B      | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|---------|----------|----------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 20:25:50 | 73.826% | 99.170   | 92.160   | 92.360    | 0.000     | 47170.000 | 46220.000 | 46970.000 |
| 2    | 20:26:34 | 71.570% | 100.300  | 96.590   | 94.350    | 0.000     | 46370.000 | 45650.000 | 46770.000 |
| 3    | 20:27:17 | 70.428% | 101.000  | 95.050   | 94.880    | 0.000     | 50040.000 | 49580.000 | 50880.000 |
| x    |          | 71.941% | 100.166% | 94.604%  | 93.865%   | 0.000     | 95.722%   | 94.303%   | 96.415%   |
| σ    |          | 1.729%  | n/a      | n/a      | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 2.404   | 0.934    | 2.377    | 1.415     | 0.000     | 4.030     | 4.496     | 4.806     |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 20:25:50 | 459.600 | 5166.000 | 0.000    | 47250.000 | 43610.000 | 46940.000 | 91.029%   | 91.510    |
| 2    | 20:26:34 | 447.300 | 5126.000 | 0.000    | 48220.000 | 44120.000 | 47270.000 | 89.324%   | 92.050    |
| 3    | 20:27:17 | 488.200 | 5580.000 | 0.000    | 54660.000 | 51670.000 | 55320.000 | 73.103%   | 107.500   |
| x    |          | 93.011% | 105.810% | 0.000    | 100.093%  | 92.931%   | 99.688%   | 84.485%   | 97.002%   |
| σ    |          | n/a     | n/a      | 0.000    | n/a       | n/a       | n/a       | 9.894%    | n/a       |
| %RSD |          | 4.508   | 4.755    | 0.000    | 8.051     | 9.711     | 9.522     | 11.711    | 9.336     |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 20:25:50 | 88.060  | 89.130   | 478.400  | 23950.000 | 24010.000 | 89.000    | 90.900    | 92.140    |
| 2    | 20:26:34 | 88.680  | 88.850   | 487.300  | 24310.000 | 24340.000 | 90.150    | 90.660    | 91.820    |
| 3    | 20:27:17 | 100.000 | 101.500  | 552.600  | 27260.000 | 26850.000 | 100.900   | 102.400   | 100.900   |
| x    |          | 92.245% | 93.177%  | 101.222% | 100.681%  | 100.260%  | 93.340%   | 94.646%   | 94.936%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 7.283   | 7.781    | 8.002    | 7.211     | 6.200     | 7.015     | 7.085     | 5.399     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 20:25:50 | 92.240  | 91.450   | 91.370   | 96.370    | 95.510    | 98.870    | 0.000     | 94.600    |
| 2    | 20:26:34 | 91.890  | 91.830   | 93.590   | 95.620    | 97.460    | 99.500    | 0.000     | 95.380    |
| 3    | 20:27:17 | 99.090  | 102.900  | 102.100  | 101.300   | 102.300   | 102.700   | 0.000     | 95.970    |
| x    |          | 94.410% | 95.384%  | 95.691%  | 97.766%   | 98.417%   | 100.366%  | 0.000     | 95.317%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 4.300   | 6.808    | 5.920    | 3.162     | 3.542     | 2.063     | 0.000     | 0.723     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 20:25:50 | 78.537% | 93.850   | 94.090   | 76.426%   | 92.850    | 94.330    | 94.740    | 95.530    |
| 2    | 20:26:34 | 79.017% | 97.830   | 97.890   | 75.801%   | 94.580    | 95.320    | 96.140    | 96.830    |
| 3    | 20:27:17 | 78.120% | 97.890   | 98.370   | 75.881%   | 93.210    | 94.130    | 94.110    | 96.390    |
| x    |          | 78.558% | 96.523%  | 96.779%  | 76.036%   | 93.550%   | 94.594%   | 94.997%   | 96.251%   |
| σ    |          | 0.449%  | n/a      | n/a      | 0.340%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 0.571   | 2.400    | 2.423    | 0.447     | 0.976     | 0.675     | 1.095     | 0.684     |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 20:25:50 | 75.791% | 93.630   | 93.290   | 93.530    | 94.590    | 94.130    | 78.441%   | 78.498%   |
| 2    | 20:26:34 | 76.562% | 95.190   | 95.060   | 93.860    | 94.310    | 93.230    | 79.989%   | 80.761%   |
| 3    | 20:27:17 | 77.131% | 94.250   | 93.740   | 93.910    | 94.640    | 93.260    | 80.692%   | 81.542%   |
| x    |          | 76.494% | 94.356%  | 94.029%  | 93.769%   | 94.513%   | 93.541%   | 79.708%   | 80.267%   |
| σ    |          | 0.673%  | n/a      | n/a      | n/a       | n/a       | n/a       | 1.151%    | 1.581%    |
| %RSD |          | 0.879   | 0.832    | 0.982    | 0.218     | 0.185     | 0.546     | 1.445     | 1.970     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 20:25:50 | 94.050  | 94.680   | 94.320   | 95.020    | 94.680    | 72.558%   |           |           |
| 2    | 20:26:34 | 94.430  | 94.990   | 95.420   | 95.320    | 95.490    | 74.802%   |           |           |
| 3    | 20:27:17 | 94.410  | 94.700   | 94.460   | 94.690    | 94.670    | 76.002%   |           |           |
| x    |          | 94.297% | 94.791%  | 94.733%  | 95.013%   | 94.949%   | 74.454%   |           |           |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | 1.748%    |           |           |
| %RSD |          | 0.228   | 0.186    | 0.636    | 0.329     | 0.496     | 2.348     |           |           |

CCB6 12/21/2012 8:32:26 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be    | 10B    | 11B     | 13C     | 23Na     | 25Mg     | 26Mg    |
|------|----------|---------|--------|--------|---------|---------|----------|----------|---------|
|      |          | ppb     | ppb    | ppb    | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 20:33:08 | 88.063% | -0.030 | 1.085  | 1.102   | 0.000   | 2.218    | 3.328    | 3.819   |
| 2    | 20:33:51 | 87.797% | -0.042 | 1.025  | 1.101   | 0.000   | 2.031    | 2.993    | 3.672   |
| 3    | 20:34:34 | 89.234% | -0.036 | 0.895  | 0.905   | 0.000   | 2.134    | 3.341    | 3.600   |
| X    |          | 88.365% | -0.036 | 1.002  | 1.036   | 0.000   | 2.128    | 3.221    | 3.697   |
| σ    |          | 0.765%  | 0.006  | 0.097  | 0.113   | 0.000   | 0.094    | 0.198    | 0.112   |
| %RSD |          | 0.866   | 16.110 | 9.678  | 10.950  | 0.000   | 4.414    | 6.136    | 3.029   |
| Run  | Time     | 27Al    | 28Si   | 37Cl   | 39K     | 43Ca    | 44Ca     | 45Sc     | 47Ti    |
|      |          | ppb     | ppb    | ppb    | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 20:33:08 | 1.245   | -0.527 | 0.000  | -4.499  | 5.916   | 0.980    | 103.375% | 0.035   |
| 2    | 20:33:51 | 1.226   | -0.516 | 0.000  | -4.249  | 5.099   | 0.848    | 101.264% | -0.022  |
| 3    | 20:34:34 | 1.103   | -0.626 | 0.000  | -4.763  | -4.543  | 0.855    | 100.209% | -0.026  |
| X    |          | 1.191   | -0.556 | 0.000  | -4.504  | 2.158   | 0.894    | 101.616% | -0.004  |
| σ    |          | 0.077   | 0.061  | 0.000  | 0.257   | 5.817   | 0.074    | 1.612%   | 0.034   |
| %RSD |          | 6.440   | 10.910 | 0.000  | 5.712   | 269.600 | 8.302    | 1.586    | 806.400 |
| Run  | Time     | 51V     | 52Cr   | 55Mn   | 56Fe    | 57Fe    | 59Co     | 60Ni     | 63Cu    |
|      |          | ppb     | ppb    | ppb    | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 20:33:08 | 0.043   | 0.003  | 0.451  | 11.620  | 15.910  | -0.007   | -0.025   | -0.021  |
| 2    | 20:33:51 | 0.023   | 0.006  | 0.415  | 8.788   | 13.570  | -0.004   | -0.027   | -0.014  |
| 3    | 20:34:34 | 0.004   | 0.020  | 0.430  | 5.445   | 11.130  | -0.009   | -0.025   | -0.017  |
| X    |          | 0.024   | 0.010  | 0.432  | 8.618   | 13.540  | -0.007   | -0.026   | -0.017  |
| σ    |          | 0.020   | 0.009  | 0.018  | 3.091   | 2.390   | 0.002    | 0.001    | 0.004   |
| %RSD |          | 83.140  | 93.570 | 4.124  | 35.860  | 17.660  | 32.050   | 4.060    | 21.330  |
| Run  | Time     | 65Cu    | 66Zn   | 68Zn   | 75As    | 78Se    | 82Se     | 83Kr     | 88Sr    |
|      |          | ppb     | ppb    | ppb    | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 20:33:08 | -0.010  | -0.243 | -0.395 | -0.256  | -0.099  | -1.047   | 0.000    | 0.012   |
| 2    | 20:33:51 | -0.018  | -0.356 | -0.244 | -0.081  | 0.061   | -0.635   | 0.000    | 0.013   |
| 3    | 20:34:34 | -0.029  | -0.203 | -0.286 | -0.088  | -0.016  | -0.385   | 0.000    | 0.015   |
| X    |          | -0.019  | -0.267 | -0.309 | -0.142  | -0.018  | -0.689   | 0.000    | 0.013   |
| σ    |          | 0.009   | 0.080  | 0.078  | 0.099   | 0.080   | 0.334    | 0.000    | 0.002   |
| %RSD |          | 49.130  | 29.800 | 25.160 | 69.680  | 444.000 | 48.480   | 0.000    | 13.400  |
| Run  | Time     | 89Y     | 95Mo   | 98Mo   | 103Rh   | 107Ag   | 109Ag    | 111Cd    | 114Cd   |
|      |          | ppb     | ppb    | ppb    | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 20:33:08 | 90.878% | 0.312  | 0.312  | 88.178% | 0.003   | 0.002    | -0.066   | -0.030  |
| 2    | 20:33:51 | 92.505% | 0.270  | 0.285  | 88.884% | -0.004  | -0.001   | -0.086   | -0.026  |
| 3    | 20:34:34 | 92.804% | 0.251  | 0.211  | 90.071% | -0.013  | 0.005    | -0.084   | -0.032  |
| X    |          | 92.063% | 0.278  | 0.269  | 89.044% | -0.005  | 0.002    | -0.079   | -0.029  |
| σ    |          | 1.036%  | 0.031  | 0.053  | 0.957%  | 0.008   | 0.003    | 0.011    | 0.003   |
| %RSD |          | 1.126   | 11.250 | 19.520 | 1.074   | 168.200 | 121.700  | 14.120   | 9.755   |
| Run  | Time     | 115In   | 118Sn  | 121Sb  | 123Sb   | 135Ba   | 137Ba    | 159Tb    | 165Ho   |
|      |          | ppb     | ppb    | ppb    | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 20:33:08 | 85.409% | -0.200 | -0.039 | -0.037  | 0.012   | 0.030    | 81.117%  | 81.578% |
| 2    | 20:33:51 | 88.113% | -0.185 | -0.049 | -0.050  | 0.010   | 0.024    | 84.638%  | 84.287% |
| 3    | 20:34:34 | 88.137% | -0.300 | -0.055 | -0.044  | 0.030   | 0.021    | 84.529%  | 85.013% |
| X    |          | 87.220% | -0.228 | -0.047 | -0.044  | 0.017   | 0.025    | 83.428%  | 83.626% |
| σ    |          | 1.568%  | 0.063  | 0.008  | 0.007   | 0.011   | 0.004    | 2.002%   | 1.810%  |
| %RSD |          | 1.798   | 27.470 | 16.150 | 15.280  | 62.970  | 17.410   | 2.400    | 2.165   |
| Run  | Time     | 203Tl   | 205Tl  | 206Pb  | 207Pb   | 208Pb   | 209Bi    |          |         |
|      |          | ppb     | ppb    | ppb    | ppb     | ppb     | ppb      |          |         |
| 1    | 20:33:08 | 0.006   | 0.010  | 0.114  | 0.120   | 0.112   | 99.597%  |          |         |
| 2    | 20:33:51 | 0.008   | 0.003  | 0.090  | 0.100   | 0.092   | 101.519% |          |         |
| 3    | 20:34:34 | 0.002   | 0.010  | 0.091  | 0.087   | 0.091   | 101.499% |          |         |
| X    |          | 0.005   | 0.008  | 0.098  | 0.102   | 0.098   | 100.872% |          |         |
| σ    |          | 0.003   | 0.004  | 0.014  | 0.017   | 0.012   | 1.104%   |          |         |
| %RSD |          | 49.000  | 55.110 | 13.870 | 16.680  | 12.060  | 1.094    |          |         |

CRI 668876 12/21/2012 8:41:07 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li      | 9Be      | 10B       | 11B      | 13C      | 23Na     | 25Mg     | 26Mg     |
|------|----------|----------|----------|-----------|----------|----------|----------|----------|----------|
|      |          | ppb      | ppb      | ppb       | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 20:41:50 | 92.515%  | 0.910    | 5.980     | 6.347    | 0.000    | 85.730   | 86.920   | 90.250   |
| 2    | 20:42:33 | 91.449%  | 0.814    | 6.884     | 6.378    | 0.000    | 85.460   | 87.630   | 88.170   |
| 3    | 20:43:16 | 90.738%  | 0.914    | 6.768     | 6.494    | 0.000    | 84.950   | 88.560   | 91.470   |
| x    |          | 91.568%  | 87.960%  | 130.883%  | 128.133% | 0.000    | 85.381%  | 87.705%  | 89.963%  |
| σ    |          | 0.894%   | n/a      | n/a       | n/a      | 0.000    | n/a      | n/a      | n/a      |
| %RSD |          | 0.977    | 6.419    | 7.515     | 1.207    | 0.000    | 0.463    | 0.934    | 1.853    |
| Run  | Time     | 27Al     | 28Si     | 37Cl      | 39K      | 43Ca     | 44Ca     | 45Sc     | 47Ti     |
|      |          | ppb      | ppb      | ppb       | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 20:41:50 | 29.980   | 481.700  | 0.000     | 88.020   | 111.200  | 102.800  | 101.455% | 4.973    |
| 2    | 20:42:33 | 29.250   | 475.100  | 0.000     | 86.450   | 108.100  | 101.600  | 99.356%  | 4.385    |
| 3    | 20:43:16 | 30.300   | 486.100  | 0.000     | 89.710   | 103.900  | 106.900  | 97.534%  | 5.063    |
| x    |          | 99.479%  | 96.193%  | 0.000     | 88.061%  | 107.762% | 103.790% | 99.449%  | 96.140%  |
| σ    |          | n/a      | n/a      | 0.000     | n/a      | n/a      | n/a      | 1.962%   | n/a      |
| %RSD |          | 1.810    | 1.145    | 0.000     | 1.848    | 3.404    | 2.637    | 1.973    | 7.662    |
| Run  | Time     | 51V      | 52Cr     | 55Mn      | 56Fe     | 57Fe     | 59Co     | 60Ni     | 63Cu     |
|      |          | ppb      | ppb      | ppb       | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 20:41:50 | 0.821    | 1.914    | 5.192     | 59.590   | 56.770   | 0.484    | 1.054    | 2.060    |
| 2    | 20:42:33 | 0.902    | 1.892    | 5.216     | 57.180   | 56.510   | 0.490    | 1.089    | 2.059    |
| 3    | 20:43:16 | 0.929    | 1.929    | 5.288     | 62.620   | 59.020   | 0.496    | 0.984    | 2.199    |
| x    |          | 88.416%  | 95.588%  | 1046.417% | 119.590% | 114.870% | 98.014%  | 104.209% | 105.302% |
| σ    |          | n/a      | n/a      | n/a       | n/a      | n/a      | n/a      | n/a      | n/a      |
| %RSD |          | 6.388    | 0.988    | 0.947     | 4.558    | 2.406    | 1.265    | 5.130    | 3.824    |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn      | 75As     | 78Se     | 82Se     | 83Kr     | 88Sr     |
|      |          | ppb      | ppb      | ppb       | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 20:41:50 | 2.168    | 4.913    | 5.133     | 1.232    | 5.658    | 5.841    | 0.000    | 5.044    |
| 2    | 20:42:33 | 2.118    | 4.837    | 5.182     | 1.213    | 5.498    | 5.611    | 0.000    | 5.064    |
| 3    | 20:43:16 | 2.126    | 4.823    | 5.239     | 1.054    | 5.694    | 5.568    | 0.000    | 5.033    |
| x    |          | 106.846% | 97.157%  | 103.698%  | 116.640% | 112.331% | 113.471% | 0.000    | 100.941% |
| σ    |          | n/a      | n/a      | n/a       | n/a      | n/a      | n/a      | 0.000    | n/a      |
| %RSD |          | 1.257    | 1.000    | 1.023     | 8.405    | 1.855    | 2.591    | 0.000    | 0.312    |
| Run  | Time     | 89Y      | 95Mo     | 98Mo      | 103Rh    | 107Ag    | 109Ag    | 111Cd    | 114Cd    |
|      |          | ppb      | ppb      | ppb       | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 20:41:50 | 85.694%  | 4.831    | 4.828     | 92.177%  | 0.938    | 0.985    | 0.961    | 1.056    |
| 2    | 20:42:33 | 86.729%  | 4.846    | 4.843     | 92.797%  | 0.933    | 0.977    | 1.064    | 1.051    |
| 3    | 20:43:16 | 86.547%  | 5.069    | 4.951     | 92.888%  | 0.977    | 1.065    | 0.975    | 1.091    |
| x    |          | 86.323%  | 98.306%  | 97.479%   | 92.621%  | 94.953%  | 100.912% | 99.984%  | 106.593% |
| σ    |          | 0.553%   | n/a      | n/a       | 0.387%   | n/a      | n/a      | n/a      | n/a      |
| %RSD |          | 0.640    | 2.721    | 1.372     | 0.418    | 2.539    | 4.845    | 5.637    | 2.024    |
| Run  | Time     | 115In    | 118Sn    | 121Sb     | 123Sb    | 135Ba    | 137Ba    | 159Tb    | 165Ho    |
|      |          | ppb      | ppb      | ppb       | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 20:41:50 | 83.926%  | 5.006    | 1.952     | 1.788    | 10.050   | 10.100   | 83.889%  | 84.400%  |
| 2    | 20:42:33 | 85.914%  | 4.959    | 1.906     | 1.931    | 10.330   | 10.120   | 86.705%  | 87.092%  |
| 3    | 20:43:16 | 86.249%  | 5.190    | 2.042     | 1.929    | 10.320   | 10.220   | 86.968%  | 87.241%  |
| x    |          | 85.363%  | 101.030% | 98.329%   | 94.132%  | 102.339% | 101.430% | 85.854%  | 86.244%  |
| σ    |          | 1.256%   | n/a      | n/a       | n/a      | n/a      | n/a      | 1.707%   | 1.599%   |
| %RSD |          | 1.471    | 2.422    | 3.528     | 4.356    | 1.526    | 0.626    | 1.988    | 1.854    |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb     | 207Pb    | 208Pb    | 209Bi    |          |          |
|      |          | ppb      | ppb      | ppb       | ppb      | ppb      | ppb      |          |          |
| 1    | 20:41:50 | 0.827    | 0.858    | 0.949     | 0.929    | 0.936    | 96.739%  |          |          |
| 2    | 20:42:33 | 0.888    | 0.895    | 0.936     | 0.938    | 0.940    | 98.806%  |          |          |
| 3    | 20:43:16 | 0.901    | 0.887    | 0.954     | 0.962    | 0.960    | 99.359%  |          |          |
| x    |          | 87.186%  | 88.026%  | 94.670%   | 94.285%  | 94.555%  | 98.301%  |          |          |
| σ    |          | n/a      | n/a      | n/a       | n/a      | n/a      | 1.381%   |          |          |
| %RSD |          | 4.552    | 2.205    | 0.975     | 1.823    | 1.377    | 1.405    |          |          |

CCV 664806 12/21/2012 8:48:23 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B      | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|---------|----------|----------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 20:49:06 | 74.061% | 104.000  | 96.830   | 97.520    | 0.000     | 51060.000 | 51080.000 | 49730.000 |
| 2    | 20:49:49 | 70.429% | 106.700  | 102.600  | 99.480    | 0.000     | 50560.000 | 48960.000 | 49200.000 |
| 3    | 20:50:32 | 71.492% | 103.700  | 100.500  | 97.590    | 0.000     | 50180.000 | 48510.000 | 48680.000 |
| x    |          | 71.994% | 104.794% | 99.977%  | 98.195%   | 0.000     | 101.203%  | 99.028%   | 98.406%   |
| σ    |          | 1.868%  | n/a      | n/a      | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 2.594   | 1.569    | 2.914    | 1.130     | 0.000     | 0.873     | 2.772     | 1.075     |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 20:49:06 | 466.900 | 5389.000 | 0.000    | 49410.000 | 45190.000 | 48710.000 | 93.735%   | 93.720    |
| 2    | 20:49:49 | 465.400 | 5360.000 | 0.000    | 50160.000 | 45700.000 | 49170.000 | 91.197%   | 96.010    |
| 3    | 20:50:32 | 461.300 | 5295.000 | 0.000    | 49960.000 | 45830.000 | 49300.000 | 90.852%   | 94.680    |
| x    |          | 92.906% | 106.956% | 0.000    | 99.689%   | 91.153%   | 98.121%   | 91.928%   | 94.804%   |
| σ    |          | n/a     | n/a      | 0.000    | n/a       | n/a       | n/a       | 1.574%    | n/a       |
| %RSD |          | 0.626   | 0.896    | 0.000    | 0.784     | 0.746     | 0.637     | 1.712     | 1.216     |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 20:49:06 | 90.160  | 91.530   | 497.900  | 24930.000 | 24840.000 | 92.300    | 92.120    | 93.760    |
| 2    | 20:49:49 | 91.610  | 91.120   | 504.000  | 25130.000 | 25130.000 | 93.110    | 93.990    | 95.070    |
| 3    | 20:50:32 | 90.590  | 91.600   | 498.700  | 25040.000 | 25270.000 | 92.970    | 94.030    | 95.560    |
| x    |          | 90.786% | 91.417%  | 100.043% | 100.129%  | 100.321%  | 92.793%   | 93.381%   | 94.797%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 0.823   | 0.282    | 0.667    | 0.395     | 0.864     | 0.467     | 1.171     | 0.983     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 20:49:06 | 94.880  | 93.750   | 94.140   | 100.000   | 99.880    | 103.200   | 0.000     | 98.130    |
| 2    | 20:49:49 | 95.300  | 95.520   | 94.760   | 99.610    | 102.300   | 104.700   | 0.000     | 98.600    |
| 3    | 20:50:32 | 95.940  | 95.770   | 95.380   | 97.600    | 101.500   | 102.700   | 0.000     | 98.470    |
| x    |          | 95.374% | 95.012%  | 94.759%  | 99.072%   | 101.211%  | 103.533%  | 0.000     | 98.402%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 0.562   | 1.161    | 0.652    | 1.301     | 1.211     | 0.987     | 0.000     | 0.246     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 20:49:06 | 78.743% | 97.730   | 96.990   | 76.832%   | 94.000    | 95.300    | 95.010    | 96.100    |
| 2    | 20:49:49 | 79.568% | 99.760   | 99.960   | 76.864%   | 95.950    | 96.240    | 96.610    | 95.110    |
| 3    | 20:50:32 | 80.019% | 102.200  | 102.700  | 77.006%   | 95.930    | 96.240    | 95.570    | 96.120    |
| x    |          | 79.443% | 99.913%  | 99.878%  | 76.900%   | 95.292%   | 95.927%   | 95.731%   | 95.776%   |
| σ    |          | 0.647%  | n/a      | n/a      | 0.093%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 0.814   | 2.265    | 2.853    | 0.121     | 1.177     | 0.566     | 0.851     | 0.600     |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 20:49:06 | 77.411% | 93.640   | 93.340   | 93.140    | 95.840    | 93.130    | 79.631%   | 79.649%   |
| 2    | 20:49:49 | 79.221% | 94.520   | 94.450   | 94.360    | 95.320    | 94.120    | 82.018%   | 82.417%   |
| 3    | 20:50:32 | 79.882% | 94.740   | 93.930   | 94.450    | 93.810    | 93.520    | 82.706%   | 82.838%   |
| x    |          | 78.838% | 94.297%  | 93.908%  | 93.983%   | 94.992%   | 93.589%   | 81.452%   | 81.635%   |
| σ    |          | 1.279%  | n/a      | n/a      | n/a       | n/a       | n/a       | 1.614%    | 1.733%    |
| %RSD |          | 1.623   | 0.617    | 0.594    | 0.779     | 1.109     | 0.533     | 1.981     | 2.122     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 20:49:06 | 89.540  | 89.580   | 89.290   | 89.060    | 89.590    | 77.453%   |           |           |
| 2    | 20:49:49 | 92.970  | 93.100   | 93.130   | 93.370    | 93.210    | 77.841%   |           |           |
| 3    | 20:50:32 | 93.620  | 93.860   | 93.690   | 93.550    | 93.690    | 78.058%   |           |           |
| x    |          | 92.045% | 92.183%  | 92.037%  | 91.993%   | 92.163%   | 77.784%   |           |           |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | 0.307%    |           |           |
| %RSD |          | 2.383   | 2.478    | 2.599    | 2.764     | 2.432     | 0.395     |           |           |

CCB7 12/21/2012 8:55:40 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li      | 9Be     | 10B    | 11B     | 13C    | 23Na    | 25Mg     | 26Mg    |
|------|----------|----------|---------|--------|---------|--------|---------|----------|---------|
|      |          | ppb      | ppb     | ppb    | ppb     | ppb    | ppb     | ppb      | ppb     |
| 1    | 20:56:23 | 108.937% | -0.034  | 0.662  | 0.648   | 0.000  | 2.677   | 3.866    | 4.391   |
| 2    | 20:57:06 | 109.164% | -0.032  | 0.663  | 0.613   | 0.000  | 2.529   | 3.939    | 4.233   |
| 3    | 20:57:49 | 105.070% | -0.025  | 0.635  | 0.538   | 0.000  | 2.643   | 4.440    | 4.463   |
| X    |          | 107.724% | -0.030  | 0.653  | 0.600   | 0.000  | 2.616   | 4.082    | 4.362   |
| σ    |          | 2.301%   | 0.005   | 0.016  | 0.056   | 0.000  | 0.078   | 0.313    | 0.117   |
| %RSD |          | 2.136    | 14.820  | 2.447  | 9.413   | 0.000  | 2.966   | 7.665    | 2.695   |
| Run  | Time     | 27Al     | 28Si    | 37Cl   | 39K     | 43Ca   | 44Ca    | 45Sc     | 47Ti    |
|      |          | ppb      | ppb     | ppb    | ppb     | ppb    | ppb     | ppb      | ppb     |
| 1    | 20:56:23 | 1.305    | -1.752  | 0.000  | -4.954  | 3.948  | 1.063   | 115.571% | 0.008   |
| 2    | 20:57:06 | 1.330    | -2.288  | 0.000  | -5.981  | 5.919  | 0.311   | 113.055% | -0.043  |
| 3    | 20:57:49 | 1.264    | -1.347  | 0.000  | -5.995  | 7.746  | 1.656   | 111.553% | -0.016  |
| X    |          | 1.300    | -1.796  | 0.000  | -5.644  | 5.871  | 1.010   | 113.393% | -0.017  |
| σ    |          | 0.034    | 0.472   | 0.000  | 0.597   | 1.900  | 0.674   | 2.030%   | 0.026   |
| %RSD |          | 2.581    | 26.280  | 0.000  | 10.580  | 32.360 | 66.750  | 1.790    | 147.800 |
| Run  | Time     | 51V      | 52Cr    | 55Mn   | 56Fe    | 57Fe   | 59Co    | 60Ni     | 63Cu    |
|      |          | ppb      | ppb     | ppb    | ppb     | ppb    | ppb     | ppb      | ppb     |
| 1    | 20:56:23 | 0.005    | 0.003   | 0.267  | 7.832   | 13.770 | 0.000   | -0.028   | -0.014  |
| 2    | 20:57:06 | 0.021    | -0.000  | 0.271  | 6.616   | 11.660 | 0.003   | -0.010   | 0.001   |
| 3    | 20:57:49 | 0.028    | -0.005  | 0.267  | 4.765   | 9.644  | 0.001   | -0.001   | -0.020  |
| X    |          | 0.018    | -0.001  | 0.268  | 6.404   | 11.690 | 0.001   | -0.013   | -0.011  |
| σ    |          | 0.012    | 0.004   | 0.002  | 1.544   | 2.061  | 0.002   | 0.014    | 0.011   |
| %RSD |          | 64.110   | 382.700 | 0.913  | 24.120  | 17.640 | 117.200 | 106.000  | 94.940  |
| Run  | Time     | 65Cu     | 66Zn    | 68Zn   | 75As    | 78Se   | 82Se    | 83Kr     | 88Sr    |
|      |          | ppb      | ppb     | ppb    | ppb     | ppb    | ppb     | ppb      | ppb     |
| 1    | 20:56:23 | -0.004   | -0.388  | -0.335 | -0.163  | 0.122  | -0.359  | 0.000    | 0.024   |
| 2    | 20:57:06 | -0.028   | -0.235  | -0.277 | -0.159  | 0.161  | -0.271  | 0.000    | 0.022   |
| 3    | 20:57:49 | 0.009    | -0.150  | -0.264 | -0.045  | 0.240  | -0.132  | 0.000    | 0.024   |
| X    |          | -0.008   | -0.258  | -0.292 | -0.122  | 0.175  | -0.254  | 0.000    | 0.023   |
| σ    |          | 0.019    | 0.121   | 0.038  | 0.067   | 0.060  | 0.114   | 0.000    | 0.001   |
| %RSD |          | 249.700  | 46.840  | 12.850 | 54.830  | 34.530 | 44.940  | 0.000    | 6.288   |
| Run  | Time     | 89Y      | 95Mo    | 98Mo   | 103Rh   | 107Ag  | 109Ag   | 111Cd    | 114Cd   |
|      |          | ppb      | ppb     | ppb    | ppb     | ppb    | ppb     | ppb      | ppb     |
| 1    | 20:56:23 | 91.280%  | 0.254   | 0.264  | 91.921% | -0.001 | -0.000  | -0.078   | -0.017  |
| 2    | 20:57:06 | 91.589%  | 0.256   | 0.222  | 91.735% | -0.000 | -0.000  | -0.010   | 0.001   |
| 3    | 20:57:49 | 92.170%  | 0.179   | 0.205  | 92.676% | -0.002 | -0.003  | -0.061   | -0.037  |
| X    |          | 91.680%  | 0.230   | 0.230  | 92.111% | -0.001 | -0.001  | -0.050   | -0.018  |
| σ    |          | 0.452%   | 0.044   | 0.031  | 0.499%  | 0.001  | 0.001   | 0.035    | 0.019   |
| %RSD |          | 0.493    | 19.040  | 13.300 | 0.541   | 71.760 | 131.700 | 70.910   | 106.500 |
| Run  | Time     | 115In    | 118Sn   | 121Sb  | 123Sb   | 135Ba  | 137Ba   | 159Tb    | 165Ho   |
|      |          | ppb      | ppb     | ppb    | ppb     | ppb    | ppb     | ppb      | ppb     |
| 1    | 20:56:23 | 83.168%  | -0.053  | -0.032 | -0.030  | 0.032  | 0.025   | 83.140%  | 83.248% |
| 2    | 20:57:06 | 84.742%  | -0.138  | -0.047 | -0.028  | 0.019  | 0.042   | 85.807%  | 86.193% |
| 3    | 20:57:49 | 85.268%  | -0.081  | -0.056 | -0.047  | 0.034  | 0.028   | 86.035%  | 86.413% |
| X    |          | 84.393%  | -0.090  | -0.045 | -0.035  | 0.028  | 0.032   | 84.994%  | 85.284% |
| σ    |          | 1.092%   | 0.043   | 0.012  | 0.010   | 0.008  | 0.009   | 1.610%   | 1.767%  |
| %RSD |          | 1.294    | 47.940  | 26.040 | 29.390  | 29.530 | 28.060  | 1.894    | 2.072   |
| Run  | Time     | 203Tl    | 205Tl   | 206Pb  | 207Pb   | 208Pb  | 209Bi   |          |         |
|      |          | ppb      | ppb     | ppb    | ppb     | ppb    | ppb     |          |         |
| 1    | 20:56:23 | 0.018    | 0.011   | 0.048  | 0.050   | 0.046  | 95.879% |          |         |
| 2    | 20:57:06 | 0.004    | 0.009   | 0.042  | 0.034   | 0.036  | 98.653% |          |         |
| 3    | 20:57:49 | 0.008    | 0.010   | 0.041  | 0.041   | 0.035  | 99.634% |          |         |
| X    |          | 0.010    | 0.010   | 0.044  | 0.042   | 0.039  | 98.055% |          |         |
| σ    |          | 0.007    | 0.001   | 0.004  | 0.008   | 0.006  | 1.948%  |          |         |
| %RSD |          | 70.860   | 10.040  | 8.096  | 19.180  | 15.380 | 1.986   |          |         |

180-17032-A-13-A 12/21/2012 9:00:02 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B      | 11B       | 13C        | 23Na       | 25Mg      | 26Mg      |
|------|----------|---------|----------|----------|-----------|------------|------------|-----------|-----------|
|      |          | ppb     | ppb      | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 21:00:45 | 70.729% | -0.006   | 97.230   | 98.710    | 0.000      | 263300.000 | 33860.000 | 34950.000 |
| 2    | 21:01:28 | 69.536% | -0.009   | 94.570   | 95.120    | 0.000      | 257900.000 | 33810.000 | 35660.000 |
| 3    | 21:02:11 | 66.150% | -0.003   | 95.480   | 97.670    | 0.000      | 261600.000 | 34410.000 | 35920.000 |
| X    |          | 68.805% | -0.006   | 95.760   | 97.160    | 0.000      | 260900.000 | 34020.000 | 35510.000 |
| σ    |          | 2.375%  | 0.003    | 1.352    | 1.848     | 0.000      | 2786.000   | 332.300   | 503.200   |
| %RSD |          | 3.452   | 54.430   | 1.412    | 1.901     | 0.000      | 1.068      | 0.977     | 1.417     |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K       | 43Ca       | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 21:00:45 | 25.320  | 6528.000 | 0.000    | 12940.000 | 127900.000 | 142900.000 | 67.110%   | 3.415     |
| 2    | 21:01:28 | 25.270  | 6447.000 | 0.000    | 12820.000 | 129200.000 | 141900.000 | 63.303%   | 3.738     |
| 3    | 21:02:11 | 25.760  | 6523.000 | 0.000    | 12780.000 | 129200.000 | 142300.000 | 62.635%   | 3.575     |
| X    |          | 25.450  | 6499.000 | 0.000    | 12850.000 | 128800.000 | 142400.000 | 64.349%   | 3.576     |
| σ    |          | 0.269   | 45.640   | 0.000    | 86.620    | 735.500    | 500.700    | 2.414%    | 0.162     |
| %RSD |          | 1.056   | 0.702    | 0.000    | 0.674     | 0.571      | 0.352      | 3.752     | 4.522     |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe      | 57Fe       | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 21:00:45 | 2.914   | 1.247    | 8529.000 | 4264.000  | 4416.000   | 1.294      | 1.681     | 2.834     |
| 2    | 21:01:28 | 2.466   | 1.199    | 8606.000 | 4353.000  | 4435.000   | 1.327      | 1.612     | 2.889     |
| 3    | 21:02:11 | 3.091   | 1.189    | 8649.000 | 4342.000  | 4432.000   | 1.298      | 1.425     | 2.833     |
| X    |          | 2.824   | 1.212    | 8595.000 | 4320.000  | 4428.000   | 1.307      | 1.573     | 2.852     |
| σ    |          | 0.322   | 0.031    | 60.760   | 48.660    | 10.490     | 0.018      | 0.133     | 0.032     |
| %RSD |          | 11.410  | 2.568    | 0.707    | 1.127     | 0.237      | 1.382      | 8.424     | 1.123     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As      | 78Se       | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 21:00:45 | 1.837   | 5.857    | 5.704    | 4.687     | 0.752      | 2.357      | 0.000     | 663.900   |
| 2    | 21:01:28 | 1.704   | 6.174    | 6.022    | 5.268     | 0.751      | 2.938      | 0.000     | 658.100   |
| 3    | 21:02:11 | 1.715   | 6.237    | 5.816    | 4.866     | 0.680      | 2.418      | 0.000     | 658.700   |
| X    |          | 1.752   | 6.089    | 5.847    | 4.940     | 0.728      | 2.571      | 0.000     | 660.200   |
| σ    |          | 0.074   | 0.204    | 0.162    | 0.297     | 0.041      | 0.319      | 0.000     | 3.171     |
| %RSD |          | 4.214   | 3.347    | 2.762    | 6.022     | 5.658      | 12.420     | 0.000     | 0.480     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh     | 107Ag      | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 21:00:45 | 68.059% | 0.723    | 0.655    | 66.755%   | -0.013     | -0.002     | -0.047    | -0.038    |
| 2    | 21:01:28 | 67.478% | 0.654    | 0.659    | 66.121%   | -0.010     | -0.015     | -0.043    | -0.005    |
| 3    | 21:02:11 | 66.566% | 0.584    | 0.597    | 65.238%   | -0.019     | -0.004     | -0.068    | -0.018    |
| X    |          | 67.368% | 0.654    | 0.637    | 66.038%   | -0.014     | -0.007     | -0.053    | -0.020    |
| σ    |          | 0.752%  | 0.069    | 0.035    | 0.762%    | 0.005      | 0.007      | 0.013     | 0.017     |
| %RSD |          | 1.117   | 10.570   | 5.511    | 1.154     | 33.390     | 98.810     | 24.820    | 82.790    |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb     | 135Ba      | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 21:00:45 | 66.060% | 1.557    | 0.191    | 0.249     | 147.700    | 147.800    | 71.099%   | 71.732%   |
| 2    | 21:01:28 | 65.634% | 1.136    | 0.188    | 0.229     | 151.600    | 149.900    | 72.239%   | 73.101%   |
| 3    | 21:02:11 | 65.710% | 1.054    | 0.188    | 0.212     | 149.400    | 148.800    | 72.883%   | 73.688%   |
| X    |          | 65.801% | 1.249    | 0.189    | 0.230     | 149.600    | 148.800    | 72.073%   | 72.841%   |
| σ    |          | 0.227%  | 0.270    | 0.002    | 0.018     | 1.988      | 1.041      | 0.903%    | 1.004%    |
| %RSD |          | 0.345   | 21.630   | 0.980    | 7.898     | 1.329      | 0.699      | 1.254     | 1.378     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb     | 208Pb      | 209Bi      |           |           |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb        | ppb        |           |           |
| 1    | 21:00:45 | -0.002  | 0.004    | 0.764    | 0.703     | 0.748      | 69.273%    |           |           |
| 2    | 21:01:28 | -0.001  | 0.007    | 0.780    | 0.769     | 0.775      | 70.836%    |           |           |
| 3    | 21:02:11 | 0.006   | 0.005    | 0.790    | 0.805     | 0.765      | 71.104%    |           |           |
| X    |          | 0.001   | 0.005    | 0.778    | 0.759     | 0.763      | 70.404%    |           |           |
| σ    |          | 0.004   | 0.001    | 0.013    | 0.052     | 0.014      | 0.989%     |           |           |
| %RSD |          | 588.600 | 24.960   | 1.698    | 6.830     | 1.786      | 1.405      |           |           |

