# Metals

## Case Narrative

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# NMED Hazardous Waste Bureau

## KAFB - BFF 1Q12

Work Order Number: 1202116

1. This report consists of 2 water samples for total recoverable or dissolved metals.

2. The samples were received cool and intact by ALS on 02/10/12.

3. The sample for dissolved metals had been filtered prior to receipt. Both samples had a pH less than 2 upon receipt.

4. The samples were prepared and analyzed based on SW-846, 3rd Edition procedures.

   For analysis by Trace ICP, the samples were digested following method 3005A and SOP 806 Rev. 15.

   For analysis by Cold Vapor AA (CVAA), the sample was digested following method 7470A and SOP 812 Rev. 15.

5. Analysis by Trace ICP followed method 6010B and SOP 834 Rev. 8.

   Analysis by CVAA followed method 7470A and SOP 812 Rev. 15.

6. All standards and solutions are NIST traceable and were used within their recommended shelf life.

7. The samples were prepared and analyzed within the established hold times.

All in house quality control procedures were followed, as described below.

8. General quality control procedures.

- A preparation (method) blank and laboratory control sample were digested and analyzed with the samples in each digestion batch.
- The preparation (method) blank associated with each digestion batch was below the practical quantitation limit for the requested analytes.
- All laboratory control sample criteria were met.
- All initial and continuing calibration blanks were below the practical quantitation limit for the requested analytes.
- All initial and continuing calibration verifications were within the acceptance criteria for the requested analytes with the exception of CCV4 for sodium. None of the samples associated with this order number were bracketed by this CCV.
- The interference check samples and high standard readbacks associated with Method 6010B were within acceptance criteria.

9. Matrix specific quality control procedures.

   Sample 1202116-9 was designated as the quality control sample for the mercury analysis. Per method requirements, matrix QC was performed for the Trace ICP analysis. Since a sample from this order number was not the selected quality control (QC) sample, matrix specific QC results are not included in this report.

   Similarity of matrix and therefore relevance of the QC results should not be automatically inferred for any sample other than the native sample selected for QC.

   - A matrix spike and matrix spike duplicate were digested and analyzed with the mercury batch. All acceptance criteria for accuracy were met.
   - A sample duplicate and matrix spike duplicate were digested and analyzed with the mercury batch. All acceptance criteria for precision were met.

10. Sample dilutions were not required for the requested analyses.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Emily Knødel — 02-20-12
Inorganics Primary Data Reviewer — Date

Inorganics Final Data Reviewer — 02-21-12
Date

## Inorganic Data Reporting Qualifiers

The following qualifiers are used by the laboratory when reporting results of inorganic analyses.

- Result qualifier -- A “B” is entered if the reported value was obtained from a reading that was less than the Practical Quantitation Limit but greater than or equal to the Method Detection Limit (MDL). If the analyte was analyzed for but not detected a “U” is entered. For samples, negative values are reported as non-detects (“U” flagged). For blanks, if the absolute value of the negative value is above the MDL and below the practical quantitation limit, then the result is “B” flagged.

- QC qualifier -- Specified entries and their meanings are as follows:

  E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.

  M - Duplicate injection precision was not met.

  N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.

  Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.

  * - Duplicate analysis (relative percent difference) not within control limits.

# ALS Environmental -- FC

## Sample Number(s) Cross-Reference Table

**OrderNum:** 1202116
**Client Name:** NMED Hazardous Waste Bureau
**Client Project Name:** KAFB - BFF 1Q12
**Client Project Number:**
**Client PO Number:** 20-667-00-16004

| Client Sample Number | Lab Sample Number | COC Number | Matrix | Date Collected | Time Collected |
|---|---|---|---|---|---|
| 106029-A | 1202116-1 | | WATER | 09-Feb-12 | 11:25 |
| 106029-B | 1202116-2 | | WATER | 09-Feb-12 | 11:27 |
| 106029-C | 1202116-3 | | WATER | 09-Feb-12 | 11:29 |
| 106029-D | 1202116-4 | | WATER | 09-Feb-12 | 11:30 |
| 106029-E | 1202116-5 | | WATER | 09-Feb-12 | 11:31 |
| 106029-F | 1202116-6 | | WATER | 09-Feb-12 | 11:33 |
| 106029-G | 1202116-7 | | WATER | 09-Feb-12 | 11:35 |
| 106029-H | 1202116-8 | | WATER | 09-Feb-12 | 11:36 |
| 106029-I | 1202116-9 | | WATER | 09-Feb-12 | 11:37 |
| 106029-J | 1202116-10 | | WATER | 09-Feb-12 | 11:38 |