180-17032-A-14-A 12/21/2012 9:04:22 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B     | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|---------|----------|---------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:05:05 | 76.694% | -0.016   | 73.910  | 74.660    | 0.000     | 93150.000 | 13410.000 | 13940.000 |
| 2    | 21:05:48 | 74.733% | -0.000   | 71.980  | 74.710    | 0.000     | 93050.000 | 13290.000 | 13960.000 |
| 3    | 21:06:31 | 73.977% | -0.021   | 77.500  | 76.840    | 0.000     | 94000.000 | 13510.000 | 14250.000 |
| X    |          | 75.135% | -0.012   | 74.470  | 75.400    | 0.000     | 93400.000 | 13400.000 | 14050.000 |
| σ    |          | 1.403%  | 0.011    | 2.803   | 1.247     | 0.000     | 525.700   | 113.500   | 174.800   |
| %RSD |          | 1.867   | 86.920   | 3.764   | 1.654     | 0.000     | 0.563     | 0.847     | 1.244     |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:05:05 | 8.050   | 4369.000 | 0.000   | 6097.000  | 58890.000 | 64470.000 | 68.457%   | 1.834     |
| 2    | 21:05:48 | 7.687   | 4312.000 | 0.000   | 5871.000  | 57300.000 | 62350.000 | 68.973%   | 1.793     |
| 3    | 21:06:31 | 7.911   | 4368.000 | 0.000   | 5904.000  | 58160.000 | 63240.000 | 67.288%   | 1.899     |
| X    |          | 7.883   | 4350.000 | 0.000   | 5957.000  | 58120.000 | 63350.000 | 68.239%   | 1.842     |
| σ    |          | 0.183   | 32.390   | 0.000   | 122.300   | 799.900   | 1066.000  | 0.863%    | 0.054     |
| %RSD |          | 2.321   | 0.745    | 0.000   | 2.054     | 1.376     | 1.682     | 1.265     | 2.911     |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:05:05 | 1.822   | 0.993    | 614.600 | 42750.000 | 42270.000 | 0.357     | 1.983     | 0.836     |
| 2    | 21:05:48 | 2.400   | 0.893    | 605.600 | 40950.000 | 40570.000 | 0.314     | 1.858     | 0.897     |
| 3    | 21:06:31 | 0.788   | 0.868    | 616.200 | 41820.000 | 41180.000 | 0.336     | 1.853     | 0.874     |
| X    |          | 1.670   | 0.918    | 612.100 | 41840.000 | 41340.000 | 0.336     | 1.898     | 0.869     |
| σ    |          | 0.816   | 0.066    | 5.711   | 899.500   | 861.900   | 0.022     | 0.074     | 0.031     |
| %RSD |          | 48.890  | 7.230    | 0.933   | 2.150     | 2.085     | 6.414     | 3.897     | 3.547     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:05:05 | 0.564   | 0.775    | 0.669   | 6.666     | 0.022     | 1.486     | 0.000     | 343.400   |
| 2    | 21:05:48 | 0.530   | 0.940    | 0.759   | 7.261     | 0.066     | 1.580     | 0.000     | 343.300   |
| 3    | 21:06:31 | 0.406   | 0.739    | 0.710   | 6.441     | 0.037     | 1.126     | 0.000     | 345.200   |
| X    |          | 0.500   | 0.818    | 0.713   | 6.790     | 0.042     | 1.397     | 0.000     | 344.000   |
| σ    |          | 0.083   | 0.107    | 0.045   | 0.424     | 0.022     | 0.240     | 0.000     | 1.067     |
| %RSD |          | 16.620  | 13.080   | 6.350   | 6.239     | 53.960    | 17.150    | 0.000     | 0.310     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:05:05 | 70.700% | 0.210    | 0.201   | 70.852%   | -0.022    | -0.015    | -0.019    | 0.003     |
| 2    | 21:05:48 | 72.517% | 0.182    | 0.188   | 72.056%   | -0.018    | -0.014    | -0.059    | -0.049    |
| 3    | 21:06:31 | 71.998% | 0.151    | 0.159   | 71.966%   | -0.021    | -0.010    | -0.086    | -0.058    |
| X    |          | 71.739% | 0.181    | 0.183   | 71.624%   | -0.020    | -0.013    | -0.055    | -0.034    |
| σ    |          | 0.936%  | 0.030    | 0.022   | 0.671%    | 0.002     | 0.003     | 0.034     | 0.033     |
| %RSD |          | 1.305   | 16.390   | 12.010  | 0.936     | 9.365     | 20.120    | 61.750    | 96.330    |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:05:05 | 68.745% | 0.721    | 0.051   | 0.070     | 114.500   | 113.400   | 74.525%   | 74.829%   |
| 2    | 21:05:48 | 70.519% | 0.673    | 0.040   | 0.043     | 113.700   | 112.600   | 77.048%   | 77.362%   |
| 3    | 21:06:31 | 70.845% | 0.588    | 0.024   | 0.071     | 114.500   | 114.200   | 76.979%   | 78.413%   |
| X    |          | 70.037% | 0.661    | 0.038   | 0.061     | 114.300   | 113.400   | 76.184%   | 76.868%   |
| σ    |          | 1.130%  | 0.068    | 0.014   | 0.016     | 0.457     | 0.821     | 1.437%    | 1.842%    |
| %RSD |          | 1.614   | 10.240   | 35.130  | 25.570    | 0.400     | 0.723     | 1.886     | 2.397     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       |           |           |
| 1    | 21:05:05 | -0.010  | -0.007   | 0.165   | 0.178     | 0.168     | 74.325%   |           |           |
| 2    | 21:05:48 | 0.002   | -0.001   | 0.134   | 0.166     | 0.153     | 77.502%   |           |           |
| 3    | 21:06:31 | -0.010  | 0.000    | 0.173   | 0.148     | 0.161     | 77.824%   |           |           |
| X    |          | -0.006  | -0.002   | 0.157   | 0.164     | 0.161     | 76.550%   |           |           |
| σ    |          | 0.007   | 0.004    | 0.021   | 0.015     | 0.007     | 1.934%    |           |           |
| %RSD |          | 119.100 | 152.100  | 13.170  | 9.299     | 4.536     | 2.527     |           |           |



180-17032-A-15-A 12/21/2012 9:08:41 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B      | 11B       | 13C       | 23Na      | 25Mg     | 26Mg     |
|------|----------|---------|----------|----------|-----------|-----------|-----------|----------|----------|
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 21:09:24 | 75.300% | -0.010   | 62.130   | 63.650    | 0.000     | 80210.000 | 7188.000 | 7563.000 |
| 2    | 21:10:07 | 72.364% | -0.012   | 61.930   | 61.110    | 0.000     | 76210.000 | 7015.000 | 7414.000 |
| 3    | 21:10:50 | 71.863% | -0.026   | 61.260   | 64.120    | 0.000     | 78520.000 | 7184.000 | 7553.000 |
| x    |          | 73.176% | -0.016   | 61.770   | 62.960    | 0.000     | 78310.000 | 7129.000 | 7510.000 |
| σ    |          | 1.857%  | 0.009    | 0.457    | 1.619     | 0.000     | 2005.000  | 98.760   | 83.590   |
| %RSD |          | 2.538   | 55.000   | 0.739    | 2.572     | 0.000     | 2.561     | 1.385    | 1.113    |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc     | 47Ti     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 21:09:24 | 4.203   | 3839.000 | 0.000    | 3157.000  | 50300.000 | 55550.000 | 66.193%  | 1.241    |
| 2    | 21:10:07 | 4.283   | 3747.000 | 0.000    | 3034.000  | 48700.000 | 53430.000 | 66.017%  | 1.372    |
| 3    | 21:10:50 | 4.119   | 3763.000 | 0.000    | 3096.000  | 49400.000 | 54500.000 | 64.612%  | 1.136    |
| x    |          | 4.201   | 3783.000 | 0.000    | 3096.000  | 49470.000 | 54490.000 | 65.607%  | 1.249    |
| σ    |          | 0.082   | 49.100   | 0.000    | 61.600    | 799.900   | 1061.000  | 0.867%   | 0.118    |
| %RSD |          | 1.944   | 1.298    | 0.000    | 1.990     | 1.617     | 1.947     | 1.321    | 9.459    |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni     | 63Cu     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 21:09:24 | 0.849   | 1.096    | 2578.000 | 12810.000 | 11500.000 | 0.174     | 0.958    | 0.885    |
| 2    | 21:10:07 | 2.485   | 0.942    | 2483.000 | 12410.000 | 11250.000 | 0.156     | 0.896    | 0.888    |
| 3    | 21:10:50 | 1.173   | 1.052    | 2526.000 | 12510.000 | 11370.000 | 0.160     | 0.799    | 0.923    |
| x    |          | 1.502   | 1.030    | 2529.000 | 12580.000 | 11380.000 | 0.163     | 0.884    | 0.899    |
| σ    |          | 0.867   | 0.079    | 47.590   | 213.000   | 125.200   | 0.009     | 0.080    | 0.021    |
| %RSD |          | 57.680  | 7.696    | 1.882    | 1.694     | 1.100     | 5.808     | 9.076    | 2.320    |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr     | 88Sr     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 21:09:24 | 0.548   | 7.304    | 7.185    | 2.708     | -0.058    | 0.720     | 0.000    | 216.600  |
| 2    | 21:10:07 | 0.571   | 6.518    | 6.890    | 3.162     | -0.031    | 1.706     | 0.000    | 217.000  |
| 3    | 21:10:50 | 0.480   | 6.976    | 6.899    | 2.627     | -0.277    | 0.938     | 0.000    | 218.300  |
| x    |          | 0.533   | 6.933    | 6.991    | 2.833     | -0.122    | 1.121     | 0.000    | 217.300  |
| σ    |          | 0.047   | 0.395    | 0.168    | 0.288     | 0.135     | 0.518     | 0.000    | 0.893    |
| %RSD |          | 8.894   | 5.693    | 2.395    | 10.180    | 110.600   | 46.200    | 0.000    | 0.411    |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd    | 114Cd    |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 21:09:24 | 70.055% | 0.209    | 0.248    | 71.352%   | -0.023    | -0.019    | -0.075   | -0.058   |
| 2    | 21:10:07 | 70.407% | 0.303    | 0.231    | 71.170%   | -0.016    | -0.016    | -0.096   | -0.035   |
| 3    | 21:10:50 | 70.423% | 0.224    | 0.255    | 70.700%   | -0.016    | -0.013    | -0.131   | -0.105   |
| x    |          | 70.295% | 0.245    | 0.244    | 71.074%   | -0.018    | -0.016    | -0.101   | -0.066   |
| σ    |          | 0.208%  | 0.051    | 0.012    | 0.336%    | 0.004     | 0.003     | 0.028    | 0.035    |
| %RSD |          | 0.296   | 20.600   | 5.026    | 0.473     | 21.820    | 17.670    | 28.200   | 53.340   |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb    | 165Ho    |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 21:09:24 | 69.145% | 0.626    | 0.038    | 0.073     | 48.890    | 48.040    | 74.536%  | 75.279%  |
| 2    | 21:10:07 | 69.825% | 0.627    | 0.056    | 0.112     | 48.100    | 48.090    | 76.785%  | 77.848%  |
| 3    | 21:10:50 | 69.589% | 0.705    | 0.072    | 0.071     | 49.280    | 48.250    | 76.521%  | 77.508%  |
| x    |          | 69.520% | 0.653    | 0.055    | 0.085     | 48.750    | 48.130    | 75.947%  | 76.878%  |
| σ    |          | 0.345%  | 0.045    | 0.017    | 0.023     | 0.602     | 0.107     | 1.229%   | 1.396%   |
| %RSD |          | 0.497   | 6.910    | 30.890   | 26.880    | 1.235     | 0.222     | 1.618    | 1.816    |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |          |          |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       |          |          |
| 1    | 21:09:24 | -0.009  | -0.004   | 0.081    | 0.113     | 0.094     | 76.498%   |          |          |
| 2    | 21:10:07 | -0.010  | -0.003   | 0.093    | 0.093     | 0.082     | 78.707%   |          |          |
| 3    | 21:10:50 | -0.003  | -0.003   | 0.070    | 0.093     | 0.083     | 79.412%   |          |          |
| x    |          | -0.007  | -0.003   | 0.082    | 0.099     | 0.086     | 78.206%   |          |          |
| σ    |          | 0.004   | 0.001    | 0.012    | 0.012     | 0.007     | 1.520%    |          |          |
| %RSD |          | 54.880  | 18.930   | 14.200   | 11.690    | 7.708     | 1.943     |          |          |

180-17032-A-16-A 12/21/2012 9:13:03 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B     | 11B       | 13C       | 23Na      | 25Mg     | 26Mg     |
|------|----------|---------|----------|---------|-----------|-----------|-----------|----------|----------|
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 21:13:46 | 76.323% | -0.027   | 22.430  | 22.400    | 0.000     | 34780.000 | 2021.000 | 2106.000 |
| 2    | 21:14:29 | 74.807% | -0.024   | 21.940  | 22.570    | 0.000     | 35030.000 | 2019.000 | 2117.000 |
| 3    | 21:15:12 | 74.758% | -0.038   | 21.150  | 21.980    | 0.000     | 33890.000 | 1998.000 | 2115.000 |
| x    |          | 75.296% | -0.030   | 21.840  | 22.320    | 0.000     | 34570.000 | 2012.000 | 2113.000 |
| σ    |          | 0.890%  | 0.007    | 0.646   | 0.305     | 0.000     | 603.200   | 12.570   | 5.858    |
| %RSD |          | 1.182   | 24.670   | 2.958   | 1.366     | 0.000     | 1.745     | 0.625    | 0.277    |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K       | 43Ca      | 44Ca      | 45Sc     | 47Ti     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 21:13:46 | 45.030  | 4585.000 | 0.000   | 12350.000 | 11750.000 | 11400.000 | 68.939%  | 3.699    |
| 2    | 21:14:29 | 44.330  | 4699.000 | 0.000   | 12290.000 | 11760.000 | 11480.000 | 67.494%  | 3.803    |
| 3    | 21:15:12 | 44.130  | 4619.000 | 0.000   | 12150.000 | 11760.000 | 11540.000 | 66.368%  | 3.514    |
| x    |          | 44.500  | 4635.000 | 0.000   | 12260.000 | 11750.000 | 11470.000 | 67.600%  | 3.672    |
| σ    |          | 0.474   | 58.620   | 0.000   | 104.600   | 7.023     | 68.830    | 1.289%   | 0.147    |
| %RSD |          | 1.065   | 1.265    | 0.000   | 0.853     | 0.060     | 0.600     | 1.907    | 3.997    |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe      | 57Fe      | 59Co      | 60Ni     | 63Cu     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 21:13:46 | 1.656   | 1.997    | 210.400 | 13550.000 | 11840.000 | 0.130     | 2.615    | 1.106    |
| 2    | 21:14:29 | 3.810   | 1.619    | 208.100 | 13400.000 | 11940.000 | 0.123     | 2.459    | 1.095    |
| 3    | 21:15:12 | 5.204   | 1.598    | 206.600 | 13300.000 | 11920.000 | 0.105     | 2.265    | 1.039    |
| x    |          | 3.557   | 1.738    | 208.400 | 13420.000 | 11900.000 | 0.119     | 2.446    | 1.080    |
| σ    |          | 1.788   | 0.225    | 1.946   | 127.300   | 52.650    | 0.013     | 0.175    | 0.036    |
| %RSD |          | 50.260  | 12.940   | 0.934   | 0.949     | 0.443     | 10.700    | 7.164    | 3.316    |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As      | 78Se      | 82Se      | 83Kr     | 88Sr     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 21:13:46 | 0.970   | 7.967    | 8.127   | -0.027    | -0.215    | 1.004     | 0.000    | 69.820   |
| 2    | 21:14:29 | 0.922   | 8.303    | 7.780   | 0.199     | -0.211    | 0.462     | 0.000    | 70.840   |
| 3    | 21:15:12 | 0.832   | 8.126    | 7.990   | 0.305     | -0.204    | 1.131     | 0.000    | 70.060   |
| x    |          | 0.908   | 8.132    | 7.966   | 0.159     | -0.210    | 0.866     | 0.000    | 70.240   |
| σ    |          | 0.070   | 0.168    | 0.175   | 0.169     | 0.005     | 0.355     | 0.000    | 0.535    |
| %RSD |          | 7.763   | 2.069    | 2.195   | 106.400   | 2.547     | 41.020    | 0.000    | 0.761    |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh     | 107Ag     | 109Ag     | 111Cd    | 114Cd    |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 21:13:46 | 71.144% | 0.248    | 0.251   | 73.071%   | -0.017    | -0.007    | -0.025   | -0.017   |
| 2    | 21:14:29 | 71.064% | 0.256    | 0.226   | 72.960%   | -0.017    | -0.010    | -0.105   | -0.077   |
| 3    | 21:15:12 | 71.237% | 0.232    | 0.219   | 73.217%   | -0.017    | -0.006    | -0.097   | -0.041   |
| x    |          | 71.148% | 0.245    | 0.232   | 73.083%   | -0.017    | -0.008    | -0.075   | -0.045   |
| σ    |          | 0.087%  | 0.012    | 0.017   | 0.129%    | 0.000     | 0.002     | 0.044    | 0.030    |
| %RSD |          | 0.122   | 4.900    | 7.294   | 0.176     | 1.716     | 26.260    | 58.540   | 66.970   |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb     | 135Ba     | 137Ba     | 159Tb    | 165Ho    |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 21:13:46 | 69.205% | 0.638    | 0.078   | 0.118     | 17.980    | 17.960    | 74.849%  | 75.597%  |
| 2    | 21:14:29 | 70.617% | 0.707    | 0.098   | 0.103     | 17.890    | 17.610    | 76.668%  | 78.033%  |
| 3    | 21:15:12 | 71.164% | 0.609    | 0.098   | 0.103     | 17.410    | 17.650    | 77.352%  | 78.412%  |
| x    |          | 70.328% | 0.651    | 0.091   | 0.108     | 17.760    | 17.740    | 76.290%  | 77.348%  |
| σ    |          | 1.011%  | 0.050    | 0.011   | 0.009     | 0.309     | 0.191     | 1.294%   | 1.528%   |
| %RSD |          | 1.437   | 7.750    | 12.370  | 8.349     | 1.740     | 1.079     | 1.696    | 1.975    |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb     | 208Pb     | 209Bi     |          |          |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       |          |          |
| 1    | 21:13:46 | -0.003  | -0.004   | 0.705   | 0.661     | 0.674     | 78.317%   |          |          |
| 2    | 21:14:29 | -0.005  | 0.002    | 0.645   | 0.658     | 0.656     | 80.282%   |          |          |
| 3    | 21:15:12 | -0.008  | 0.000    | 0.665   | 0.693     | 0.673     | 80.957%   |          |          |
| x    |          | -0.005  | -0.000   | 0.672   | 0.671     | 0.668     | 79.852%   |          |          |
| σ    |          | 0.003   | 0.003    | 0.030   | 0.020     | 0.010     | 1.372%    |          |          |
| %RSD |          | 47.430  | 597.600  | 4.536   | 2.912     | 1.516     | 1.718     |          |          |

180-17032-A-17-A 12/21/2012 9:17:22 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B    | 11B      | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|---------|----------|--------|----------|-----------|-----------|-----------|-----------|
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:18:05 | 73.009% | -0.015   | 76.800 | 78.960   | 0.000     | 16350.000 | 46310.000 | 47980.000 |
| 2    | 21:18:48 | 72.451% | -0.022   | 74.660 | 79.460   | 0.000     | 15870.000 | 45940.000 | 48030.000 |
| 3    | 21:19:31 | 70.438% | -0.020   | 77.970 | 79.990   | 0.000     | 15820.000 | 45520.000 | 47890.000 |
| X    |          | 71.966% | -0.019   | 76.480 | 79.470   | 0.000     | 16010.000 | 45920.000 | 47970.000 |
| σ    |          | 1.352%  | 0.003    | 1.681  | 0.518    | 0.000     | 293.000   | 394.800   | 70.020    |
| %RSD |          | 1.879   | 18.250   | 2.198  | 0.652    | 0.000     | 1.830     | 0.860     | 0.146     |
| Run  | Time     | 27Al    | 28Si     | 37Cl   | 39K      | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:18:05 | 1.454   | 7708.000 | 0.000  | 6127.000 | 65110.000 | 71170.000 | 67.172%   | 0.963     |
| 2    | 21:18:48 | 1.553   | 7763.000 | 0.000  | 5928.000 | 64650.000 | 71640.000 | 65.501%   | 1.187     |
| 3    | 21:19:31 | 1.496   | 7608.000 | 0.000  | 5865.000 | 64580.000 | 71010.000 | 65.624%   | 0.869     |
| X    |          | 1.501   | 7693.000 | 0.000  | 5973.000 | 64780.000 | 71270.000 | 66.099%   | 1.006     |
| σ    |          | 0.050   | 78.470   | 0.000  | 137.100  | 286.500   | 329.200   | 0.932%    | 0.163     |
| %RSD |          | 3.310   | 1.020    | 0.000  | 2.295    | 0.442     | 0.462     | 1.409     | 16.220    |
| Run  | Time     | 51V     | 52Cr     | 55Mn   | 56Fe     | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:18:05 | 1.874   | 2.943    | 1.030  | 31.650   | 339.600   | 0.157     | 2.586     | 1.477     |
| 2    | 21:18:48 | 1.254   | 3.022    | 1.037  | 23.530   | 332.200   | 0.153     | 2.562     | 1.452     |
| 3    | 21:19:31 | 5.216   | 3.054    | 0.999  | 20.870   | 295.700   | 0.149     | 2.446     | 1.464     |
| X    |          | 2.781   | 3.006    | 1.022  | 25.350   | 322.500   | 0.153     | 2.531     | 1.464     |
| σ    |          | 2.131   | 0.057    | 0.020  | 5.615    | 23.500    | 0.004     | 0.075     | 0.013     |
| %RSD |          | 76.630  | 1.898    | 1.972  | 22.150   | 7.286     | 2.569     | 2.957     | 0.863     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn   | 75As     | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:18:05 | 1.667   | 7.813    | 7.857  | -0.738   | 2.087     | 2.569     | 0.000     | 294.500   |
| 2    | 21:18:48 | 1.536   | 7.847    | 7.780  | -0.470   | 1.951     | 2.601     | 0.000     | 295.900   |
| 3    | 21:19:31 | 1.586   | 7.695    | 7.493  | -0.224   | 1.984     | 4.516     | 0.000     | 295.800   |
| X    |          | 1.597   | 7.785    | 7.710  | -0.477   | 2.007     | 3.229     | 0.000     | 295.400   |
| σ    |          | 0.066   | 0.080    | 0.192  | 0.257    | 0.071     | 1.115     | 0.000     | 0.792     |
| %RSD |          | 4.121   | 1.026    | 2.484  | 53.790   | 3.528     | 34.540    | 0.000     | 0.268     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo   | 103Rh    | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:18:05 | 69.488% | 0.253    | 0.194  | 71.250%  | -0.022    | -0.011    | -0.091    | -0.046    |
| 2    | 21:18:48 | 70.073% | 0.203    | 0.222  | 71.232%  | -0.022    | -0.013    | -0.109    | -0.061    |
| 3    | 21:19:31 | 69.347% | 0.223    | 0.218  | 70.652%  | -0.021    | -0.013    | -0.161    | -0.109    |
| X    |          | 69.636% | 0.226    | 0.211  | 71.045%  | -0.022    | -0.012    | -0.120    | -0.072    |
| σ    |          | 0.385%  | 0.025    | 0.015  | 0.340%   | 0.001     | 0.002     | 0.036     | 0.033     |
| %RSD |          | 0.553   | 11.090   | 7.221  | 0.479    | 3.078     | 12.290    | 30.230    | 45.650    |
| Run  | Time     | 115In   | 118Sn    | 121Sb  | 123Sb    | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:18:05 | 68.436% | 0.372    | 0.026  | 0.061    | 39.180    | 38.810    | 74.219%   | 74.998%   |
| 2    | 21:18:48 | 69.568% | 0.464    | 0.021  | 0.022    | 39.100    | 39.320    | 76.107%   | 76.671%   |
| 3    | 21:19:31 | 69.401% | 0.479    | 0.031  | 0.054    | 40.330    | 39.120    | 76.924%   | 77.314%   |
| X    |          | 69.135% | 0.438    | 0.026  | 0.045    | 39.530    | 39.080    | 75.750%   | 76.328%   |
| σ    |          | 0.611%  | 0.058    | 0.005  | 0.021    | 0.686     | 0.259     | 1.387%    | 1.196%    |
| %RSD |          | 0.884   | 13.160   | 18.630 | 45.570   | 1.735     | 0.662     | 1.831     | 1.567     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb  | 207Pb    | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb       |           |           |
| 1    | 21:18:05 | -0.003  | -0.003   | 0.037  | 0.029    | 0.038     | 77.573%   |           |           |
| 2    | 21:18:48 | -0.007  | 0.007    | 0.053  | 0.039    | 0.040     | 79.190%   |           |           |
| 3    | 21:19:31 | -0.006  | -0.003   | 0.033  | 0.032    | 0.030     | 81.200%   |           |           |
| X    |          | -0.005  | 0.000    | 0.041  | 0.033    | 0.036     | 79.321%   |           |           |
| σ    |          | 0.002   | 0.006    | 0.011  | 0.005    | 0.006     | 1.817%    |           |           |
| %RSD |          | 37.250  | 1889.000 | 25.690 | 15.450   | 15.580    | 2.291     |           |           |

180-17032-A-18-A 12/21/2012 9:21:42 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B      | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|---------|----------|----------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:22:24 | 76.056% | -0.015   | 108.600  | 109.600   | 0.000     | 18450.000 | 17480.000 | 18470.000 |
| 2    | 21:23:07 | 73.792% | -0.013   | 109.100  | 109.000   | 0.000     | 18010.000 | 17410.000 | 18560.000 |
| 3    | 21:23:50 | 74.098% | -0.021   | 109.200  | 111.600   | 0.000     | 18100.000 | 17380.000 | 18160.000 |
| X    |          | 74.649% | -0.016   | 109.000  | 110.100   | 0.000     | 18190.000 | 17420.000 | 18400.000 |
| σ    |          | 1.228%  | 0.004    | 0.349    | 1.369     | 0.000     | 233.900   | 48.380    | 207.200   |
| %RSD |          | 1.645   | 23.100   | 0.320    | 1.243     | 0.000     | 1.286     | 0.278     | 1.126     |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:22:24 | 47.030  | 6617.000 | 0.000    | 7922.000  | 61360.000 | 66700.000 | 68.171%   | 2.031     |
| 2    | 21:23:07 | 46.050  | 6572.000 | 0.000    | 7877.000  | 60260.000 | 66690.000 | 66.208%   | 2.398     |
| 3    | 21:23:50 | 45.180  | 6480.000 | 0.000    | 7982.000  | 62140.000 | 68360.000 | 66.031%   | 1.718     |
| X    |          | 46.090  | 6556.000 | 0.000    | 7927.000  | 61250.000 | 67250.000 | 66.803%   | 2.049     |
| σ    |          | 0.927   | 70.080   | 0.000    | 53.060    | 946.500   | 957.200   | 1.188%    | 0.340     |
| %RSD |          | 2.012   | 1.069    | 0.000    | 0.669     | 1.545     | 1.423     | 1.778     | 16.610    |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:22:24 | 2.608   | 1.271    | 1371.000 | 19970.000 | 17910.000 | 3.596     | 4.040     | 1.192     |
| 2    | 21:23:07 | 2.026   | 1.170    | 1363.000 | 20100.000 | 18190.000 | 3.574     | 3.924     | 1.098     |
| 3    | 21:23:50 | 3.509   | 1.129    | 1373.000 | 20010.000 | 17940.000 | 3.608     | 3.955     | 1.032     |
| X    |          | 2.714   | 1.190    | 1369.000 | 20030.000 | 18010.000 | 3.593     | 3.973     | 1.107     |
| σ    |          | 0.747   | 0.073    | 5.258    | 65.670    | 151.300   | 0.017     | 0.060     | 0.080     |
| %RSD |          | 27.540  | 6.150    | 0.384    | 0.328     | 0.840     | 0.476     | 1.507     | 7.252     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:22:24 | 1.246   | 2.837    | 3.102    | 6.427     | -0.228    | 0.684     | 0.000     | 245.000   |
| 2    | 21:23:07 | 1.268   | 3.042    | 3.121    | 6.071     | 0.030     | 1.076     | 0.000     | 247.700   |
| 3    | 21:23:50 | 1.186   | 3.045    | 2.930    | 4.905     | -0.167    | 0.730     | 0.000     | 251.300   |
| X    |          | 1.233   | 2.975    | 3.051    | 5.801     | -0.122    | 0.830     | 0.000     | 248.000   |
| σ    |          | 0.043   | 0.120    | 0.105    | 0.796     | 0.135     | 0.214     | 0.000     | 3.155     |
| %RSD |          | 3.466   | 4.016    | 3.452    | 13.720    | 111.100   | 25.800    | 0.000     | 1.272     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:22:24 | 71.058% | 0.654    | 0.671    | 72.273%   | -0.019    | -0.012    | -0.064    | -0.038    |
| 2    | 21:23:07 | 70.857% | 0.600    | 0.620    | 72.415%   | -0.014    | -0.018    | -0.053    | -0.010    |
| 3    | 21:23:50 | 70.784% | 0.635    | 0.652    | 71.843%   | -0.024    | -0.016    | -0.077    | -0.048    |
| X    |          | 70.900% | 0.630    | 0.647    | 72.177%   | -0.019    | -0.015    | -0.065    | -0.032    |
| σ    |          | 0.142%  | 0.028    | 0.026    | 0.298%    | 0.005     | 0.003     | 0.012     | 0.020     |
| %RSD |          | 0.200   | 4.418    | 3.972    | 0.413     | 26.870    | 19.290    | 18.740    | 61.860    |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:22:24 | 68.553% | 0.479    | 0.067    | 0.077     | 25.280    | 25.480    | 74.100%   | 74.921%   |
| 2    | 21:23:07 | 69.945% | 0.457    | 0.059    | 0.087     | 26.010    | 25.390    | 76.569%   | 77.227%   |
| 3    | 21:23:50 | 70.086% | 0.522    | 0.060    | 0.100     | 26.070    | 25.930    | 76.341%   | 77.585%   |
| X    |          | 69.528% | 0.486    | 0.062    | 0.088     | 25.790    | 25.600    | 75.670%   | 76.578%   |
| σ    |          | 0.848%  | 0.033    | 0.004    | 0.012     | 0.441     | 0.289     | 1.365%    | 1.446%    |
| %RSD |          | 1.219   | 6.853    | 7.181    | 13.190    | 1.710     | 1.129     | 1.804     | 1.888     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 21:22:24 | -0.002  | -0.000   | 0.186    | 0.181     | 0.193     | 76.563%   |           |           |
| 2    | 21:23:07 | 0.000   | -0.004   | 0.182    | 0.164     | 0.167     | 79.276%   |           |           |
| 3    | 21:23:50 | -0.010  | 0.003    | 0.180    | 0.164     | 0.170     | 78.713%   |           |           |
| X    |          | -0.004  | -0.000   | 0.183    | 0.170     | 0.176     | 78.184%   |           |           |
| σ    |          | 0.005   | 0.004    | 0.003    | 0.010     | 0.014     | 1.432%    |           |           |
| %RSD |          | 140.600 | 862.600  | 1.445    | 5.909     | 7.975     | 1.832     |           |           |

180-17032-A-19-A 12/21/2012 9:26:01 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B      | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|---------|----------|----------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:26:44 | 71.676% | -0.019   | 6.639    | 7.209     | 0.000     | 33020.000 | 45880.000 | 47830.000 |
| 2    | 21:27:27 | 71.547% | -0.023   | 6.579    | 6.520     | 0.000     | 32700.000 | 45420.000 | 47820.000 |
| 3    | 21:28:10 | 70.262% | -0.015   | 5.812    | 6.360     | 0.000     | 32630.000 | 45810.000 | 48440.000 |
| X    |          | 71.162% | -0.019   | 6.343    | 6.696     | 0.000     | 32780.000 | 45700.000 | 48030.000 |
| σ    |          | 0.782%  | 0.004    | 0.461    | 0.452     | 0.000     | 209.400   | 247.800   | 356.100   |
| %RSD |          | 1.099   | 22.690   | 7.272    | 6.744     | 0.000     | 0.639     | 0.542     | 0.741     |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:26:44 | 2.580   | 7497.000 | 0.000    | 2361.000  | 46480.000 | 52620.000 | 65.805%   | 1.055     |
| 2    | 21:27:27 | 2.256   | 7354.000 | 0.000    | 2356.000  | 46550.000 | 51930.000 | 63.294%   | 1.084     |
| 3    | 21:28:10 | 2.580   | 7490.000 | 0.000    | 2322.000  | 46620.000 | 51890.000 | 63.114%   | 1.034     |
| X    |          | 2.472   | 7447.000 | 0.000    | 2347.000  | 46550.000 | 52150.000 | 64.071%   | 1.058     |
| σ    |          | 0.187   | 80.620   | 0.000    | 21.170    | 69.650    | 409.000   | 1.504%    | 0.025     |
| %RSD |          | 7.577   | 1.083    | 0.000    | 0.902     | 0.150     | 0.784     | 2.348     | 2.351     |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:26:44 | 0.446   | 1.029    | 2733.000 | 11400.000 | 10080.000 | 2.987     | 3.589     | 0.367     |
| 2    | 21:27:27 | 0.676   | 1.077    | 2779.000 | 11420.000 | 10320.000 | 2.905     | 3.559     | 0.366     |
| 3    | 21:28:10 | 2.643   | 0.909    | 2755.000 | 11460.000 | 10150.000 | 2.927     | 3.356     | 0.381     |
| X    |          | 1.255   | 1.005    | 2756.000 | 11430.000 | 10190.000 | 2.940     | 3.501     | 0.372     |
| σ    |          | 1.207   | 0.087    | 23.060   | 26.240    | 123.500   | 0.042     | 0.127     | 0.008     |
| %RSD |          | 96.190  | 8.629    | 0.837    | 0.230     | 1.213     | 1.442     | 3.616     | 2.277     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:26:44 | 0.402   | 1.018    | 0.902    | 1.579     | -0.269    | 0.882     | 0.000     | 332.100   |
| 2    | 21:27:27 | 0.335   | 0.910    | 0.781    | 1.196     | -0.244    | 0.995     | 0.000     | 335.000   |
| 3    | 21:28:10 | 0.341   | 0.866    | 0.605    | 1.309     | -0.423    | 0.931     | 0.000     | 340.100   |
| X    |          | 0.359   | 0.931    | 0.763    | 1.362     | -0.312    | 0.936     | 0.000     | 335.700   |
| σ    |          | 0.037   | 0.078    | 0.149    | 0.197     | 0.097     | 0.057     | 0.000     | 4.079     |
| %RSD |          | 10.420  | 8.423    | 19.580   | 14.460    | 30.990    | 6.075     | 0.000     | 1.215     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:26:44 | 68.555% | 0.426    | 0.461    | 69.754%   | -0.020    | -0.018    | -0.120    | -0.090    |
| 2    | 21:27:27 | 68.895% | 0.531    | 0.481    | 69.871%   | -0.017    | -0.017    | -0.064    | -0.026    |
| 3    | 21:28:10 | 68.550% | 0.424    | 0.455    | 69.079%   | -0.017    | -0.012    | -0.166    | -0.120    |
| X    |          | 68.667% | 0.460    | 0.466    | 69.568%   | -0.018    | -0.016    | -0.116    | -0.079    |
| σ    |          | 0.198%  | 0.061    | 0.014    | 0.427%    | 0.002     | 0.004     | 0.051     | 0.048     |
| %RSD |          | 0.288   | 13.290   | 2.939    | 0.614     | 9.801     | 22.320    | 43.880    | 61.180    |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:26:44 | 67.168% | 0.564    | 0.053    | 0.112     | 211.700   | 210.400   | 72.960%   | 74.049%   |
| 2    | 21:27:27 | 67.883% | 0.448    | 0.050    | 0.068     | 213.100   | 213.200   | 74.825%   | 75.969%   |
| 3    | 21:28:10 | 68.450% | 0.519    | 0.070    | 0.109     | 211.300   | 213.500   | 75.639%   | 76.740%   |
| X    |          | 67.834% | 0.510    | 0.058    | 0.097     | 212.000   | 212.400   | 74.475%   | 75.586%   |
| σ    |          | 0.643%  | 0.059    | 0.011    | 0.024     | 0.986     | 1.739     | 1.373%    | 1.386%    |
| %RSD |          | 0.948   | 11.490   | 19.020   | 25.210    | 0.465     | 0.819     | 1.844     | 1.834     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 21:26:44 | -0.007  | 0.001    | 0.027    | 0.015     | 0.015     | 76.106%   |           |           |
| 2    | 21:27:27 | -0.005  | 0.001    | 0.011    | 0.016     | 0.011     | 78.159%   |           |           |
| 3    | 21:28:10 | -0.006  | -0.001   | 0.013    | 0.016     | 0.015     | 79.608%   |           |           |
| X    |          | -0.006  | 0.000    | 0.017    | 0.016     | 0.014     | 77.958%   |           |           |
| σ    |          | 0.001   | 0.001    | 0.009    | 0.001     | 0.002     | 1.760%    |           |           |
| %RSD |          | 18.090  | 472.100  | 53.440   | 5.950     | 15.730    | 2.257     |           |           |

180-17032-A-20-A 12/21/2012 9:30:22 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B     | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|---------|----------|---------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:31:04 | 74.200% | -0.033   | 35.550  | 38.310    | 0.000     | 89680.000 | 32450.000 | 33790.000 |
| 2    | 21:31:47 | 71.560% | -0.026   | 35.920  | 38.430    | 0.000     | 88320.000 | 31900.000 | 33330.000 |
| 3    | 21:32:30 | 71.600% | -0.033   | 37.220  | 39.880    | 0.000     | 90620.000 | 32170.000 | 33810.000 |
| X    |          | 72.453% | -0.031   | 36.230  | 38.870    | 0.000     | 89540.000 | 32180.000 | 33640.000 |
| σ    |          | 1.513%  | 0.004    | 0.876   | 0.874     | 0.000     | 1154.000  | 277.900   | 269.200   |
| %RSD |          | 2.088   | 13.290   | 2.418   | 2.248     | 0.000     | 1.289     | 0.864     | 0.800     |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:31:04 | 2.718   | 4261.000 | 0.000   | 6047.000  | 33680.000 | 37100.000 | 65.311%   | 1.046     |
| 2    | 21:31:47 | 2.592   | 4308.000 | 0.000   | 5967.000  | 33560.000 | 36620.000 | 64.673%   | 1.119     |
| 3    | 21:32:30 | 2.563   | 4341.000 | 0.000   | 6113.000  | 34290.000 | 37730.000 | 63.183%   | 0.953     |
| X    |          | 2.624   | 4303.000 | 0.000   | 6043.000  | 33840.000 | 37150.000 | 64.389%   | 1.039     |
| σ    |          | 0.082   | 40.450   | 0.000   | 73.060    | 391.400   | 553.500   | 1.092%    | 0.083     |
| %RSD |          | 3.134   | 0.940    | 0.000   | 1.209     | 1.157     | 1.490     | 1.696     | 7.973     |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:31:04 | 2.986   | 0.827    | 741.700 | 18130.000 | 16250.000 | 4.839     | 1.583     | 1.125     |
| 2    | 21:31:47 | 2.782   | 0.809    | 738.900 | 18220.000 | 16360.000 | 4.870     | 1.655     | 1.086     |
| 3    | 21:32:30 | 2.164   | 0.792    | 762.900 | 18580.000 | 16610.000 | 4.979     | 1.789     | 1.097     |
| X    |          | 2.644   | 0.810    | 747.800 | 18310.000 | 16410.000 | 4.896     | 1.676     | 1.103     |
| σ    |          | 0.428   | 0.017    | 13.110  | 235.800   | 187.600   | 0.073     | 0.104     | 0.020     |
| %RSD |          | 16.200  | 2.104    | 1.753   | 1.288     | 1.143     | 1.498     | 6.217     | 1.807     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:31:04 | 0.687   | 6.343    | 5.723   | 1.451     | -0.330    | 0.511     | 0.000     | 281.000   |
| 2    | 21:31:47 | 0.652   | 6.459    | 6.942   | 0.941     | -0.256    | 0.381     | 0.000     | 282.000   |
| 3    | 21:32:30 | 0.666   | 6.677    | 6.737   | 1.950     | -0.251    | 1.047     | 0.000     | 282.400   |
| X    |          | 0.669   | 6.493    | 6.467   | 1.447     | -0.279    | 0.646     | 0.000     | 281.800   |
| σ    |          | 0.018   | 0.170    | 0.652   | 0.504     | 0.045     | 0.353     | 0.000     | 0.698     |
| %RSD |          | 2.629   | 2.612    | 10.090  | 34.860    | 15.980    | 54.630    | 0.000     | 0.248     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:31:04 | 68.379% | 3.145    | 3.011   | 69.851%   | -0.020    | -0.015    | -0.058    | -0.034    |
| 2    | 21:31:47 | 68.555% | 3.282    | 3.107   | 69.223%   | -0.018    | -0.010    | -0.055    | -0.010    |
| 3    | 21:32:30 | 68.574% | 3.098    | 3.173   | 69.886%   | -0.009    | -0.020    | -0.068    | -0.029    |
| X    |          | 68.503% | 3.175    | 3.097   | 69.653%   | -0.016    | -0.015    | -0.061    | -0.024    |
| σ    |          | 0.107%  | 0.096    | 0.081   | 0.373%    | 0.006     | 0.005     | 0.007     | 0.013     |
| %RSD |          | 0.157   | 3.012    | 2.628   | 0.535     | 35.730    | 30.970    | 11.390    | 53.450    |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:31:04 | 67.865% | 0.372    | 0.008   | 0.058     | 174.500   | 172.200   | 73.800%   | 74.222%   |
| 2    | 21:31:47 | 68.405% | 0.347    | 0.053   | 0.049     | 173.200   | 174.600   | 74.934%   | 76.593%   |
| 3    | 21:32:30 | 68.239% | 0.405    | 0.055   | 0.075     | 176.700   | 175.200   | 75.325%   | 76.493%   |
| X    |          | 68.170% | 0.375    | 0.039   | 0.060     | 174.800   | 174.000   | 74.686%   | 75.769%   |
| σ    |          | 0.277%  | 0.029    | 0.027   | 0.013     | 1.750     | 1.583     | 0.792%    | 1.341%    |
| %RSD |          | 0.406   | 7.713    | 68.050  | 21.410    | 1.001     | 0.910     | 1.061     | 1.770     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       |           |           |
| 1    | 21:31:04 | -0.007  | -0.000   | 0.041   | 0.029     | 0.035     | 75.017%   |           |           |
| 2    | 21:31:47 | -0.005  | -0.004   | 0.023   | 0.017     | 0.024     | 76.951%   |           |           |
| 3    | 21:32:30 | -0.005  | -0.006   | 0.036   | 0.028     | 0.031     | 76.530%   |           |           |
| X    |          | -0.006  | -0.004   | 0.033   | 0.025     | 0.030     | 76.166%   |           |           |
| σ    |          | 0.001   | 0.003    | 0.009   | 0.007     | 0.006     | 1.017%    |           |           |
| %RSD |          | 15.560  | 87.600   | 28.430  | 27.140    | 18.630    | 1.335     |           |           |