# ALS Laboratory Group

225 Commerce Drive, Fort Collins, Colorado 80524
TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

## Chain-of-Custody

Form 202r8

| | | | |
|---|---|---|---|
| WORKORDER # | 1202114 | | |
| PAGE | 1 of 1 | | |
| DISPOSAL | By Lab or Return to Client | | |

| | | | |
|---|---|---|---|
| PROJECT NAME | KAFB BFF Q1/12 | SAMPLER | Salem |
| PROJECT No. | | SITE ID | 106029 |
| | | EDD FORMAT | |
| | | PURCHASE ORDER | |
| COMPANY NAME | NMED | BILL TO COMPANY | NMED/HWB |
| SEND REPORT TO | Brian Salem | INVOICE ATTN TO | Dave Cobrain |
| ADDRESS | 5500 San Antonio NE | ADDRESS | 2905 Rodeo Park Dr |
| CITY / STATE / ZIP | Albuquerque, NM 87109 | CITY / STATE / ZIP | Santa Fe, NM 87505 |
| PHONE | 505-222-9576 | PHONE | 505-476-6055 |
| FAX | | FAX | |
| E-MAIL | | E-MAIL | |

| | | |
|---|---|---|
| DATE | 2-9-12 | |
| TURNAROUND | Normal | |

| Lab ID | Field ID | Matrix | Sample Date | Sample Time | # Bottles | Pres. | QC | VOC 8260 | EDB 8011 | C-KO 8015 | PAH 8270 | DRO 8015 | Anions AIR 310.1 | NH3 350.3 353.3 | Sul Fide 376.1 | Tot. Met. 6010 TAL | Diss. Met 6010 Potable only |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 106029-A | W | 2-9-12 | 11:25 | 3 | HCl | | X | | | | | | | | | |
| 2 | 106029-B | | | 11:27 | 3 | HCl | | | X | | | | | | | | |
| 3 | 106029-C | | | 11:29 | 3 | HCl | | | | X | | | | | | | |
| 4 | 106029-D | | | 11:30 | 1 | — | | | | | X | | | | | | |
| 5 | 106029-E | | | 11:31 | 1 | $H_2SO_4$ | | | | | | X | | | | | |
| 6 | 106029-F | | | 11:33 | 1 | — | | | | | | | X | | | | |
| 7 | 106029-G | | | 11:35 | 1 | $H_2SO_4$ | | | | | | | | X | | | |
| 8 | 106029-H | | | 11:36 | 1 | NaOH | | | | | | | | | X | | |
| 9 | 106029-I | | | 11:37 | 1 | $HNO_3$ | | | | | | | | | | X | |
| 10 | 106029-J | | | 11:38 | 1 | $HNO_3$ | | | | | | | | | | | X |

Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analytes below.

Comments:

| QC PACKAGE (check below) | |
|---|---|
| | LEVEL II (Standard QC) |
| | LEVEL III (Std QC + forms) |
| | LEVEL IV (Std QC + forms + raw data) |
| | |

| | SIGNATURE | PRINTED NAME | DATE | TIME |
|---|---|---|---|---|
| RELINQUISHED BY | Brian Salem | Brian Salem | 2-9-12 | 15:00 |
| RECEIVED BY | C Trimble | C Trimble | 2-10-12 | 0955 |
| RELINQUISHED BY | | | | |
| RECEIVED BY | | | | |
| RELINQUISHED BY | | | | |
| RECEIVED BY | | | | |

Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035

ALS Laboratory Group - Fort Collins

# CONDITION OF SAMPLE UPON RECEIPT FORM

Client: NMED Workorder No: 1202116

Project Manager: LS Initials: CDT Date: 2-10-12

| | | | | |
|---|---|---|---|---|
| 1. | Does this project require any **special handling** in addition to standard Paragon procedures? | | YES | (NO) |
| 2. | Are custody **seals** on **shipping containers** intact? | NONE | (YES) | NO |
| 3. | Are Custody seals on **sample containers** intact? | (NONE) | YES | NO |
| 4. | Is there a **COC (Chain-of-Custody) present** or other representative documents? | | (YES) | NO |
| 5. | Are the **COC and bottle labels complete and legible**? | | (YES) | NO |
| 6. | Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.) | | (YES) | NO |
| 7. | Were **airbills / shipping documents** present and/or removable? | DROP OFF | (YES) | NO |
| 8. | Are all **aqueous samples requiring preservation preserved correctly? (excluding volatiles)** | N/A | (YES) | NO |
| 9. | Are all aqueous **non-preserved samples pH 4-9**? | N/A | (YES) | NO |
| 10. | Is there **sufficient sample** for the requested analyses? | | (YES) | NO |
| 11. | Were all samples placed in the **proper containers** for the requested analyses? | | (YES) | NO |
| 12. | Are all samples within **holding times** for the requested analyses? | | (YES) | NO |
| 13. | Were all sample containers received **intact**? (not broken or leaking, etc.) | | (YES) | NO |
| 14. | Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ____ < green pea ____ > green pea | N/A | (YES) | NO |
| 15. | Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required) | (N/A) | YES | NO |
| 16. | Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.) | (N/A) | YES | NO |
| 17. | Were the samples **shipped on ice**? | | (YES) | NO |
| 18. | Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*: #2 (#4)** | RAD ONLY | (YES) | NO |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Cooler #: | 1 | | | | | | | |
| Temperature (°C): | 3.4 | | | | | | | |
| No. of custody seals on cooler: | 2 | | | | | | | |
| DOT Survey/ Acceptance Information — External µR/hr reading: | 14 | | | | | | | |
| Background µR/hr reading: | 13 | | | | | | | |

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

**Additional Information:** PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

If applicable, was the client contacted? **YES / NO / NA** Contact: _____ Date/Time: _____

**Project Manager Signature / Date:** 2/13/12

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

Form 201r22.xls (6/1/09)

FedEx Express **NEW** Package US Airbill

FedEx Tracking Number 8768 4050 1528

0200 Form ID No.

1202116

**FedEx Retrieval Cop**

**1 From**

Date 2-9-12 Sender's FedEx Account Number

Sender's Name Brian Salem Phone 505 222-9576

Company NMED / HWB

Address 5500 San Antonio NE Dept./Floor/Suite/Room

City ABQ State NM ZIP 87109

**2 Your Internal Billing Reference**

**3 To**

Recipient's Name Lance Steere Phone 970 490-1511

Company ALS Labs

Address 225 Commerce Dr. Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City Ft. Collins State CO ZIP 80524-2762

01 ☐ HOLD Weekday FedEx location address REQUIRED. **NOT available for** FedEx First Overnight.

31 ☐ HOLD Saturday FedEx location address REQUIRED. **Available ONLY for** FedEx Priority Overnight and FedEx 2Day to select locations.

8768 4050 1528

**4 Express Package Service** * To most locations.

NOTE: Service order has changed. Please select carefully.

***Packages up to 150 lbs***

*For packages over 150 lbs., use the new FedEx Express Freight US Airbill.*

**Next Business Day**

06 ☐ FedEx First Overnight — Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

01 ☒ FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

05 ☐ FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.

**2 or 3 Business Days**

49 ☐ **NEW** FedEx 2Day A.M. — Second business morning.* Saturday Delivery NOT available.

03 ☐ FedEx 2Day — Second business afternoon.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

20 ☐ FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

**5 Packaging** * Declared value limit $500.

06 ☐ FedEx Envelope* 02 ☐ FedEx Pak* 03 ☐ FedEx Box 04 ☐ FedEx Tube 01 ☒ Other

**6 Special Handling and Delivery Signature Options**

03 ☐ **SATURDAY DELIVERY**

☐ No Signature Required — Package may be left without obtaining a signature for delivery.

10 ☐ Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*

34 ☐ Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

**Does this shipment contain dangerous goods?**

One box must be checked.

☒ No 04 ☐ Yes — As per attached Shipper's Declaration. ☐ Shipper's Declaration not required. 06 ☐ Dry Ice — Dry ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

☐ Cargo Aircraft Only

3.40

**7 Payment** *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No. ☐

1 ☐ Sender — Acct. No. in Section 1 will be billed. 2 ☒ Recipient 3 ☐ Third Party 4 ☐ Credit Card 5 ☐ Cash/Check

Total Packages 1 Total Weight 49 lbs. Credit Card Auth.

†Our liability is limited to $100 unless you declare a higher value. See the current FedEx Service Guide for details.

612

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fedex.com 1.800.GoFedEx 1.800.463.3339

# Total Recoverable ICP Metals

## Method SW6010B

## Sample Results

**Lab Name:** **ALS Environmental -- FC**
**Work Order Number:** 1202116
**Client Name:** NMED Hazardous Waste Bureau
**ClientProject ID:** KAFB - BFF 1Q12

**Field ID:** 106029-I
**Lab ID:** 1202116-9

**Analysis ReqCode:** **202**

**Sample Matrix:** WATER
**% Moisture:** N/A
**Date Collected:** 09-Feb-12
**Date Extracted:** 13-Feb-12
**Date Analyzed:** 13-Feb-12
**Prep Method:** SW3005 Rev A

**Prep Batch:** IP120213-6
**QCBatchID:** IP120213-6-4
**Run ID:** IT120213-2A2
**Cleanup:** NONE
**Basis:** As Received
**File Name:** 120213A.

**Sample Aliquot:** 50 g
**Final Volume:** 50 g
**Result Units:** MG/L
**Clean DF:** 1

| CASNO | Target Analyte | Dilution Factor | Result | Reporting Limit | MDL | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|---|
| 7429-90-5 | ALUMINUM | 1 | 0.093 | 0.2 | 0.031 | B | |
| 7440-36-0 | ANTIMONY | 1 | 0.0036 | 0.02 | 0.0036 | U | |
| 7440-38-2 | ARSENIC | 1 | 0.0026 | 0.01 | 0.0026 | U | |
| 7440-39-3 | BARIUM | 1 | 0.094 | 0.1 | 0.0017 | B | |
| 7440-41-7 | BERYLLIUM | 1 | 0.0002 | 0.005 | 0.00018 | B | |
| 7440-43-9 | CADMIUM | 1 | 0.0008 | 0.005 | 0.0008 | U | |
| 7440-70-2 | CALCIUM | 1 | 81 | 1 | 0.13 | | |
| 7440-47-3 | CHROMIUM | 1 | 0.0018 | 0.01 | 0.0018 | U | |
| 7440-48-4 | COBALT | 1 | 0.00088 | 0.01 | 0.00088 | U | |
| 7440-50-8 | COPPER | 1 | 0.0016 | 0.01 | 0.0016 | U | |
| 7439-89-6 | IRON | 1 | 0.037 | 0.1 | 0.037 | U | |
| 7439-92-1 | LEAD | 1 | 0.0021 | 0.003 | 0.0021 | U | |
| 7439-95-4 | MAGNESIUM | 1 | 12 | 1 | 0.12 | | |
| 7439-96-5 | MANGANESE | 1 | 0.0014 | 0.01 | 0.0014 | U | |
| 7440-02-0 | NICKEL | 1 | 0.0015 | 0.02 | 0.0015 | U | |
| 7440-09-7 | POTASSIUM | 1 | 3 | 1 | 0.36 | | |
| 7782-49-2 | SELENIUM | 1 | 0.0064 | 0.005 | 0.0022 | | |
| 7440-22-4 | SILVER | 1 | 0.0016 | 0.01 | 0.0016 | U | |
| 7440-23-5 | SODIUM | 1 | 27 | 1 | 0.39 | | |
| 7440-28-0 | THALLIUM | 1 | 0.0037 | 0.01 | 0.0037 | U | |
| 7440-62-2 | VANADIUM | 1 | 0.0034 | 0.01 | 0.0016 | B | |
| 7440-66-6 | ZINC | 1 | 0.0046 | 0.02 | 0.0021 | B | |

**Data Package ID:** *IT1202116-1*

# Dissolved ICP Metals

## Method SW6010B

## Sample Results

**Lab Name:** **ALS Environmental -- FC**
**Work Order Number:** 1202116
**Client Name:** NMED Hazardous Waste Bureau
**ClientProject ID:** KAFB - BFF 1Q12