MB 180-57784/1-A

12/21/2012 9:38:21 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be    | 10B    | 11B     | 13C     | 23Na    | 25Mg    | 26Mg    |
|------|----------|---------|--------|--------|---------|---------|---------|---------|---------|
|      |          | ppb     | ppb    | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 21:39:04 | 80.687% | -0.036 | 0.700  | 0.806   | 0.000   | 1.017   | 0.724   | 0.813   |
| 2    | 21:39:47 | 80.578% | -0.035 | 0.582  | 0.801   | 0.000   | 3.298   | 1.389   | 1.562   |
| 3    | 21:40:30 | 80.782% | -0.036 | 0.787  | 0.724   | 0.000   | 0.415   | 0.569   | 0.628   |
| X    |          | 80.682% | -0.035 | 0.690  | 0.777   | 0.000   | 1.577   | 0.894   | 1.001   |
| σ    |          | 0.102%  | 0.000  | 0.103  | 0.046   | 0.000   | 1.521   | 0.436   | 0.495   |
| %RSD |          | 0.127   | 1.271  | 14.900 | 5.972   | 0.000   | 96.460  | 48.710  | 49.420  |
| Run  | Time     | 27Al    | 28Si   | 37Cl   | 39K     | 43Ca    | 44Ca    | 45Sc    | 47Ti    |
|      |          | ppb     | ppb    | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 21:39:04 | -0.024  | 1.791  | 0.000  | -5.835  | -9.619  | -0.328  | 89.567% | -0.075  |
| 2    | 21:39:47 | 0.235   | 3.252  | 0.000  | 0.832   | -0.399  | 4.997   | 74.857% | 0.013   |
| 3    | 21:40:30 | 0.124   | 1.680  | 0.000  | -6.376  | -3.054  | -0.306  | 89.945% | -0.032  |
| X    |          | 0.112   | 2.241  | 0.000  | -3.793  | -4.357  | 1.454   | 84.789% | -0.031  |
| σ    |          | 0.130   | 0.877  | 0.000  | 4.015   | 4.746   | 3.068   | 8.604%  | 0.044   |
| %RSD |          | 116.700 | 39.150 | 0.000  | 105.800 | 108.900 | 211.000 | 10.147  | 140.400 |
| Run  | Time     | 51V     | 52Cr   | 55Mn   | 56Fe    | 57Fe    | 59Co    | 60Ni    | 63Cu    |
|      |          | ppb     | ppb    | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 21:39:04 | 0.000   | 0.113  | 0.052  | 5.306   | 4.562   | -0.016  | -0.058  | -0.015  |
| 2    | 21:39:47 | 0.178   | 0.150  | 0.099  | 13.470  | 7.127   | -0.017  | -0.032  | 0.004   |
| 3    | 21:40:30 | 0.309   | 0.141  | 0.039  | 0.532   | 2.564   | -0.015  | -0.043  | -0.008  |
| X    |          | 0.162   | 0.135  | 0.063  | 6.436   | 4.751   | -0.016  | -0.045  | -0.006  |
| σ    |          | 0.155   | 0.019  | 0.032  | 6.542   | 2.287   | 0.001   | 0.013   | 0.010   |
| %RSD |          | 95.350  | 14.330 | 50.110 | 101.700 | 48.150  | 4.224   | 28.810  | 150.900 |
| Run  | Time     | 65Cu    | 66Zn   | 68Zn   | 75As    | 78Se    | 82Se    | 83Kr    | 88Sr    |
|      |          | ppb     | ppb    | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 21:39:04 | -0.018  | -0.543 | -0.347 | -0.100  | -0.183  | 0.150   | 0.000   | 0.009   |
| 2    | 21:39:47 | 0.006   | -0.130 | -0.156 | 0.218   | 0.052   | 0.625   | 0.000   | 0.016   |
| 3    | 21:40:30 | -0.009  | -0.492 | -0.409 | -0.021  | 0.007   | 0.085   | 0.000   | 0.006   |
| X    |          | -0.007  | -0.388 | -0.304 | 0.033   | -0.041  | 0.286   | 0.000   | 0.011   |
| σ    |          | 0.012   | 0.225  | 0.132  | 0.165   | 0.125   | 0.295   | 0.000   | 0.005   |
| %RSD |          | 176.300 | 58.060 | 43.450 | 508.500 | 301.300 | 103.000 | 0.000   | 50.130  |
| Run  | Time     | 89Y     | 95Mo   | 98Mo   | 103Rh   | 107Ag   | 109Ag   | 111Cd   | 114Cd   |
|      |          | ppb     | ppb    | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 21:39:04 | 78.340% | 0.013  | 0.015  | 85.110% | -0.021  | -0.014  | -0.028  | -0.026  |
| 2    | 21:39:47 | 79.548% | 0.020  | 0.011  | 85.186% | -0.022  | -0.016  | -0.074  | -0.036  |
| 3    | 21:40:30 | 80.011% | 0.018  | 0.013  | 86.063% | -0.025  | -0.018  | -0.056  | -0.016  |
| X    |          | 79.300% | 0.017  | 0.013  | 85.453% | -0.023  | -0.016  | -0.053  | -0.026  |
| σ    |          | 0.863%  | 0.003  | 0.002  | 0.530%  | 0.002   | 0.002   | 0.023   | 0.010   |
| %RSD |          | 1.088   | 18.810 | 13.020 | 0.620   | 9.219   | 12.380  | 43.860  | 39.180  |
| Run  | Time     | 115In   | 118Sn  | 121Sb  | 123Sb   | 135Ba   | 137Ba   | 159Tb   | 165Ho   |
|      |          | ppb     | ppb    | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 21:39:04 | 76.686% | -0.300 | -0.081 | -0.076  | 0.031   | 0.011   | 78.730% | 79.263% |
| 2    | 21:39:47 | 78.997% | -0.317 | -0.081 | -0.079  | 0.021   | 0.020   | 80.971% | 81.618% |
| 3    | 21:40:30 | 79.497% | -0.438 | -0.089 | -0.083  | 0.017   | 0.015   | 82.499% | 82.497% |
| X    |          | 78.393% | -0.351 | -0.083 | -0.079  | 0.023   | 0.015   | 80.733% | 81.126% |
| σ    |          | 1.500%  | 0.075  | 0.004  | 0.004   | 0.007   | 0.004   | 1.896%  | 1.672%  |
| %RSD |          | 1.913   | 21.470 | 5.359  | 4.519   | 32.090  | 28.960  | 2.349   | 2.061   |
| Run  | Time     | 203Tl   | 205Tl  | 206Pb  | 207Pb   | 208Pb   | 209Bi   |         |         |
|      |          | ppb     | ppb    | ppb    | ppb     | ppb     | ppb     |         |         |
| 1    | 21:39:04 | -0.016  | -0.012 | 0.016  | 0.009   | 0.007   | 92.502% |         |         |
| 2    | 21:39:47 | -0.012  | -0.010 | 0.004  | 0.022   | 0.010   | 93.768% |         |         |
| 3    | 21:40:30 | -0.015  | -0.014 | 0.005  | 0.008   | 0.005   | 95.000% |         |         |
| X    |          | -0.014  | -0.012 | 0.008  | 0.013   | 0.007   | 93.757% |         |         |
| σ    |          | 0.002   | 0.002  | 0.006  | 0.008   | 0.002   | 1.249%  |         |         |
| %RSD |          | 17.380  | 13.370 | 78.400 | 61.020  | 29.090  | 1.332   |         |         |

LCS 180-57784/2-A 12/21/2012 9:42:44 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li      | 9Be      | 10B     | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|----------|----------|---------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb      | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:43:26 | 74.484%  | 42.290   | 810.800 | 830.800   | 0.000     | 44750.000 | 44120.000 | 45840.000 |
| 2    | 21:44:09 | 72.598%  | 43.230   | 821.900 | 819.400   | 0.000     | 43570.000 | 44160.000 | 45560.000 |
| 3    | 21:44:52 | 70.971%  | 43.000   | 836.500 | 851.200   | 0.000     | 42970.000 | 43190.000 | 45780.000 |
| X    |          | 72.684%  | 42.840   | 823.100 | 833.800   | 0.000     | 43770.000 | 43820.000 | 45730.000 |
| σ    |          | 1.758%   | 0.488    | 12.860  | 16.100    | 0.000     | 906.000   | 548.000   | 143.800   |
| %RSD |          | 2.419    | 1.139    | 1.563   | 1.931     | 0.000     | 2.070     | 1.251     | 0.315     |
| Run  | Time     | 27Al     | 28Si     | 37Cl    | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:43:26 | 1843.000 | 9720.000 | 0.000   | 49210.000 | 47990.000 | 52510.000 | 66.081%   | 1014.000  |
| 2    | 21:44:09 | 1824.000 | 9580.000 | 0.000   | 48400.000 | 48280.000 | 52690.000 | 64.274%   | 1015.000  |
| 3    | 21:44:52 | 1827.000 | 9606.000 | 0.000   | 47870.000 | 47190.000 | 51480.000 | 64.251%   | 1006.000  |
| X    |          | 1831.000 | 9635.000 | 0.000   | 48490.000 | 47820.000 | 52220.000 | 64.869%   | 1012.000  |
| σ    |          | 10.090   | 74.420   | 0.000   | 671.800   | 563.200   | 653.900   | 1.050%    | 5.285     |
| %RSD |          | 0.551    | 0.772    | 0.000   | 1.385     | 1.178     | 1.252     | 1.618     | 0.522     |
| Run  | Time     | 51V      | 52Cr     | 55Mn    | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:43:26 | 474.600  | 194.000  | 518.900 | 1086.000  | 1163.000  | 467.100   | 471.800   | 231.800   |
| 2    | 21:44:09 | 498.100  | 195.500  | 520.000 | 1090.000  | 1170.000  | 474.500   | 472.600   | 237.300   |
| 3    | 21:44:52 | 477.500  | 194.000  | 518.000 | 1067.000  | 1150.000  | 458.400   | 465.700   | 234.400   |
| X    |          | 483.400  | 194.500  | 519.000 | 1081.000  | 1161.000  | 466.700   | 470.100   | 234.500   |
| σ    |          | 12.860   | 0.866    | 0.986   | 11.950    | 9.945     | 8.052     | 3.761     | 2.749     |
| %RSD |          | 2.661    | 0.445    | 0.190   | 1.106     | 0.857     | 1.725     | 0.800     | 1.172     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn    | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:43:26 | 230.400  | 452.000  | 452.100 | 36.070    | 8.913     | 9.749     | 0.000     | 1012.000  |
| 2    | 21:44:09 | 235.700  | 459.500  | 459.200 | 35.720    | 8.762     | 9.907     | 0.000     | 1017.000  |
| 3    | 21:44:52 | 234.000  | 457.500  | 459.700 | 35.670    | 9.166     | 9.491     | 0.000     | 1031.000  |
| X    |          | 233.400  | 456.300  | 457.000 | 35.820    | 8.947     | 9.716     | 0.000     | 1020.000  |
| σ    |          | 2.704    | 3.868    | 4.273   | 0.220     | 0.204     | 0.210     | 0.000     | 9.948     |
| %RSD |          | 1.159    | 0.848    | 0.935   | 0.613     | 2.283     | 2.161     | 0.000     | 0.975     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo    | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:43:26 | 69.505%  | 935.600  | 927.200 | 69.166%   | 45.480    | 45.740    | 45.170    | 34.510    |
| 2    | 21:44:09 | 69.608%  | 944.100  | 936.600 | 70.050%   | 45.170    | 46.150    | 45.750    | 36.090    |
| 3    | 21:44:52 | 69.053%  | 943.500  | 947.800 | 69.905%   | 44.980    | 45.800    | 44.720    | 35.560    |
| X    |          | 69.389%  | 941.100  | 937.200 | 69.707%   | 45.210    | 45.900    | 45.210    | 35.390    |
| σ    |          | 0.295%   | 4.741    | 10.330  | 0.474%    | 0.249     | 0.225     | 0.516     | 0.807     |
| %RSD |          | 0.425    | 0.504    | 1.102   | 0.680     | 0.550     | 0.491     | 1.140     | 2.281     |
| Run  | Time     | 115In    | 118Sn    | 121Sb   | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb     | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:43:26 | 66.468%  | 2144.000 | 452.600 | 453.800   | 1812.000  | 1788.000  | 73.271%   | 74.383%   |
| 2    | 21:44:09 | 67.980%  | 2134.000 | 455.800 | 453.300   | 1807.000  | 1800.000  | 75.116%   | 76.287%   |
| 3    | 21:44:52 | 67.933%  | 2137.000 | 455.500 | 456.300   | 1806.000  | 1804.000  | 76.341%   | 77.088%   |
| X    |          | 67.461%  | 2138.000 | 454.600 | 454.500   | 1808.000  | 1798.000  | 74.909%   | 75.919%   |
| σ    |          | 0.860%   | 4.967    | 1.771   | 1.621     | 3.023     | 8.360     | 1.545%    | 1.390%    |
| %RSD |          | 1.274    | 0.232    | 0.390   | 0.357     | 0.167     | 0.465     | 2.063     | 1.830     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb   | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb      | ppb      | ppb     | ppb       | ppb       | ppb       |           |           |
| 1    | 21:43:26 | 41.950   | 41.490   | 17.080  | 16.890    | 17.050    | 74.420%   |           |           |
| 2    | 21:44:09 | 42.240   | 42.610   | 17.350  | 17.220    | 17.200    | 76.631%   |           |           |
| 3    | 21:44:52 | 42.870   | 42.900   | 17.390  | 17.170    | 17.180    | 77.025%   |           |           |
| X    |          | 42.360   | 42.330   | 17.270  | 17.090    | 17.140    | 76.026%   |           |           |
| σ    |          | 0.471    | 0.743    | 0.165   | 0.179     | 0.084     | 1.404%    |           |           |
| %RSD |          | 1.113    | 1.754    | 0.954   | 1.048     | 0.491     | 1.847     |           |           |



CCV 664806 12/21/2012 9:50:03 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B      | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|---------|----------|----------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:50:46 | 74.502% | 102.500  | 101.900  | 100.500   | 0.000     | 48870.000 | 48160.000 | 48030.000 |
| 2    | 21:51:29 | 72.405% | 100.700  | 100.300  | 98.080    | 0.000     | 48950.000 | 47590.000 | 47740.000 |
| 3    | 21:52:12 | 71.068% | 103.500  | 99.400   | 99.070    | 0.000     | 51450.000 | 51080.000 | 51360.000 |
| x    |          | 72.658% | 102.244% | 100.542% | 99.222%   | 0.000     | 99.515%   | 97.880%   | 98.081%   |
| σ    |          | 1.731%  | n/a      | n/a      | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 2.382   | 1.380    | 1.250    | 1.231     | 0.000     | 2.954     | 3.825     | 4.104     |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:50:46 | 457.300 | 5273.000 | 0.000    | 48420.000 | 44860.000 | 48390.000 | 90.753%   | 95.210    |
| 2    | 21:51:29 | 458.300 | 5319.000 | 0.000    | 49160.000 | 45600.000 | 48970.000 | 88.062%   | 96.110    |
| 3    | 21:52:12 | 495.100 | 5643.000 | 0.000    | 54150.000 | 51240.000 | 55140.000 | 77.547%   | 107.500   |
| x    |          | 94.046% | 108.233% | 0.000    | 101.157%  | 94.463%   | 101.666%  | 85.454%   | 99.594%   |
| σ    |          | n/a     | n/a      | 0.000    | n/a       | n/a       | n/a       | 6.979%    | n/a       |
| %RSD |          | 4.574   | 3.730    | 0.000    | 6.166     | 7.389     | 7.357     | 8.167     | 6.857     |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:50:46 | 89.720  | 90.180   | 489.500  | 24350.000 | 24480.000 | 90.510    | 91.180    | 93.060    |
| 2    | 21:51:29 | 90.400  | 92.550   | 495.500  | 24630.000 | 24640.000 | 91.560    | 93.800    | 95.750    |
| 3    | 21:52:12 | 102.200 | 101.200  | 549.400  | 27300.000 | 27200.000 | 99.620    | 101.000   | 102.700   |
| x    |          | 94.097% | 94.643%  | 102.296% | 101.708%  | 101.744%  | 93.898%   | 95.331%   | 97.174%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 7.443   | 6.135    | 6.455    | 6.405     | 5.998     | 5.307     | 5.339     | 5.125     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:50:46 | 93.150  | 92.350   | 92.390   | 97.040    | 97.260    | 98.880    | 0.000     | 95.450    |
| 2    | 21:51:29 | 94.270  | 94.020   | 94.460   | 96.490    | 98.730    | 98.900    | 0.000     | 95.590    |
| 3    | 21:52:12 | 103.300 | 101.000  | 102.100  | 101.700   | 102.300   | 102.600   | 0.000     | 96.150    |
| x    |          | 96.897% | 95.793%  | 96.304%  | 98.411%   | 99.431%   | 100.129%  | 0.000     | 95.729%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 5.725   | 4.796    | 5.283    | 2.911     | 2.607     | 2.142     | 0.000     | 0.391     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:50:46 | 77.508% | 93.360   | 92.760   | 78.092%   | 90.520    | 92.290    | 93.540    | 95.430    |
| 2    | 21:51:29 | 78.162% | 96.880   | 97.010   | 78.508%   | 91.760    | 93.240    | 94.250    | 96.380    |
| 3    | 21:52:12 | 78.290% | 98.520   | 98.000   | 78.221%   | 92.420    | 93.500    | 94.640    | 96.870    |
| x    |          | 77.987% | 96.252%  | 95.923%  | 78.274%   | 91.566%   | 93.011%   | 94.145%   | 96.229%   |
| σ    |          | 0.420%  | n/a      | n/a      | 0.213%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 0.538   | 2.738    | 2.900    | 0.272     | 1.058     | 0.684     | 0.593     | 0.759     |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 21:50:46 | 74.155% | 94.000   | 93.450   | 93.370    | 95.000    | 93.030    | 75.381%   | 75.986%   |
| 2    | 21:51:29 | 75.238% | 95.210   | 94.480   | 93.460    | 94.310    | 94.880    | 77.279%   | 78.067%   |
| 3    | 21:52:12 | 75.845% | 95.510   | 94.410   | 94.600    | 96.450    | 95.610    | 77.914%   | 78.351%   |
| x    |          | 75.079% | 94.907%  | 94.115%  | 93.812%   | 95.252%   | 94.507%   | 76.858%   | 77.468%   |
| σ    |          | 0.856%  | n/a      | n/a      | n/a       | n/a       | n/a       | 1.318%    | 1.291%    |
| %RSD |          | 1.140   | 0.841    | 0.610    | 0.730     | 1.145     | 1.404     | 1.715     | 1.667     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 21:50:46 | 91.220  | 90.680   | 90.670   | 90.780    | 90.580    | 72.731%   |           |           |
| 2    | 21:51:29 | 93.190  | 92.870   | 92.600   | 92.840    | 92.860    | 73.947%   |           |           |
| 3    | 21:52:12 | 93.390  | 94.170   | 93.970   | 93.990    | 93.550    | 74.312%   |           |           |
| x    |          | 92.599% | 92.574%  | 92.413%  | 92.535%   | 92.329%   | 73.664%   |           |           |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | 0.828%    |           |           |
| %RSD |          | 1.298   | 1.903    | 1.796    | 1.758     | 1.680     | 1.124     |           |           |

CCB8 12/21/2012 9:57:21 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be     | 10B    | 11B     | 13C     | 23Na     | 25Mg     | 26Mg    |
|------|----------|---------|---------|--------|---------|---------|----------|----------|---------|
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 21:58:04 | 93.074% | -0.029  | 2.205  | 2.295   | 0.000   | 3.952    | 4.901    | 5.391   |
| 2    | 21:58:47 | 93.565% | -0.019  | 2.229  | 2.235   | 0.000   | 3.368    | 4.886    | 5.257   |
| 3    | 21:59:30 | 93.004% | -0.031  | 1.933  | 1.991   | 0.000   | 3.688    | 4.936    | 5.262   |
| X    |          | 93.214% | -0.026  | 2.122  | 2.174   | 0.000   | 3.669    | 4.908    | 5.304   |
| σ    |          | 0.306%  | 0.007   | 0.164  | 0.161   | 0.000   | 0.293    | 0.026    | 0.076   |
| %RSD |          | 0.328   | 25.850  | 7.741  | 7.410   | 0.000   | 7.982    | 0.523    | 1.434   |
| Run  | Time     | 27Al    | 28Si    | 37Cl   | 39K     | 43Ca    | 44Ca     | 45Sc     | 47Ti    |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 21:58:04 | 1.575   | -0.114  | 0.000  | -3.421  | 6.278   | 3.562    | 111.281% | 0.051   |
| 2    | 21:58:47 | 1.459   | -0.317  | 0.000  | -3.382  | -0.725  | 3.970    | 110.449% | -0.030  |
| 3    | 21:59:30 | 1.500   | -0.264  | 0.000  | -2.696  | 3.391   | 2.717    | 108.580% | -0.085  |
| X    |          | 1.511   | -0.232  | 0.000  | -3.166  | 2.981   | 3.416    | 110.103% | -0.021  |
| σ    |          | 0.058   | 0.105   | 0.000  | 0.408   | 3.519   | 0.639    | 1.384%   | 0.068   |
| %RSD |          | 3.870   | 45.340  | 0.000  | 12.890  | 118.100 | 18.700   | 1.257    | 324.400 |
| Run  | Time     | 51V     | 52Cr    | 55Mn   | 56Fe    | 57Fe    | 59Co     | 60Ni     | 63Cu    |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 21:58:04 | 0.013   | 0.017   | 0.327  | 10.300  | 14.710  | -0.000   | -0.008   | -0.008  |
| 2    | 21:58:47 | 0.013   | -0.004  | 0.324  | 6.481   | 12.570  | -0.000   | -0.009   | -0.007  |
| 3    | 21:59:30 | 0.002   | -0.002  | 0.322  | 6.106   | 11.740  | -0.006   | 0.008    | -0.003  |
| X    |          | 0.009   | 0.004   | 0.324  | 7.628   | 13.010  | -0.002   | -0.003   | -0.006  |
| σ    |          | 0.006   | 0.011   | 0.003  | 2.319   | 1.534   | 0.003    | 0.010    | 0.002   |
| %RSD |          | 71.600  | 318.500 | 0.902  | 30.400  | 11.790  | 146.300  | 327.700  | 40.900  |
| Run  | Time     | 65Cu    | 66Zn    | 68Zn   | 75As    | 78Se    | 82Se     | 83Kr     | 88Sr    |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 21:58:04 | -0.007  | -0.140  | -0.306 | -0.020  | -0.099  | 0.287    | 0.000    | 0.022   |
| 2    | 21:58:47 | -0.004  | -0.231  | -0.213 | -0.142  | 0.006   | -0.427   | 0.000    | 0.018   |
| 3    | 21:59:30 | 0.018   | -0.044  | -0.210 | -0.053  | 0.018   | 0.088    | 0.000    | 0.026   |
| X    |          | 0.002   | -0.138  | -0.243 | -0.072  | -0.025  | -0.017   | 0.000    | 0.022   |
| σ    |          | 0.014   | 0.093   | 0.055  | 0.063   | 0.065   | 0.368    | 0.000    | 0.004   |
| %RSD |          | 634.900 | 67.330  | 22.440 | 87.630  | 259.200 | 2120.000 | 0.000    | 17.760  |
| Run  | Time     | 89Y     | 95Mo    | 98Mo   | 103Rh   | 107Ag   | 109Ag    | 111Cd    | 114Cd   |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 21:58:04 | 87.148% | 0.429   | 0.475  | 89.790% | -0.002  | 0.010    | -0.040   | -0.014  |
| 2    | 21:58:47 | 90.034% | 0.471   | 0.417  | 90.424% | -0.005  | -0.004   | -0.009   | 0.013   |
| 3    | 21:59:30 | 88.892% | 0.414   | 0.444  | 89.574% | -0.004  | -0.004   | -0.020   | -0.003  |
| X    |          | 88.691% | 0.438   | 0.445  | 89.929% | -0.004  | 0.001    | -0.023   | -0.001  |
| σ    |          | 1.454%  | 0.030   | 0.029  | 0.442%  | 0.002   | 0.008    | 0.016    | 0.014   |
| %RSD |          | 1.639   | 6.739   | 6.524  | 0.491   | 45.440  | 1014.000 | 68.560   | 924.800 |
| Run  | Time     | 115In   | 118Sn   | 121Sb  | 123Sb   | 135Ba   | 137Ba    | 159Tb    | 165Ho   |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 21:58:04 | 79.132% | 0.162   | -0.025 | -0.002  | 0.034   | 0.022    | 79.388%  | 79.264% |
| 2    | 21:58:47 | 81.510% | 0.082   | -0.036 | -0.011  | 0.020   | 0.033    | 81.908%  | 81.816% |
| 3    | 21:59:30 | 82.404% | 0.084   | -0.021 | -0.041  | 0.020   | 0.030    | 81.782%  | 81.776% |
| X    |          | 81.015% | 0.109   | -0.027 | -0.018  | 0.025   | 0.029    | 81.026%  | 80.952% |
| σ    |          | 1.691%  | 0.046   | 0.008  | 0.021   | 0.008   | 0.005    | 1.420%   | 1.462%  |
| %RSD |          | 2.088   | 41.810  | 30.070 | 116.100 | 32.530  | 19.030   | 1.753    | 1.806   |
| Run  | Time     | 203Tl   | 205Tl   | 206Pb  | 207Pb   | 208Pb   | 209Bi    |          |         |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb      |          |         |
| 1    | 21:58:04 | 0.016   | 0.025   | 0.068  | 0.071   | 0.062   | 92.657%  |          |         |
| 2    | 21:58:47 | 0.026   | 0.026   | 0.055  | 0.050   | 0.048   | 94.092%  |          |         |
| 3    | 21:59:30 | 0.019   | 0.029   | 0.049  | 0.048   | 0.043   | 94.005%  |          |         |
| X    |          | 0.021   | 0.027   | 0.057  | 0.056   | 0.051   | 93.585%  |          |         |
| σ    |          | 0.005   | 0.002   | 0.009  | 0.013   | 0.010   | 0.805%   |          |         |
| %RSD |          | 24.400  | 8.533   | 16.380 | 22.510  | 18.960  | 0.860    |          |         |

180-17032-A-21-A 12/21/2012 10:01:43 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B     | 11B      | 13C       | 23Na       | 25Mg      | 26Mg      |
|------|----------|---------|----------|---------|----------|-----------|------------|-----------|-----------|
|      |          | ppb     | ppb      | ppb     | ppb      | ppb       | ppb        | ppb       | ppb       |
| 1    | 22:02:26 | 73.573% | -0.015   | 52.130  | 54.950   | 0.000     | 150000.000 | 34410.000 | 36310.000 |
| 2    | 22:03:09 | 71.303% | -0.018   | 54.390  | 57.140   | 0.000     | 149800.000 | 34890.000 | 36540.000 |
| 3    | 22:03:52 | 68.554% | -0.005   | 55.890  | 57.520   | 0.000     | 153700.000 | 35920.000 | 37530.000 |
| X    |          | 71.143% | -0.013   | 54.130  | 56.540   | 0.000     | 151200.000 | 35080.000 | 36790.000 |
| σ    |          | 2.513%  | 0.007    | 1.895   | 1.389    | 0.000     | 2179.000   | 773.500   | 645.700   |
| %RSD |          | 3.532   | 52.520   | 3.500   | 2.457    | 0.000     | 1.441      | 2.205     | 1.755     |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K      | 43Ca      | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb       | ppb        | ppb       | ppb       |
| 1    | 22:02:26 | 8.852   | 8277.000 | 0.000   | 2910.000 | 81000.000 | 90160.000  | 64.302%   | 1.667     |
| 2    | 22:03:09 | 9.062   | 8065.000 | 0.000   | 2837.000 | 81680.000 | 89330.000  | 64.077%   | 1.611     |
| 3    | 22:03:52 | 8.972   | 8414.000 | 0.000   | 2918.000 | 82060.000 | 90170.000  | 61.635%   | 1.483     |
| X    |          | 8.962   | 8252.000 | 0.000   | 2888.000 | 81580.000 | 89890.000  | 63.338%   | 1.587     |
| σ    |          | 0.105   | 175.700  | 0.000   | 44.980   | 533.800   | 480.900    | 1.479%    | 0.095     |
| %RSD |          | 1.175   | 2.129    | 0.000   | 1.557    | 0.654     | 0.535      | 2.335     | 5.968     |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe     | 57Fe      | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb       | ppb        | ppb       | ppb       |
| 1    | 22:02:26 | 3.164   | 1.556    | 143.600 | 129.100  | 534.000   | 1.419      | 17.080    | 2.282     |
| 2    | 22:03:09 | 3.331   | 1.593    | 142.300 | 121.400  | 519.500   | 1.426      | 17.260    | 2.201     |
| 3    | 22:03:52 | 5.011   | 1.601    | 148.500 | 124.500  | 525.500   | 1.404      | 17.530    | 2.265     |
| X    |          | 3.835   | 1.583    | 144.800 | 125.000  | 526.300   | 1.416      | 17.290    | 2.249     |
| σ    |          | 1.021   | 0.024    | 3.298   | 3.889    | 7.319     | 0.011      | 0.224     | 0.043     |
| %RSD |          | 26.630  | 1.533    | 2.278   | 3.111    | 1.391     | 0.806      | 1.297     | 1.904     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As     | 78Se      | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb       | ppb        | ppb       | ppb       |
| 1    | 22:02:26 | 1.750   | 61.760   | 61.390  | 0.240    | 3.788     | 5.794      | 0.000     | 341.300   |
| 2    | 22:03:09 | 1.697   | 60.420   | 60.360  | 0.275    | 3.646     | 5.910      | 0.000     | 342.800   |
| 3    | 22:03:52 | 1.858   | 64.190   | 64.950  | 0.669    | 3.661     | 5.128      | 0.000     | 356.200   |
| X    |          | 1.768   | 62.120   | 62.240  | 0.395    | 3.698     | 5.611      | 0.000     | 346.800   |
| σ    |          | 0.082   | 1.909    | 2.410   | 0.238    | 0.078     | 0.422      | 0.000     | 8.232     |
| %RSD |          | 4.634   | 3.072    | 3.872   | 60.340   | 2.107     | 7.523      | 0.000     | 2.374     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh    | 107Ag     | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb       | ppb        | ppb       | ppb       |
| 1    | 22:02:26 | 67.038% | 0.766    | 0.760   | 67.479%  | -0.013    | -0.015     | 0.444     | 0.547     |
| 2    | 22:03:09 | 67.966% | 0.628    | 0.638   | 67.741%  | -0.014    | -0.011     | 0.523     | 0.532     |
| 3    | 22:03:52 | 65.515% | 0.574    | 0.570   | 66.200%  | -0.017    | -0.015     | 0.508     | 0.550     |
| X    |          | 66.840% | 0.656    | 0.656   | 67.140%  | -0.014    | -0.014     | 0.492     | 0.543     |
| σ    |          | 1.238%  | 0.099    | 0.096   | 0.824%   | 0.002     | 0.003      | 0.042     | 0.010     |
| %RSD |          | 1.852   | 15.150   | 14.690  | 1.228    | 13.870    | 19.710     | 8.493     | 1.786     |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb    | 135Ba     | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb       | ppb        | ppb       | ppb       |
| 1    | 22:02:26 | 65.242% | 4.139    | 0.346   | 0.373    | 60.800    | 60.780     | 70.737%   | 71.352%   |
| 2    | 22:03:09 | 66.331% | 3.031    | 0.275   | 0.286    | 61.160    | 61.020     | 72.564%   | 73.552%   |
| 3    | 22:03:52 | 65.580% | 2.450    | 0.293   | 0.288    | 63.220    | 62.350     | 71.961%   | 73.136%   |
| X    |          | 65.717% | 3.207    | 0.304   | 0.316    | 61.730    | 61.380     | 71.754%   | 72.680%   |
| σ    |          | 0.557%  | 0.858    | 0.037   | 0.050    | 1.307     | 0.850      | 0.931%    | 1.169%    |
| %RSD |          | 0.848   | 26.750   | 12.110  | 15.700   | 2.117     | 1.384      | 1.298     | 1.608     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb    | 208Pb     | 209Bi      |           |           |
|      |          | ppb     | ppb      | ppb     | ppb      | ppb       | ppb        |           |           |
| 1    | 22:02:26 | 0.038   | 0.038    | 0.401   | 0.383    | 0.398     | 70.893%    |           |           |
| 2    | 22:03:09 | 0.034   | 0.042    | 0.382   | 0.392    | 0.383     | 72.685%    |           |           |
| 3    | 22:03:52 | 0.037   | 0.031    | 0.420   | 0.393    | 0.407     | 72.294%    |           |           |
| X    |          | 0.036   | 0.037    | 0.401   | 0.389    | 0.396     | 71.958%    |           |           |
| σ    |          | 0.002   | 0.006    | 0.019   | 0.006    | 0.012     | 0.942%     |           |           |
| %RSD |          | 5.348   | 15.180   | 4.717   | 1.426    | 3.090     | 1.309      |           |           |

180-17032-A-22-A 12/21/2012 10:06:05 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be    | 10B     | 11B     | 13C     | 23Na    | 25Mg    | 26Mg    |
|------|----------|---------|--------|---------|---------|---------|---------|---------|---------|
|      |          | ppb     | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 22:06:47 | 78.150% | -0.029 | 2.834   | 2.885   | 0.000   | 15.020  | 5.288   | 5.337   |
| 2    | 22:07:31 | 77.465% | -0.044 | 2.500   | 2.624   | 0.000   | 8.073   | 2.562   | 3.383   |
| 3    | 22:08:13 | 75.164% | -0.015 | 2.303   | 2.552   | 0.000   | 4.580   | 2.036   | 2.218   |
| X    |          | 76.926% | -0.029 | 2.546   | 2.687   | 0.000   | 9.223   | 3.295   | 3.646   |
| σ    |          | 1.564%  | 0.015  | 0.268   | 0.175   | 0.000   | 5.312   | 1.746   | 1.576   |
| %RSD |          | 2.033   | 50.420 | 10.540  | 6.513   | 0.000   | 57.590  | 52.980  | 43.220  |
| Run  | Time     | 27Al    | 28Si   | 37Cl    | 39K     | 43Ca    | 44Ca    | 45Sc    | 47Ti    |
|      |          | ppb     | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 22:06:47 | 0.823   | 12.860 | 0.000   | 5.939   | 23.480  | 25.480  | 69.607% | 0.286   |
| 2    | 22:07:31 | 0.980   | 12.490 | 0.000   | 5.470   | 26.570  | 21.640  | 67.376% | 0.343   |
| 3    | 22:08:13 | 0.850   | 11.590 | 0.000   | 5.641   | 3.123   | 21.330  | 67.733% | 0.249   |
| X    |          | 0.884   | 12.310 | 0.000   | 5.683   | 17.720  | 22.820  | 68.239% | 0.293   |
| σ    |          | 0.084   | 0.654  | 0.000   | 0.237   | 12.740  | 2.312   | 1.198%  | 0.047   |
| %RSD |          | 9.480   | 5.311  | 0.000   | 4.174   | 71.870  | 10.130  | 1.756   | 16.090  |
| Run  | Time     | 51V     | 52Cr   | 55Mn    | 56Fe    | 57Fe    | 59Co    | 60Ni    | 63Cu    |
|      |          | ppb     | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 22:06:47 | 0.412   | 1.365  | 0.178   | 9.321   | 6.711   | -0.009  | 0.031   | 0.079   |
| 2    | 22:07:31 | 1.587   | 1.247  | 0.151   | 8.595   | 6.541   | -0.010  | 0.021   | 0.088   |
| 3    | 22:08:13 | 2.902   | 1.043  | 0.144   | 8.027   | 5.569   | -0.005  | 0.000   | 0.089   |
| X    |          | 1.634   | 1.218  | 0.158   | 8.648   | 6.273   | -0.008  | 0.017   | 0.085   |
| σ    |          | 1.246   | 0.163  | 0.018   | 0.648   | 0.616   | 0.003   | 0.016   | 0.006   |
| %RSD |          | 76.260  | 13.340 | 11.440  | 7.497   | 9.818   | 36.920  | 89.940  | 6.644   |
| Run  | Time     | 65Cu    | 66Zn   | 68Zn    | 75As    | 78Se    | 82Se    | 83Kr    | 88Sr    |
|      |          | ppb     | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 22:06:47 | 0.055   | 0.513  | 0.309   | -0.070  | -0.294  | -0.139  | 0.000   | 0.070   |
| 2    | 22:07:31 | 0.061   | 0.251  | 0.193   | -0.371  | -0.447  | 0.492   | 0.000   | 0.044   |
| 3    | 22:08:13 | 0.105   | 0.491  | 0.408   | 0.137   | -0.369  | 1.460   | 0.000   | 0.042   |
| X    |          | 0.074   | 0.418  | 0.303   | -0.101  | -0.370  | 0.604   | 0.000   | 0.052   |
| σ    |          | 0.027   | 0.145  | 0.108   | 0.256   | 0.076   | 0.805   | 0.000   | 0.016   |
| %RSD |          | 36.880  | 34.710 | 35.420  | 251.900 | 20.590  | 133.200 | 0.000   | 29.970  |
| Run  | Time     | 89Y     | 95Mo   | 98Mo    | 103Rh   | 107Ag   | 109Ag   | 111Cd   | 114Cd   |
|      |          | ppb     | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 22:06:47 | 71.341% | 0.213  | 0.181   | 77.040% | -0.018  | -0.014  | -0.051  | -0.038  |
| 2    | 22:07:31 | 72.650% | 0.146  | 0.159   | 77.388% | -0.018  | -0.013  | -0.049  | -0.022  |
| 3    | 22:08:13 | 72.618% | 0.155  | 0.150   | 77.449% | -0.015  | -0.020  | -0.051  | -0.045  |
| X    |          | 72.203% | 0.172  | 0.163   | 77.292% | -0.017  | -0.016  | -0.050  | -0.035  |
| σ    |          | 0.747%  | 0.036  | 0.016   | 0.220%  | 0.002   | 0.004   | 0.001   | 0.012   |
| %RSD |          | 1.034   | 21.280 | 9.868   | 0.285   | 9.984   | 22.520  | 2.648   | 32.980  |
| Run  | Time     | 115In   | 118Sn  | 121Sb   | 123Sb   | 135Ba   | 137Ba   | 159Tb   | 165Ho   |
|      |          | ppb     | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 22:06:47 | 71.092% | 1.104  | 0.049   | 0.045   | 0.058   | 0.049   | 75.878% | 76.126% |
| 2    | 22:07:31 | 72.164% | 1.032  | 0.057   | 0.037   | 0.052   | 0.020   | 77.849% | 78.532% |
| 3    | 22:08:13 | 72.479% | 1.056  | 0.057   | 0.066   | 0.025   | 0.022   | 78.205% | 78.867% |
| X    |          | 71.912% | 1.064  | 0.055   | 0.050   | 0.045   | 0.030   | 77.310% | 77.842% |
| σ    |          | 0.727%  | 0.037  | 0.005   | 0.015   | 0.018   | 0.016   | 1.253%  | 1.495%  |
| %RSD |          | 1.012   | 3.468  | 8.318   | 29.700  | 39.550  | 53.730  | 1.621   | 1.921   |
| Run  | Time     | 203Tl   | 205Tl  | 206Pb   | 207Pb   | 208Pb   | 209Bi   |         |         |
|      |          | ppb     | ppb    | ppb     | ppb     | ppb     | ppb     |         |         |
| 1    | 22:06:47 | 0.012   | 0.006  | 0.011   | 0.004   | 0.003   | 83.892% |         |         |
| 2    | 22:07:31 | 0.007   | 0.008  | -0.003  | 0.005   | -0.003  | 86.625% |         |         |
| 3    | 22:08:13 | 0.007   | 0.005  | -0.004  | -0.003  | -0.003  | 87.581% |         |         |
| X    |          | 0.008   | 0.006  | 0.001   | 0.002   | -0.001  | 86.033% |         |         |
| σ    |          | 0.003   | 0.002  | 0.008   | 0.004   | 0.004   | 1.915%  |         |         |
| %RSD |          | 32.650  | 27.590 | 669.300 | 244.200 | 412.200 | 2.226   |         |         |