**Field ID:** 106029-J
**Lab ID:** 1202116-10

**Analysis ReqCode:** **201**

**Sample Matrix:** WATER
**% Moisture:** N/A
**Date Collected:** 09-Feb-12
**Date Extracted:** 13-Feb-12
**Date Analyzed:** 13-Feb-12
**Prep Method:** SW3005 Rev A

**Prep Batch:** IP120213-6
**QCBatchID:** IP120213-6-5
**Run ID:** IT120213-2A2
**Cleanup:** NONE
**Basis:** As Received
**File Name:** 120213A.

**Sample Aliquot:** 50 g
**Final Volume:** 50 g
**Result Units:** MG/L
**Clean DF:** 1

| CASNO | Target Analyte | Dilution Factor | Result | Reporting Limit | MDL | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|---|
| 7439-89-6 | IRON | 1 | 0.037 | 0.1 | 0.037 | U | |
| 7439-96-5 | MANGANESE | 1 | 0.0014 | 0.01 | 0.0014 | U | |

**Data Package ID:** *IT1202116-1*

# Total Mercury

## Method SW7470A

## Sample Results

**Lab Name:** **ALS Environmental -- FC**
**Work Order Number:** 1202116
**Client Name:** NMED Hazardous Waste Bureau
**ClientProject ID:** KAFB - BFF 1Q12

**Field ID:** 106029-I
**Lab ID:** 1202116-9

**Analysis ReqCode:** **202**

**Sample Matrix:** WATER
**% Moisture:** N/A
**Date Collected:** 09-Feb-12
**Date Extracted:** 13-Feb-12
**Date Analyzed:** 14-Feb-12
**Prep Method:** METHOD

**Prep Batch:** HG120213-1
**QCBatchID:** HG120213-1-1
**Run ID:** HG120214-1A2
**Cleanup:** NONE
**Basis:** As Received
**File Name:** HG120213-1

**Sample Aliquot:** 20 g
**Final Volume:** 20 g
**Result Units:** MG/L
**Clean DF:** 1

| CASNO | Target Analyte | Dilution Factor | Result | Reporting Limit | MDL | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|---|
| 7439-97-6 | MERCURY | 1 | 0.00006 | 0.0002 | 0.00006 | U | |

**Data Package ID:** *HG1202116-1*

# ICP Metals

## Method SW6010B

## Method Blank

**Lab Name:** **ALS Environmental -- FC**
**Work Order Number:** 1202116
**Client Name:** NMED Hazardous Waste Bureau
**ClientProject ID:** KAFB - BFF 1Q12

**Lab ID:** IP120213-6MB

**Sample Matrix:** WATER
**% Moisture:** N/A
**Date Collected:** N/A
**Date Extracted:** 13-Feb-12
**Date Analyzed:** 13-Feb-12

**Prep Batch:** IP120213-6
**QCBatchID:** IP120213-6-4
**Run ID:** IT120213-2A2
**Cleanup:** NONE
**Basis:** N/A
**File Name:** 120213A.