180-17032-A-23-A 12/21/2012 10:10:26 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be    | 10B     | 11B     | 13C     | 23Na    | 25Mg    | 26Mg    |
|------|----------|---------|--------|---------|---------|---------|---------|---------|---------|
|      |          | ppb     | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 22:11:09 | 80.584% | -0.039 | 2.125   | 2.050   | 0.000   | 8.192   | 1.937   | 2.607   |
| 2    | 22:11:52 | 81.681% | -0.026 | 2.242   | 1.907   | 0.000   | 7.716   | 2.215   | 2.495   |
| 3    | 22:12:35 | 80.393% | -0.023 | 1.814   | 1.892   | 0.000   | 5.620   | 1.785   | 1.837   |
| X    |          | 80.886% | -0.030 | 2.061   | 1.950   | 0.000   | 7.176   | 1.979   | 2.313   |
| σ    |          | 0.695%  | 0.008  | 0.221   | 0.087   | 0.000   | 1.368   | 0.218   | 0.416   |
| %RSD |          | 0.859   | 27.470 | 10.730  | 4.476   | 0.000   | 19.070  | 11.030  | 17.980  |
| Run  | Time     | 27Al    | 28Si   | 37Cl    | 39K     | 43Ca    | 44Ca    | 45Sc    | 47Ti    |
|      |          | ppb     | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 22:11:09 | 0.529   | 9.959  | 0.000   | 10.170  | 9.719   | 12.520  | 68.784% | 0.210   |
| 2    | 22:11:52 | 0.261   | 9.244  | 0.000   | 6.516   | 3.859   | 9.609   | 70.734% | 0.302   |
| 3    | 22:12:35 | 0.302   | 8.585  | 0.000   | 5.936   | 3.196   | 7.550   | 70.709% | 0.279   |
| X    |          | 0.364   | 9.263  | 0.000   | 7.542   | 5.591   | 9.894   | 70.076% | 0.263   |
| σ    |          | 0.145   | 0.687  | 0.000   | 2.298   | 3.590   | 2.500   | 1.119%  | 0.048   |
| %RSD |          | 39.700  | 7.420  | 0.000   | 30.470  | 64.210  | 25.260  | 1.596   | 18.180  |
| Run  | Time     | 51V     | 52Cr   | 55Mn    | 56Fe    | 57Fe    | 59Co    | 60Ni    | 63Cu    |
|      |          | ppb     | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 22:11:09 | 0.391   | 1.164  | 0.158   | 12.510  | 6.350   | -0.001  | 0.065   | 0.104   |
| 2    | 22:11:52 | 2.709   | 0.991  | 0.147   | 8.165   | 2.926   | 0.001   | 0.019   | 0.106   |
| 3    | 22:12:35 | 0.968   | 0.955  | 0.146   | 5.043   | 2.704   | 0.001   | 0.031   | 0.097   |
| X    |          | 1.356   | 1.037  | 0.150   | 8.572   | 3.993   | 0.000   | 0.038   | 0.102   |
| σ    |          | 1.207   | 0.112  | 0.007   | 3.749   | 2.043   | 0.001   | 0.024   | 0.005   |
| %RSD |          | 88.990  | 10.780 | 4.641   | 43.740  | 51.170  | 250.000 | 61.780  | 4.751   |
| Run  | Time     | 65Cu    | 66Zn   | 68Zn    | 75As    | 78Se    | 82Se    | 83Kr    | 88Sr    |
|      |          | ppb     | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 22:11:09 | 0.132   | 0.238  | 0.198   | -0.139  | -0.118  | 0.642   | 0.000   | 0.032   |
| 2    | 22:11:52 | 0.099   | 0.063  | 0.035   | -0.200  | -0.362  | 0.452   | 0.000   | 0.038   |
| 3    | 22:12:35 | 0.087   | 0.443  | 0.233   | -0.224  | -0.265  | 0.309   | 0.000   | 0.033   |
| X    |          | 0.106   | 0.248  | 0.155   | -0.188  | -0.249  | 0.468   | 0.000   | 0.034   |
| σ    |          | 0.023   | 0.190  | 0.106   | 0.043   | 0.123   | 0.167   | 0.000   | 0.003   |
| %RSD |          | 21.830  | 76.560 | 68.060  | 23.110  | 49.430  | 35.750  | 0.000   | 8.410   |
| Run  | Time     | 89Y     | 95Mo   | 98Mo    | 103Rh   | 107Ag   | 109Ag   | 111Cd   | 114Cd   |
|      |          | ppb     | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 22:11:09 | 73.857% | 1.367  | 1.327   | 78.741% | -0.018  | -0.015  | -0.063  | -0.042  |
| 2    | 22:11:52 | 75.047% | 1.434  | 1.315   | 79.799% | -0.018  | -0.012  | -0.129  | -0.073  |
| 3    | 22:12:35 | 74.067% | 1.312  | 1.354   | 79.328% | -0.023  | -0.010  | -0.078  | -0.054  |
| X    |          | 74.324% | 1.371  | 1.332   | 79.289% | -0.020  | -0.012  | -0.090  | -0.056  |
| σ    |          | 0.635%  | 0.061  | 0.020   | 0.530%  | 0.003   | 0.003   | 0.034   | 0.016   |
| %RSD |          | 0.854   | 4.433  | 1.505   | 0.669   | 15.960  | 20.540  | 38.160  | 27.990  |
| Run  | Time     | 115In   | 118Sn  | 121Sb   | 123Sb   | 135Ba   | 137Ba   | 159Tb   | 165Ho   |
|      |          | ppb     | ppb    | ppb     | ppb     | ppb     | ppb     | ppb     | ppb     |
| 1    | 22:11:09 | 71.844% | 0.642  | 0.005   | 0.041   | 0.102   | 0.059   | 76.089% | 75.873% |
| 2    | 22:11:52 | 74.402% | 0.720  | 0.037   | 0.022   | 0.041   | 0.069   | 78.187% | 79.022% |
| 3    | 22:12:35 | 73.716% | 0.681  | 0.034   | 0.048   | 0.055   | 0.077   | 78.463% | 79.655% |
| X    |          | 73.321% | 0.681  | 0.025   | 0.037   | 0.066   | 0.068   | 77.579% | 78.183% |
| σ    |          | 1.324%  | 0.039  | 0.017   | 0.013   | 0.032   | 0.009   | 1.299%  | 2.026%  |
| %RSD |          | 1.805   | 5.772  | 68.760  | 35.970  | 48.410  | 13.150  | 1.674   | 2.591   |
| Run  | Time     | 203Tl   | 205Tl  | 206Pb   | 207Pb   | 208Pb   | 209Bi   |         |         |
|      |          | ppb     | ppb    | ppb     | ppb     | ppb     | ppb     |         |         |
| 1    | 22:11:09 | 0.001   | 0.005  | 0.008   | -0.005  | 0.002   | 84.493% |         |         |
| 2    | 22:11:52 | 0.002   | 0.005  | -0.001  | 0.002   | -0.001  | 86.789% |         |         |
| 3    | 22:12:35 | 0.002   | 0.004  | -0.000  | 0.002   | -0.004  | 88.143% |         |         |
| X    |          | 0.001   | 0.005  | 0.002   | -0.000  | -0.001  | 86.475% |         |         |
| σ    |          | 0.001   | 0.000  | 0.005   | 0.004   | 0.003   | 1.845%  |         |         |
| %RSD |          | 54.330  | 8.221  | 238.100 | 886.100 | 300.400 | 2.134   |         |         |

180-17069-A-1-A 12/21/2012 10:14:47 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B     | 11B       | 13C       | 23Na      | 25Mg     | 26Mg     |
|------|----------|---------|----------|---------|-----------|-----------|-----------|----------|----------|
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:15:30 | 74.717% | 0.005    | 71.370  | 72.490    | 0.000     | 22510.000 | 4524.000 | 4745.000 |
| 2    | 22:16:13 | 72.328% | 0.010    | 69.650  | 72.090    | 0.000     | 22610.000 | 4519.000 | 4881.000 |
| 3    | 22:16:55 | 69.508% | -0.004   | 74.030  | 74.020    | 0.000     | 22050.000 | 4538.000 | 4786.000 |
| X    |          | 72.184% | 0.004    | 71.680  | 72.860    | 0.000     | 22390.000 | 4527.000 | 4804.000 |
| σ    |          | 2.607%  | 0.007    | 2.203   | 1.018     | 0.000     | 295.800   | 9.612    | 69.740   |
| %RSD |          | 3.612   | 189.000  | 3.074   | 1.397     | 0.000     | 1.321     | 0.212    | 1.452    |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K       | 43Ca      | 44Ca      | 45Sc     | 47Ti     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:15:30 | 122.800 | 9407.000 | 0.000   | 6464.000  | 41490.000 | 46620.000 | 65.400%  | 3.809    |
| 2    | 22:16:13 | 126.800 | 9708.000 | 0.000   | 6734.000  | 42350.000 | 47720.000 | 62.182%  | 3.762    |
| 3    | 22:16:55 | 124.700 | 9519.000 | 0.000   | 6434.000  | 40670.000 | 45240.000 | 62.768%  | 3.374    |
| X    |          | 124.800 | 9545.000 | 0.000   | 6544.000  | 41500.000 | 46530.000 | 63.450%  | 3.649    |
| σ    |          | 1.988   | 152.000  | 0.000   | 165.100   | 838.800   | 1245.000  | 1.714%   | 0.239    |
| %RSD |          | 1.593   | 1.593    | 0.000   | 2.523     | 2.021     | 2.675     | 2.701    | 6.544    |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe      | 57Fe      | 59Co      | 60Ni     | 63Cu     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:15:30 | 0.831   | 1.385    | 246.900 | 13780.000 | 12290.000 | 0.231     | 1.343    | 0.869    |
| 2    | 22:16:13 | 3.525   | 1.345    | 252.200 | 13840.000 | 12370.000 | 0.255     | 1.270    | 0.849    |
| 3    | 22:16:55 | 2.512   | 1.318    | 250.700 | 13930.000 | 12450.000 | 0.228     | 1.184    | 0.882    |
| X    |          | 2.289   | 1.349    | 249.900 | 13850.000 | 12370.000 | 0.238     | 1.266    | 0.867    |
| σ    |          | 1.361   | 0.034    | 2.700   | 74.840    | 78.700    | 0.015     | 0.080    | 0.017    |
| %RSD |          | 59.440  | 2.509    | 1.080   | 0.540     | 0.636     | 6.240     | 6.308    | 1.928    |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As      | 78Se      | 82Se      | 83Kr     | 88Sr     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:15:30 | 0.841   | 5.971    | 6.304   | 9.526     | -0.249    | 0.699     | 0.000    | 270.300  |
| 2    | 22:16:13 | 0.775   | 5.998    | 6.050   | 10.990    | 0.059     | 1.102     | 0.000    | 269.700  |
| 3    | 22:16:55 | 0.849   | 5.647    | 6.124   | 10.290    | -0.087    | 1.386     | 0.000    | 275.000  |
| X    |          | 0.822   | 5.872    | 6.159   | 10.270    | -0.092    | 1.062     | 0.000    | 271.600  |
| σ    |          | 0.041   | 0.195    | 0.131   | 0.731     | 0.154     | 0.345     | 0.000    | 2.899    |
| %RSD |          | 4.948   | 3.321    | 2.118   | 7.117     | 166.800   | 32.490    | 0.000    | 1.067    |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh     | 107Ag     | 109Ag     | 111Cd    | 114Cd    |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:15:30 | 69.844% | 0.271    | 0.225   | 72.473%   | -0.024    | -0.014    | -0.008   | -0.003   |
| 2    | 22:16:13 | 70.684% | 0.203    | 0.227   | 72.699%   | -0.019    | -0.010    | -0.089   | -0.074   |
| 3    | 22:16:55 | 69.224% | 0.221    | 0.220   | 71.794%   | -0.022    | -0.017    | -0.068   | -0.035   |
| X    |          | 69.917% | 0.232    | 0.224   | 72.322%   | -0.022    | -0.014    | -0.055   | -0.037   |
| σ    |          | 0.733%  | 0.035    | 0.003   | 0.471%    | 0.002     | 0.004     | 0.042    | 0.036    |
| %RSD |          | 1.048   | 15.090   | 1.507   | 0.651     | 10.170    | 27.420    | 75.760   | 95.550   |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb     | 135Ba     | 137Ba     | 159Tb    | 165Ho    |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:15:30 | 68.816% | 0.876    | 0.094   | 0.153     | 90.170    | 89.370    | 75.257%  | 75.285%  |
| 2    | 22:16:13 | 70.678% | 0.887    | 0.143   | 0.125     | 90.550    | 89.910    | 76.665%  | 77.439%  |
| 3    | 22:16:55 | 70.075% | 0.822    | 0.127   | 0.137     | 90.670    | 90.820    | 77.008%  | 78.429%  |
| X    |          | 69.856% | 0.862    | 0.121   | 0.138     | 90.470    | 90.030    | 76.310%  | 77.051%  |
| σ    |          | 0.950%  | 0.035    | 0.025   | 0.014     | 0.260     | 0.730     | 0.928%   | 1.607%   |
| %RSD |          | 1.360   | 4.069    | 20.390  | 10.220    | 0.287     | 0.810     | 1.216    | 2.086    |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb     | 208Pb     | 209Bi     |          |          |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       |          |          |
| 1    | 22:15:30 | 0.001   | -0.003   | 0.405   | 0.431     | 0.410     | 79.469%   |          |          |
| 2    | 22:16:13 | -0.003  | -0.002   | 0.416   | 0.445     | 0.410     | 81.595%   |          |          |
| 3    | 22:16:55 | -0.003  | -0.005   | 0.400   | 0.421     | 0.401     | 81.969%   |          |          |
| X    |          | -0.002  | -0.004   | 0.407   | 0.433     | 0.407     | 81.011%   |          |          |
| σ    |          | 0.003   | 0.002    | 0.008   | 0.012     | 0.006     | 1.348%    |          |          |
| %RSD |          | 140.700 | 47.500   | 2.025   | 2.788     | 1.364     | 1.665     |          |          |

180-17069-A-2-A

12/21/2012 10:19:05 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be       | 10B    | 11B      | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|---------|-----------|--------|----------|-----------|-----------|-----------|-----------|
|      |          | ppb     | ppb       | ppb    | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:19:48 | 75.187% | -0.014    | 54.160 | 53.730   | 0.000     | 14800.000 | 20090.000 | 21010.000 |
| 2    | 22:20:31 | 71.776% | -0.013    | 54.230 | 56.650   | 0.000     | 14950.000 | 20290.000 | 21530.000 |
| 3    | 22:21:14 | 69.329% | -0.009    | 53.640 | 53.730   | 0.000     | 14410.000 | 20190.000 | 21430.000 |
| X    |          | 72.098% | -0.012    | 54.010 | 54.700   | 0.000     | 14720.000 | 20190.000 | 21320.000 |
| σ    |          | 2.942%  | 0.003     | 0.323  | 1.685    | 0.000     | 278.600   | 99.870    | 275.300   |
| %RSD |          | 4.081   | 25.570    | 0.597  | 3.080    | 0.000     | 1.893     | 0.495     | 1.291     |
| Run  | Time     | 27Al    | 28Si      | 37Cl   | 39K      | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb       | ppb    | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:19:48 | 34.260  | 12180.000 | 0.000  | 5331.000 | 80290.000 | 89570.000 | 64.751%   | 2.424     |
| 2    | 22:20:31 | 35.900  | 12670.000 | 0.000  | 5364.000 | 81160.000 | 90060.000 | 61.276%   | 2.713     |
| 3    | 22:21:14 | 34.750  | 12400.000 | 0.000  | 5251.000 | 80500.000 | 88680.000 | 61.298%   | 2.711     |
| X    |          | 34.970  | 12420.000 | 0.000  | 5315.000 | 80650.000 | 89440.000 | 62.442%   | 2.616     |
| σ    |          | 0.840   | 242.900   | 0.000  | 58.130   | 452.900   | 696.200   | 1.999%    | 0.166     |
| %RSD |          | 2.401   | 1.956     | 0.000  | 1.094    | 0.562     | 0.778     | 3.202     | 6.359     |
| Run  | Time     | 51V     | 52Cr      | 55Mn   | 56Fe     | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb       | ppb    | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:19:48 | 4.101   | 2.143     | 7.059  | 229.500  | 605.800   | 0.298     | 0.897     | 3.366     |
| 2    | 22:20:31 | 5.271   | 2.237     | 7.152  | 230.400  | 610.200   | 0.306     | 0.866     | 3.551     |
| 3    | 22:21:14 | 5.672   | 2.177     | 7.179  | 226.100  | 586.500   | 0.284     | 0.880     | 3.393     |
| X    |          | 5.015   | 2.186     | 7.130  | 228.600  | 600.900   | 0.296     | 0.881     | 3.437     |
| σ    |          | 0.816   | 0.047     | 0.063  | 2.281    | 12.580    | 0.011     | 0.016     | 0.100     |
| %RSD |          | 16.270  | 2.169     | 0.885  | 0.998    | 2.094     | 3.644     | 1.794     | 2.907     |
| Run  | Time     | 65Cu    | 66Zn      | 68Zn   | 75As     | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb       | ppb    | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:19:48 | 3.260   | 37.360    | 39.150 | 6.037    | 0.718     | 1.010     | 0.000     | 264.700   |
| 2    | 22:20:31 | 3.540   | 40.790    | 40.260 | 6.697    | 0.838     | 2.209     | 0.000     | 269.900   |
| 3    | 22:21:14 | 3.352   | 38.740    | 39.600 | 6.412    | 0.564     | 1.568     | 0.000     | 266.300   |
| X    |          | 3.384   | 38.960    | 39.670 | 6.382    | 0.707     | 1.595     | 0.000     | 267.000   |
| σ    |          | 0.143   | 1.725     | 0.556  | 0.331    | 0.138     | 0.600     | 0.000     | 2.700     |
| %RSD |          | 4.217   | 4.427     | 1.402  | 5.187    | 19.470    | 37.600    | 0.000     | 1.011     |
| Run  | Time     | 89Y     | 95Mo      | 98Mo   | 103Rh    | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb       | ppb    | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:19:48 | 68.053% | 1.425     | 1.410  | 70.593%  | -0.025    | -0.017    | 0.142     | 0.187     |
| 2    | 22:20:31 | 67.196% | 1.347     | 1.543  | 69.600%  | -0.021    | -0.019    | 0.089     | 0.146     |
| 3    | 22:21:14 | 67.836% | 1.504     | 1.433  | 69.433%  | -0.020    | -0.012    | 0.148     | 0.177     |
| X    |          | 67.695% | 1.425     | 1.462  | 69.875%  | -0.022    | -0.016    | 0.126     | 0.170     |
| σ    |          | 0.446%  | 0.079     | 0.071  | 0.627%   | 0.003     | 0.004     | 0.033     | 0.021     |
| %RSD |          | 0.658   | 5.528     | 4.870  | 0.897    | 11.860    | 23.260    | 26.050    | 12.420    |
| Run  | Time     | 115In   | 118Sn     | 121Sb  | 123Sb    | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb       | ppb    | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:19:48 | 67.233% | 0.720     | 0.895  | 0.914    | 66.760    | 66.900    | 73.330%   | 73.976%   |
| 2    | 22:20:31 | 67.307% | 0.810     | 0.904  | 0.895    | 69.560    | 68.860    | 74.117%   | 75.283%   |
| 3    | 22:21:14 | 67.972% | 0.858     | 0.911  | 0.965    | 67.630    | 67.370    | 74.851%   | 75.625%   |
| X    |          | 67.504% | 0.796     | 0.903  | 0.925    | 67.980    | 67.710    | 74.099%   | 74.961%   |
| σ    |          | 0.407%  | 0.070     | 0.008  | 0.036    | 1.430     | 1.026     | 0.760%    | 0.870%    |
| %RSD |          | 0.603   | 8.800     | 0.910  | 3.930    | 2.103     | 1.515     | 1.026     | 1.161     |
| Run  | Time     | 203Tl   | 205Tl     | 206Pb  | 207Pb    | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb       | ppb    | ppb      | ppb       | ppb       |           |           |
| 1    | 22:19:48 | 0.016   | 0.014     | 0.294  | 0.324    | 0.301     | 77.082%   |           |           |
| 2    | 22:20:31 | 0.010   | 0.018     | 0.321  | 0.316    | 0.310     | 78.433%   |           |           |
| 3    | 22:21:14 | 0.018   | 0.016     | 0.315  | 0.312    | 0.300     | 80.786%   |           |           |
| X    |          | 0.015   | 0.016     | 0.310  | 0.317    | 0.304     | 78.767%   |           |           |
| σ    |          | 0.004   | 0.002     | 0.014  | 0.006    | 0.006     | 1.874%    |           |           |
| %RSD |          | 25.810  | 14.870    | 4.606  | 1.842    | 1.857     | 2.380     |           |           |

180-17069-A-3-A 12/21/2012 10:23:24 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li      | 9Be       | 10B       | 11B        | 13C       | 23Na       | 25Mg      | 26Mg      |
|------|----------|----------|-----------|-----------|------------|-----------|------------|-----------|-----------|
|      |          | ppb      | ppb       | ppb       | ppb        | ppb       | ppb        | ppb       | ppb       |
| 1    | 22:24:07 | 73.221%  | 1.820     | 94.610    | 94.290     | 0.000     | 21860.000  | 12410.000 | 12990.000 |
| 2    | 22:24:51 | 71.995%  | 1.922     | 94.190    | 94.160     | 0.000     | 21590.000  | 12530.000 | 13170.000 |
| 3    | 22:25:33 | 71.981%  | 1.789     | 91.910    | 94.010     | 0.000     | 21710.000  | 12410.000 | 13000.000 |
| X    |          | 72.399%  | 1.844     | 93.570    | 94.150     | 0.000     | 21720.000  | 12450.000 | 13050.000 |
| σ    |          | 0.712%   | 0.069     | 1.448     | 0.142      | 0.000     | 132.500    | 72.090    | 105.400   |
| %RSD |          | 0.983    | 3.763     | 1.548     | 0.150      | 0.000     | 0.610      | 0.579     | 0.808     |
| Run  | Time     | 27Al     | 28Si      | 37Cl      | 39K        | 43Ca      | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb      | ppb       | ppb       | ppb        | ppb       | ppb        | ppb       | ppb       |
| 1    | 22:24:07 | 9915.000 | 19650.000 | 0.000     | 5864.000   | 51040.000 | 56280.000  | 65.673%   | 8.761     |
| 2    | 22:24:51 | 9902.000 | 19530.000 | 0.000     | 5772.000   | 50490.000 | 55360.000  | 66.142%   | 8.314     |
| 3    | 22:25:33 | 9764.000 | 19220.000 | 0.000     | 5790.000   | 50320.000 | 55410.000  | 65.567%   | 8.037     |
| X    |          | 9860.000 | 19470.000 | 0.000     | 5809.000   | 50620.000 | 55690.000  | 65.794%   | 8.371     |
| σ    |          | 83.390   | 219.700   | 0.000     | 48.610     | 377.800   | 518.100    | 0.306%    | 0.365     |
| %RSD |          | 0.846    | 1.129     | 0.000     | 0.837      | 0.746     | 0.930      | 0.465     | 4.359     |
| Run  | Time     | 51V      | 52Cr      | 55Mn      | 56Fe       | 57Fe      | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb      | ppb       | ppb       | ppb        | ppb       | ppb        | ppb       | ppb       |
| 1    | 22:24:07 | 40.270   | 33.010    | 12770.000 | 101300.000 | 99450.000 | 16.660     | 22.970    | 4.260     |
| 2    | 22:24:51 | 40.650   | 33.040    | 12680.000 | 99440.000  | 97730.000 | 16.960     | 22.520    | 4.167     |
| 3    | 22:25:33 | 39.600   | 32.990    | 12610.000 | 99420.000  | 98810.000 | 16.940     | 23.190    | 4.059     |
| X    |          | 40.170   | 33.020    | 12690.000 | 100100.000 | 98670.000 | 16.850     | 22.890    | 4.162     |
| σ    |          | 0.529    | 0.026     | 83.030    | 1093.000   | 869.500   | 0.170      | 0.342     | 0.101     |
| %RSD |          | 1.316    | 0.079     | 0.654     | 1.092      | 0.881     | 1.009      | 1.495     | 2.422     |
| Run  | Time     | 65Cu     | 66Zn      | 68Zn      | 75As       | 78Se      | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb      | ppb       | ppb       | ppb        | ppb       | ppb        | ppb       | ppb       |
| 1    | 22:24:07 | 4.701    | 119.000   | 117.700   | 24.320     | 0.120     | -0.046     | 0.000     | 170.700   |
| 2    | 22:24:51 | 4.401    | 116.600   | 117.700   | 23.920     | 0.305     | 0.395      | 0.000     | 170.700   |
| 3    | 22:25:33 | 4.614    | 117.800   | 117.800   | 24.390     | 0.359     | -0.350     | 0.000     | 172.300   |
| X    |          | 4.572    | 117.800   | 117.700   | 24.210     | 0.261     | -0.000     | 0.000     | 171.200   |
| σ    |          | 0.155    | 1.210     | 0.053     | 0.256      | 0.125     | 0.374      | 0.000     | 0.938     |
| %RSD |          | 3.384    | 1.027     | 0.045     | 1.059      | 47.880    | 112900.000 | 0.000     | 0.548     |
| Run  | Time     | 89Y      | 95Mo      | 98Mo      | 103Rh      | 107Ag     | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb      | ppb       | ppb       | ppb        | ppb       | ppb        | ppb       | ppb       |
| 1    | 22:24:07 | 83.599%  | 0.270     | 0.211     | 71.500%    | -0.018    | -0.011     | 0.161     | 0.116     |
| 2    | 22:24:51 | 85.415%  | 0.289     | 0.224     | 71.560%    | -0.015    | -0.017     | 0.074     | 0.091     |
| 3    | 22:25:33 | 85.853%  | 0.298     | 0.213     | 72.597%    | -0.017    | -0.016     | 0.069     | 0.059     |
| X    |          | 84.956%  | 0.285     | 0.216     | 71.886%    | -0.017    | -0.015     | 0.102     | 0.089     |
| σ    |          | 1.195%   | 0.014     | 0.007     | 0.617%     | 0.001     | 0.003      | 0.051     | 0.029     |
| %RSD |          | 1.407    | 4.996     | 3.151     | 0.859      | 7.933     | 20.680     | 50.600    | 32.630    |
| Run  | Time     | 115In    | 118Sn     | 121Sb     | 123Sb      | 135Ba     | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb      | ppb       | ppb       | ppb        | ppb       | ppb        | ppb       | ppb       |
| 1    | 22:24:07 | 68.456%  | 0.821     | 0.824     | 0.870      | 66.650    | 66.850     | 75.409%   | 76.012%   |
| 2    | 22:24:51 | 70.364%  | 0.745     | 0.911     | 0.993      | 68.440    | 66.870     | 77.429%   | 79.319%   |
| 3    | 22:25:33 | 70.663%  | 0.582     | 0.859     | 0.860      | 67.990    | 68.050     | 79.062%   | 79.377%   |
| X    |          | 69.828%  | 0.716     | 0.865     | 0.907      | 67.690    | 67.260     | 77.300%   | 78.236%   |
| σ    |          | 1.197%   | 0.122     | 0.044     | 0.074      | 0.928     | 0.691      | 1.830%    | 1.927%    |
| %RSD |          | 1.714    | 17.080    | 5.059     | 8.185      | 1.371     | 1.028      | 2.368     | 2.462     |
| Run  | Time     | 203Tl    | 205Tl     | 206Pb     | 207Pb      | 208Pb     | 209Bi      |           |           |
|      |          | ppb      | ppb       | ppb       | ppb        | ppb       | ppb        |           |           |
| 1    | 22:24:07 | 0.002    | 0.010     | 7.103     | 7.314      | 7.186     | 77.091%    |           |           |
| 2    | 22:24:51 | 0.006    | 0.007     | 7.197     | 7.356      | 7.289     | 79.037%    |           |           |
| 3    | 22:25:33 | 0.003    | 0.002     | 7.260     | 7.436      | 7.319     | 80.232%    |           |           |
| X    |          | 0.003    | 0.006     | 7.187     | 7.368      | 7.265     | 78.786%    |           |           |
| σ    |          | 0.002    | 0.004     | 0.079     | 0.062      | 0.070     | 1.585%     |           |           |
| %RSD |          | 60.150   | 67.700    | 1.101     | 0.840      | 0.957     | 2.012      |           |           |



180-17069-A-4-A 12/21/2012 10:27:43 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li       | 9Be       | 10B       | 11B        | 13C        | 23Na      | 25Mg      | 26Mg      |
|------|----------|-----------|-----------|-----------|------------|------------|-----------|-----------|-----------|
|      |          | ppb       | ppb       | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 22:28:26 | 75.642%   | 1.832     | 93.940    | 96.250     | 0.000      | 22420.000 | 12890.000 | 13340.000 |
| 2    | 22:29:09 | 70.775%   | 1.866     | 100.500   | 101.600    | 0.000      | 21880.000 | 12630.000 | 13360.000 |
| 3    | 22:29:52 | 71.761%   | 1.808     | 93.560    | 96.980     | 0.000      | 22100.000 | 12840.000 | 13340.000 |
| X    |          | 72.726%   | 1.835     | 95.990    | 98.270     | 0.000      | 22130.000 | 12790.000 | 13350.000 |
| σ    |          | 2.573%    | 0.029     | 3.876     | 2.878      | 0.000      | 271.900   | 137.900   | 12.260    |
| %RSD |          | 3.538     | 1.586     | 4.038     | 2.929      | 0.000      | 1.229     | 1.079     | 0.092     |
| Run  | Time     | 27Al      | 28Si      | 37Cl      | 39K        | 43Ca       | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb       | ppb       | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 22:28:26 | 10030.000 | 19730.000 | 0.000     | 5901.000   | 50930.000  | 56050.000 | 67.539%   | 8.511     |
| 2    | 22:29:09 | 10190.000 | 20140.000 | 0.000     | 5927.000   | 51010.000  | 56480.000 | 66.554%   | 8.560     |
| 3    | 22:29:52 | 10130.000 | 20030.000 | 0.000     | 5917.000   | 51490.000  | 57240.000 | 65.147%   | 8.519     |
| X    |          | 10120.000 | 19970.000 | 0.000     | 5915.000   | 51140.000  | 56590.000 | 66.413%   | 8.530     |
| σ    |          | 79.480    | 215.000   | 0.000     | 13.080     | 305.700    | 605.500   | 1.202%    | 0.026     |
| %RSD |          | 0.786     | 1.077     | 0.000     | 0.221      | 0.598      | 1.070     | 1.811     | 0.308     |
| Run  | Time     | 51V       | 52Cr      | 55Mn      | 56Fe       | 57Fe       | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb       | ppb       | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 22:28:26 | 42.770    | 33.380    | 12900.000 | 102100.000 | 100200.000 | 17.050    | 24.040    | 4.774     |
| 2    | 22:29:09 | 42.520    | 33.260    | 12750.000 | 101200.000 | 99760.000  | 17.170    | 23.840    | 4.809     |
| 3    | 22:29:52 | 43.110    | 34.250    | 12900.000 | 102100.000 | 101600.000 | 17.610    | 24.180    | 4.983     |
| X    |          | 42.800    | 33.630    | 12850.000 | 101800.000 | 100500.000 | 17.280    | 24.020    | 4.856     |
| σ    |          | 0.295     | 0.543     | 88.390    | 536.200    | 961.500    | 0.292     | 0.173     | 0.112     |
| %RSD |          | 0.690     | 1.614     | 0.688     | 0.527      | 0.956      | 1.690     | 0.722     | 2.306     |
| Run  | Time     | 65Cu      | 66Zn      | 68Zn      | 75As       | 78Se       | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb       | ppb       | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 22:28:26 | 4.913     | 126.100   | 125.100   | 24.210     | 0.132      | 0.416     | 0.000     | 174.500   |
| 2    | 22:29:09 | 5.166     | 126.300   | 125.600   | 24.650     | 0.069      | 0.189     | 0.000     | 175.900   |
| 3    | 22:29:52 | 5.131     | 128.900   | 127.500   | 24.610     | 0.435      | 0.560     | 0.000     | 177.400   |
| X    |          | 5.070     | 127.100   | 126.100   | 24.490     | 0.212      | 0.388     | 0.000     | 175.900   |
| σ    |          | 0.137     | 1.566     | 1.273     | 0.245      | 0.196      | 0.187     | 0.000     | 1.429     |
| %RSD |          | 2.696     | 1.232     | 1.009     | 0.999      | 92.280     | 48.190    | 0.000     | 0.812     |
| Run  | Time     | 89Y       | 95Mo      | 98Mo      | 103Rh      | 107Ag      | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb       | ppb       | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 22:28:26 | 86.523%   | 0.331     | 0.304     | 73.209%    | -0.013     | -0.013    | 0.072     | 0.097     |
| 2    | 22:29:09 | 86.533%   | 0.376     | 0.331     | 72.860%    | -0.019     | -0.017    | 0.191     | 0.161     |
| 3    | 22:29:52 | 87.014%   | 0.367     | 0.289     | 72.490%    | -0.020     | -0.010    | 0.166     | 0.144     |
| X    |          | 86.690%   | 0.358     | 0.308     | 72.853%    | -0.018     | -0.013    | 0.143     | 0.134     |
| σ    |          | 0.281%    | 0.024     | 0.021     | 0.360%     | 0.004      | 0.003     | 0.063     | 0.033     |
| %RSD |          | 0.324     | 6.696     | 6.951     | 0.494      | 22.190     | 23.270    | 44.000    | 24.790    |
| Run  | Time     | 115In     | 118Sn     | 121Sb     | 123Sb      | 135Ba      | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb       | ppb       | ppb       | ppb        | ppb        | ppb       | ppb       | ppb       |
| 1    | 22:28:26 | 70.650%   | 0.514     | 0.851     | 0.882      | 70.970     | 69.600    | 76.864%   | 78.074%   |
| 2    | 22:29:09 | 71.197%   | 0.466     | 0.906     | 0.952      | 70.080     | 69.770    | 79.078%   | 79.747%   |
| 3    | 22:29:52 | 71.087%   | 0.701     | 0.954     | 0.919      | 72.360     | 72.190    | 79.352%   | 80.445%   |
| X    |          | 70.978%   | 0.560     | 0.904     | 0.917      | 71.130     | 70.520    | 78.432%   | 79.422%   |
| σ    |          | 0.289%    | 0.124     | 0.052     | 0.035      | 1.150      | 1.447     | 1.364%    | 1.218%    |
| %RSD |          | 0.408     | 22.150    | 5.751     | 3.793      | 1.617      | 2.052     | 1.739     | 1.534     |
| Run  | Time     | 203Tl     | 205Tl     | 206Pb     | 207Pb      | 208Pb      | 209Bi     |           |           |
|      |          | ppb       | ppb       | ppb       | ppb        | ppb        | ppb       |           |           |
| 1    | 22:28:26 | 0.007     | 0.003     | 7.321     | 7.297      | 7.228      | 78.615%   |           |           |
| 2    | 22:29:09 | 0.000     | 0.012     | 7.264     | 7.420      | 7.364      | 79.919%   |           |           |
| 3    | 22:29:52 | 0.002     | 0.006     | 7.373     | 7.210      | 7.290      | 80.790%   |           |           |
| X    |          | 0.003     | 0.007     | 7.320     | 7.309      | 7.294      | 79.775%   |           |           |
| σ    |          | 0.003     | 0.005     | 0.055     | 0.106      | 0.068      | 1.095%    |           |           |
| %RSD |          | 107.800   | 69.810    | 0.746     | 1.446      | 0.938      | 1.373     |           |           |

180-17069-A-5-A

12/21/2012 10:32:03 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B      | 11B       | 13C       | 23Na      | 25Mg     | 26Mg     |
|------|----------|---------|----------|----------|-----------|-----------|-----------|----------|----------|
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:32:46 | 77.423% | 0.045    | 47.520   | 46.870    | 0.000     | 36660.000 | 4467.000 | 6054.000 |
| 2    | 22:33:29 | 74.957% | 0.068    | 46.470   | 46.360    | 0.000     | 36160.000 | 4992.000 | 6034.000 |
| 3    | 22:34:12 | 72.561% | 0.061    | 45.340   | 47.840    | 0.000     | 36840.000 | 4507.000 | 6173.000 |
| X    |          | 74.980% | 0.058    | 46.440   | 47.020    | 0.000     | 36550.000 | 4655.000 | 6087.000 |
| σ    |          | 2.431%  | 0.012    | 1.091    | 0.755     | 0.000     | 352.000   | 292.600  | 75.200   |
| %RSD |          | 3.242   | 20.130   | 2.350    | 1.605     | 0.000     | 0.963     | 6.286    | 1.235    |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc     | 47Ti     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:32:46 | 119.600 | 4517.000 | 0.000    | 5050.000  | 18250.000 | 17660.000 | 67.009%  | 2.884    |
| 2    | 22:33:29 | 118.700 | 4465.000 | 0.000    | 4851.000  | 18200.000 | 17900.000 | 66.501%  | 2.578    |
| 3    | 22:34:12 | 120.200 | 4550.000 | 0.000    | 5162.000  | 18940.000 | 18280.000 | 63.789%  | 2.945    |
| X    |          | 119.500 | 4511.000 | 0.000    | 5021.000  | 18470.000 | 17950.000 | 65.767%  | 2.802    |
| σ    |          | 0.755   | 43.130   | 0.000    | 157.500   | 411.900   | 316.100   | 1.731%   | 0.197    |
| %RSD |          | 0.632   | 0.956    | 0.000    | 3.137     | 2.231     | 1.762     | 2.632    | 7.021    |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni     | 63Cu     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:32:46 | 5.992   | 2.475    | 2218.000 | 19240.000 | 17050.000 | 0.180     | 1.656    | 0.593    |
| 2    | 22:33:29 | 6.242   | 2.349    | 2193.000 | 18680.000 | 16710.000 | 0.192     | 1.538    | 0.649    |
| 3    | 22:34:12 | 5.956   | 2.360    | 2230.000 | 19060.000 | 17150.000 | 0.179     | 1.569    | 0.618    |
| X    |          | 6.063   | 2.395    | 2214.000 | 18990.000 | 16970.000 | 0.184     | 1.588    | 0.620    |
| σ    |          | 0.156   | 0.070    | 18.890   | 287.300   | 230.800   | 0.007     | 0.061    | 0.028    |
| %RSD |          | 2.573   | 2.921    | 0.853    | 1.513     | 1.360     | 3.966     | 3.855    | 4.555    |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr     | 88Sr     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:32:46 | 0.515   | 1.798    | 2.283    | 62.200    | 0.074     | 0.694     | 0.000    | 164.900  |
| 2    | 22:33:29 | 0.444   | 1.605    | 1.786    | 62.940    | -0.107    | 0.997     | 0.000    | 166.000  |
| 3    | 22:34:12 | 0.484   | 1.997    | 2.295    | 62.590    | 0.174     | 0.513     | 0.000    | 167.500  |
| X    |          | 0.481   | 1.800    | 2.121    | 62.580    | 0.047     | 0.735     | 0.000    | 166.100  |
| σ    |          | 0.036   | 0.196    | 0.290    | 0.371     | 0.142     | 0.244     | 0.000    | 1.297    |
| %RSD |          | 7.455   | 10.890   | 13.690   | 0.593     | 305.100   | 33.260    | 0.000    | 0.781    |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd    | 114Cd    |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:32:46 | 72.609% | 0.158    | 0.153    | 74.843%   | -0.024    | -0.013    | -0.058   | -0.023   |
| 2    | 22:33:29 | 72.792% | 0.160    | 0.161    | 74.703%   | -0.021    | -0.011    | -0.088   | -0.061   |
| 3    | 22:34:12 | 72.309% | 0.131    | 0.131    | 73.877%   | -0.018    | -0.023    | -0.193   | -0.123   |
| X    |          | 72.570% | 0.150    | 0.148    | 74.474%   | -0.021    | -0.016    | -0.113   | -0.069   |
| σ    |          | 0.244%  | 0.016    | 0.016    | 0.522%    | 0.003     | 0.006     | 0.071    | 0.050    |
| %RSD |          | 0.336   | 10.610   | 10.630   | 0.701     | 13.990    | 40.360    | 62.560   | 72.880   |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb    | 165Ho    |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 22:32:46 | 71.946% | 0.406    | 1.544    | 1.577     | 80.420    | 80.100    | 76.681%  | 78.347%  |
| 2    | 22:33:29 | 71.934% | 0.372    | 1.480    | 1.533     | 81.490    | 80.940    | 79.887%  | 80.788%  |
| 3    | 22:34:12 | 72.071% | 0.456    | 1.576    | 1.502     | 81.960    | 81.140    | 80.033%  | 81.043%  |
| X    |          | 71.983% | 0.411    | 1.533    | 1.537     | 81.290    | 80.730    | 78.867%  | 80.059%  |
| σ    |          | 0.076%  | 0.042    | 0.049    | 0.037     | 0.788     | 0.552     | 1.894%   | 1.488%   |
| %RSD |          | 0.105   | 10.260   | 3.189    | 2.425     | 0.969     | 0.684     | 2.402    | 1.859    |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |          |          |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       |          |          |
| 1    | 22:32:46 | -0.007  | -0.005   | 2.232    | 2.228     | 2.268     | 80.545%   |          |          |
| 2    | 22:33:29 | -0.012  | -0.006   | 2.288    | 2.304     | 2.255     | 83.260%   |          |          |
| 3    | 22:34:12 | -0.004  | -0.003   | 2.261    | 2.272     | 2.253     | 84.245%   |          |          |
| X    |          | -0.008  | -0.005   | 2.260    | 2.268     | 2.258     | 82.684%   |          |          |
| σ    |          | 0.004   | 0.002    | 0.028    | 0.038     | 0.008     | 1.917%    |          |          |
| %RSD |          | 47.520  | 38.600   | 1.235    | 1.691     | 0.352     | 2.318     |          |          |

180-17069-A-5-A SD@5 12/21/2012 10:36:23 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be     | 10B     | 11B      | 13C      | 23Na     | 25Mg     | 26Mg     |
|------|----------|---------|---------|---------|----------|----------|----------|----------|----------|
|      |          | ppb     | ppb     | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 22:37:06 | 78.626% | -0.029  | 10.450  | 10.760   | 0.000    | 7508.000 | 1049.000 | 1109.000 |
| 2    | 22:37:49 | 77.180% | -0.023  | 10.650  | 10.480   | 0.000    | 7629.000 | 1090.000 | 1128.000 |
| 3    | 22:38:32 | 77.308% | -0.008  | 10.220  | 10.680   | 0.000    | 7742.000 | 1095.000 | 1130.000 |
| X    |          | 77.705% | -0.020  | 10.440  | 10.640   | 0.000    | 7626.000 | 1078.000 | 1123.000 |
| σ    |          | 0.801%  | 0.011   | 0.214   | 0.146    | 0.000    | 117.300  | 25.360   | 11.500   |
| %RSD |          | 1.030   | 55.190  | 2.046   | 1.377    | 0.000    | 1.539    | 2.353    | 1.025    |
| Run  | Time     | 27Al    | 28Si    | 37Cl    | 39K      | 43Ca     | 44Ca     | 45Sc     | 47Ti     |
|      |          | ppb     | ppb     | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 22:37:06 | 31.480  | 857.100 | 0.000   | 1013.000 | 3482.000 | 3475.000 | 75.209%  | 0.422    |
| 2    | 22:37:49 | 32.910  | 882.400 | 0.000   | 1042.000 | 3652.000 | 3618.000 | 71.709%  | 0.560    |
| 3    | 22:38:32 | 32.130  | 855.400 | 0.000   | 1031.000 | 3608.000 | 3576.000 | 72.623%  | 0.381    |
| X    |          | 32.170  | 865.000 | 0.000   | 1029.000 | 3581.000 | 3556.000 | 73.181%  | 0.455    |
| σ    |          | 0.718   | 15.160  | 0.000   | 14.660   | 88.310   | 73.710   | 1.815%   | 0.093    |
| %RSD |          | 2.232   | 1.752   | 0.000   | 1.424    | 2.466    | 2.073    | 2.481    | 20.570   |
| Run  | Time     | 51V     | 52Cr    | 55Mn    | 56Fe     | 57Fe     | 59Co     | 60Ni     | 63Cu     |
|      |          | ppb     | ppb     | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 22:37:06 | 1.388   | 0.523   | 438.100 | 3853.000 | 3343.000 | 0.032    | 0.345    | 0.292    |
| 2    | 22:37:49 | 1.280   | 0.568   | 449.500 | 3936.000 | 3453.000 | 0.027    | 0.370    | 0.277    |
| 3    | 22:38:32 | 0.861   | 0.474   | 448.000 | 3889.000 | 3399.000 | 0.019    | 0.327    | 0.248    |
| X    |          | 1.176   | 0.522   | 445.200 | 3893.000 | 3398.000 | 0.026    | 0.347    | 0.272    |
| σ    |          | 0.279   | 0.047   | 6.144   | 41.890   | 54.750   | 0.006    | 0.021    | 0.022    |
| %RSD |          | 23.690  | 8.959   | 1.380   | 1.076    | 1.611    | 24.760   | 6.133    | 8.085    |
| Run  | Time     | 65Cu    | 66Zn    | 68Zn    | 75As     | 78Se     | 82Se     | 83Kr     | 88Sr     |
|      |          | ppb     | ppb     | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 22:37:06 | 0.243   | 0.303   | 0.224   | 13.210   | 0.203    | 0.824    | 0.000    | 32.980   |
| 2    | 22:37:49 | 0.193   | 0.363   | 0.261   | 13.380   | 0.013    | 0.315    | 0.000    | 33.130   |
| 3    | 22:38:32 | 0.308   | 0.216   | 0.037   | 13.300   | -0.023   | 1.080    | 0.000    | 33.510   |
| X    |          | 0.248   | 0.294   | 0.174   | 13.300   | 0.064    | 0.740    | 0.000    | 33.200   |
| σ    |          | 0.058   | 0.074   | 0.120   | 0.086    | 0.121    | 0.389    | 0.000    | 0.270    |
| %RSD |          | 23.230  | 25.190  | 69.120  | 0.650    | 189.400  | 52.630   | 0.000    | 0.814    |
| Run  | Time     | 89Y     | 95Mo    | 98Mo    | 103Rh    | 107Ag    | 109Ag    | 111Cd    | 114Cd    |
|      |          | ppb     | ppb     | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 22:37:06 | 77.226% | 0.016   | 0.053   | 82.960%  | -0.020   | -0.017   | -0.093   | -0.051   |
| 2    | 22:37:49 | 78.269% | 0.045   | 0.046   | 82.781%  | -0.018   | -0.017   | -0.105   | -0.049   |
| 3    | 22:38:32 | 78.194% | 0.038   | 0.043   | 82.598%  | -0.020   | -0.015   | -0.129   | -0.074   |
| X    |          | 77.896% | 0.033   | 0.047   | 82.780%  | -0.019   | -0.016   | -0.109   | -0.058   |
| σ    |          | 0.581%  | 0.015   | 0.005   | 0.181%   | 0.001    | 0.001    | 0.019    | 0.014    |
| %RSD |          | 0.746   | 45.540  | 10.360  | 0.219    | 4.970    | 5.675    | 17.020   | 24.220   |
| Run  | Time     | 115In   | 118Sn   | 121Sb   | 123Sb    | 135Ba    | 137Ba    | 159Tb    | 165Ho    |
|      |          | ppb     | ppb     | ppb     | ppb      | ppb      | ppb      | ppb      | ppb      |
| 1    | 22:37:06 | 77.357% | -0.197  | 0.265   | 0.217    | 15.940   | 15.840   | 80.712%  | 81.855%  |
| 2    | 22:37:49 | 78.743% | -0.134  | 0.205   | 0.242    | 15.930   | 16.060   | 82.451%  | 83.040%  |
| 3    | 22:38:32 | 78.665% | -0.097  | 0.234   | 0.246    | 16.540   | 16.650   | 83.022%  | 83.425%  |
| X    |          | 78.255% | -0.143  | 0.235   | 0.235    | 16.140   | 16.180   | 82.062%  | 82.773%  |
| σ    |          | 0.778%  | 0.051   | 0.030   | 0.015    | 0.348    | 0.418    | 1.203%   | 0.818%   |
| %RSD |          | 0.995   | 35.560  | 12.790  | 6.568    | 2.156    | 2.585    | 1.466    | 0.988    |
| Run  | Time     | 203Tl   | 205Tl   | 206Pb   | 207Pb    | 208Pb    | 209Bi    |          |          |
|      |          | ppb     | ppb     | ppb     | ppb      | ppb      | ppb      |          |          |
| 1    | 22:37:06 | -0.012  | -0.010  | 0.438   | 0.423    | 0.440    | 90.765%  |          |          |
| 2    | 22:37:49 | -0.016  | -0.009  | 0.436   | 0.471    | 0.435    | 93.142%  |          |          |
| 3    | 22:38:32 | -0.014  | -0.006  | 0.458   | 0.454    | 0.443    | 93.348%  |          |          |
| X    |          | -0.014  | -0.009  | 0.444   | 0.450    | 0.439    | 92.418%  |          |          |
| σ    |          | 0.002   | 0.002   | 0.012   | 0.024    | 0.004    | 1.435%   |          |          |
| %RSD |          | 14.680  | 22.380  | 2.693   | 5.357    | 0.928    | 1.553    |          |          |

180-17069-A-5-B MS

12/21/2012 10:40:43 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li      | 9Be       | 10B      | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb      | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:41:26 | 72.716%  | 42.330    | 855.200  | 866.200   | 0.000     | 77110.000 | 47320.000 | 50660.000 |
| 2    | 22:42:09 | 68.214%  | 41.860    | 847.400  | 862.000   | 0.000     | 76620.000 | 48290.000 | 50920.000 |
| 3    | 22:42:52 | 68.420%  | 42.180    | 843.300  | 852.200   | 0.000     | 74790.000 | 47990.000 | 51870.000 |
| X    |          | 69.783%  | 42.120    | 848.600  | 860.200   | 0.000     | 76170.000 | 47870.000 | 51150.000 |
| σ    |          | 2.542%   | 0.241     | 6.052    | 7.177     | 0.000     | 1222.000  | 493.000   | 635.200   |
| %RSD |          | 3.643    | 0.571     | 0.713    | 0.834     | 0.000     | 1.604     | 1.030     | 1.242     |
| Run  | Time     | 27Al     | 28Si      | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb      | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:41:26 | 1962.000 | 13620.000 | 0.000    | 52220.000 | 63930.000 | 70480.000 | 64.926%   | 983.400   |
| 2    | 22:42:09 | 1937.000 | 13660.000 | 0.000    | 51580.000 | 63420.000 | 69820.000 | 62.435%   | 998.400   |
| 3    | 22:42:52 | 1988.000 | 13630.000 | 0.000    | 51480.000 | 63980.000 | 70360.000 | 60.183%   | 1003.000  |
| X    |          | 1962.000 | 13640.000 | 0.000    | 51760.000 | 63780.000 | 70220.000 | 62.515%   | 994.800   |
| σ    |          | 25.540   | 23.310    | 0.000    | 400.300   | 309.800   | 354.900   | 2.372%    | 10.030    |
| %RSD |          | 1.302    | 0.171     | 0.000    | 0.773     | 0.486     | 0.505     | 3.795     | 1.009     |
| Run  | Time     | 51V      | 52Cr      | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb      | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:41:26 | 487.100  | 191.700   | 2528.000 | 18360.000 | 16660.000 | 461.900   | 459.900   | 229.300   |
| 2    | 22:42:09 | 493.200  | 196.500   | 2596.000 | 18500.000 | 16710.000 | 463.600   | 465.100   | 233.700   |
| 3    | 22:42:52 | 490.500  | 194.000   | 2603.000 | 18750.000 | 16540.000 | 463.800   | 460.000   | 233.500   |
| X    |          | 490.300  | 194.100   | 2576.000 | 18540.000 | 16630.000 | 463.100   | 461.700   | 232.200   |
| σ    |          | 3.070    | 2.409     | 41.320   | 199.400   | 88.380    | 1.036     | 3.011     | 2.520     |
| %RSD |          | 0.626    | 1.241     | 1.604    | 1.076     | 0.531     | 0.224     | 0.652     | 1.085     |
| Run  | Time     | 65Cu     | 66Zn      | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb      | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:41:26 | 226.700  | 448.800   | 446.200  | 96.560    | 7.846     | 8.755     | 0.000     | 1202.000  |
| 2    | 22:42:09 | 231.500  | 454.800   | 453.300  | 98.740    | 7.943     | 9.431     | 0.000     | 1216.000  |
| 3    | 22:42:52 | 230.000  | 453.600   | 457.700  | 97.890    | 7.696     | 8.645     | 0.000     | 1183.000  |
| X    |          | 229.400  | 452.400   | 452.400  | 97.730    | 7.828     | 8.944     | 0.000     | 1200.000  |
| σ    |          | 2.491    | 3.150     | 5.787    | 1.095     | 0.124     | 0.426     | 0.000     | 16.150    |
| %RSD |          | 1.086    | 0.696     | 1.279    | 1.120     | 1.587     | 4.762     | 0.000     | 1.346     |
| Run  | Time     | 89Y      | 95Mo      | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb      | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:41:26 | 68.445%  | 929.500   | 935.400  | 67.803%   | 44.530    | 45.060    | 45.320    | 34.980    |
| 2    | 22:42:09 | 68.288%  | 945.200   | 951.500  | 67.781%   | 45.220    | 45.960    | 45.450    | 35.850    |
| 3    | 22:42:52 | 68.659%  | 934.600   | 939.400  | 68.155%   | 44.170    | 45.330    | 44.920    | 35.760    |
| X    |          | 68.464%  | 936.400   | 942.100  | 67.913%   | 44.640    | 45.450    | 45.230    | 35.530    |
| σ    |          | 0.186%   | 7.994     | 8.393    | 0.210%    | 0.536     | 0.458     | 0.277     | 0.478     |
| %RSD |          | 0.272    | 0.854     | 0.891    | 0.309     | 1.201     | 1.007     | 0.612     | 1.346     |
| Run  | Time     | 115In    | 118Sn     | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb      | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:41:26 | 67.050%  | 2131.000  | 452.000  | 451.300   | 1883.000  | 1877.000  | 74.570%   | 75.414%   |
| 2    | 22:42:09 | 67.468%  | 2140.000  | 457.800  | 457.600   | 1894.000  | 1890.000  | 76.158%   | 77.030%   |
| 3    | 22:42:52 | 68.534%  | 2106.000  | 452.600  | 450.800   | 1862.000  | 1860.000  | 77.981%   | 78.449%   |
| X    |          | 67.684%  | 2126.000  | 454.100  | 453.200   | 1879.000  | 1876.000  | 76.236%   | 76.964%   |
| σ    |          | 0.765%   | 17.540    | 3.183    | 3.800     | 16.120    | 14.880    | 1.707%    | 1.519%    |
| %RSD |          | 1.131    | 0.825     | 0.701    | 0.838     | 0.858     | 0.793     | 2.239     | 1.973     |
| Run  | Time     | 203Tl    | 205Tl     | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb      | ppb       | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 22:41:26 | 42.090   | 42.160    | 19.380   | 19.700    | 19.580    | 73.679%   |           |           |
| 2    | 22:42:09 | 42.840   | 42.760    | 19.720   | 19.660    | 19.680    | 75.710%   |           |           |
| 3    | 22:42:52 | 41.850   | 41.930    | 19.320   | 19.590    | 19.320    | 78.035%   |           |           |
| X    |          | 42.260   | 42.290    | 19.470   | 19.650    | 19.530    | 75.808%   |           |           |
| σ    |          | 0.520    | 0.430     | 0.217    | 0.059     | 0.185     | 2.179%    |           |           |
| %RSD |          | 1.230    | 1.017     | 1.115    | 0.298     | 0.948     | 2.875     |           |           |

CCV 664806 12/21/2012 10:47:59 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B      | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|---------|----------|----------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:48:42 | 73.686% | 100.900  | 102.800  | 101.800   | 0.000     | 48970.000 | 48150.000 | 48770.000 |
| 2    | 22:49:25 | 70.949% | 102.500  | 100.900  | 99.130    | 0.000     | 49240.000 | 47710.000 | 48110.000 |
| 3    | 22:50:08 | 69.673% | 105.100  | 104.900  | 105.700   | 0.000     | 52940.000 | 51110.000 | 51290.000 |
| x    |          | 71.436% | 102.843% | 102.865% | 102.205%  | 0.000     | 100.766%  | 97.979%   | 98.783%   |
| σ    |          | 2.050%  | n/a      | n/a      | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 2.870   | 2.098    | 1.968    | 3.223     | 0.000     | 4.399     | 3.770     | 3.397     |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:48:42 | 462.200 | 5395.000 | 0.000    | 49270.000 | 45690.000 | 49370.000 | 85.771%   | 97.020    |
| 2    | 22:49:25 | 458.200 | 5276.000 | 0.000    | 49090.000 | 46130.000 | 49110.000 | 84.234%   | 97.230    |
| 3    | 22:50:08 | 486.300 | 5715.000 | 0.000    | 55090.000 | 52040.000 | 56810.000 | 73.040%   | 111.700   |
| x    |          | 93.785% | 109.237% | 0.000    | 102.305%  | 95.908%   | 103.531%  | 81.015%   | 101.981%  |
| σ    |          | n/a     | n/a      | 0.000    | n/a       | n/a       | n/a       | 6.949%    | n/a       |
| %RSD |          | 3.244   | 4.159    | 0.000    | 6.677     | 7.387     | 8.440     | 8.578     | 8.249     |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:48:42 | 92.950  | 92.930   | 508.200  | 25290.000 | 25400.000 | 93.560    | 96.330    | 96.120    |
| 2    | 22:49:25 | 92.320  | 92.360   | 504.300  | 25400.000 | 25650.000 | 95.940    | 96.870    | 96.130    |
| 3    | 22:50:08 | 106.600 | 107.500  | 573.200  | 28590.000 | 28510.000 | 104.500   | 104.700   | 105.600   |
| x    |          | 97.295% | 97.594%  | 105.715% | 105.708%  | 106.073%  | 98.006%   | 99.284%   | 99.284%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 8.299   | 8.794    | 7.321    | 7.100     | 6.507     | 5.881     | 4.697     | 5.512     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:48:42 | 96.690  | 97.270   | 97.550   | 100.600   | 100.900   | 102.100   | 0.000     | 98.320    |
| 2    | 22:49:25 | 96.160  | 96.330   | 96.770   | 99.750    | 101.900   | 104.800   | 0.000     | 97.840    |
| 3    | 22:50:08 | 103.500 | 105.400  | 103.400  | 104.300   | 106.500   | 105.900   | 0.000     | 99.800    |
| x    |          | 98.781% | 99.670%  | 99.239%  | 101.552%  | 103.122%  | 104.234%  | 0.000     | 98.654%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 4.137   | 5.011    | 3.647    | 2.362     | 2.907     | 1.882     | 0.000     | 1.032     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:48:42 | 74.827% | 97.420   | 97.650   | 74.658%   | 94.050    | 95.820    | 97.490    | 98.060    |
| 2    | 22:49:25 | 75.368% | 100.400  | 99.840   | 74.688%   | 95.390    | 96.080    | 97.830    | 98.620    |
| 3    | 22:50:08 | 75.957% | 101.800  | 102.300  | 74.892%   | 95.820    | 97.610    | 98.240    | 100.600   |
| x    |          | 75.384% | 99.884%  | 99.919%  | 74.746%   | 95.086%   | 96.504%   | 97.851%   | 99.089%   |
| σ    |          | 0.565%  | n/a      | n/a      | 0.127%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 0.750   | 2.253    | 2.305    | 0.171     | 0.973     | 1.006     | 0.382     | 1.339     |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 22:48:42 | 72.017% | 98.660   | 96.820   | 96.440    | 96.110    | 96.310    | 75.831%   | 76.268%   |
| 2    | 22:49:25 | 73.316% | 97.460   | 96.990   | 96.550    | 97.690    | 95.750    | 78.503%   | 78.558%   |
| 3    | 22:50:08 | 73.019% | 100.100  | 98.020   | 98.090    | 96.580    | 96.750    | 78.513%   | 79.179%   |
| x    |          | 72.784% | 98.749%  | 97.276%  | 97.025%   | 96.793%   | 96.268%   | 77.616%   | 78.002%   |
| σ    |          | 0.680%  | n/a      | n/a      | n/a       | n/a       | n/a       | 1.546%    | 1.533%    |
| %RSD |          | 0.935   | 1.347    | 0.668    | 0.951     | 0.834     | 0.521     | 1.991     | 1.966     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 22:48:42 | 92.310  | 91.800   | 92.160   | 92.080    | 92.160    | 72.247%   |           |           |
| 2    | 22:49:25 | 94.110  | 93.690   | 92.960   | 93.740    | 93.460    | 73.320%   |           |           |
| 3    | 22:50:08 | 94.790  | 95.070   | 95.060   | 95.250    | 95.350    | 73.445%   |           |           |
| x    |          | 93.740% | 93.519%  | 93.394%  | 93.691%   | 93.656%   | 73.004%   |           |           |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | 0.659%    |           |           |
| %RSD |          | 1.366   | 1.755    | 1.602    | 1.696     | 1.715     | 0.902     |           |           |

CCB9 12/21/2012 10:55:12 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be     | 10B     | 11B     | 13C     | 23Na     | 25Mg     | 26Mg    |
|------|----------|---------|---------|---------|---------|---------|----------|----------|---------|
|      |          | ppb     | ppb     | ppb     | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 22:55:55 | 88.192% | -0.018  | 2.739   | 2.755   | 0.000   | 5.434    | 6.441    | 7.022   |
| 2    | 22:56:38 | 88.467% | -0.042  | 2.523   | 2.433   | 0.000   | 5.150    | 6.349    | 6.583   |
| 3    | 22:57:21 | 91.860% | -0.026  | 2.098   | 2.269   | 0.000   | 4.842    | 6.395    | 6.653   |
| X    |          | 89.506% | -0.029  | 2.454   | 2.486   | 0.000   | 5.142    | 6.395    | 6.753   |
| σ    |          | 2.043%  | 0.012   | 0.326   | 0.247   | 0.000   | 0.296    | 0.046    | 0.236   |
| %RSD |          | 2.282   | 41.220  | 13.290  | 9.940   | 0.000   | 5.751    | 0.720    | 3.493   |
| Run  | Time     | 27Al    | 28Si    | 37Cl    | 39K     | 43Ca    | 44Ca     | 45Sc     | 47Ti    |
|      |          | ppb     | ppb     | ppb     | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 22:55:55 | 1.713   | 0.721   | 0.000   | -1.149  | 8.740   | 4.302    | 106.527% | -0.035  |
| 2    | 22:56:38 | 1.636   | 0.425   | 0.000   | -0.548  | 1.806   | 4.813    | 104.283% | 0.110   |
| 3    | 22:57:21 | 1.679   | 0.225   | 0.000   | -1.495  | 1.945   | 6.068    | 103.516% | 0.030   |
| X    |          | 1.676   | 0.457   | 0.000   | -1.064  | 4.164   | 5.061    | 104.775% | 0.035   |
| σ    |          | 0.039   | 0.250   | 0.000   | 0.479   | 3.964   | 0.909    | 1.565%   | 0.072   |
| %RSD |          | 2.309   | 54.600  | 0.000   | 45.000  | 95.200  | 17.960   | 1.494    | 206.700 |
| Run  | Time     | 51V     | 52Cr    | 55Mn    | 56Fe    | 57Fe    | 59Co     | 60Ni     | 63Cu    |
|      |          | ppb     | ppb     | ppb     | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 22:55:55 | 0.049   | 0.005   | 0.314   | 9.791   | 15.180  | -0.001   | -0.017   | -0.020  |
| 2    | 22:56:38 | -0.015  | 0.000   | 0.313   | 9.770   | 13.860  | 0.008    | 0.004    | -0.010  |
| 3    | 22:57:21 | 0.027   | 0.019   | 0.302   | 6.672   | 12.230  | 0.002    | -0.009   | -0.007  |
| X    |          | 0.020   | 0.008   | 0.310   | 8.745   | 13.760  | 0.003    | -0.007   | -0.012  |
| σ    |          | 0.033   | 0.010   | 0.007   | 1.795   | 1.476   | 0.005    | 0.011    | 0.007   |
| %RSD |          | 159.800 | 123.300 | 2.172   | 20.530  | 10.730  | 161.600  | 151.500  | 55.780  |
| Run  | Time     | 65Cu    | 66Zn    | 68Zn    | 75As    | 78Se    | 82Se     | 83Kr     | 88Sr    |
|      |          | ppb     | ppb     | ppb     | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 22:55:55 | 0.015   | -0.284  | -0.234  | -0.151  | -0.028  | -0.333   | 0.000    | 0.029   |
| 2    | 22:56:38 | -0.011  | -0.074  | 0.017   | -0.082  | -0.017  | 0.115    | 0.000    | 0.032   |
| 3    | 22:57:21 | 0.023   | 0.063   | 0.016   | -0.074  | -0.204  | 0.201    | 0.000    | 0.031   |
| X    |          | 0.009   | -0.098  | -0.067  | -0.102  | -0.083  | -0.006   | 0.000    | 0.030   |
| σ    |          | 0.018   | 0.175   | 0.144   | 0.043   | 0.105   | 0.286    | 0.000    | 0.002   |
| %RSD |          | 195.100 | 178.000 | 216.000 | 41.780  | 126.800 | 5194.000 | 0.000    | 5.413   |
| Run  | Time     | 89Y     | 95Mo    | 98Mo    | 103Rh   | 107Ag   | 109Ag    | 111Cd    | 114Cd   |
|      |          | ppb     | ppb     | ppb     | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 22:55:55 | 86.581% | 0.464   | 0.489   | 88.297% | -0.006  | 0.006    | -0.020   | -0.001  |
| 2    | 22:56:38 | 87.886% | 0.450   | 0.431   | 89.319% | -0.000  | 0.001    | -0.113   | -0.068  |
| 3    | 22:57:21 | 88.175% | 0.376   | 0.380   | 89.670% | 0.000   | 0.006    | -0.039   | 0.001   |
| X    |          | 87.547% | 0.430   | 0.434   | 89.095% | -0.002  | 0.004    | -0.057   | -0.022  |
| σ    |          | 0.849%  | 0.048   | 0.054   | 0.713%  | 0.003   | 0.003    | 0.049    | 0.039   |
| %RSD |          | 0.970   | 11.050  | 12.510  | 0.801   | 164.800 | 62.350   | 85.370   | 175.100 |
| Run  | Time     | 115In   | 118Sn   | 121Sb   | 123Sb   | 135Ba   | 137Ba    | 159Tb    | 165Ho   |
|      |          | ppb     | ppb     | ppb     | ppb     | ppb     | ppb      | ppb      | ppb     |
| 1    | 22:55:55 | 79.306% | 0.122   | -0.029  | -0.026  | 0.050   | 0.045    | 82.538%  | 83.098% |
| 2    | 22:56:38 | 80.737% | 0.070   | -0.040  | -0.021  | 0.040   | 0.037    | 85.289%  | 85.130% |
| 3    | 22:57:21 | 81.122% | -0.058  | -0.019  | -0.024  | 0.052   | 0.055    | 85.881%  | 86.003% |
| X    |          | 80.388% | 0.045   | -0.029  | -0.024  | 0.047   | 0.046    | 84.569%  | 84.744% |
| σ    |          | 0.957%  | 0.093   | 0.010   | 0.002   | 0.006   | 0.009    | 1.784%   | 1.491%  |
| %RSD |          | 1.190   | 208.100 | 35.460  | 9.322   | 13.290  | 19.720   | 2.109    | 1.759   |
| Run  | Time     | 203Tl   | 205Tl   | 206Pb   | 207Pb   | 208Pb   | 209Bi    |          |         |
|      |          | ppb     | ppb     | ppb     | ppb     | ppb     | ppb      |          |         |
| 1    | 22:55:55 | 0.018   | 0.033   | 0.062   | 0.045   | 0.052   | 92.726%  |          |         |
| 2    | 22:56:38 | 0.034   | 0.028   | 0.043   | 0.047   | 0.042   | 94.145%  |          |         |
| 3    | 22:57:21 | 0.019   | 0.028   | 0.039   | 0.034   | 0.040   | 94.580%  |          |         |
| X    |          | 0.024   | 0.030   | 0.048   | 0.042   | 0.045   | 93.817%  |          |         |
| σ    |          | 0.009   | 0.003   | 0.013   | 0.007   | 0.006   | 0.969%   |          |         |
| %RSD |          | 37.050  | 10.160  | 26.070  | 17.610  | 13.640  | 1.033    |          |         |

## 180-17069-A-5-C MSD

12/21/2012 10:59:34 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li      | 9Be       | 10B      | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb      | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:00:17 | 74.374%  | 43.850    | 870.200  | 870.700   | 0.000     | 79470.000 | 48710.000 | 49990.000 |
| 2    | 23:01:00 | 71.688%  | 43.550    | 858.500  | 889.000   | 0.000     | 79910.000 | 49010.000 | 51490.000 |
| 3    | 23:01:43 | 71.124%  | 41.180    | 830.000  | 843.000   | 0.000     | 76110.000 | 46950.000 | 49590.000 |
| X    |          | 72.396%  | 42.860    | 852.900  | 867.600   | 0.000     | 78500.000 | 48220.000 | 50360.000 |
| σ    |          | 1.737%   | 1.464     | 20.660   | 23.190    | 0.000     | 2076.000  | 1111.000  | 1004.000  |
| %RSD |          | 2.399    | 3.415     | 2.423    | 2.672     | 0.000     | 2.645     | 2.305     | 1.993     |
| Run  | Time     | 27Al     | 28Si      | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb      | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:00:17 | 1907.000 | 13770.000 | 0.000    | 53270.000 | 65250.000 | 70880.000 | 67.171%   | 1010.000  |
| 2    | 23:01:00 | 1958.000 | 13810.000 | 0.000    | 53960.000 | 66150.000 | 73080.000 | 63.850%   | 1030.000  |
| 3    | 23:01:43 | 1885.000 | 13240.000 | 0.000    | 51100.000 | 63270.000 | 69090.000 | 63.681%   | 975.800   |
| X    |          | 1916.000 | 13610.000 | 0.000    | 52780.000 | 64890.000 | 71020.000 | 64.901%   | 1005.000  |
| σ    |          | 37.420   | 318.200   | 0.000    | 1494.000  | 1474.000  | 2002.000  | 1.968%    | 27.310    |
| %RSD |          | 1.952    | 2.338     | 0.000    | 2.832     | 2.271     | 2.819     | 3.032     | 2.716     |
| Run  | Time     | 51V      | 52Cr      | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb      | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:00:17 | 492.700  | 195.600   | 2609.000 | 18870.000 | 17200.000 | 449.400   | 468.600   | 232.800   |
| 2    | 23:01:00 | 494.400  | 198.900   | 2676.000 | 19470.000 | 17590.000 | 485.200   | 476.200   | 238.600   |
| 3    | 23:01:43 | 473.000  | 191.000   | 2556.000 | 18560.000 | 17010.000 | 465.700   | 459.900   | 228.700   |
| X    |          | 486.700  | 195.200   | 2614.000 | 18970.000 | 17270.000 | 466.800   | 468.200   | 233.400   |
| σ    |          | 11.880   | 3.951     | 59.960   | 459.900   | 294.800   | 17.940    | 8.150     | 4.962     |
| %RSD |          | 2.441    | 2.025     | 2.294    | 2.425     | 1.707     | 3.844     | 1.741     | 2.126     |
| Run  | Time     | 65Cu     | 66Zn      | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb      | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:00:17 | 234.500  | 448.300   | 448.900  | 96.550    | 7.994     | 9.342     | 0.000     | 1223.000  |
| 2    | 23:01:00 | 240.500  | 459.400   | 458.000  | 97.330    | 8.384     | 10.040    | 0.000     | 1221.000  |
| 3    | 23:01:43 | 229.200  | 443.600   | 443.800  | 94.360    | 7.926     | 9.767     | 0.000     | 1196.000  |
| X    |          | 234.700  | 450.400   | 450.200  | 96.080    | 8.101     | 9.715     | 0.000     | 1213.000  |
| σ    |          | 5.659    | 8.118     | 7.211    | 1.541     | 0.247     | 0.350     | 0.000     | 14.870    |
| %RSD |          | 2.411    | 1.803     | 1.602    | 1.604     | 3.049     | 3.607     | 0.000     | 1.225     |
| Run  | Time     | 89Y      | 95Mo      | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb      | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:00:17 | 68.888%  | 941.900   | 936.200  | 68.607%   | 44.700    | 45.650    | 44.800    | 34.130    |
| 2    | 23:01:00 | 69.580%  | 958.300   | 946.400  | 68.850%   | 45.460    | 45.910    | 45.380    | 34.890    |
| 3    | 23:01:43 | 69.873%  | 932.100   | 934.000  | 69.308%   | 44.340    | 44.990    | 44.960    | 35.020    |
| X    |          | 69.447%  | 944.100   | 938.900  | 68.922%   | 44.830    | 45.520    | 45.050    | 34.680    |
| σ    |          | 0.506%   | 13.220    | 6.588    | 0.356%    | 0.570     | 0.470     | 0.301     | 0.482     |
| %RSD |          | 0.728    | 1.400     | 0.702    | 0.516     | 1.272     | 1.034     | 0.668     | 1.390     |
| Run  | Time     | 115In    | 118Sn     | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb      | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:00:17 | 66.364%  | 2158.000  | 453.500  | 453.500   | 1912.000  | 1889.000  | 73.113%   | 73.990%   |
| 2    | 23:01:00 | 67.400%  | 2172.000  | 458.100  | 455.300   | 1920.000  | 1912.000  | 75.365%   | 75.707%   |
| 3    | 23:01:43 | 68.044%  | 2121.000  | 451.500  | 450.600   | 1877.000  | 1866.000  | 76.624%   | 77.376%   |
| X    |          | 67.269%  | 2151.000  | 454.300  | 453.100   | 1903.000  | 1889.000  | 75.034%   | 75.691%   |
| σ    |          | 0.848%   | 26.290    | 3.386    | 2.358     | 22.860    | 23.310    | 1.779%    | 1.693%    |
| %RSD |          | 1.260    | 1.222     | 0.745    | 0.520     | 1.201     | 1.234     | 2.371     | 2.236     |
| Run  | Time     | 203Tl    | 205Tl     | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb      | ppb       | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 23:00:17 | 42.550   | 42.250    | 19.680   | 19.510    | 19.660    | 72.204%   |           |           |
| 2    | 23:01:00 | 43.070   | 43.070    | 19.860   | 20.050    | 19.880    | 74.735%   |           |           |
| 3    | 23:01:43 | 41.800   | 41.380    | 18.770   | 19.290    | 19.040    | 78.134%   |           |           |
| X    |          | 42.480   | 42.230    | 19.440   | 19.620    | 19.530    | 75.024%   |           |           |
| σ    |          | 0.640    | 0.842     | 0.583    | 0.393     | 0.434     | 2.975%    |           |           |
| %RSD |          | 1.507    | 1.994     | 2.998    | 2.002     | 2.225     | 3.966     |           |           |

180-17069-A-6-A 12/21/2012 11:06:49 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be       | 10B      | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|---------|-----------|----------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb     | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:07:32 | 74.584% | 0.010     | 189.100  | 191.900   | 0.000     | 44740.000 | 23520.000 | 24410.000 |
| 2    | 23:08:15 | 73.201% | 0.023     | 188.200  | 194.400   | 0.000     | 44340.000 | 23060.000 | 24610.000 |
| 3    | 23:08:58 | 71.497% | 0.004     | 190.300  | 196.400   | 0.000     | 46050.000 | 24180.000 | 25330.000 |
| X    |          | 73.094% | 0.012     | 189.200  | 194.200   | 0.000     | 45050.000 | 23590.000 | 24780.000 |
| σ    |          | 1.546%  | 0.010     | 1.089    | 2.251     | 0.000     | 896.500   | 566.200   | 482.900   |
| %RSD |          | 2.115   | 81.780    | 0.576    | 1.159     | 0.000     | 1.990     | 2.401     | 1.949     |
| Run  | Time     | 27Al    | 28Si      | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:07:32 | 21.680  | 13970.000 | 0.000    | 4571.000  | 64620.000 | 72000.000 | 66.476%   | 2.982     |
| 2    | 23:08:15 | 21.950  | 13920.000 | 0.000    | 4584.000  | 65390.000 | 71900.000 | 64.993%   | 2.766     |
| 3    | 23:08:58 | 22.030  | 14370.000 | 0.000    | 4637.000  | 67020.000 | 73830.000 | 63.381%   | 2.557     |
| X    |          | 21.890  | 14080.000 | 0.000    | 4597.000  | 65680.000 | 72570.000 | 64.950%   | 2.768     |
| σ    |          | 0.186   | 246.800   | 0.000    | 35.340    | 1229.000  | 1087.000  | 1.548%    | 0.213     |
| %RSD |          | 0.851   | 1.752     | 0.000    | 0.769     | 1.872     | 1.497     | 2.383     | 7.678     |
| Run  | Time     | 51V     | 52Cr      | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:07:32 | 1.519   | 1.718     | 1509.000 | 47860.000 | 47070.000 | 0.273     | 0.954     | 0.983     |
| 2    | 23:08:15 | 3.852   | 1.728     | 1506.000 | 46790.000 | 46980.000 | 0.236     | 1.017     | 1.076     |
| 3    | 23:08:58 | 3.930   | 1.770     | 1557.000 | 48220.000 | 47990.000 | 0.277     | 0.972     | 1.078     |
| X    |          | 3.100   | 1.739     | 1524.000 | 47620.000 | 47350.000 | 0.262     | 0.981     | 1.046     |
| σ    |          | 1.370   | 0.028     | 28.400   | 745.100   | 558.700   | 0.023     | 0.032     | 0.054     |
| %RSD |          | 44.190  | 1.604     | 1.863    | 1.565     | 1.180     | 8.732     | 3.302     | 5.170     |
| Run  | Time     | 65Cu    | 66Zn      | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:07:32 | 0.957   | 4.803     | 4.839    | 8.383     | 0.019     | 1.272     | 0.000     | 594.300   |
| 2    | 23:08:15 | 0.938   | 5.049     | 5.218    | 7.875     | -0.042    | 1.150     | 0.000     | 595.400   |
| 3    | 23:08:58 | 0.960   | 5.024     | 5.381    | 8.879     | -0.026    | 1.778     | 0.000     | 606.600   |
| X    |          | 0.951   | 4.959     | 5.146    | 8.379     | -0.016    | 1.400     | 0.000     | 598.800   |
| σ    |          | 0.012   | 0.135     | 0.278    | 0.502     | 0.032     | 0.333     | 0.000     | 6.815     |
| %RSD |          | 1.243   | 2.726     | 5.410    | 5.991     | 195.000   | 23.770    | 0.000     | 1.138     |
| Run  | Time     | 89Y     | 95Mo      | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:07:32 | 69.004% | 1.781     | 1.727    | 70.365%   | -0.017    | -0.017    | -0.002    | 0.023     |
| 2    | 23:08:15 | 69.074% | 1.327     | 1.263    | 70.294%   | -0.018    | -0.010    | -0.103    | -0.065    |
| 3    | 23:08:58 | 68.659% | 1.063     | 1.012    | 69.408%   | -0.019    | -0.012    | -0.144    | -0.099    |
| X    |          | 68.913% | 1.391     | 1.334    | 70.022%   | -0.018    | -0.013    | -0.083    | -0.047    |
| σ    |          | 0.222%  | 0.363     | 0.363    | 0.533%    | 0.001     | 0.004     | 0.073     | 0.063     |
| %RSD |          | 0.322   | 26.120    | 27.190   | 0.761     | 5.285     | 28.410    | 87.750    | 133.600   |
| Run  | Time     | 115In   | 118Sn     | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb       | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:07:32 | 67.290% | 4.269     | 0.254    | 0.342     | 111.700   | 108.900   | 72.699%   | 73.397%   |
| 2    | 23:08:15 | 68.269% | 3.032     | 0.267    | 0.277     | 110.400   | 110.900   | 74.949%   | 75.662%   |
| 3    | 23:08:58 | 67.904% | 2.362     | 0.281    | 0.285     | 113.600   | 112.800   | 74.851%   | 75.557%   |
| X    |          | 67.821% | 3.221     | 0.267    | 0.301     | 111.900   | 110.900   | 74.166%   | 74.872%   |
| σ    |          | 0.495%  | 0.967     | 0.013    | 0.035     | 1.573     | 1.916     | 1.272%    | 1.278%    |
| %RSD |          | 0.729   | 30.020    | 4.947    | 11.720    | 1.405     | 1.728     | 1.715     | 1.707     |
| Run  | Time     | 203Tl   | 205Tl     | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb       | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 23:07:32 | 0.157   | 0.147     | 0.440    | 0.448     | 0.437     | 76.046%   |           |           |
| 2    | 23:08:15 | 0.111   | 0.114     | 0.425    | 0.465     | 0.435     | 78.091%   |           |           |
| 3    | 23:08:58 | 0.101   | 0.096     | 0.429    | 0.419     | 0.437     | 77.220%   |           |           |
| X    |          | 0.123   | 0.119     | 0.431    | 0.444     | 0.436     | 77.119%   |           |           |
| σ    |          | 0.030   | 0.026     | 0.008    | 0.023     | 0.001     | 1.026%    |           |           |
| %RSD |          | 24.560  | 22.030    | 1.757    | 5.161     | 0.207     | 1.331     |           |           |



180-17069-A-7-A 12/21/2012 11:11:11 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be       | 10B     | 11B       | 13C        | 23Na       | 25Mg      | 26Mg      |
|------|----------|---------|-----------|---------|-----------|------------|------------|-----------|-----------|
|      |          | ppb     | ppb       | ppb     | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:11:54 | 71.894% | -0.029    | 233.300 | 239.500   | 0.000      | 34780.000  | 56920.000 | 60360.000 |
| 2    | 23:12:37 | 70.023% | -0.022    | 232.500 | 233.700   | 0.000      | 34100.000  | 56250.000 | 59630.000 |
| 3    | 23:13:20 | 68.963% | -0.006    | 244.300 | 242.500   | 0.000      | 34380.000  | 56510.000 | 60650.000 |
| X    |          | 70.293% | -0.019    | 236.700 | 238.600   | 0.000      | 34420.000  | 56560.000 | 60210.000 |
| σ    |          | 1.484%  | 0.012     | 6.605   | 4.472     | 0.000      | 341.500    | 337.500   | 527.600   |
| %RSD |          | 2.111   | 62.810    | 2.791   | 1.874     | 0.000      | 0.992      | 0.597     | 0.876     |
| Run  | Time     | 27Al    | 28Si      | 37Cl    | 39K       | 43Ca       | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb     | ppb       | ppb     | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:11:54 | 1.595   | 16310.000 | 0.000   | 13120.000 | 107200.000 | 118300.000 | 64.027%   | 4.132     |
| 2    | 23:12:37 | 1.555   | 16210.000 | 0.000   | 12960.000 | 108200.000 | 119200.000 | 61.714%   | 3.635     |
| 3    | 23:13:20 | 1.551   | 16470.000 | 0.000   | 12970.000 | 106400.000 | 119100.000 | 61.486%   | 3.395     |
| X    |          | 1.567   | 16330.000 | 0.000   | 13020.000 | 107300.000 | 118900.000 | 62.409%   | 3.721     |
| σ    |          | 0.024   | 130.200   | 0.000   | 90.890    | 880.500    | 475.300    | 1.406%    | 0.376     |
| %RSD |          | 1.548   | 0.797     | 0.000   | 0.698     | 0.821      | 0.400      | 2.253     | 10.100    |
| Run  | Time     | 51V     | 52Cr      | 55Mn    | 56Fe      | 57Fe       | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb     | ppb       | ppb     | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:11:54 | 2.668   | 0.999     | 565.900 | 35290.000 | 35530.000  | 1.405      | 2.764     | 0.690     |
| 2    | 23:12:37 | 3.387   | 0.948     | 566.600 | 35180.000 | 35780.000  | 1.347      | 2.700     | 0.732     |
| 3    | 23:13:20 | 2.704   | 0.919     | 568.000 | 35920.000 | 35820.000  | 1.427      | 2.781     | 0.648     |
| X    |          | 2.919   | 0.955     | 566.800 | 35460.000 | 35710.000  | 1.393      | 2.748     | 0.690     |
| σ    |          | 0.406   | 0.041     | 1.039   | 396.200   | 159.400    | 0.042      | 0.043     | 0.042     |
| %RSD |          | 13.890  | 4.251     | 0.183   | 1.117     | 0.446      | 2.989      | 1.547     | 6.095     |
| Run  | Time     | 65Cu    | 66Zn      | 68Zn    | 75As      | 78Se       | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb     | ppb       | ppb     | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:11:54 | 0.697   | 7.167     | 7.384   | 11.920    | -0.123     | 0.955      | 0.000     | 988.100   |
| 2    | 23:12:37 | 0.725   | 7.467     | 7.616   | 11.570    | 0.107      | 1.293      | 0.000     | 995.100   |
| 3    | 23:13:20 | 0.680   | 7.853     | 8.010   | 12.400    | -0.264     | 0.200      | 0.000     | 997.900   |
| X    |          | 0.701   | 7.496     | 7.670   | 11.960    | -0.094     | 0.816      | 0.000     | 993.700   |
| σ    |          | 0.023   | 0.344     | 0.317   | 0.415     | 0.187      | 0.559      | 0.000     | 5.013     |
| %RSD |          | 3.241   | 4.590     | 4.128   | 3.467     | 200.100    | 68.550     | 0.000     | 0.504     |
| Run  | Time     | 89Y     | 95Mo      | 98Mo    | 103Rh     | 107Ag      | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb     | ppb       | ppb     | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:11:54 | 67.821% | 0.908     | 0.793   | 68.934%   | -0.019     | -0.020     | -0.012    | 0.015     |
| 2    | 23:12:37 | 67.589% | 0.847     | 0.710   | 68.050%   | -0.021     | -0.014     | -0.037    | -0.025    |
| 3    | 23:13:20 | 67.194% | 0.812     | 0.703   | 68.276%   | -0.017     | -0.015     | -0.098    | -0.051    |
| X    |          | 67.535% | 0.856     | 0.735   | 68.420%   | -0.019     | -0.017     | -0.049    | -0.021    |
| σ    |          | 0.317%  | 0.049     | 0.050   | 0.459%    | 0.002      | 0.003      | 0.044     | 0.033     |
| %RSD |          | 0.469   | 5.698     | 6.787   | 0.671     | 9.158      | 18.900     | 90.100    | 160.100   |
| Run  | Time     | 115In   | 118Sn     | 121Sb   | 123Sb     | 135Ba      | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb     | ppb       | ppb     | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:11:54 | 66.540% | 1.640     | 0.260   | 0.288     | 263.600    | 262.700    | 72.875%   | 73.147%   |
| 2    | 23:12:37 | 68.064% | 1.662     | 0.246   | 0.281     | 264.800    | 265.100    | 73.900%   | 75.378%   |
| 3    | 23:13:20 | 67.593% | 1.486     | 0.189   | 0.328     | 268.200    | 266.400    | 74.659%   | 75.403%   |
| X    |          | 67.399% | 1.596     | 0.232   | 0.299     | 265.500    | 264.700    | 73.812%   | 74.643%   |
| σ    |          | 0.781%  | 0.096     | 0.038   | 0.025     | 2.372      | 1.896      | 0.895%    | 1.295%    |
| %RSD |          | 1.158   | 6.020     | 16.220  | 8.460     | 0.893      | 0.716      | 1.213     | 1.736     |
| Run  | Time     | 203Tl   | 205Tl     | 206Pb   | 207Pb     | 208Pb      | 209Bi      |           |           |
|      |          | ppb     | ppb       | ppb     | ppb       | ppb        | ppb        |           |           |
| 1    | 23:11:54 | 0.048   | 0.051     | 12.550  | 12.560    | 12.540     | 74.559%    |           |           |
| 2    | 23:12:37 | 0.022   | 0.043     | 12.780  | 12.820    | 12.680     | 76.438%    |           |           |
| 3    | 23:13:20 | 0.037   | 0.039     | 12.720  | 12.670    | 12.680     | 76.953%    |           |           |
| X    |          | 0.036   | 0.044     | 12.690  | 12.680    | 12.630     | 75.983%    |           |           |
| σ    |          | 0.013   | 0.006     | 0.118   | 0.132     | 0.079      | 1.260%     |           |           |
| %RSD |          | 36.980  | 14.110    | 0.932   | 1.039     | 0.626      | 1.658      |           |           |