**Sample Aliquot:** 50 g
**Final Volume:** 50 g
**Result Units:** MG/L
**Clean DF:** 1

| CASNO | Target Analyte | DF | Result | Reporting Limit | MDL | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|---|
| 7429-90-5 | ALUMINUM | 1 | 0.031 | 0.2 | 0.031 | U | |
| 7440-36-0 | ANTIMONY | 1 | 0.0036 | 0.02 | 0.0036 | U | |
| 7440-38-2 | ARSENIC | 1 | 0.0026 | 0.01 | 0.0026 | U | |
| 7440-39-3 | BARIUM | 1 | 0.0017 | 0.1 | 0.0017 | U | |
| 7440-41-7 | BERYLLIUM | 1 | 0.00018 | 0.005 | 0.00018 | U | |
| 7440-43-9 | CADMIUM | 1 | -0.0012 | 0.005 | 0.0008 | B | |
| 7440-70-2 | CALCIUM | 1 | 0.13 | 1 | 0.13 | U | |
| 7440-47-3 | CHROMIUM | 1 | 0.0018 | 0.01 | 0.0018 | U | |
| 7440-48-4 | COBALT | 1 | 0.00088 | 0.01 | 0.00088 | U | |
| 7440-50-8 | COPPER | 1 | -0.0023 | 0.01 | 0.0016 | B | |
| 7439-89-6 | IRON | 1 | 0.037 | 0.1 | 0.037 | U | |
| 7439-92-1 | LEAD | 1 | 0.0021 | 0.003 | 0.0021 | U | |
| 7439-95-4 | MAGNESIUM | 1 | 0.12 | 1 | 0.12 | U | |
| 7439-96-5 | MANGANESE | 1 | 0.0014 | 0.01 | 0.0014 | U | |
| 7440-02-0 | NICKEL | 1 | -0.0032 | 0.02 | 0.0015 | B | |
| 7440-09-7 | POTASSIUM | 1 | 0.36 | 1 | 0.36 | U | |
| 7782-49-2 | SELENIUM | 1 | 0.0022 | 0.005 | 0.0022 | U | |
| 7440-22-4 | SILVER | 1 | 0.0016 | 0.01 | 0.0016 | U | |
| 7440-23-5 | SODIUM | 1 | 0.39 | 1 | 0.39 | U | |
| 7440-28-0 | THALLIUM | 1 | 0.0037 | 0.01 | 0.0037 | U | |
| 7440-62-2 | VANADIUM | 1 | 0.0016 | 0.01 | 0.0016 | U | |
| 7440-66-6 | ZINC | 1 | 0.0021 | 0.02 | 0.0021 | U | |

**Data Package ID:** *IT1202116-1*

# ICP Metals

## Method SW6010B

## Laboratory Control Sample

**Lab Name:** **ALS Environmental -- FC**
**Work Order Number:** 1202116
**Client Name:** NMED Hazardous Waste Bureau
**ClientProject ID:** KAFB - BFF 1Q12

**Lab ID:** IP120213-6LCS

**Sample Matrix:** WATER
**% Moisture:** N/A
**Date Collected:** N/A
**Date Extracted:** 02/13/2012
**Date Analyzed:** 02/13/2012
**Prep Method:** SW3005A

**Prep Batch:** IP120213-6
**QCBatchID:** IP120213-6-4
**Run ID:** IT120213-2A2
**Cleanup:** NONE
**Basis:** N/A
**File Name:** 120213A.

**Sample Aliquot:** 50 g
**Final Volume:** 50 g
**Result Units:** MG/L
**Clean DF:** 1

| CASNO | Target Analyte | Spike Added | LCS Result | Reporting Limit | Result Qualifier | LCS % Rec. | Control Limits |
|---|---|---|---|---|---|---|---|
| 7429-90-5 | ALUMINUM | 2 | 2.18 | 0.2 | | 109 | 80 - 120% |
| 7440-36-0 | ANTIMONY | 0.5 | 0.479 | 0.02 | | 96 | 80 - 120% |
| 7440-38-2 | ARSENIC | 2 | 2 | 0.01 | | 100 | 80 - 120% |
| 7440-39-3 | BARIUM | 2 | 1.97 | 0.1 | | 99 | 80 - 120% |
| 7440-41-7 | BERYLLIUM | 0.05 | 0.0486 | 0.005 | | 97 | 80 - 120% |
| 7440-43-9 | CADMIUM | 0.05 | 0.0517 | 0.005 | | 103 | 80 - 120% |
| 7440-70-2 | CALCIUM | 40 | 38.4 | 1 | | 96 | 80 - 120% |
| 7440-47-3 | CHROMIUM | 0.2 | 0.191 | 0.01 | | 96 | 80 - 120% |
| 7440-48-4 | COBALT | 0.5 | 0.476 | 0.01 | | 95 | 80 - 120% |
| 7440-50-8 | COPPER | 0.25 | 0.253 | 0.01 | | 101 | 80 - 120% |
| 7439-89-6 | IRON | 1 | 0.971 | 0.1 | | 97 | 80 - 120% |
| 7439-92-1 | LEAD | 0.5 | 0.483 | 0.003 | | 97 | 80 - 120% |
| 7439-95-4 | MAGNESIUM | 40 | 37.3 | 1 | | 93 | 80 - 120% |
| 7439-96-5 | MANGANESE | 0.5 | 0.48 | 0.01 | | 96 | 80 - 120% |
| 7440-02-0 | NICKEL | 0.5 | 0.484 | 0.02 | | 97 | 80 - 120% |
| 7440-09-7 | POTASSIUM | 40 | 38 | 1 | | 95 | 80 - 120% |
| 7782-49-2 | SELENIUM | 2 | 2.05 | 0.005 | | 102 | 80 - 120% |
| 7440-22-4 | SILVER | 0.1 | 0.0942 | 0.01 | | 94 | 80 - 120% |
| 7440-23-5 | SODIUM | 40 | 37.7 | 1 | | 94 | 80 - 120% |
| 7440-28-0 | THALLIUM | 2 | 2.08 | 0.01 | | 104 | 80 - 120% |
| 7440-62-2 | VANADIUM | 0.5 | 0.486 | 0.01 | | 97 | 80 - 120% |
| 7440-66-6 | ZINC | 0.5 | 0.478 | 0.02 | | 96 | 80 - 120% |