180-17069-A-8-A 12/21/2012 11:15:33 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be       | 10B      | 11B       | 13C        | 23Na       | 25Mg      | 26Mg      |
|------|----------|---------|-----------|----------|-----------|------------|------------|-----------|-----------|
|      |          | ppb     | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:16:16 | 68.437% | -0.026    | 169.400  | 176.100   | 0.000      | 79870.000  | 67590.000 | 70750.000 |
| 2    | 23:16:59 | 68.254% | 0.003     | 168.400  | 170.800   | 0.000      | 79060.000  | 67890.000 | 71550.000 |
| 3    | 23:17:42 | 66.483% | -0.016    | 172.100  | 171.600   | 0.000      | 77890.000  | 66680.000 | 71280.000 |
| X    |          | 67.725% | -0.013    | 170.000  | 172.800   | 0.000      | 78940.000  | 67380.000 | 71190.000 |
| σ    |          | 1.079%  | 0.015     | 1.958    | 2.841     | 0.000      | 996.100    | 631.100   | 402.500   |
| %RSD |          | 1.594   | 113.200   | 1.152    | 1.644     | 0.000      | 1.262      | 0.937     | 0.565     |
| Run  | Time     | 27Al    | 28Si      | 37Cl     | 39K       | 43Ca       | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb     | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:16:16 | 192.700 | 11250.000 | 0.000    | 13030.000 | 163100.000 | 180400.000 | 61.485%   | 9.676     |
| 2    | 23:16:59 | 196.400 | 11090.000 | 0.000    | 13170.000 | 164500.000 | 182200.000 | 59.889%   | 9.616     |
| 3    | 23:17:42 | 193.200 | 11110.000 | 0.000    | 12780.000 | 161700.000 | 180100.000 | 59.600%   | 9.953     |
| X    |          | 194.100 | 11150.000 | 0.000    | 12990.000 | 163100.000 | 180900.000 | 60.324%   | 9.748     |
| σ    |          | 2.009   | 89.220    | 0.000    | 196.300   | 1402.000   | 1115.000   | 1.015%    | 0.180     |
| %RSD |          | 1.035   | 0.800     | 0.000    | 1.511     | 0.860      | 0.616      | 1.683     | 1.844     |
| Run  | Time     | 51V     | 52Cr      | 55Mn     | 56Fe      | 57Fe       | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb     | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:16:16 | 1.996   | 1.866     | 2009.000 | 8539.000  | 8196.000   | 0.676      | 1.020     | 1.173     |
| 2    | 23:16:59 | 2.818   | 1.773     | 1999.000 | 8430.000  | 8139.000   | 0.662      | 1.017     | 1.174     |
| 3    | 23:17:42 | 2.024   | 1.748     | 2029.000 | 8544.000  | 8162.000   | 0.669      | 0.949     | 1.274     |
| X    |          | 2.280   | 1.795     | 2012.000 | 8504.000  | 8166.000   | 0.669      | 0.995     | 1.207     |
| σ    |          | 0.467   | 0.062     | 15.130   | 64.590    | 28.930     | 0.007      | 0.041     | 0.058     |
| %RSD |          | 20.480  | 3.458     | 0.752    | 0.760     | 0.354      | 1.038      | 4.081     | 4.792     |
| Run  | Time     | 65Cu    | 66Zn      | 68Zn     | 75As      | 78Se       | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb     | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:16:16 | 0.993   | 14.500    | 13.830   | 1.716     | -0.049     | 1.279      | 0.000     | 969.800   |
| 2    | 23:16:59 | 1.012   | 14.470    | 14.370   | 2.436     | -0.221     | 1.059      | 0.000     | 970.700   |
| 3    | 23:17:42 | 1.010   | 14.770    | 14.500   | 3.095     | -0.111     | 1.009      | 0.000     | 984.300   |
| X    |          | 1.005   | 14.580    | 14.230   | 2.415     | -0.127     | 1.116      | 0.000     | 974.900   |
| σ    |          | 0.011   | 0.162     | 0.356    | 0.689     | 0.088      | 0.143      | 0.000     | 8.131     |
| %RSD |          | 1.065   | 1.109     | 2.504    | 28.540    | 69.020     | 12.870     | 0.000     | 0.834     |
| Run  | Time     | 89Y     | 95Mo      | 98Mo     | 103Rh     | 107Ag      | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb     | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:16:16 | 65.282% | 0.461     | 0.354    | 65.909%   | -0.022     | -0.014     | -0.029    | -0.004    |
| 2    | 23:16:59 | 65.782% | 0.409     | 0.378    | 65.843%   | -0.019     | -0.016     | -0.086    | -0.055    |
| 3    | 23:17:42 | 64.275% | 0.367     | 0.370    | 64.819%   | -0.011     | -0.013     | -0.063    | -0.034    |
| X    |          | 65.113% | 0.413     | 0.367    | 65.523%   | -0.017     | -0.014     | -0.059    | -0.031    |
| σ    |          | 0.767%  | 0.047     | 0.012    | 0.611%    | 0.006      | 0.002      | 0.028     | 0.025     |
| %RSD |          | 1.178   | 11.380    | 3.272    | 0.933     | 32.030     | 11.470     | 47.560    | 81.250    |
| Run  | Time     | 115In   | 118Sn     | 121Sb    | 123Sb     | 135Ba      | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb     | ppb       | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:16:16 | 64.082% | 1.255     | 0.036    | 0.095     | 134.700    | 134.800    | 70.196%   | 70.999%   |
| 2    | 23:16:59 | 64.567% | 1.250     | 0.042    | 0.137     | 135.100    | 136.400    | 71.438%   | 72.673%   |
| 3    | 23:17:42 | 64.484% | 1.292     | 0.049    | 0.116     | 135.900    | 135.900    | 71.914%   | 72.466%   |
| X    |          | 64.378% | 1.266     | 0.042    | 0.116     | 135.200    | 135.700    | 71.183%   | 72.046%   |
| σ    |          | 0.259%  | 0.023     | 0.006    | 0.021     | 0.606      | 0.799      | 0.887%    | 0.912%    |
| %RSD |          | 0.402   | 1.802     | 14.890   | 17.740    | 0.448      | 0.589      | 1.246     | 1.266     |
| Run  | Time     | 203Tl   | 205Tl     | 206Pb    | 207Pb     | 208Pb      | 209Bi      |           |           |
|      |          | ppb     | ppb       | ppb      | ppb       | ppb        | ppb        |           |           |
| 1    | 23:16:16 | 0.028   | 0.034     | 1.374    | 1.396     | 1.338      | 71.727%    |           |           |
| 2    | 23:16:59 | 0.039   | 0.040     | 1.300    | 1.302     | 1.318      | 73.589%    |           |           |
| 3    | 23:17:42 | 0.021   | 0.030     | 1.323    | 1.310     | 1.340      | 73.662%    |           |           |
| X    |          | 0.030   | 0.035     | 1.332    | 1.336     | 1.332      | 72.992%    |           |           |
| σ    |          | 0.009   | 0.005     | 0.038    | 0.052     | 0.012      | 1.097%     |           |           |
| %RSD |          | 30.470  | 14.400    | 2.868    | 3.910     | 0.937      | 1.502      |           |           |

180-17069-A-9-A 12/21/2012 11:19:56 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be       | 10B     | 11B       | 13C       | 23Na       | 25Mg      | 26Mg      |
|------|----------|---------|-----------|---------|-----------|-----------|------------|-----------|-----------|
|      |          | ppb     | ppb       | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 23:20:38 | 72.099% | -0.014    | 218.900 | 220.600   | 0.000     | 60830.000  | 58410.000 | 60940.000 |
| 2    | 23:21:21 | 69.863% | -0.029    | 210.900 | 217.000   | 0.000     | 61100.000  | 58980.000 | 61220.000 |
| 3    | 23:22:04 | 69.233% | -0.009    | 211.700 | 219.400   | 0.000     | 61310.000  | 57910.000 | 61150.000 |
| X    |          | 70.398% | -0.017    | 213.800 | 219.000   | 0.000     | 61080.000  | 58430.000 | 61110.000 |
| σ    |          | 1.506%  | 0.011     | 4.420   | 1.818     | 0.000     | 239.300    | 534.300   | 145.200   |
| %RSD |          | 2.139   | 62.370    | 2.067   | 0.830     | 0.000     | 0.392      | 0.914     | 0.238     |
| Run  | Time     | 27Al    | 28Si      | 37Cl    | 39K       | 43Ca      | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb     | ppb       | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 23:20:38 | 32.990  | 14640.000 | 0.000   | 10640.000 | 95460.000 | 106200.000 | 63.669%   | 4.405     |
| 2    | 23:21:21 | 33.660  | 14740.000 | 0.000   | 10510.000 | 96120.000 | 106200.000 | 61.432%   | 4.465     |
| 3    | 23:22:04 | 34.270  | 14620.000 | 0.000   | 10470.000 | 97210.000 | 105800.000 | 61.910%   | 4.229     |
| X    |          | 33.640  | 14670.000 | 0.000   | 10540.000 | 96270.000 | 106100.000 | 62.337%   | 4.367     |
| σ    |          | 0.639   | 61.940    | 0.000   | 92.150    | 884.800   | 199.300    | 1.178%    | 0.123     |
| %RSD |          | 1.898   | 0.422     | 0.000   | 0.874     | 0.919     | 0.188      | 1.890     | 2.811     |
| Run  | Time     | 51V     | 52Cr      | 55Mn    | 56Fe      | 57Fe      | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb     | ppb       | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 23:20:38 | 1.835   | 1.262     | 369.400 | 29400.000 | 29580.000 | 1.586      | 2.013     | 0.717     |
| 2    | 23:21:21 | 1.905   | 1.191     | 378.600 | 29860.000 | 29690.000 | 1.605      | 2.164     | 0.732     |
| 3    | 23:22:04 | 2.939   | 1.099     | 369.200 | 29300.000 | 28990.000 | 1.507      | 2.114     | 0.760     |
| X    |          | 2.226   | 1.184     | 372.400 | 29520.000 | 29420.000 | 1.566      | 2.097     | 0.737     |
| σ    |          | 0.618   | 0.082     | 5.345   | 300.600   | 380.300   | 0.052      | 0.077     | 0.022     |
| %RSD |          | 27.770  | 6.928     | 1.435   | 1.018     | 1.293     | 3.334      | 3.670     | 2.984     |
| Run  | Time     | 65Cu    | 66Zn      | 68Zn    | 75As      | 78Se      | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb     | ppb       | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 23:20:38 | 0.668   | 2.128     | 2.083   | 14.610    | -0.140    | 0.840      | 0.000     | 974.400   |
| 2    | 23:21:21 | 0.669   | 2.064     | 2.149   | 13.990    | -0.104    | 1.888      | 0.000     | 979.900   |
| 3    | 23:22:04 | 0.601   | 1.795     | 2.278   | 14.230    | -0.013    | 1.344      | 0.000     | 969.900   |
| X    |          | 0.646   | 1.996     | 2.170   | 14.280    | -0.086    | 1.357      | 0.000     | 974.800   |
| σ    |          | 0.039   | 0.176     | 0.099   | 0.316     | 0.065     | 0.524      | 0.000     | 5.021     |
| %RSD |          | 6.024   | 8.840     | 4.570   | 2.213     | 76.010    | 38.620     | 0.000     | 0.515     |
| Run  | Time     | 89Y     | 95Mo      | 98Mo    | 103Rh     | 107Ag     | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb     | ppb       | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 23:20:38 | 66.654% | 0.629     | 0.638   | 67.779%   | -0.022    | -0.016     | -0.030    | -0.026    |
| 2    | 23:21:21 | 66.538% | 0.716     | 0.677   | 67.246%   | -0.021    | -0.021     | -0.086    | -0.048    |
| 3    | 23:22:04 | 67.555% | 0.652     | 0.641   | 67.802%   | -0.020    | -0.011     | -0.139    | -0.082    |
| X    |          | 66.916% | 0.665     | 0.652   | 67.609%   | -0.021    | -0.016     | -0.085    | -0.052    |
| σ    |          | 0.557%  | 0.045     | 0.021   | 0.315%    | 0.001     | 0.005      | 0.055     | 0.028     |
| %RSD |          | 0.832   | 6.757     | 3.247   | 0.465     | 4.752     | 33.620     | 64.130    | 53.600    |
| Run  | Time     | 115In   | 118Sn     | 121Sb   | 123Sb     | 135Ba     | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb     | ppb       | ppb     | ppb       | ppb       | ppb        | ppb       | ppb       |
| 1    | 23:20:38 | 65.640% | 1.193     | 0.141   | 0.225     | 501.900   | 500.100    | 71.921%   | 73.044%   |
| 2    | 23:21:21 | 67.221% | 1.216     | 0.159   | 0.239     | 502.000   | 499.900    | 73.320%   | 74.712%   |
| 3    | 23:22:04 | 67.338% | 1.031     | 0.172   | 0.195     | 498.100   | 495.100    | 74.703%   | 74.963%   |
| X    |          | 66.733% | 1.147     | 0.157   | 0.219     | 500.700   | 498.400    | 73.315%   | 74.239%   |
| σ    |          | 0.948%  | 0.101     | 0.016   | 0.023     | 2.185     | 2.811      | 1.391%    | 1.043%    |
| %RSD |          | 1.421   | 8.809     | 10.190  | 10.290    | 0.436     | 0.564      | 1.897     | 1.405     |
| Run  | Time     | 203Tl   | 205Tl     | 206Pb   | 207Pb     | 208Pb     | 209Bi      |           |           |
|      |          | ppb     | ppb       | ppb     | ppb       | ppb       | ppb        |           |           |
| 1    | 23:20:38 | 0.008   | 0.025     | 7.313   | 7.361     | 7.257     | 73.105%    |           |           |
| 2    | 23:21:21 | 0.016   | 0.020     | 7.406   | 7.419     | 7.373     | 75.052%    |           |           |
| 3    | 23:22:04 | 0.004   | 0.013     | 7.360   | 7.300     | 7.312     | 75.668%    |           |           |
| X    |          | 0.009   | 0.019     | 7.360   | 7.360     | 7.314     | 74.608%    |           |           |
| σ    |          | 0.006   | 0.006     | 0.046   | 0.059     | 0.058     | 1.338%     |           |           |
| %RSD |          | 66.580  | 32.270    | 0.630   | 0.805     | 0.797     | 1.793      |           |           |

180-17069-A-10-A 12/21/2012 11:24:15 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be       | 10B      | 11B      | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|---------|-----------|----------|----------|-----------|-----------|-----------|-----------|
|      |          | ppb     | ppb       | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:24:58 | 70.467% | -0.012    | 120.800  | 122.200  | 0.000     | 63700.000 | 53940.000 | 56450.000 |
| 2    | 23:25:41 | 67.308% | -0.012    | 120.800  | 128.000  | 0.000     | 64910.000 | 56160.000 | 58890.000 |
| 3    | 23:26:24 | 66.537% | -0.016    | 119.900  | 123.600  | 0.000     | 64370.000 | 56160.000 | 60140.000 |
| X    |          | 68.104% | -0.013    | 120.500  | 124.600  | 0.000     | 64330.000 | 55420.000 | 58490.000 |
| σ    |          | 2.082%  | 0.002     | 0.519    | 3.053    | 0.000     | 607.100   | 1281.000  | 1878.000  |
| %RSD |          | 3.058   | 17.440    | 0.430    | 2.450    | 0.000     | 0.944     | 2.311     | 3.210     |
| Run  | Time     | 27Al    | 28Si      | 37Cl     | 39K      | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb       | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:24:58 | 139.500 | 10800.000 | 0.000    | 3153.000 | 72510.000 | 80710.000 | 62.602%   | 6.048     |
| 2    | 23:25:41 | 145.300 | 10910.000 | 0.000    | 3192.000 | 74160.000 | 81920.000 | 59.799%   | 5.720     |
| 3    | 23:26:24 | 148.300 | 11030.000 | 0.000    | 3117.000 | 72640.000 | 80900.000 | 58.103%   | 5.761     |
| X    |          | 144.400 | 10910.000 | 0.000    | 3154.000 | 73110.000 | 81170.000 | 60.168%   | 5.843     |
| σ    |          | 4.506   | 113.300   | 0.000    | 37.240   | 919.000   | 649.800   | 2.272%    | 0.179     |
| %RSD |          | 3.121   | 1.039     | 0.000    | 1.181    | 1.257     | 0.800     | 3.776     | 3.062     |
| Run  | Time     | 51V     | 52Cr      | 55Mn     | 56Fe     | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb       | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:24:58 | 2.135   | 1.504     | 4131.000 | 1839.000 | 1927.000  | 3.874     | 4.606     | 2.569     |
| 2    | 23:25:41 | 3.873   | 1.425     | 4109.000 | 1832.000 | 1931.000  | 3.829     | 4.355     | 2.536     |
| 3    | 23:26:24 | 2.647   | 1.417     | 4221.000 | 1871.000 | 1922.000  | 3.844     | 4.333     | 2.656     |
| X    |          | 2.885   | 1.449     | 4154.000 | 1847.000 | 1926.000  | 3.849     | 4.431     | 2.587     |
| σ    |          | 0.893   | 0.048     | 59.240   | 21.050   | 4.670     | 0.023     | 0.152     | 0.062     |
| %RSD |          | 30.960  | 3.337     | 1.426    | 1.140    | 0.242     | 0.595     | 3.429     | 2.404     |
| Run  | Time     | 65Cu    | 66Zn      | 68Zn     | 75As     | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb       | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:24:58 | 2.573   | 7.178     | 7.843    | 22.840   | -0.240    | 1.620     | 0.000     | 483.600   |
| 2    | 23:25:41 | 2.318   | 7.573     | 7.770    | 22.270   | -0.120    | 1.717     | 0.000     | 483.500   |
| 3    | 23:26:24 | 2.336   | 7.374     | 7.740    | 23.260   | -0.429    | 0.653     | 0.000     | 485.900   |
| X    |          | 2.409   | 7.375     | 7.785    | 22.790   | -0.263    | 1.330     | 0.000     | 484.300   |
| σ    |          | 0.142   | 0.198     | 0.053    | 0.495    | 0.156     | 0.588     | 0.000     | 1.350     |
| %RSD |          | 5.892   | 2.683     | 0.681    | 2.171    | 59.260    | 44.220    | 0.000     | 0.279     |
| Run  | Time     | 89Y     | 95Mo      | 98Mo     | 103Rh    | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb       | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:24:58 | 65.940% | 1.642     | 1.596    | 66.585%  | -0.019    | -0.013    | 0.053     | 0.089     |
| 2    | 23:25:41 | 66.098% | 1.611     | 1.657    | 66.980%  | -0.025    | -0.020    | 0.050     | 0.058     |
| 3    | 23:26:24 | 65.752% | 1.648     | 1.578    | 66.544%  | -0.019    | -0.019    | 0.005     | 0.051     |
| X    |          | 65.930% | 1.634     | 1.610    | 66.703%  | -0.021    | -0.017    | 0.036     | 0.066     |
| σ    |          | 0.174%  | 0.020     | 0.041    | 0.241%   | 0.004     | 0.004     | 0.027     | 0.020     |
| %RSD |          | 0.263   | 1.207     | 2.575    | 0.361    | 17.580    | 21.270    | 73.730    | 31.050    |
| Run  | Time     | 115In   | 118Sn     | 121Sb    | 123Sb    | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb       | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:24:58 | 64.988% | 0.887     | 0.020    | 0.082    | 148.100   | 149.400   | 71.702%   | 72.587%   |
| 2    | 23:25:41 | 65.102% | 1.104     | 0.048    | 0.081    | 150.600   | 147.900   | 73.398%   | 74.008%   |
| 3    | 23:26:24 | 65.382% | 0.813     | 0.043    | 0.064    | 150.500   | 149.700   | 73.459%   | 73.932%   |
| X    |          | 65.157% | 0.935     | 0.037    | 0.076    | 149.700   | 149.000   | 72.853%   | 73.509%   |
| σ    |          | 0.203%  | 0.151     | 0.015    | 0.010    | 1.450     | 0.959     | 0.997%    | 0.799%    |
| %RSD |          | 0.311   | 16.170    | 39.910   | 13.140   | 0.968     | 0.644     | 1.369     | 1.088     |
| Run  | Time     | 203Tl   | 205Tl     | 206Pb    | 207Pb    | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb       | ppb      | ppb      | ppb       | ppb       |           |           |
| 1    | 23:24:58 | 0.053   | 0.054     | 0.397    | 0.371    | 0.383     | 74.750%   |           |           |
| 2    | 23:25:41 | 0.056   | 0.047     | 0.402    | 0.385    | 0.387     | 76.277%   |           |           |
| 3    | 23:26:24 | 0.057   | 0.062     | 0.370    | 0.406    | 0.395     | 76.114%   |           |           |
| X    |          | 0.055   | 0.054     | 0.390    | 0.388    | 0.388     | 75.714%   |           |           |
| σ    |          | 0.002   | 0.008     | 0.017    | 0.018    | 0.006     | 0.838%    |           |           |
| %RSD |          | 3.809   | 14.050    | 4.339    | 4.602    | 1.469     | 1.107     |           |           |

180-17069-A-11-A 12/21/2012 11:28:34 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be       | 10B      | 11B      | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|---------|-----------|----------|----------|-----------|-----------|-----------|-----------|
|      |          | ppb     | ppb       | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:29:17 | 70.320% | -0.005    | 45.530   | 49.410   | 0.000     | 40710.000 | 44000.000 | 45650.000 |
| 2    | 23:30:00 | 68.583% | 0.008     | 45.590   | 46.900   | 0.000     | 40930.000 | 44430.000 | 46380.000 |
| 3    | 23:30:43 | 68.599% | -0.015    | 46.550   | 47.470   | 0.000     | 40120.000 | 43340.000 | 46000.000 |
| X    |          | 69.167% | -0.004    | 45.890   | 47.930   | 0.000     | 40590.000 | 43920.000 | 46010.000 |
| σ    |          | 0.998%  | 0.012     | 0.572    | 1.315    | 0.000     | 418.600   | 545.800   | 361.600   |
| %RSD |          | 1.443   | 282.300   | 1.247    | 2.743    | 0.000     | 1.031     | 1.243     | 0.786     |
| Run  | Time     | 27Al    | 28Si      | 37Cl     | 39K      | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb       | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:29:17 | 69.710  | 15440.000 | 0.000    | 2144.000 | 51270.000 | 57570.000 | 62.031%   | 4.917     |
| 2    | 23:30:00 | 69.540  | 15700.000 | 0.000    | 2201.000 | 52820.000 | 58530.000 | 60.080%   | 4.652     |
| 3    | 23:30:43 | 70.050  | 15490.000 | 0.000    | 2156.000 | 51660.000 | 56930.000 | 59.937%   | 4.352     |
| X    |          | 69.770  | 15550.000 | 0.000    | 2167.000 | 51920.000 | 57680.000 | 60.683%   | 4.641     |
| σ    |          | 0.256   | 138.900   | 0.000    | 29.970   | 807.900   | 801.600   | 1.169%    | 0.282     |
| %RSD |          | 0.367   | 0.893     | 0.000    | 1.383    | 1.556     | 1.390     | 1.927     | 6.087     |
| Run  | Time     | 51V     | 52Cr      | 55Mn     | 56Fe     | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb       | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:29:17 | 1.576   | 1.854     | 7577.000 | 3671.000 | 3450.000  | 77.750    | 32.230    | 2.876     |
| 2    | 23:30:00 | 2.188   | 1.780     | 7711.000 | 3695.000 | 3506.000  | 79.610    | 33.380    | 2.969     |
| 3    | 23:30:43 | 1.198   | 1.665     | 7617.000 | 3674.000 | 3428.000  | 77.630    | 32.150    | 2.920     |
| X    |          | 1.654   | 1.766     | 7635.000 | 3680.000 | 3461.000  | 78.330    | 32.590    | 2.922     |
| σ    |          | 0.499   | 0.095     | 68.650   | 13.380   | 40.480    | 1.115     | 0.688     | 0.047     |
| %RSD |          | 30.190  | 5.394     | 0.899    | 0.364    | 1.170     | 1.423     | 2.113     | 1.593     |
| Run  | Time     | 65Cu    | 66Zn      | 68Zn     | 75As     | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb       | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:29:17 | 2.924   | 65.130    | 67.250   | 3.719    | -0.274    | 1.085     | 0.000     | 228.100   |
| 2    | 23:30:00 | 2.914   | 67.730    | 68.420   | 2.868    | -0.531    | 0.870     | 0.000     | 235.400   |
| 3    | 23:30:43 | 2.924   | 65.970    | 66.700   | 4.275    | -0.356    | 1.727     | 0.000     | 232.900   |
| X    |          | 2.920   | 66.280    | 67.460   | 3.621    | -0.387    | 1.227     | 0.000     | 232.100   |
| σ    |          | 0.006   | 1.328     | 0.880    | 0.708    | 0.131     | 0.446     | 0.000     | 3.735     |
| %RSD |          | 0.197   | 2.004     | 1.305    | 19.570   | 33.880    | 36.310    | 0.000     | 1.609     |
| Run  | Time     | 89Y     | 95Mo      | 98Mo     | 103Rh    | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb       | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:29:17 | 67.040% | 0.644     | 0.574    | 68.051%  | -0.017    | -0.019    | 0.422     | 0.655     |
| 2    | 23:30:00 | 65.665% | 0.664     | 0.622    | 66.776%  | -0.018    | -0.018    | 0.419     | 0.475     |
| 3    | 23:30:43 | 66.633% | 0.632     | 0.597    | 67.632%  | -0.018    | -0.021    | 0.398     | 0.463     |
| X    |          | 66.446% | 0.646     | 0.598    | 67.486%  | -0.018    | -0.019    | 0.413     | 0.531     |
| σ    |          | 0.706%  | 0.016     | 0.024    | 0.650%   | 0.001     | 0.001     | 0.013     | 0.108     |
| %RSD |          | 1.063   | 2.503     | 4.009    | 0.963    | 3.536     | 6.070     | 3.184     | 20.270    |
| Run  | Time     | 115In   | 118Sn     | 121Sb    | 123Sb    | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb       | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:29:17 | 64.669% | 0.923     | 0.046    | 0.083    | 34.200    | 33.240    | 71.205%   | 72.361%   |
| 2    | 23:30:00 | 65.177% | 1.128     | 0.032    | 0.083    | 34.760    | 33.750    | 72.373%   | 73.535%   |
| 3    | 23:30:43 | 65.778% | 0.951     | 0.063    | 0.079    | 34.490    | 34.190    | 73.601%   | 74.334%   |
| X    |          | 65.208% | 1.001     | 0.047    | 0.082    | 34.480    | 33.730    | 72.393%   | 73.410%   |
| σ    |          | 0.555%  | 0.111     | 0.015    | 0.002    | 0.277     | 0.476     | 1.198%    | 0.993%    |
| %RSD |          | 0.852   | 11.120    | 32.060   | 2.501    | 0.803     | 1.411     | 1.655     | 1.352     |
| Run  | Time     | 203Tl   | 205Tl     | 206Pb    | 207Pb    | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb       | ppb      | ppb      | ppb       | ppb       |           |           |
| 1    | 23:29:17 | 0.049   | 0.053     | 1.300    | 1.389    | 1.339     | 75.369%   |           |           |
| 2    | 23:30:00 | 0.053   | 0.066     | 1.376    | 1.293    | 1.332     | 76.176%   |           |           |
| 3    | 23:30:43 | 0.063   | 0.059     | 1.342    | 1.351    | 1.318     | 76.692%   |           |           |
| X    |          | 0.055   | 0.059     | 1.340    | 1.344    | 1.330     | 76.079%   |           |           |
| σ    |          | 0.007   | 0.006     | 0.038    | 0.049    | 0.010     | 0.667%    |           |           |
| %RSD |          | 12.880  | 10.490    | 2.852    | 3.628    | 0.785     | 0.876     |           |           |

180-17069-A-12-A 12/21/2012 11:32:54 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B    | 11B      | 13C       | 23Na      | 25Mg     | 26Mg     |
|------|----------|---------|----------|--------|----------|-----------|-----------|----------|----------|
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb       | ppb      | ppb      |
| 1    | 23:33:36 | 72.298% | -0.034   | 28.360 | 29.090   | 0.000     | 40770.000 | 7217.000 | 7694.000 |
| 2    | 23:34:19 | 72.103% | -0.016   | 28.010 | 28.370   | 0.000     | 39760.000 | 7272.000 | 7727.000 |
| 3    | 23:35:02 | 69.631% | -0.029   | 28.240 | 29.040   | 0.000     | 40500.000 | 7459.000 | 7951.000 |
| X    |          | 71.344% | -0.026   | 28.200 | 28.830   | 0.000     | 40340.000 | 7316.000 | 7791.000 |
| σ    |          | 1.487%  | 0.009    | 0.178  | 0.402    | 0.000     | 521.600   | 126.800  | 139.700  |
| %RSD |          | 2.084   | 34.530   | 0.632  | 1.396    | 0.000     | 1.293     | 1.733    | 1.793    |
| Run  | Time     | 27Al    | 28Si     | 37Cl   | 39K      | 43Ca      | 44Ca      | 45Sc     | 47Ti     |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb       | ppb      | ppb      |
| 1    | 23:33:36 | 64.340  | 5377.000 | 0.000  | 3951.000 | 31250.000 | 34800.000 | 63.222%  | 3.337    |
| 2    | 23:34:19 | 64.760  | 5446.000 | 0.000  | 3947.000 | 31790.000 | 35100.000 | 60.833%  | 3.682    |
| 3    | 23:35:02 | 66.820  | 5465.000 | 0.000  | 3936.000 | 31940.000 | 35710.000 | 59.716%  | 3.733    |
| X    |          | 65.310  | 5429.000 | 0.000  | 3945.000 | 31660.000 | 35200.000 | 61.257%  | 3.584    |
| σ    |          | 1.329   | 46.670   | 0.000  | 7.978    | 367.100   | 466.900   | 1.791%   | 0.215    |
| %RSD |          | 2.035   | 0.860    | 0.000  | 0.202    | 1.159     | 1.326     | 2.924    | 6.010    |
| Run  | Time     | 51V     | 52Cr     | 55Mn   | 56Fe     | 57Fe      | 59Co      | 60Ni     | 63Cu     |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb       | ppb      | ppb      |
| 1    | 23:33:36 | 3.721   | 1.482    | 24.380 | 620.600  | 670.900   | 0.437     | 2.696    | 1.087    |
| 2    | 23:34:19 | 2.093   | 1.508    | 25.100 | 640.800  | 688.700   | 0.445     | 2.780    | 1.184    |
| 3    | 23:35:02 | 2.213   | 1.395    | 24.520 | 630.800  | 690.300   | 0.448     | 2.629    | 1.063    |
| X    |          | 2.676   | 1.462    | 24.670 | 630.700  | 683.300   | 0.444     | 2.701    | 1.112    |
| σ    |          | 0.907   | 0.059    | 0.382  | 10.120   | 10.750    | 0.006     | 0.076    | 0.064    |
| %RSD |          | 33.900  | 4.024    | 1.550  | 1.604    | 1.574     | 1.273     | 2.796    | 5.766    |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn   | 75As     | 78Se      | 82Se      | 83Kr     | 88Sr     |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb       | ppb      | ppb      |
| 1    | 23:33:36 | 0.860   | 1.301    | 1.363  | 1.435    | -0.088    | 1.373     | 0.000    | 132.500  |
| 2    | 23:34:19 | 0.984   | 1.555    | 1.557  | 1.893    | -0.185    | 1.799     | 0.000    | 134.800  |
| 3    | 23:35:02 | 1.011   | 1.430    | 1.260  | 1.859    | -0.290    | 0.933     | 0.000    | 134.400  |
| X    |          | 0.952   | 1.429    | 1.394  | 1.729    | -0.188    | 1.368     | 0.000    | 133.900  |
| σ    |          | 0.080   | 0.127    | 0.151  | 0.255    | 0.101     | 0.433     | 0.000    | 1.260    |
| %RSD |          | 8.441   | 8.896    | 10.830 | 14.740   | 53.710    | 31.650    | 0.000    | 0.941    |
| Run  | Time     | 89Y     | 95Mo     | 98Mo   | 103Rh    | 107Ag     | 109Ag     | 111Cd    | 114Cd    |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb       | ppb      | ppb      |
| 1    | 23:33:36 | 66.825% | 0.959    | 0.969  | 69.928%  | -0.010    | -0.007    | 0.019    | 0.051    |
| 2    | 23:34:19 | 66.477% | 1.065    | 1.041  | 70.082%  | -0.013    | -0.014    | -0.109   | -0.068   |
| 3    | 23:35:02 | 66.209% | 0.981    | 1.042  | 69.072%  | -0.012    | -0.011    | -0.109   | -0.036   |
| X    |          | 66.504% | 1.002    | 1.017  | 69.694%  | -0.012    | -0.011    | -0.066   | -0.018   |
| σ    |          | 0.309%  | 0.056    | 0.042  | 0.544%   | 0.002     | 0.003     | 0.074    | 0.062    |
| %RSD |          | 0.465   | 5.615    | 4.097  | 0.781    | 13.170    | 30.850    | 110.800  | 348.800  |
| Run  | Time     | 115In   | 118Sn    | 121Sb  | 123Sb    | 135Ba     | 137Ba     | 159Tb    | 165Ho    |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb       | ppb      | ppb      |
| 1    | 23:33:36 | 66.686% | 0.489    | 0.245  | 0.307    | 17.560    | 17.270    | 73.090%  | 74.007%  |
| 2    | 23:34:19 | 67.058% | 0.597    | 0.266  | 0.232    | 17.360    | 17.910    | 74.000%  | 75.365%  |
| 3    | 23:35:02 | 66.928% | 0.640    | 0.279  | 0.284    | 17.470    | 17.260    | 75.089%  | 75.705%  |
| X    |          | 66.891% | 0.575    | 0.263  | 0.275    | 17.460    | 17.480    | 74.060%  | 75.026%  |
| σ    |          | 0.189%  | 0.078    | 0.017  | 0.039    | 0.098     | 0.376     | 1.001%   | 0.899%   |
| %RSD |          | 0.283   | 13.510   | 6.566  | 14.100   | 0.564     | 2.152     | 1.352    | 1.198    |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb  | 207Pb    | 208Pb     | 209Bi     |          |          |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb       |          |          |
| 1    | 23:33:36 | 0.008   | 0.005    | 0.241  | 0.244    | 0.238     | 79.096%   |          |          |
| 2    | 23:34:19 | 0.005   | 0.006    | 0.238  | 0.266    | 0.245     | 80.000%   |          |          |
| 3    | 23:35:02 | 0.003   | 0.006    | 0.265  | 0.266    | 0.256     | 80.316%   |          |          |
| X    |          | 0.006   | 0.006    | 0.248  | 0.259    | 0.247     | 79.804%   |          |          |
| σ    |          | 0.003   | 0.001    | 0.015  | 0.013    | 0.009     | 0.633%    |          |          |
| %RSD |          | 46.010  | 13.880   | 6.066  | 4.929    | 3.778     | 0.793     |          |          |

180-17069-A-13-A 12/21/2012 11:37:13 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B      | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|---------|----------|----------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:37:56 | 73.261% | -0.020   | 43.270   | 44.420    | 0.000     | 33400.000 | 12100.000 | 12810.000 |
| 2    | 23:38:39 | 70.708% | -0.028   | 44.630   | 45.740    | 0.000     | 33570.000 | 12280.000 | 12910.000 |
| 3    | 23:39:22 | 69.914% | -0.052   | 44.400   | 44.690    | 0.000     | 34480.000 | 12690.000 | 13320.000 |
| X    |          | 71.295% | -0.033   | 44.100   | 44.950    | 0.000     | 33820.000 | 12360.000 | 13020.000 |
| σ    |          | 1.749%  | 0.017    | 0.727    | 0.700     | 0.000     | 579.800   | 302.500   | 266.500   |
| %RSD |          | 2.453   | 50.930   | 1.648    | 1.557     | 0.000     | 1.715     | 2.448     | 2.047     |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:37:56 | 2.140   | 7945.000 | 0.000    | 5348.000  | 39850.000 | 45070.000 | 62.403%   | 1.766     |
| 2    | 23:38:39 | 2.071   | 8003.000 | 0.000    | 5288.000  | 39280.000 | 43830.000 | 62.892%   | 1.886     |
| 3    | 23:39:22 | 2.079   | 8062.000 | 0.000    | 5365.000  | 40610.000 | 45300.000 | 59.883%   | 1.807     |
| X    |          | 2.097   | 8003.000 | 0.000    | 5333.000  | 39910.000 | 44740.000 | 61.726%   | 1.820     |
| σ    |          | 0.038   | 58.640   | 0.000    | 40.480    | 668.000   | 791.900   | 1.614%    | 0.061     |
| %RSD |          | 1.796   | 0.733    | 0.000    | 0.759     | 1.674     | 1.770     | 2.615     | 3.348     |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:37:56 | 1.467   | 0.728    | 2511.000 | 25600.000 | 22570.000 | 0.257     | 2.021     | 0.453     |
| 2    | 23:38:39 | 3.097   | 0.678    | 2469.000 | 25400.000 | 25110.000 | 0.269     | 1.837     | 0.441     |
| 3    | 23:39:22 | 1.576   | 0.635    | 2559.000 | 26300.000 | 23100.000 | 0.246     | 1.853     | 0.499     |
| X    |          | 2.047   | 0.680    | 2513.000 | 25770.000 | 23590.000 | 0.257     | 1.904     | 0.464     |
| σ    |          | 0.911   | 0.046    | 45.150   | 476.100   | 1343.000  | 0.012     | 0.102     | 0.031     |
| %RSD |          | 44.520  | 6.775    | 1.797    | 1.848     | 5.693     | 4.528     | 5.340     | 6.614     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:37:56 | 0.316   | 0.953    | 1.551    | 1.754     | -0.330    | 0.598     | 0.000     | 205.000   |
| 2    | 23:38:39 | 0.391   | 0.785    | 1.486    | 2.289     | -0.228    | 2.036     | 0.000     | 211.100   |
| 3    | 23:39:22 | 0.359   | 0.998    | 1.257    | 2.573     | -0.165    | 1.988     | 0.000     | 210.700   |
| X    |          | 0.355   | 0.912    | 1.432    | 2.205     | -0.241    | 1.541     | 0.000     | 209.000   |
| σ    |          | 0.038   | 0.112    | 0.155    | 0.416     | 0.083     | 0.817     | 0.000     | 3.411     |
| %RSD |          | 10.550  | 12.270   | 10.800   | 18.860    | 34.420    | 53.000    | 0.000     | 1.632     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:37:56 | 67.430% | 0.266    | 0.315    | 70.033%   | -0.018    | -0.012    | -0.150    | -0.113    |
| 2    | 23:38:39 | 66.669% | 0.293    | 0.292    | 70.731%   | -0.024    | -0.015    | -0.086    | -0.063    |
| 3    | 23:39:22 | 67.454% | 0.318    | 0.283    | 68.965%   | -0.024    | -0.016    | -0.079    | -0.052    |
| X    |          | 67.184% | 0.292    | 0.297    | 69.910%   | -0.022    | -0.015    | -0.105    | -0.076    |
| σ    |          | 0.447%  | 0.026    | 0.017    | 0.889%    | 0.004     | 0.002     | 0.039     | 0.032     |
| %RSD |          | 0.665   | 8.918    | 5.612    | 1.272     | 15.910    | 13.300    | 37.580    | 42.800    |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:37:56 | 66.943% | 0.384    | -0.016   | 0.014     | 76.400    | 75.590    | 72.697%   | 73.721%   |
| 2    | 23:38:39 | 68.006% | 0.496    | -0.018   | -0.011    | 77.370    | 75.460    | 75.242%   | 75.755%   |
| 3    | 23:39:22 | 67.966% | 0.472    | -0.022   | 0.006     | 76.760    | 76.610    | 74.986%   | 75.864%   |
| X    |          | 67.638% | 0.451    | -0.018   | 0.003     | 76.840    | 75.890    | 74.308%   | 75.114%   |
| σ    |          | 0.603%  | 0.059    | 0.003    | 0.013     | 0.490     | 0.632     | 1.401%    | 1.207%    |
| %RSD |          | 0.891   | 13.040   | 16.250   | 392.000   | 0.637     | 0.833     | 1.885     | 1.607     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 23:37:56 | -0.006  | 0.002    | 0.032    | 0.026     | 0.026     | 77.747%   |           |           |
| 2    | 23:38:39 | -0.000  | 0.004    | 0.021    | 0.019     | 0.017     | 79.851%   |           |           |
| 3    | 23:39:22 | -0.005  | 0.002    | 0.020    | 0.012     | 0.018     | 79.075%   |           |           |
| X    |          | -0.004  | 0.002    | 0.024    | 0.019     | 0.020     | 78.891%   |           |           |
| σ    |          | 0.003   | 0.001    | 0.007    | 0.007     | 0.005     | 1.064%    |           |           |
| %RSD |          | 80.590  | 40.870   | 28.020   | 37.240    | 22.880    | 1.349     |           |           |

180-17069-A-14-A 12/21/2012 11:41:33 PM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B      | 11B       | 13C        | 23Na       | 25Mg      | 26Mg      |
|------|----------|---------|----------|----------|-----------|------------|------------|-----------|-----------|
|      |          | ppb     | ppb      | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:42:16 | 69.875% | -0.037   | 76.190   | 77.840    | 0.000      | 33480.000  | 19710.000 | 21100.000 |
| 2    | 23:42:59 | 68.785% | -0.039   | 77.600   | 77.620    | 0.000      | 34120.000  | 19690.000 | 20700.000 |
| 3    | 23:43:42 | 67.857% | -0.059   | 76.550   | 78.280    | 0.000      | 33660.000  | 20000.000 | 21130.000 |
| X    |          | 68.839% | -0.045   | 76.780   | 77.910    | 0.000      | 33750.000  | 19800.000 | 20980.000 |
| σ    |          | 1.010%  | 0.012    | 0.733    | 0.334     | 0.000      | 334.500    | 173.100   | 242.200   |
| %RSD |          | 1.467   | 27.130   | 0.955    | 0.429     | 0.000      | 0.991      | 0.874     | 1.155     |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K       | 43Ca       | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:42:16 | 1.747   | 9849.000 | 0.000    | 13260.000 | 119500.000 | 133000.000 | 61.801%   | 3.108     |
| 2    | 23:42:59 | 1.888   | 9896.000 | 0.000    | 13130.000 | 118800.000 | 132300.000 | 61.078%   | 2.760     |
| 3    | 23:43:42 | 1.837   | 9660.000 | 0.000    | 12870.000 | 118300.000 | 131800.000 | 59.170%   | 2.757     |
| X    |          | 1.824   | 9802.000 | 0.000    | 13080.000 | 118800.000 | 132300.000 | 60.683%   | 2.875     |
| σ    |          | 0.072   | 124.900  | 0.000    | 197.800   | 584.500    | 584.100    | 1.359%    | 0.202     |
| %RSD |          | 3.925   | 1.274    | 0.000    | 1.512     | 0.492      | 0.441      | 2.240     | 7.014     |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe      | 57Fe       | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:42:16 | 4.050   | 0.821    | 5762.000 | 35060.000 | 35150.000  | 0.492      | 2.536     | 0.444     |
| 2    | 23:42:59 | 1.059   | 0.753    | 5701.000 | 34730.000 | 34810.000  | 0.455      | 2.373     | 0.541     |
| 3    | 23:43:42 | -0.314  | 0.717    | 5778.000 | 35040.000 | 35320.000  | 0.473      | 2.509     | 0.494     |
| X    |          | 1.598   | 0.764    | 5747.000 | 34940.000 | 35090.000  | 0.473      | 2.473     | 0.493     |
| σ    |          | 2.231   | 0.053    | 40.850   | 187.000   | 257.500    | 0.019      | 0.087     | 0.049     |
| %RSD |          | 139.600 | 6.876    | 0.711    | 0.535     | 0.734      | 3.926      | 3.524     | 9.883     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As      | 78Se       | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:42:16 | 0.676   | 1.795    | 1.979    | 4.962     | -0.204     | 1.840      | 0.000     | 579.200   |
| 2    | 23:42:59 | 0.600   | 1.553    | 1.376    | 5.744     | -0.150     | 2.330      | 0.000     | 578.400   |
| 3    | 23:43:42 | 0.595   | 1.676    | 1.532    | 5.362     | -0.155     | 1.300      | 0.000     | 513.200   |
| X    |          | 0.623   | 1.675    | 1.629    | 5.356     | -0.170     | 1.824      | 0.000     | 556.900   |
| σ    |          | 0.045   | 0.121    | 0.313    | 0.391     | 0.030      | 0.515      | 0.000     | 37.850    |
| %RSD |          | 7.283   | 7.250    | 19.230   | 7.300     | 17.630     | 28.250     | 0.000     | 6.796     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh     | 107Ag      | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:42:16 | 66.376% | 0.434    | 0.357    | 68.038%   | -0.024     | -0.019     | -0.145    | -0.083    |
| 2    | 23:42:59 | 66.531% | 0.486    | 0.402    | 67.970%   | -0.023     | -0.018     | -0.144    | -0.092    |
| 3    | 23:43:42 | 66.473% | 0.458    | 0.391    | 67.977%   | -0.025     | -0.015     | -0.106    | -0.060    |
| X    |          | 66.460% | 0.459    | 0.383    | 67.995%   | -0.024     | -0.017     | -0.132    | -0.078    |
| σ    |          | 0.078%  | 0.026    | 0.024    | 0.038%    | 0.001      | 0.002      | 0.022     | 0.016     |
| %RSD |          | 0.118   | 5.728    | 6.136    | 0.055     | 4.388      | 11.030     | 16.840    | 20.540    |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb     | 135Ba      | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb        | ppb        | ppb       | ppb       |
| 1    | 23:42:16 | 65.550% | 0.364    | 0.013    | 0.053     | 104.800    | 103.300    | 72.605%   | 73.845%   |
| 2    | 23:42:59 | 66.806% | 0.486    | 0.041    | 0.058     | 105.000    | 104.000    | 74.694%   | 75.758%   |
| 3    | 23:43:42 | 66.848% | 0.396    | 0.025    | 0.053     | 104.500    | 104.300    | 75.112%   | 76.189%   |
| X    |          | 66.401% | 0.415    | 0.027    | 0.055     | 104.800    | 103.900    | 74.137%   | 75.264%   |
| σ    |          | 0.738%  | 0.063    | 0.014    | 0.003     | 0.278      | 0.481      | 1.343%    | 1.248%    |
| %RSD |          | 1.111   | 15.150   | 51.990   | 5.275     | 0.265      | 0.464      | 1.811     | 1.658     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb     | 208Pb      | 209Bi      |           |           |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb        | ppb        |           |           |
| 1    | 23:42:16 | -0.003  | -0.001   | 0.033    | 0.038     | 0.034      | 76.494%    |           |           |
| 2    | 23:42:59 | -0.008  | -0.002   | 0.020    | 0.027     | 0.026      | 78.027%    |           |           |
| 3    | 23:43:42 | -0.007  | -0.004   | 0.033    | 0.021     | 0.025      | 78.747%    |           |           |
| X    |          | -0.006  | -0.003   | 0.028    | 0.028     | 0.028      | 77.756%    |           |           |
| σ    |          | 0.003   | 0.002    | 0.008    | 0.009     | 0.005      | 1.151%     |           |           |
| %RSD |          | 41.500  | 64.590   | 26.980   | 30.530    | 17.990     | 1.480      |           |           |



CCV 664806 12/21/2012 11:48:46 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li      | 9Be      | 10B      | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:49:29 | 72.096%  | 103.400  | 100.500  | 98.480    | 0.000     | 52190.000 | 50660.000 | 50800.000 |
| 2    | 23:50:12 | 70.317%  | 103.800  | 97.650   | 100.500   | 0.000     | 51400.000 | 50360.000 | 50980.000 |
| 3    | 23:50:55 | 67.779%  | 101.300  | 98.500   | 97.770    | 0.000     | 49190.000 | 48430.000 | 49370.000 |
| x    |          | 70.064%  | 102.807% | 98.878%  | 98.912%   | 0.000     | 101.854%  | 99.633%   | 100.768%  |
| σ    |          | 2.170%   | n/a      | n/a      | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 3.097    | 1.320    | 1.473    | 1.422     | 0.000     | 3.054     | 2.427     | 1.755     |
| Run  | Time     | 27Al     | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:49:29 | 484.100  | 5671.000 | 0.000    | 54350.000 | 50700.000 | 55340.000 | 74.390%   | 105.800   |
| 2    | 23:50:12 | 483.900  | 5638.000 | 0.000    | 53560.000 | 50780.000 | 55470.000 | 72.756%   | 107.300   |
| 3    | 23:50:55 | 468.600  | 5446.000 | 0.000    | 50690.000 | 48460.000 | 52490.000 | 74.008%   | 102.600   |
| x    |          | 95.775%  | 111.699% | 0.000    | 105.733%  | 99.963%   | 108.865%  | 73.718%   | 105.257%  |
| σ    |          | n/a      | n/a      | 0.000    | n/a       | n/a       | n/a       | 0.855%    | n/a       |
| %RSD |          | 1.861    | 2.172    | 0.000    | 3.648     | 2.637     | 3.096     | 1.159     | 2.285     |
| Run  | Time     | 51V      | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:49:29 | 101.500  | 102.100  | 553.000  | 27440.000 | 27430.000 | 100.100   | 99.540    | 100.400   |
| 2    | 23:50:12 | 103.500  | 103.900  | 562.200  | 27560.000 | 27410.000 | 100.900   | 100.000   | 100.800   |
| 3    | 23:50:55 | 95.810   | 96.330   | 529.700  | 26480.000 | 26040.000 | 94.780    | 95.050    | 96.950    |
| x    |          | 100.268% | 100.787% | 109.662% | 108.643%  | 107.840%  | 98.588%   | 98.214%   | 99.382%   |
| σ    |          | n/a      | n/a      | n/a      | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 3.983    | 3.929    | 3.062    | 2.186     | 2.956     | 3.368     | 2.800     | 2.123     |
| Run  | Time     | 65Cu     | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:49:29 | 100.900  | 102.300  | 101.400  | 100.700   | 102.100   | 103.700   | 0.000     | 96.360    |
| 2    | 23:50:12 | 101.200  | 102.000  | 101.400  | 101.200   | 101.600   | 103.900   | 0.000     | 97.040    |
| 3    | 23:50:55 | 97.640   | 97.740   | 96.280   | 96.840    | 97.130    | 100.500   | 0.000     | 92.460    |
| x    |          | 99.912%  | 100.662% | 99.700%  | 99.573%   | 100.291%  | 102.727%  | 0.000     | 95.287%   |
| σ    |          | n/a      | n/a      | n/a      | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 1.972    | 2.516    | 2.973    | 2.394     | 2.743     | 1.859     | 0.000     | 2.595     |
| Run  | Time     | 89Y      | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:49:29 | 75.208%  | 95.220   | 94.930   | 73.113%   | 94.320    | 96.310    | 97.420    | 98.940    |
| 2    | 23:50:12 | 76.188%  | 98.140   | 98.070   | 73.724%   | 94.680    | 96.750    | 97.370    | 98.790    |
| 3    | 23:50:55 | 77.618%  | 96.380   | 95.540   | 75.072%   | 92.050    | 92.820    | 94.900    | 95.880    |
| x    |          | 76.338%  | 96.581%  | 96.177%  | 73.969%   | 93.680%   | 95.294%   | 96.566%   | 97.870%   |
| σ    |          | 1.212%   | n/a      | n/a      | 1.003%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 1.587    | 1.523    | 1.730    | 1.355     | 1.524     | 2.257     | 1.491     | 1.764     |
| Run  | Time     | 115In    | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 23:49:29 | 70.232%  | 97.380   | 98.180   | 97.450    | 96.050    | 96.280    | 74.622%   | 75.302%   |
| 2    | 23:50:12 | 71.977%  | 97.790   | 97.730   | 97.370    | 96.380    | 95.960    | 76.659%   | 77.418%   |
| 3    | 23:50:55 | 73.713%  | 95.560   | 94.720   | 93.900    | 93.320    | 91.750    | 79.828%   | 80.067%   |
| x    |          | 71.974%  | 96.908%  | 96.878%  | 96.242%   | 95.250%   | 94.662%   | 77.037%   | 77.595%   |
| σ    |          | 1.741%   | n/a      | n/a      | n/a       | n/a       | n/a       | 2.623%    | 2.387%    |
| %RSD |          | 2.419    | 1.223    | 1.944    | 2.105     | 1.761     | 2.673     | 3.405     | 3.077     |
| Run  | Time     | 203Tl    | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb      | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 23:49:29 | 91.980   | 91.160   | 91.070   | 91.250    | 91.140    | 72.518%   |           |           |
| 2    | 23:50:12 | 93.000   | 92.940   | 92.350   | 93.370    | 92.720    | 73.959%   |           |           |
| 3    | 23:50:55 | 90.460   | 90.850   | 90.860   | 91.540    | 90.870    | 75.368%   |           |           |
| x    |          | 91.813%  | 91.652%  | 91.428%  | 92.055%   | 91.573%   | 73.948%   |           |           |
| σ    |          | n/a      | n/a      | n/a      | n/a       | n/a       | 1.425%    |           |           |
| %RSD |          | 1.393    | 1.227    | 0.883    | 1.248     | 1.090     | 1.927     |           |           |

CCB10 12/21/2012 11:56:00 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be     | 10B    | 11B     | 13C     | 23Na    | 25Mg     | 26Mg    |
|------|----------|---------|---------|--------|---------|---------|---------|----------|---------|
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb     |
| 1    | 23:56:43 | 97.319% | -0.032  | 1.627  | 1.496   | 0.000   | 4.737   | 6.286    | 6.686   |
| 2    | 23:57:26 | 96.758% | -0.042  | 1.619  | 1.517   | 0.000   | 5.240   | 6.764    | 7.232   |
| 3    | 23:58:09 | 92.236% | -0.031  | 1.472  | 1.484   | 0.000   | 4.958   | 6.734    | 7.088   |
| X    |          | 95.438% | -0.035  | 1.573  | 1.499   | 0.000   | 4.979   | 6.594    | 7.002   |
| σ    |          | 2.787%  | 0.006   | 0.087  | 0.016   | 0.000   | 0.252   | 0.268    | 0.283   |
| %RSD |          | 2.920   | 18.130  | 5.550  | 1.098   | 0.000   | 5.067   | 4.062    | 4.046   |
| Run  | Time     | 27Al    | 28Si    | 37Cl   | 39K     | 43Ca    | 44Ca    | 45Sc     | 47Ti    |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb     |
| 1    | 23:56:43 | 1.475   | -0.439  | 0.000  | -3.880  | 5.870   | 4.296   | 109.235% | 0.008   |
| 2    | 23:57:26 | 1.532   | -0.430  | 0.000  | -4.872  | 4.679   | 3.296   | 108.636% | -0.053  |
| 3    | 23:58:09 | 1.434   | -0.015  | 0.000  | -4.358  | 0.646   | 1.217   | 108.589% | -0.059  |
| X    |          | 1.480   | -0.295  | 0.000  | -4.370  | 3.732   | 2.936   | 108.820% | -0.034  |
| σ    |          | 0.049   | 0.243   | 0.000  | 0.496   | 2.738   | 1.571   | 0.360%   | 0.037   |
| %RSD |          | 3.322   | 82.330  | 0.000  | 11.350  | 73.360  | 53.490  | 0.331    | 108.100 |
| Run  | Time     | 51V     | 52Cr    | 55Mn   | 56Fe    | 57Fe    | 59Co    | 60Ni     | 63Cu    |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb     |
| 1    | 23:56:43 | 0.013   | 0.009   | 0.318  | 6.600   | 15.270  | 0.001   | -0.019   | -0.006  |
| 2    | 23:57:26 | 0.039   | 0.012   | 0.332  | 5.530   | 12.490  | 0.001   | -0.006   | -0.002  |
| 3    | 23:58:09 | 0.058   | -0.003  | 0.319  | 1.450   | 10.830  | 0.000   | -0.019   | -0.013  |
| X    |          | 0.036   | 0.006   | 0.323  | 4.527   | 12.860  | 0.001   | -0.015   | -0.007  |
| σ    |          | 0.023   | 0.008   | 0.008  | 2.717   | 2.245   | 0.001   | 0.007    | 0.005   |
| %RSD |          | 62.030  | 139.100 | 2.458  | 60.030  | 17.450  | 94.850  | 49.190   | 76.310  |
| Run  | Time     | 65Cu    | 66Zn    | 68Zn   | 75As    | 78Se    | 82Se    | 83Kr     | 88Sr    |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb     |
| 1    | 23:56:43 | -0.002  | -0.182  | -0.415 | -0.017  | -0.239  | 0.366   | 0.000    | 0.034   |
| 2    | 23:57:26 | 0.009   | -0.217  | -0.083 | -0.105  | -0.396  | 0.204   | 0.000    | 0.026   |
| 3    | 23:58:09 | -0.005  | -0.252  | -0.358 | -0.138  | -0.427  | -0.208  | 0.000    | 0.034   |
| X    |          | 0.001   | -0.217  | -0.285 | -0.087  | -0.354  | 0.121   | 0.000    | 0.031   |
| σ    |          | 0.008   | 0.035   | 0.177  | 0.063   | 0.101   | 0.296   | 0.000    | 0.005   |
| %RSD |          | 996.400 | 16.240  | 62.160 | 72.340  | 28.430  | 245.500 | 0.000    | 15.170  |
| Run  | Time     | 89Y     | 95Mo    | 98Mo   | 103Rh   | 107Ag   | 109Ag   | 111Cd    | 114Cd   |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb     |
| 1    | 23:56:43 | 88.337% | 0.325   | 0.294  | 94.945% | -0.002  | 0.003   | -0.048   | -0.013  |
| 2    | 23:57:26 | 89.802% | 0.311   | 0.295  | 96.251% | -0.001  | -0.000  | -0.027   | 0.005   |
| 3    | 23:58:09 | 91.018% | 0.267   | 0.250  | 96.001% | 0.000   | 0.003   | -0.063   | -0.029  |
| X    |          | 89.719% | 0.301   | 0.280  | 95.732% | -0.001  | 0.002   | -0.046   | -0.012  |
| σ    |          | 1.343%  | 0.030   | 0.026  | 0.693%  | 0.001   | 0.002   | 0.018    | 0.017   |
| %RSD |          | 1.497   | 10.010  | 9.193  | 0.724   | 119.900 | 101.100 | 38.990   | 134.900 |
| Run  | Time     | 115In   | 118Sn   | 121Sb  | 123Sb   | 135Ba   | 137Ba   | 159Tb    | 165Ho   |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb     |
| 1    | 23:56:43 | 84.106% | -0.281  | -0.048 | -0.031  | 0.047   | 0.068   | 83.256%  | 83.619% |
| 2    | 23:57:26 | 86.500% | -0.288  | -0.037 | -0.051  | 0.045   | 0.064   | 85.551%  | 86.146% |
| 3    | 23:58:09 | 87.268% | -0.316  | -0.050 | -0.051  | 0.064   | 0.071   | 86.890%  | 87.410% |
| X    |          | 85.958% | -0.295  | -0.045 | -0.044  | 0.052   | 0.068   | 85.232%  | 85.725% |
| σ    |          | 1.649%  | 0.018   | 0.007  | 0.012   | 0.010   | 0.004   | 1.838%   | 1.930%  |
| %RSD |          | 1.919   | 6.249   | 15.190 | 26.550  | 19.320  | 5.764   | 2.157    | 2.252   |
| Run  | Time     | 203Tl   | 205Tl   | 206Pb  | 207Pb   | 208Pb   | 209Bi   |          |         |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     |          |         |
| 1    | 23:56:43 | 0.008   | 0.012   | 0.045  | 0.050   | 0.046   | 95.460% |          |         |
| 2    | 23:57:26 | 0.010   | 0.006   | 0.061  | 0.040   | 0.044   | 97.066% |          |         |
| 3    | 23:58:09 | 0.006   | 0.006   | 0.039  | 0.039   | 0.037   | 98.771% |          |         |
| X    |          | 0.008   | 0.008   | 0.049  | 0.043   | 0.043   | 97.099% |          |         |
| σ    |          | 0.002   | 0.003   | 0.011  | 0.006   | 0.005   | 1.656%  |          |         |
| %RSD |          | 23.550  | 40.910  | 22.860 | 14.570  | 10.910  | 1.705   |          |         |

180-17069-A-15-A 12/22/2012 12:00:22 AM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B    | 11B      | 13C       | 23Na       | 25Mg      | 26Mg      |
|------|----------|---------|----------|--------|----------|-----------|------------|-----------|-----------|
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb        | ppb       | ppb       |
| 1    | 00:01:05 | 70.802% | -0.033   | 93.160 | 93.000   | 0.000     | 69040.000  | 21270.000 | 22070.000 |
| 2    | 00:01:48 | 68.887% | -0.049   | 92.480 | 93.420   | 0.000     | 68850.000  | 21230.000 | 22640.000 |
| 3    | 00:02:31 | 66.953% | -0.045   | 96.650 | 97.330   | 0.000     | 69710.000  | 21600.000 | 23140.000 |
| X    |          | 68.880% | -0.042   | 94.100 | 94.580   | 0.000     | 69200.000  | 21370.000 | 22610.000 |
| σ    |          | 1.924%  | 0.009    | 2.236  | 2.391    | 0.000     | 450.900    | 205.100   | 537.100   |
| %RSD |          | 2.794   | 20.340   | 2.377  | 2.528    | 0.000     | 0.652      | 0.960     | 2.375     |
| Run  | Time     | 27Al    | 28Si     | 37Cl   | 39K      | 43Ca      | 44Ca       | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb        | ppb       | ppb       |
| 1    | 00:01:05 | 1.551   | 4588.000 | 0.000  | 3340.000 | 98040.000 | 110400.000 | 63.665%   | 0.805     |
| 2    | 00:01:48 | 1.701   | 4688.000 | 0.000  | 3294.000 | 98370.000 | 110200.000 | 61.735%   | 0.853     |
| 3    | 00:02:31 | 1.607   | 4768.000 | 0.000  | 3324.000 | 98650.000 | 111400.000 | 60.131%   | 0.787     |
| X    |          | 1.619   | 4681.000 | 0.000  | 3319.000 | 98350.000 | 110700.000 | 61.844%   | 0.815     |
| σ    |          | 0.076   | 89.980   | 0.000  | 23.000   | 305.500   | 634.500    | 1.770%    | 0.034     |
| %RSD |          | 4.668   | 1.922    | 0.000  | 0.693    | 0.311     | 0.573      | 2.861     | 4.174     |
| Run  | Time     | 51V     | 52Cr     | 55Mn   | 56Fe     | 57Fe      | 59Co       | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb        | ppb       | ppb       |
| 1    | 00:01:05 | 3.180   | 1.130    | 25.520 | 142.700  | 640.400   | 1.081      | 1.671     | 1.285     |
| 2    | 00:01:48 | 2.759   | 1.101    | 25.730 | 134.400  | 606.900   | 1.083      | 1.549     | 1.212     |
| 3    | 00:02:31 | 1.266   | 1.163    | 26.830 | 135.500  | 584.000   | 1.085      | 1.603     | 1.266     |
| X    |          | 2.402   | 1.131    | 26.030 | 137.500  | 610.400   | 1.083      | 1.608     | 1.255     |
| σ    |          | 1.006   | 0.031    | 0.705  | 4.505    | 28.350    | 0.002      | 0.061     | 0.038     |
| %RSD |          | 41.890  | 2.755    | 2.710  | 3.276    | 4.644     | 0.175      | 3.780     | 3.032     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn   | 75As     | 78Se      | 82Se       | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb        | ppb       | ppb       |
| 1    | 00:01:05 | 1.123   | 2.411    | 1.890  | 0.450    | 3.618     | 5.149      | 0.000     | 464.400   |
| 2    | 00:01:48 | 1.090   | 2.564    | 1.994  | 0.948    | 3.903     | 6.080      | 0.000     | 467.300   |
| 3    | 00:02:31 | 1.225   | 2.204    | 2.170  | 0.501    | 3.599     | 5.833      | 0.000     | 472.800   |
| X    |          | 1.146   | 2.393    | 2.018  | 0.633    | 3.707     | 5.687      | 0.000     | 468.200   |
| σ    |          | 0.070   | 0.181    | 0.142  | 0.274    | 0.170     | 0.482      | 0.000     | 4.272     |
| %RSD |          | 6.116   | 7.563    | 7.022  | 43.220   | 4.583     | 8.478      | 0.000     | 0.912     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo   | 103Rh    | 107Ag     | 109Ag      | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb        | ppb       | ppb       |
| 1    | 00:01:05 | 67.412% | 0.394    | 0.362  | 69.275%  | -0.015    | -0.014     | -0.009    | 0.032     |
| 2    | 00:01:48 | 67.884% | 0.372    | 0.349  | 69.463%  | -0.019    | -0.019     | 0.106     | 0.133     |
| 3    | 00:02:31 | 67.274% | 0.353    | 0.314  | 68.716%  | -0.014    | -0.013     | 0.025     | 0.046     |
| X    |          | 67.523% | 0.373    | 0.342  | 69.152%  | -0.016    | -0.015     | 0.041     | 0.071     |
| σ    |          | 0.320%  | 0.020    | 0.025  | 0.389%   | 0.003     | 0.003      | 0.060     | 0.055     |
| %RSD |          | 0.473   | 5.417    | 7.361  | 0.562    | 16.070    | 21.440     | 146.500   | 77.200    |
| Run  | Time     | 115In   | 118Sn    | 121Sb  | 123Sb    | 135Ba     | 137Ba      | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb        | ppb       | ppb       |
| 1    | 00:01:05 | 65.755% | 1.042    | 0.032  | 0.084    | 128.800   | 128.200    | 72.164%   | 72.383%   |
| 2    | 00:01:48 | 67.004% | 0.782    | 0.036  | 0.088    | 130.300   | 130.300    | 73.715%   | 74.898%   |
| 3    | 00:02:31 | 66.530% | 0.721    | 0.046  | 0.064    | 130.300   | 128.900    | 74.423%   | 75.047%   |
| X    |          | 66.430% | 0.849    | 0.038  | 0.079    | 129.800   | 129.100    | 73.434%   | 74.109%   |
| σ    |          | 0.631%  | 0.171    | 0.007  | 0.013    | 0.852     | 1.073      | 1.155%    | 1.497%    |
| %RSD |          | 0.950   | 20.130   | 18.290 | 16.090   | 0.656     | 0.831      | 1.573     | 2.020     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb  | 207Pb    | 208Pb     | 209Bi      |           |           |
|      |          | ppb     | ppb      | ppb    | ppb      | ppb       | ppb        |           |           |
| 1    | 00:01:05 | -0.008  | -0.001   | 0.055  | 0.050    | 0.061     | 76.324%    |           |           |
| 2    | 00:01:48 | -0.005  | -0.005   | 0.044  | 0.053    | 0.054     | 78.099%    |           |           |
| 3    | 00:02:31 | -0.002  | -0.004   | 0.051  | 0.057    | 0.052     | 78.392%    |           |           |
| X    |          | -0.005  | -0.003   | 0.050  | 0.053    | 0.056     | 77.605%    |           |           |
| σ    |          | 0.003   | 0.002    | 0.005  | 0.003    | 0.005     | 1.119%     |           |           |
| %RSD |          | 53.040  | 56.750   | 10.880 | 5.866    | 8.196     | 1.442      |           |           |

180-17069-A-16-A 12/22/2012 12:04:43 AM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B     | 11B       | 13C       | 23Na      | 25Mg     | 26Mg     |
|------|----------|---------|----------|---------|-----------|-----------|-----------|----------|----------|
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 00:05:26 | 72.710% | -0.024   | 66.000  | 64.190    | 0.000     | 22870.000 | 5019.000 | 6592.000 |
| 2    | 00:06:09 | 74.377% | -0.035   | 61.250  | 61.890    | 0.000     | 22070.000 | 4951.000 | 6398.000 |
| 3    | 00:06:52 | 71.662% | -0.004   | 61.380  | 61.280    | 0.000     | 22480.000 | 5334.000 | 6680.000 |
| X    |          | 72.917% | -0.021   | 62.880  | 62.450    | 0.000     | 22470.000 | 5101.000 | 6557.000 |
| σ    |          | 1.369%  | 0.016    | 2.704   | 1.534     | 0.000     | 397.300   | 204.700  | 144.400  |
| %RSD |          | 1.878   | 75.740   | 4.301   | 2.456     | 0.000     | 1.768     | 4.012    | 2.202    |
| Run  | Time     | 27Al    | 28Si     | 37Cl    | 39K       | 43Ca      | 44Ca      | 45Sc     | 47Ti     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 00:05:26 | 16.410  | 4594.000 | 0.000   | 9976.000  | 37060.000 | 41460.000 | 66.455%  | 3.235    |
| 2    | 00:06:09 | 15.970  | 4461.000 | 0.000   | 9581.000  | 36690.000 | 40540.000 | 64.304%  | 3.480    |
| 3    | 00:06:52 | 16.410  | 4525.000 | 0.000   | 9848.000  | 36720.000 | 41010.000 | 63.267%  | 3.107    |
| X    |          | 16.260  | 4527.000 | 0.000   | 9802.000  | 36820.000 | 41000.000 | 64.675%  | 3.274    |
| σ    |          | 0.251   | 66.670   | 0.000   | 201.600   | 205.300   | 457.900   | 1.626%   | 0.190    |
| %RSD |          | 1.545   | 1.473    | 0.000   | 2.057     | 0.558     | 1.117     | 2.514    | 5.795    |
| Run  | Time     | 51V     | 52Cr     | 55Mn    | 56Fe      | 57Fe      | 59Co      | 60Ni     | 63Cu     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 00:05:26 | 8.875   | 1.422    | 239.300 | 16100.000 | 14170.000 | 1.729     | 5.362    | 1.713    |
| 2    | 00:06:09 | 10.570  | 1.340    | 238.600 | 15680.000 | 13970.000 | 1.648     | 5.428    | 1.634    |
| 3    | 00:06:52 | 9.112   | 1.287    | 244.700 | 16140.000 | 14090.000 | 1.682     | 5.484    | 1.748    |
| X    |          | 9.519   | 1.350    | 240.800 | 15970.000 | 14080.000 | 1.686     | 5.425    | 1.699    |
| σ    |          | 0.918   | 0.068    | 3.338   | 254.900   | 98.580    | 0.041     | 0.061    | 0.058    |
| %RSD |          | 9.645   | 5.048    | 1.386   | 1.596     | 0.700     | 2.402     | 1.128    | 3.426    |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn    | 75As      | 78Se      | 82Se      | 83Kr     | 88Sr     |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 00:05:26 | 1.604   | 1.811    | 1.508   | 5.564     | 1.158     | 3.159     | 0.000    | 226.400  |
| 2    | 00:06:09 | 1.504   | 1.841    | 1.458   | 5.591     | 1.299     | 2.609     | 0.000    | 222.900  |
| 3    | 00:06:52 | 1.661   | 2.006    | 2.016   | 6.096     | 1.328     | 2.851     | 0.000    | 225.700  |
| X    |          | 1.590   | 1.886    | 1.660   | 5.751     | 1.262     | 2.873     | 0.000    | 225.000  |
| σ    |          | 0.080   | 0.105    | 0.309   | 0.300     | 0.091     | 0.276     | 0.000    | 1.845    |
| %RSD |          | 5.020   | 5.586    | 18.600  | 5.213     | 7.214     | 9.600     | 0.000    | 0.820    |
| Run  | Time     | 89Y     | 95Mo     | 98Mo    | 103Rh     | 107Ag     | 109Ag     | 111Cd    | 114Cd    |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 00:05:26 | 69.349% | 1.777    | 1.820   | 71.968%   | -0.018    | -0.016    | -0.099   | -0.070   |
| 2    | 00:06:09 | 71.059% | 1.741    | 1.893   | 72.915%   | -0.019    | -0.010    | -0.083   | -0.047   |
| 3    | 00:06:52 | 70.214% | 1.832    | 1.911   | 72.085%   | -0.016    | -0.014    | -0.144   | -0.093   |
| X    |          | 70.207% | 1.783    | 1.875   | 72.323%   | -0.018    | -0.013    | -0.109   | -0.070   |
| σ    |          | 0.855%  | 0.046    | 0.048   | 0.516%    | 0.001     | 0.003     | 0.032    | 0.023    |
| %RSD |          | 1.218   | 2.554    | 2.557   | 0.713     | 8.037     | 23.370    | 29.270   | 32.990   |
| Run  | Time     | 115In   | 118Sn    | 121Sb   | 123Sb     | 135Ba     | 137Ba     | 159Tb    | 165Ho    |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       | ppb      | ppb      |
| 1    | 00:05:26 | 68.427% | 0.730    | 0.175   | 0.177     | 38.520    | 38.300    | 73.956%  | 75.055%  |
| 2    | 00:06:09 | 70.227% | 0.634    | 0.154   | 0.160     | 36.950    | 37.320    | 76.619%  | 77.436%  |
| 3    | 00:06:52 | 69.693% | 0.639    | 0.155   | 0.145     | 37.800    | 37.770    | 77.062%  | 77.981%  |
| X    |          | 69.449% | 0.668    | 0.162   | 0.161     | 37.760    | 37.800    | 75.879%  | 76.824%  |
| σ    |          | 0.925%  | 0.054    | 0.012   | 0.016     | 0.789     | 0.486     | 1.680%   | 1.556%   |
| %RSD |          | 1.331   | 8.074    | 7.407   | 10.050    | 2.089     | 1.285     | 2.214    | 2.025    |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb   | 207Pb     | 208Pb     | 209Bi     |          |          |
|      |          | ppb     | ppb      | ppb     | ppb       | ppb       | ppb       |          |          |
| 1    | 00:05:26 | -0.006  | -0.004   | 0.173   | 0.164     | 0.157     | 79.088%   |          |          |
| 2    | 00:06:09 | -0.007  | -0.005   | 0.164   | 0.167     | 0.166     | 83.034%   |          |          |
| 3    | 00:06:52 | -0.008  | -0.002   | 0.134   | 0.166     | 0.154     | 82.657%   |          |          |
| X    |          | -0.007  | -0.003   | 0.157   | 0.166     | 0.159     | 81.593%   |          |          |
| σ    |          | 0.001   | 0.001    | 0.020   | 0.001     | 0.006     | 2.178%    |          |          |
| %RSD |          | 14.370  | 38.570   | 12.840  | 0.719     | 4.024     | 2.669     |          |          |

180-17069-A-17-A 12/22/2012 12:09:05 AM

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B      | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|---------|----------|----------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:09:47 | 73.036% | -0.017   | 104.800  | 105.000   | 0.000     | 55910.000 | 27000.000 | 28290.000 |
| 2    | 00:10:31 | 70.762% | -0.028   | 103.800  | 105.400   | 0.000     | 55170.000 | 26840.000 | 28370.000 |
| 3    | 00:11:14 | 69.484% | -0.004   | 104.500  | 107.100   | 0.000     | 54350.000 | 26700.000 | 28070.000 |
| X    |          | 71.094% | -0.016   | 104.400  | 105.800   | 0.000     | 55140.000 | 26850.000 | 28240.000 |
| σ    |          | 1.799%  | 0.012    | 0.481    | 1.081     | 0.000     | 781.400   | 150.400   | 155.600   |
| %RSD |          | 2.531   | 74.230   | 0.461    | 1.022     | 0.000     | 1.417     | 0.560     | 0.551     |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:09:47 | 21.200  | 9636.000 | 0.000    | 8496.000  | 68690.000 | 75810.000 | 63.382%   | 3.916     |
| 2    | 00:10:31 | 21.940  | 9707.000 | 0.000    | 8375.000  | 68020.000 | 74090.000 | 62.535%   | 4.166     |
| 3    | 00:11:14 | 21.140  | 9550.000 | 0.000    | 8249.000  | 66900.000 | 74370.000 | 61.345%   | 3.921     |
| X    |          | 21.430  | 9631.000 | 0.000    | 8373.000  | 67870.000 | 74750.000 | 62.420%   | 4.001     |
| σ    |          | 0.443   | 78.730   | 0.000    | 123.600   | 903.800   | 925.500   | 1.023%    | 0.143     |
| %RSD |          | 2.068   | 0.817    | 0.000    | 1.476     | 1.332     | 1.238     | 1.639     | 3.581     |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:09:47 | 2.090   | 1.125    | 3094.000 | 42970.000 | 42790.000 | 0.309     | 0.824     | 1.354     |
| 2    | 00:10:31 | 2.533   | 1.070    | 3101.000 | 42730.000 | 42950.000 | 0.300     | 0.708     | 1.360     |
| 3    | 00:11:14 | 1.710   | 0.987    | 3075.000 | 42920.000 | 43150.000 | 0.306     | 0.754     | 1.288     |
| X    |          | 2.111   | 1.061    | 3090.000 | 42870.000 | 42970.000 | 0.305     | 0.762     | 1.334     |
| σ    |          | 0.412   | 0.069    | 13.070   | 128.400   | 183.100   | 0.005     | 0.058     | 0.040     |
| %RSD |          | 19.520  | 6.518    | 0.423    | 0.299     | 0.426     | 1.557     | 7.672     | 2.996     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:09:47 | 1.094   | 2.205    | 1.993    | 4.436     | 0.278     | 2.439     | 0.000     | 408.300   |
| 2    | 00:10:31 | 1.194   | 2.332    | 2.176    | 4.498     | 0.237     | 2.367     | 0.000     | 412.600   |
| 3    | 00:11:14 | 1.109   | 2.287    | 2.125    | 3.630     | 0.098     | 1.553     | 0.000     | 416.600   |
| X    |          | 1.132   | 2.275    | 2.098    | 4.188     | 0.204     | 2.119     | 0.000     | 412.500   |
| σ    |          | 0.054   | 0.064    | 0.094    | 0.484     | 0.094     | 0.492     | 0.000     | 4.154     |
| %RSD |          | 4.757   | 2.828    | 4.490    | 11.570    | 46.060    | 23.220    | 0.000     | 1.007     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:09:47 | 68.821% | 0.313    | 0.280    | 70.531%   | -0.016    | -0.012    | -0.097    | -0.042    |
| 2    | 00:10:31 | 68.567% | 0.277    | 0.274    | 70.168%   | -0.022    | -0.013    | -0.110    | -0.073    |
| 3    | 00:11:14 | 68.003% | 0.309    | 0.256    | 69.783%   | -0.024    | -0.019    | -0.112    | -0.086    |
| X    |          | 68.464% | 0.299    | 0.270    | 70.160%   | -0.021    | -0.015    | -0.107    | -0.067    |
| σ    |          | 0.419%  | 0.020    | 0.012    | 0.374%    | 0.004     | 0.004     | 0.008     | 0.023     |
| %RSD |          | 0.612   | 6.601    | 4.507    | 0.533     | 18.940    | 25.760    | 7.637     | 33.850    |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:09:47 | 67.550% | 0.417    | 0.018    | 0.077     | 76.480    | 75.360    | 73.235%   | 74.739%   |
| 2    | 00:10:31 | 68.316% | 0.406    | 0.008    | 0.053     | 75.660    | 76.940    | 75.317%   | 76.351%   |
| 3    | 00:11:14 | 68.480% | 0.455    | 0.054    | 0.054     | 77.410    | 76.200    | 75.695%   | 76.679%   |
| X    |          | 68.115% | 0.426    | 0.027    | 0.062     | 76.520    | 76.170    | 74.749%   | 75.923%   |
| σ    |          | 0.496%  | 0.026    | 0.024    | 0.013     | 0.874     | 0.794     | 1.325%    | 1.038%    |
| %RSD |          | 0.728   | 6.019    | 89.610   | 21.670    | 1.142     | 1.042     | 1.773     | 1.368     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 00:09:47 | -0.009  | -0.010   | 0.482    | 0.496     | 0.497     | 77.307%   |           |           |
| 2    | 00:10:31 | -0.013  | -0.006   | 0.483    | 0.520     | 0.506     | 79.668%   |           |           |
| 3    | 00:11:14 | -0.015  | -0.008   | 0.549    | 0.446     | 0.502     | 79.809%   |           |           |
| X    |          | -0.012  | -0.008   | 0.505    | 0.487     | 0.502     | 78.928%   |           |           |
| σ    |          | 0.003   | 0.002    | 0.038    | 0.038     | 0.005     | 1.406%    |           |           |
| %RSD |          | 25.700  | 24.970   | 7.605    | 7.781     | 0.901     | 1.781     |           |           |

CCV 664806 12/22/2012 12:16:18 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be      | 10B      | 11B       | 13C       | 23Na      | 25Mg      | 26Mg      |
|------|----------|---------|----------|----------|-----------|-----------|-----------|-----------|-----------|
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:17:01 | 74.817% | 99.650   | 95.010   | 95.240    | 0.000     | 47920.000 | 46750.000 | 46700.000 |
| 2    | 00:17:44 | 71.574% | 102.900  | 98.950   | 98.340    | 0.000     | 51880.000 | 50500.000 | 50850.000 |
| 3    | 00:18:27 | 68.993% | 106.300  | 103.000  | 104.800   | 0.000     | 53890.000 | 52860.000 | 53420.000 |
| x    |          | 71.795% | 102.938% | 99.000%  | 99.446%   | 0.000     | 102.463%  | 100.072%  | 100.646%  |
| σ    |          | 2.918%  | n/a      | n/a      | n/a       | 0.000     | n/a       | n/a       | n/a       |
| %RSD |          | 4.065   | 3.210    | 4.053    | 4.881     | 0.000     | 5.931     | 6.149     | 6.731     |
| Run  | Time     | 27Al    | 28Si     | 37Cl     | 39K       | 43Ca      | 44Ca      | 45Sc      | 47Ti      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:17:01 | 438.000 | 5186.000 | 0.000    | 48000.000 | 43970.000 | 47790.000 | 89.104%   | 93.070    |
| 2    | 00:17:44 | 483.900 | 5598.000 | 0.000    | 53940.000 | 50760.000 | 55250.000 | 74.493%   | 107.600   |
| 3    | 00:18:27 | 510.700 | 5929.000 | 0.000    | 56400.000 | 52990.000 | 57700.000 | 72.203%   | 111.600   |
| x    |          | 95.509% | 111.417% | 0.000    | 105.563%  | 98.482%   | 107.163%  | 78.600%   | 104.064%  |
| σ    |          | n/a     | n/a      | 0.000    | n/a       | n/a       | n/a       | 9.168%    | n/a       |
| %RSD |          | 7.701   | 6.683    | 0.000    | 8.187     | 9.538     | 9.636     | 11.665    | 9.351     |
| Run  | Time     | 51V     | 52Cr     | 55Mn     | 56Fe      | 57Fe      | 59Co      | 60Ni      | 63Cu      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:17:01 | 88.840  | 89.130   | 496.600  | 24880.000 | 24870.000 | 91.150    | 92.310    | 92.940    |
| 2    | 00:17:44 | 102.100 | 102.600  | 559.000  | 27750.000 | 28010.000 | 102.500   | 102.800   | 103.500   |
| 3    | 00:18:27 | 106.200 | 106.600  | 578.300  | 28470.000 | 28470.000 | 104.300   | 105.200   | 105.400   |
| x    |          | 99.034% | 99.459%  | 108.927% | 108.130%  | 108.462%  | 99.325%   | 100.124%  | 100.630%  |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 9.153   | 9.213    | 7.844    | 7.016     | 7.217     | 7.181     | 6.863     | 6.684     |
| Run  | Time     | 65Cu    | 66Zn     | 68Zn     | 75As      | 78Se      | 82Se      | 83Kr      | 88Sr      |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:17:01 | 92.520  | 93.550   | 95.150   | 97.150    | 99.110    | 100.200   | 0.000     | 97.630    |
| 2    | 00:17:44 | 101.000 | 102.500  | 101.500  | 104.100   | 103.900   | 106.000   | 0.000     | 99.140    |
| 3    | 00:18:27 | 105.900 | 105.800  | 104.800  | 105.700   | 105.600   | 107.400   | 0.000     | 99.660    |
| x    |          | 99.822% | 100.604% | 100.473% | 102.321%  | 102.870%  | 104.542%  | 0.000     | 98.811%   |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | n/a       | 0.000     | n/a       |
| %RSD |          | 6.793   | 6.295    | 4.867    | 4.444     | 3.278     | 3.645     | 0.000     | 1.068     |
| Run  | Time     | 89Y     | 95Mo     | 98Mo     | 103Rh     | 107Ag     | 109Ag     | 111Cd     | 114Cd     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:17:01 | 74.350% | 96.200   | 95.510   | 73.841%   | 93.380    | 95.500    | 97.310    | 98.210    |
| 2    | 00:17:44 | 75.626% | 98.540   | 97.870   | 74.882%   | 94.840    | 96.000    | 97.470    | 99.180    |
| 3    | 00:18:27 | 76.364% | 101.600  | 100.100  | 74.753%   | 96.400    | 97.810    | 98.240    | 99.820    |
| x    |          | 75.447% | 98.795%  | 97.817%  | 74.492%   | 94.873%   | 96.433%   | 97.675%   | 99.070%   |
| σ    |          | 1.019%  | n/a      | n/a      | 0.568%    | n/a       | n/a       | n/a       | n/a       |
| %RSD |          | 1.351   | 2.769    | 2.328    | 0.762     | 1.593     | 1.260     | 0.510     | 0.815     |
| Run  | Time     | 115In   | 118Sn    | 121Sb    | 123Sb     | 135Ba     | 137Ba     | 159Tb     | 165Ho     |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       | ppb       | ppb       |
| 1    | 00:17:01 | 71.115% | 97.470   | 96.740   | 97.110    | 96.970    | 96.250    | 74.840%   | 75.204%   |
| 2    | 00:17:44 | 72.817% | 98.500   | 97.080   | 97.060    | 96.130    | 95.800    | 77.509%   | 77.938%   |
| 3    | 00:18:27 | 72.952% | 100.000  | 99.670   | 98.270    | 98.200    | 98.500    | 78.136%   | 78.516%   |
| x    |          | 72.294% | 98.666%  | 97.830%  | 97.479%   | 97.097%   | 96.851%   | 76.828%   | 77.219%   |
| σ    |          | 1.024%  | n/a      | n/a      | n/a       | n/a       | n/a       | 1.750%    | 1.769%    |
| %RSD |          | 1.416   | 1.300    | 1.640    | 0.699     | 1.071     | 1.493     | 2.278     | 2.291     |
| Run  | Time     | 203Tl   | 205Tl    | 206Pb    | 207Pb     | 208Pb     | 209Bi     |           |           |
|      |          | ppb     | ppb      | ppb      | ppb       | ppb       | ppb       |           |           |
| 1    | 00:17:01 | 91.450  | 91.390   | 91.700   | 91.640    | 91.530    | 72.157%   |           |           |
| 2    | 00:17:44 | 92.760  | 92.770   | 92.310   | 92.700    | 92.730    | 74.066%   |           |           |
| 3    | 00:18:27 | 93.260  | 93.330   | 94.260   | 94.170    | 93.910    | 74.790%   |           |           |
| x    |          | 92.488% | 92.496%  | 92.757%  | 92.835%   | 92.722%   | 73.671%   |           |           |
| σ    |          | n/a     | n/a      | n/a      | n/a       | n/a       | 1.360%    |           |           |
| %RSD |          | 1.012   | 1.082    | 1.445    | 1.368     | 1.283     | 1.846     |           |           |

CCB11 12/22/2012 12:23:32 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

| Run  | Time     | 6Li     | 9Be     | 10B    | 11B     | 13C     | 23Na    | 25Mg     | 26Mg     |
|------|----------|---------|---------|--------|---------|---------|---------|----------|----------|
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb      |
| 1    | 00:24:14 | 98.005% | -0.035  | 1.369  | 1.346   | 0.000   | 6.379   | 8.497    | 8.462    |
| 2    | 00:24:58 | 97.376% | -0.026  | 1.164  | 1.223   | 0.000   | 6.183   | 7.499    | 8.196    |
| 3    | 00:25:40 | 96.751% | -0.045  | 1.198  | 1.153   | 0.000   | 6.607   | 7.897    | 8.602    |
| X    |          | 97.377% | -0.036  | 1.243  | 1.240   | 0.000   | 6.390   | 7.965    | 8.420    |
| σ    |          | 0.627%  | 0.010   | 0.110  | 0.098   | 0.000   | 0.212   | 0.502    | 0.206    |
| %RSD |          | 0.644   | 26.980  | 8.814  | 7.879   | 0.000   | 3.319   | 6.308    | 2.451    |
| Run  | Time     | 27Al    | 28Si    | 37Cl   | 39K     | 43Ca    | 44Ca    | 45Sc     | 47Ti     |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb      |
| 1    | 00:24:14 | 1.618   | -0.012  | 0.000  | -0.865  | 9.221   | 5.675   | 108.677% | -0.012   |
| 2    | 00:24:58 | 1.544   | 0.225   | 0.000  | -0.900  | 4.094   | 7.228   | 109.061% | -0.002   |
| 3    | 00:25:40 | 1.743   | 0.567   | 0.000  | -0.502  | 9.027   | 7.210   | 106.478% | 0.013    |
| X    |          | 1.635   | 0.260   | 0.000  | -0.756  | 7.447   | 6.704   | 108.072% | -0.000   |
| σ    |          | 0.100   | 0.291   | 0.000  | 0.220   | 2.906   | 0.891   | 1.394%   | 0.012    |
| %RSD |          | 6.138   | 112.200 | 0.000  | 29.160  | 39.020  | 13.300  | 1.290    | 4261.000 |
| Run  | Time     | 51V     | 52Cr    | 55Mn   | 56Fe    | 57Fe    | 59Co    | 60Ni     | 63Cu     |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb      |
| 1    | 00:24:14 | 0.018   | 0.003   | 0.374  | 10.330  | 18.210  | 0.005   | 0.008    | -0.007   |
| 2    | 00:24:58 | 0.073   | 0.012   | 0.376  | 6.706   | 14.430  | 0.004   | -0.007   | -0.007   |
| 3    | 00:25:40 | 0.004   | 0.004   | 0.368  | 7.523   | 14.440  | 0.004   | -0.035   | 0.003    |
| X    |          | 0.032   | 0.006   | 0.373  | 8.188   | 15.690  | 0.004   | -0.011   | -0.004   |
| σ    |          | 0.036   | 0.005   | 0.004  | 1.903   | 2.180   | 0.000   | 0.021    | 0.005    |
| %RSD |          | 114.000 | 80.210  | 1.087  | 23.240  | 13.890  | 11.930  | 186.500  | 148.700  |
| Run  | Time     | 65Cu    | 66Zn    | 68Zn   | 75As    | 78Se    | 82Se    | 83Kr     | 88Sr     |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb      |
| 1    | 00:24:14 | 0.023   | -0.138  | -0.294 | -0.054  | -0.069  | 0.214   | 0.000    | 0.038    |
| 2    | 00:24:58 | -0.010  | -0.143  | -0.307 | -0.176  | -0.108  | -0.170  | 0.000    | 0.035    |
| 3    | 00:25:40 | 0.024   | -0.306  | -0.349 | 0.025   | -0.146  | 0.501   | 0.000    | 0.042    |
| X    |          | 0.012   | -0.196  | -0.317 | -0.068  | -0.108  | 0.182   | 0.000    | 0.038    |
| σ    |          | 0.020   | 0.095   | 0.028  | 0.101   | 0.039   | 0.337   | 0.000    | 0.003    |
| %RSD |          | 160.700 | 48.750  | 8.954  | 148.200 | 36.000  | 185.500 | 0.000    | 8.507    |
| Run  | Time     | 89Y     | 95Mo    | 98Mo   | 103Rh   | 107Ag   | 109Ag   | 111Cd    | 114Cd    |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb      |
| 1    | 00:24:14 | 90.208% | 0.307   | 0.372  | 95.244% | -0.001  | 0.003   | -0.054   | -0.019   |
| 2    | 00:24:58 | 92.154% | 0.313   | 0.324  | 96.851% | 0.002   | 0.005   | -0.054   | -0.020   |
| 3    | 00:25:40 | 91.560% | 0.303   | 0.234  | 95.522% | 0.009   | 0.011   | -0.064   | -0.010   |
| X    |          | 91.308% | 0.308   | 0.310  | 95.872% | 0.003   | 0.006   | -0.057   | -0.016   |
| σ    |          | 0.997%  | 0.005   | 0.070  | 0.859%  | 0.005   | 0.004   | 0.006    | 0.006    |
| %RSD |          | 1.092   | 1.629   | 22.610 | 0.896   | 146.900 | 67.240  | 10.600   | 34.550   |
| Run  | Time     | 115In   | 118Sn   | 121Sb  | 123Sb   | 135Ba   | 137Ba   | 159Tb    | 165Ho    |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     | ppb      | ppb      |
| 1    | 00:24:14 | 87.656% | -0.277  | -0.041 | -0.021  | 0.030   | 0.062   | 84.079%  | 84.472%  |
| 2    | 00:24:58 | 89.400% | -0.238  | -0.031 | -0.043  | 0.096   | 0.053   | 87.026%  | 86.791%  |
| 3    | 00:25:40 | 89.246% | -0.351  | -0.031 | -0.040  | 0.032   | 0.079   | 87.055%  | 87.078%  |
| X    |          | 88.767% | -0.288  | -0.034 | -0.035  | 0.053   | 0.064   | 86.053%  | 86.114%  |
| σ    |          | 0.966%  | 0.058   | 0.006  | 0.012   | 0.038   | 0.013   | 1.710%   | 1.429%   |
| %RSD |          | 1.088   | 19.950  | 17.470 | 34.250  | 71.430  | 20.550  | 1.987    | 1.659    |
| Run  | Time     | 203Tl   | 205Tl   | 206Pb  | 207Pb   | 208Pb   | 209Bi   |          |          |
|      |          | ppb     | ppb     | ppb    | ppb     | ppb     | ppb     |          |          |
| 1    | 00:24:14 | 0.002   | 0.005   | 0.067  | 0.056   | 0.058   | 96.744% |          |          |
| 2    | 00:24:58 | -0.003  | 0.007   | 0.056  | 0.049   | 0.046   | 98.826% |          |          |
| 3    | 00:25:40 | 0.012   | 0.005   | 0.035  | 0.037   | 0.035   | 99.075% |          |          |
| X    |          | 0.004   | 0.006   | 0.053  | 0.047   | 0.047   | 98.215% |          |          |
| σ    |          | 0.008   | 0.001   | 0.016  | 0.010   | 0.012   | 1.280%  |          |          |
| %RSD |          | 202.200 | 18.530  | 30.060 | 20.720  | 24.650  | 1.304   |          |          |

## Performance Report

### Sample details

Sample name : ITUNE

Acquired at : 12/21/2012 1:40:58 PM

Report name : EPA ILMO5.2/6020A 2.1 [8/5/2011 12:59:56 PM]

### Mass Calibration verification

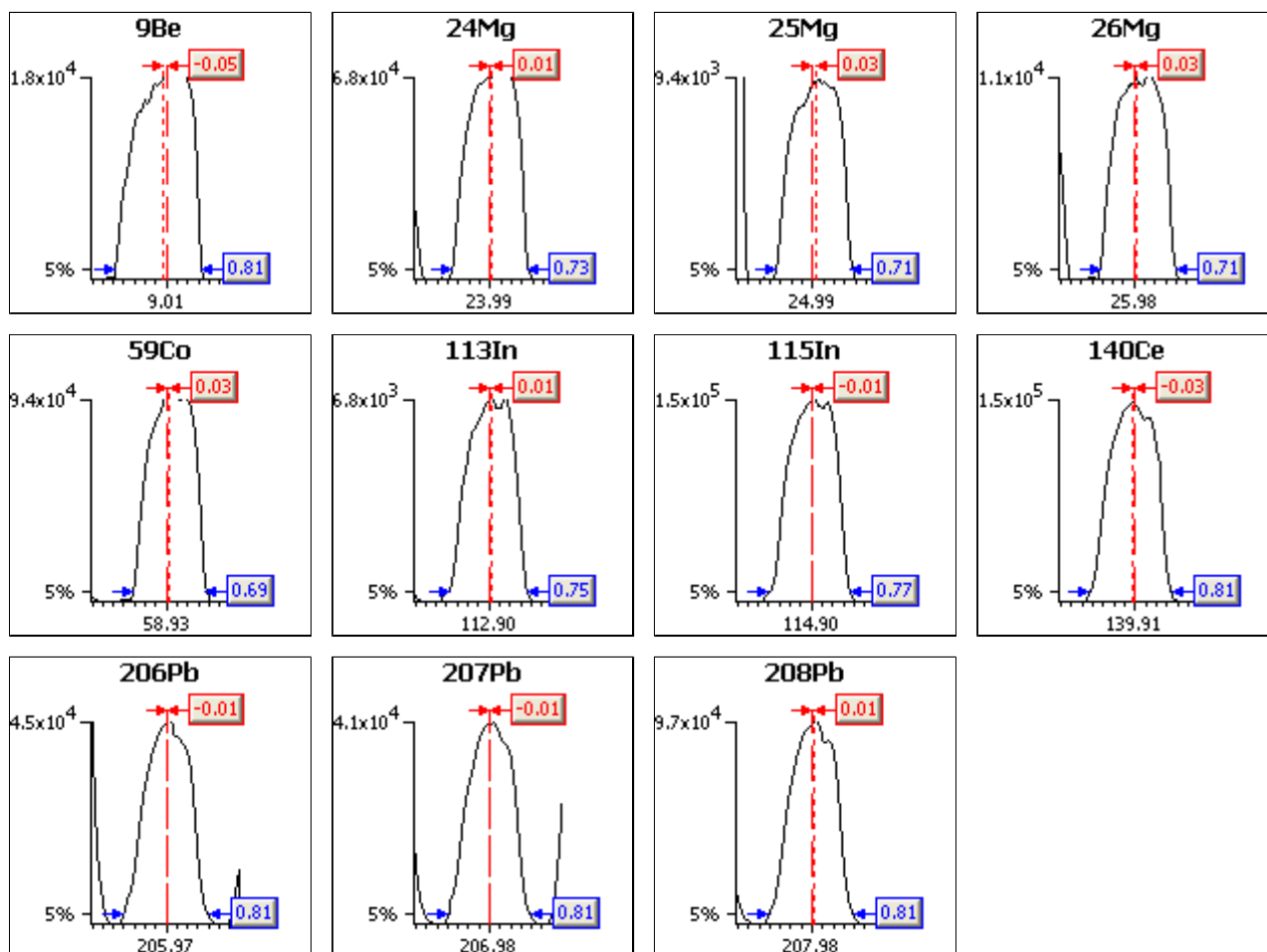
#### Acquisition parameters

Sweeps : 25

Dwell : 2.0 mSecs

Point spacing : 0.02 amu

Peak width measured at 5% of the peak maximum



| Analyte      | Limits     |            |            | Results    |            |
|--------------|------------|------------|------------|------------|------------|
|              | Max. width | Min. width | Max. error | Peak width | Peak error |
| <b>9Be</b>   | 0.90       | 0.45       | 0.10       | 0.81       | -0.05      |
| <b>24Mg</b>  | 0.90       | 0.45       | 0.10       | 0.73       | 0.01       |
| <b>25Mg</b>  | 0.90       | 0.45       | 0.10       | 0.71       | 0.03       |
| <b>26Mg</b>  | 0.90       | 0.45       | 0.10       | 0.71       | 0.03       |
| <b>59Co</b>  | 0.90       | 0.45       | 0.10       | 0.69       | 0.03       |
| <b>113In</b> | 0.90       | 0.45       | 0.10       | 0.75       | 0.01       |
| <b>115In</b> | 0.90       | 0.45       | 0.10       | 0.77       | -0.01      |
| <b>140Ce</b> | 0.90       | 0.45       | 0.10       | 0.81       | -0.03      |
| <b>206Pb</b> | 0.90       | 0.45       | 0.10       | 0.81       | -0.01      |
| <b>207Pb</b> | 0.90       | 0.45       | 0.10       | 0.81       | -0.01      |
| <b>208Pb</b> | 0.90       | 0.45       | 0.10       | 0.81       | 0.01       |



**Sample details**

Sample name : ITUNE

Acquired at : 12/21/2012 1:40:58 PM

Report name : EPA ILM05.2/6020A 2.1 [8/5/2011 12:59:56 PM]

**Tune conditions**

| Major          |       | Minor         |        | Global              |     | Add. Gases |      |
|----------------|-------|---------------|--------|---------------------|-----|------------|------|
| Extraction     | -114  | Lens 2        | -36.1  | Standard resolution | n/a | He/H2      | 0.00 |
| Lens 1         | 2.0   | Lens 3        | -176.5 | High resolution     | n/a | He/NH3     | 0.00 |
| Focus          | 26.7  | Forward power | 1349   | Analogue Detector   | n/a |            |      |
| D1             | -37.6 | Horizontal    | 72     | PC Detector         | n/a |            |      |
| Pole Bias      | 3.0   | Vertical      | 408    |                     |     |            |      |
| Hexapole Bias  | -3.0  | D2            | -160   |                     |     |            |      |
| Nebuliser      | 0.80  | DA            | -80.0  |                     |     |            |      |
| Sampling Depth | 150   | Cool          | 13.0   |                     |     |            |      |
|                |       | Auxiliary     | 0.90   |                     |     |            |      |

**Sensitivity and stability results****Acquisition parameters**

Sweeps : 150

| Run           | Time       | 5Bkg   | 9Be    | 24Mg    | 25Mg   | 26Mg   | 56Ar O  | 59Co   | 137Ba++ |
|---------------|------------|--------|--------|---------|--------|--------|---------|--------|---------|
| Dwell (mSecs) |            | 0.0    | 0.0    | 0.0     | 0.0    | 0.0    | 0.0     | 0.0    | 0.0     |
| Limits        | %RSD       | -      | 5.0%   | 5.0%    | 5.0%   | 5.0%   | -       | 5.0%   | -       |
|               | Countrate  | -      | >500   | >500    | >500   | >500   | -       | >10000 | -       |
| 1             | 1:41:46 PM | 0      | 18273  | 71294   | 9034   | 10342  | 403301  | 94145  | 23      |
| 2             | 1:43:11 PM | 0      | 17716  | 66809   | 8392   | 9784   | 388788  | 92278  | 21      |
| 3             | 1:44:36 PM | 0      | 18160  | 69764   | 8726   | 10068  | 391773  | 93936  | 19      |
| 4             | 1:46:01 PM | 0      | 17745  | 69137   | 8750   | 10385  | 393223  | 91907  | 16      |
| 5             | 1:47:26 PM | 0      | 17925  | 72185   | 8917   | 10704  | 396840  | 93220  | 23      |
| x             |            | 0      | 17964  | 69838   | 8764   | 10256  | 394785  | 93097  | 21      |
| σ             |            | 0.06   | 247.34 | 2079.60 | 242.99 | 347.69 | 5572.74 | 987.86 | 3.18    |
| %RSD          |            | 69.722 | 1.377  | 2.978   | 2.773  | 3.390  | 1.412   | 1.061  | 15.469  |

| Run           | Time       | 138Ba++ | 101Bkg | 113In | 115In   | 138Ba | 140Ce   | 156Ce O | 206Pb  |
|---------------|------------|---------|--------|-------|---------|-------|---------|---------|--------|
| Dwell (mSecs) |            | 0.0     | 0.0    | 0.0   | 0.0     | 0.0   | 0.0     | 0.0     | 0.0    |
| Limits        | %RSD       | -       | -      | 5.0%  | 5.0%    | -     | 5.0%    | -       | 5.0%   |
|               | Countrate  | -       | -      | >200  | >5000   | -     | >10000  | -       | >500   |
| 1             | 1:41:46 PM | 148     | 0      | 6931  | 150768  | 3751  | 154436  | 2422    | 46840  |
| 2             | 1:43:11 PM | 144     | 0      | 6895  | 152511  | 3636  | 155538  | 2385    | 47427  |
| 3             | 1:44:36 PM | 144     | 0      | 7124  | 155042  | 3802  | 157492  | 2431    | 48089  |
| 4             | 1:46:01 PM | 141     | 0      | 6996  | 152808  | 3788  | 156460  | 2395    | 47855  |
| 5             | 1:47:26 PM | 155     | 0      | 6989  | 153520  | 3796  | 158230  | 2394    | 48113  |
| x             |            | 146     | 0      | 6987  | 152930  | 3755  | 156431  | 2405    | 47665  |
| σ             |            | 5.51    | 0.03   | 86.89 | 1555.50 | 68.93 | 1511.69 | 19.77   | 537.16 |
| %RSD          |            | 3.770   | 37.268 | 1.244 | 1.017   | 1.836 | 0.966   | 0.822   | 1.127  |

| Run           | Time       | 207Pb  | 208Pb   | 220Bkg  |
|---------------|------------|--------|---------|---------|
| Dwell (mSecs) |            | 0.0    | 0.0     | 0.0     |
| Limits        | %RSD       | 5.0%   | 5.0%    | -       |
|               | Countrate  | >500   | >500    | <2500   |
| 1             | 1:41:46 PM | 42095  | 100521  | 0       |
| 2             | 1:43:11 PM | 42509  | 101366  | 0       |
| 3             | 1:44:36 PM | 43466  | 103866  | 0       |
| 4             | 1:46:01 PM | 42929  | 102930  | 0       |
| 5             | 1:47:26 PM | 43798  | 103675  | 0       |
| x             |            | 42959  | 102472  | 0       |
| σ             |            | 691.10 | 1468.97 | 0.03    |
| %RSD          |            | 1.609  | 1.434   | 223.607 |

**Ratio results**

| Run          | Time       | 156Ce O/140Ce |
|--------------|------------|---------------|
| Ratio limits |            | <0.0500       |
| 1            | 1:41:46 PM | 0             |
| 2            | 1:43:11 PM | 0             |

|           |            |        |
|-----------|------------|--------|
| 3         | 1:44:36 PM | 0      |
| 4         | 1:46:01 PM | 0      |
| 5         | 1:47:26 PM | 0      |
| $\bar{x}$ |            | 0.0154 |
| $\sigma$  |            | 0.00   |
| %RSD      |            | 1.3123 |

Result : The performance report passed.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

Batch Number: 59046 Batch Start Date: 11/20/12 12:18 Batch Analyst: Reinheimer, Bill

Batch Method: 3050B Batch End Date: 11/20/12 18:00

| Lab Sample ID       | Client Sample ID        | Method Chain       | Basis | CalcMsg                | InitialAmount | FinalAmount | CANMS2 00001 | CANMSA)Low<br>00001 | CANMSA High<br>00001 |
|---------------------|-------------------------|--------------------|-------|------------------------|---------------|-------------|--------------|---------------------|----------------------|
| MB 180-59046/1      |                         | 3050B,<br>6020/DOD |       | CALC NOT SET TO<br>RUN | 1.00 g        | 100 mL      |              |                     |                      |
| LCS 180-59046/2     |                         | 3050B,<br>6020/DOD |       | CALC NOT SET TO<br>RUN | 1.00 g        | 100 mL      | 1 mL         |                     | 1 mL                 |
| 240-17525-Q-1       | 069SS-0001M-0001<br>-SO | 3050B,<br>6020/DOD | T     | CALC NOT SET TO<br>RUN | 1.12 g        | 100 mL      |              |                     |                      |
| 240-17525-Q-1<br>DU | 069SS-0001M-0001<br>-SO | 3050B,<br>6020/DOD | T     | CALC NOT SET TO<br>RUN | 1.12 g        | 100 mL      |              |                     |                      |
| 240-17525-Q-1<br>MS | 069SS-0001M-0001<br>-SO | 3050B,<br>6020/DOD | T     | CALC NOT SET TO<br>RUN | 1.12 g        | 100 mL      | 1 mL         | 1 mL                |                      |
| 240-17525-G-2       | 069SS-0002M-0001<br>-SO | 3050B,<br>6020/DOD | T     | CALC NOT SET TO<br>RUN | 1.06 g        | 100 mL      |              |                     |                      |
| 240-17525-F-3       | 069SS-003M-0001-<br>SO  | 3050B,<br>6020/DOD | T     | CALC NOT SET TO<br>RUN | 1.18 g        | 100 mL      |              |                     |                      |
| 240-17525-F-4       | 069SS-004M-0001-<br>SO  | 3050B,<br>6020/DOD | T     | CALC NOT SET TO<br>RUN | 1.26 g        | 100 mL      |              |                     |                      |
| 240-17525-Q-5       | 077SS-0001M-0001<br>-SO | 3050B,<br>6020/DOD | T     | CALC NOT SET TO<br>RUN | 1.21 g        | 100 mL      |              |                     |                      |
| 240-17525-Q-5<br>DU | 077SS-0001M-0001<br>-SO | 3050B,<br>6020/DOD | T     | CALC NOT SET TO<br>RUN | 1.21 g        | 100 mL      |              |                     |                      |
| 240-17525-Q-5<br>MS | 077SS-0001M-0001<br>-SO | 3050B,<br>6020/DOD | T     | CALC NOT SET TO<br>RUN | 1.21 g        | 100 mL      | 1 mL         | 1 mL                |                      |
| 240-17525-G-6       | 077SS-0002M-0001<br>-SO | 3050B,<br>6020/DOD | T     | CALC NOT SET TO<br>RUN | 1.12 g        | 100 mL      |              |                     |                      |

| Lab Sample ID       | Client Sample ID        | Method Chain       | Basis | CANMSB_High<br>00001 | CANMSB_Low<br>00001 |  |  |  |  |
|---------------------|-------------------------|--------------------|-------|----------------------|---------------------|--|--|--|--|
| MB 180-59046/1      |                         | 3050B,<br>6020/DOD |       |                      |                     |  |  |  |  |
| LCS 180-59046/2     |                         | 3050B,<br>6020/DOD |       | 1 mL                 |                     |  |  |  |  |
| 240-17525-Q-1       | 069SS-0001M-0001<br>-SO | 3050B,<br>6020/DOD | T     |                      |                     |  |  |  |  |
| 240-17525-Q-1<br>DU | 069SS-0001M-0001<br>-SO | 3050B,<br>6020/DOD | T     |                      |                     |  |  |  |  |
| 240-17525-Q-1<br>MS | 069SS-0001M-0001<br>-SO | 3050B,<br>6020/DOD | T     |                      | 1 mL                |  |  |  |  |
| 240-17525-G-2       | 069SS-0002M-0001<br>-SO | 3050B,<br>6020/DOD | T     |                      |                     |  |  |  |  |
| 240-17525-F-3       | 069SS-003M-0001-<br>SO  | 3050B,<br>6020/DOD | T     |                      |                     |  |  |  |  |
| 240-17525-F-4       | 069SS-004M-0001-<br>SO  | 3050B,<br>6020/DOD | T     |                      |                     |  |  |  |  |

## METALS BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 240-17525-2

SDG No.: \_\_\_\_\_

Batch Number: 59046 Batch Start Date: 11/20/12 12:18 Batch Analyst: Reinheimer, BillBatch Method: 3050B Batch End Date: 11/20/12 18:00

| Lab Sample ID       | Client Sample ID        | Method Chain       | Basis | CANMSB_High<br>00001 | CANMSB_Low<br>00001 |  |  |  |  |
|---------------------|-------------------------|--------------------|-------|----------------------|---------------------|--|--|--|--|
| 240-17525-Q-5       | 077SS-0001M-0001<br>-SO | 3050B,<br>6020/DOD | T     |                      |                     |  |  |  |  |
| 240-17525-Q-5<br>DU | 077SS-0001M-0001<br>-SO | 3050B,<br>6020/DOD | T     |                      |                     |  |  |  |  |
| 240-17525-Q-5<br>MS | 077SS-0001M-0001<br>-SO | 3050B,<br>6020/DOD | T     |                      | 1 mL                |  |  |  |  |
| 240-17525-G-6       | 077SS-0002M-0001<br>-SO | 3050B,<br>6020/DOD | T     |                      |                     |  |  |  |  |

| Batch Notes                   |                                                                      |
|-------------------------------|----------------------------------------------------------------------|
| Analyst                       | Dale Elshaw Canton Lab                                               |
| Balance ID                    | B039                                                                 |
| Batch Comment                 | Samples were prepared in Canton Lab. Batched @ Pitt for TALS upload. |
| Filter Paper Lot Number       | 6326666                                                              |
| Hydrogen peroxide lot number  | 10 mL K45A06                                                         |
| Lot # of hydrochloric acid    | 10 mL 0000013500                                                     |
| Logbook ID for diluted Nitric | 5 mL L03021                                                          |
| Lot # of Nitric Acid          | 10 mL L03021                                                         |
| Pipette ID                    | 383364-383389                                                        |
| Digestion Tube/Cup Lot #      | 121014                                                               |

| Basis | Basis Description |
|-------|-------------------|
| T     | Total/NA          |

# Subcontract Data

# Shipping and Receiving Documents

# Chain of Custody Record

TestAmerica Laboratory location: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

|                                                                                                                                                                                                                                                                |  |                                                                                              |  |                                                                                                                                                                                                                  |  |                                                                       |  |                                                                                      |  |                                                                                                  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------|--|--------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------|--|
| <b>Company Name:</b> ECU<br><b>Address:</b> 33 BOSTON POST RD WAT<br><b>City/State/Zip:</b> MA 01252<br><b>Phone:</b> 617-420-4420                                                                                                                             |  | <b>Client Project Manager:</b> AL BASTARD<br><b>Telephone:</b> 508 509 1784<br><b>Email:</b> |  | <b>Site Contact:</b> JEFF DORRAN<br><b>Telephone:</b> 508 509 1784                                                                                                                                               |  | <b>Lab Contact:</b> MARK LOBO<br><b>Telephone:</b>                    |  | <b>TestAmerica Laboratories, Inc.</b><br><b>COC No:</b> 050740<br><b>1 of 1 COCs</b> |  |                                                                                                  |  |
| <b>Project Name:</b> RAVENNA<br><b>Project Number:</b>                                                                                                                                                                                                         |  | <b>Method of Shipment/Carrier:</b> LAB PICK UP<br><b>Shipping/Tracking No:</b>               |  | <b>Analysis Turnaround Time:</b><br><input type="checkbox"/> 3 weeks<br><input type="checkbox"/> 2 weeks<br><input type="checkbox"/> 1 week<br><input type="checkbox"/> 2 days<br><input type="checkbox"/> 1 day |  | <b>Analyses:</b><br>VOC SVOC PCO PCO POSITIVES PAHs METALS TOL METALS |  | <b>Sample Specific Notes / Special Instructions:</b>                                 |  |                                                                                                  |  |
| <b>P.O. #</b>                                                                                                                                                                                                                                                  |  | <b>Sample Date</b>                                                                           |  | <b>Sample Time</b>                                                                                                                                                                                               |  | <b>Matrix:</b><br>Aqueous Sediment Solid Other:                       |  | <b>Containers &amp; Preservatives:</b><br>HNO3 HCl NaOH ZnAc NaOH Luptes Other:      |  |                                                                                                  |  |
| 06955-0001M-0001-S0<br>06955-0001M-0002-S0<br>06955-0002M-0001-S0<br>06955-0003M-0001-S0<br>06955-0004M-0001-S0<br>07255-0001M-0001-S0<br>07255-0001M-0002-S0<br>07255-0002M-0001-S0<br>07255-0003-0001-S0<br>07255-0003-0001-TB                               |  | 11-11-140915<br>1015<br>0950<br>1045<br>0820                                                 |  | X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X                                                                                                                                                                        |  | X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X                             |  | X<br>X<br>X<br>X<br>X<br>X<br>X<br>X<br>X                                            |  | MS/MSO<br>MS/MSO<br>MS/MSO<br>MS/MSO<br>MS/MSO<br>MS/MSO<br>MS/MSO<br>MS/MSO<br>MS/MSO<br>MS/MSO |  |
| <b>Possible Hazard Identification</b><br><input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown                                      |  |                                                                                              |  |                                                                                                                                                                                                                  |  |                                                                       |  |                                                                                      |  |                                                                                                  |  |
| <b>Special Instructions/OC Requirements &amp; Comments:</b><br>07755-0003-0001-S0 IS A BOTTLE TAKEN FROM SAMPLE - DO NOT DRP<br>07755-0003-0001-S0 IS A BOTTLE TAKEN FROM SAMPLE - DO NOT DRP<br>07755-0003-0001-S0 IS A BOTTLE TAKEN FROM SAMPLE - DO NOT DRP |  |                                                                                              |  |                                                                                                                                                                                                                  |  |                                                                       |  |                                                                                      |  |                                                                                                  |  |
| <b>Relinquished by:</b> [Signature]<br><b>Date/Time:</b> 11-12-12 1630                                                                                                                                                                                         |  | <b>Received by:</b> [Signature]<br><b>Date/Time:</b> 11-12-12 1630                           |  | <b>Company:</b> ECU<br><b>Date/Time:</b> 11-12-12 1630                                                                                                                                                           |  | <b>Company:</b> ECU<br><b>Date/Time:</b> 11-12-12 1630                |  | <b>Company:</b> ECU<br><b>Date/Time:</b> 11-12-12 1630                               |  |                                                                                                  |  |
| <b>Relinquished by:</b> [Signature]<br><b>Date/Time:</b> 11-12-12 1757                                                                                                                                                                                         |  | <b>Received by:</b> [Signature]<br><b>Date/Time:</b> 11-12-12 1757                           |  | <b>Company:</b> ECU<br><b>Date/Time:</b> 11-12-12 1757                                                                                                                                                           |  | <b>Company:</b> ECU<br><b>Date/Time:</b> 11-12-12 1757                |  | <b>Company:</b> ECU<br><b>Date/Time:</b> 11-12-12 1757                               |  |                                                                                                  |  |

## TestAmerica Canton Sample Receipt Form/Narrative

Login # : 17525

Client ECC Site Name Ravenna By: [Signature]  
Cooler Received on 11/12/12 Opened on \_\_\_\_\_ (Signature)  
FedEx: 1<sup>st</sup> Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other \_\_\_\_\_  
TestAmerica Cooler # \_\_\_\_\_ Foam Box Client Cooler Box Other \_\_\_\_\_  
Packing material used: Bubble Wrap Foam Plastic Bag None Other \_\_\_\_\_  
COOLANT: Wet Ice Blue Ice Dry Ice Water None

## 1. Cooler temperature upon receipt

IR GUN# 1 (CF -2 °C) Observed Sample Temp. \_\_\_\_\_ °C Corrected Sample Temp. \_\_\_\_\_ °C  
IR GUN# 4G (CF 0 °C) Observed Sample Temp. \_\_\_\_\_ °C Corrected Sample Temp. \_\_\_\_\_ °C  
IR GUN# 5G (CF 0 °C) Observed Sample Temp. \_\_\_\_\_ °C Corrected Sample Temp. \_\_\_\_\_ °C  
IR GUN# 8 (CF 0 °C) Observed Sample Temp. \_\_\_\_\_ °C Corrected Sample Temp. \_\_\_\_\_ °C

☒ Multiple  
on Back

## 2. Were custody seals on the outside of the cooler(s)? If Yes Quantity \_\_\_\_\_

Yes No

-Were custody seals on the outside of the cooler(s) signed &amp; dated?

Yes No NA

-Were custody seals on the bottle(s)?

Yes No

## 3. Shippers' packing slip attached to the cooler(s)?

Yes No

## 4. Did custody papers accompany the sample(s)?

Yes No

## 5. Were the custody papers relinquished &amp; signed in the appropriate place?

Yes No

## 6. Did all bottles arrive in good condition (Unbroken)?

Yes No

## 7. Could all bottle labels be reconciled with the COC?

Yes No

## 8. Were correct bottle(s) used for the test(s) indicated?

Yes No

## 9. Sufficient quantity received to perform indicated analyses?

Yes No

## 10. Were sample(s) at the correct pH upon receipt?

Yes No NA

## 11. Were VOAs on the COC?

Yes No

## 12. Were air bubbles &gt;6 mm in any VOA vials?

Yes No NA

## 13. Was a trip blank present in the cooler(s)?

Yes No

Contacted PM \_\_\_\_\_ Date \_\_\_\_\_ by \_\_\_\_\_ via Verbal Voice Mail Other

Concerning \_\_\_\_\_

## 14. CHAIN OF CUSTODY &amp; SAMPLE DISCREPANCIES

## 15. SAMPLE CONDITION

Sample(s) \_\_\_\_\_ were received after the recommended holding time had expired.

Sample(s) \_\_\_\_\_ were received in a broken container.

Sample(s) \_\_\_\_\_ were received with bubble &gt;6 mm in diameter. (Notify PM)



Sample(s) \_\_\_\_\_ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 031512-HNO<sub>3</sub>; Sulfuric Acid Lot# 051012-H<sub>2</sub>SO<sub>4</sub>; Sodium Hydroxide Lot# 121809-NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH<sub>3</sub>COO)<sub>2</sub>ZN/NaOH. What time was preservative added to sample(s)? \_\_\_\_\_

C:\Users\livengood\AppData\Local\Microsoft\Windows\Temporary Internet Files\OLKD16\COOLER TestAmerica Rev 88 110712 ris.doc SOP: NC-SC-0003, Sample Receiving

## Login Sample Receipt Checklist

Client: Environmental Chemical Corp.

Job Number: 240-17525-2

Login Number: 17525

List Number: 1

Creator: Gamber, Tom

List Source: TestAmerica Pittsburgh

List Creation: 12/20/12 05:34 PM

| Question                                                                                 | Answer | Comment |
|------------------------------------------------------------------------------------------|--------|---------|
| Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.      | N/A    |         |
| The cooler's custody seal, if present, is intact.                                        | True   |         |
| Sample custody seals, if present, are intact.                                            | True   |         |
| The cooler or samples do not appear to have been compromised or tampered with.           | True   |         |
| Samples were received on ice.                                                            | False  |         |
| Cooler Temperature is acceptable.                                                        | True   |         |
| Cooler Temperature is recorded.                                                          | True   |         |
| COC is present.                                                                          | True   |         |
| COC is filled out in ink and legible.                                                    | True   |         |
| COC is filled out with all pertinent information.                                        | True   |         |
| Is the Field Sampler's name present on COC?                                              | True   |         |
| There are no discrepancies between the containers received and the COC.                  | True   |         |
| Samples are received within Holding Time.                                                | True   |         |
| Sample containers have legible labels.                                                   | True   |         |
| Containers are not broken or leaking.                                                    | True   |         |
| Sample collection date/times are provided.                                               | True   |         |
| Appropriate sample containers are used.                                                  | True   |         |
| Sample bottles are completely filled.                                                    | True   |         |
| Sample Preservation Verified.                                                            | True   |         |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs         | True   |         |
| Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4"). | True   |         |
| Multiphasic samples are not present.                                                     | True   |         |
| Samples do not require splitting or compositing.                                         | True   |         |
| Residual Chlorine Checked.                                                               | N/A    |         |