**Data Package ID:** *IT1202116-1*

# Mercury

## Method SW7470A

## Method Blank

**Lab Name:** **ALS Environmental -- FC**
**Work Order Number:** 1202116
**Client Name:** NMED Hazardous Waste Bureau
**ClientProject ID:** KAFB - BFF 1Q12

**Lab ID:** HG120213-1MB

**Sample Matrix:** WATER
**% Moisture:** N/A
**Date Collected:** N/A
**Date Extracted:** 13-Feb-12
**Date Analyzed:** 14-Feb-12

**Prep Batch:** HG120213-1
**QCBatchID:** HG120213-1-1
**Run ID:** HG120214-1A2
**Cleanup:** NONE
**Basis:** N/A
**File Name:** HG120213-1

**Sample Aliquot:** 20 g
**Final Volume:** 20 g
**Result Units:** MG/L
**Clean DF:** 1

| CASNO | Target Analyte | DF | Result | Reporting Limit | MDL | Result Qualifier | EPA Qualifier |
|---|---|---|---|---|---|---|---|
| 7439-97-6 | MERCURY | 1 | 0.00006 | 0.0002 | 0.00006 | U | |

**Data Package ID:** *HG1202116-1*

# Mercury

## Method SW7470A

## Laboratory Control Sample

**Lab Name:** **ALS Environmental -- FC**
**Work Order Number:** 1202116
**Client Name:** NMED Hazardous Waste Bureau
**ClientProject ID:** KAFB - BFF 1Q12

**Lab ID:** HG120213-1LCS

**Sample Matrix:** WATER
**% Moisture:** N/A
**Date Collected:** N/A
**Date Extracted:** 02/13/2012
**Date Analyzed:** 02/14/2012
**Prep Method:** METHOD

**Prep Batch:** HG120213-1
**QCBatchID:** HG120213-1-1
**Run ID:** HG120214-1A2
**Cleanup:** NONE
**Basis:** N/A
**File Name:** HG120213-1

**Sample Aliquot:** 20 g
**Final Volume:** 20 g
**Result Units:** MG/L
**Clean DF:** 1

| CASNO | Target Analyte | Spike Added | LCS Result | Reporting Limit | Result Qualifier | LCS % Rec. | Control Limits |
|---|---|---|---|---|---|---|---|
| 7439-97-6 | MERCURY | 0.001 | 0.00103 | 0.0002 | | 103 | 80 - 120% |

**Data Package ID:** *HG1202116-1*

# Mercury

## Method SW7470A

## Matrix Spike And Matrix Spike Duplicate

**Lab Name:** ALS Environmental -- FC
**Work Order Number:** 1202116
**Client Name:** NMED Hazardous Waste Bureau
**ClientProject ID:** KAFB - BFF 1Q12

**Field ID:** 106029-I
**LabID:** 1202116-9MS

**Sample Matrix:** WATER
**% Moisture:** N/A
**Date Collected:** 09-Feb-12
**Date Extracted:** 13-Feb-12
**Date Analyzed:** 14-Feb-12
**Prep Method:** METHOD

**Prep Batch:** HG120213-1
**QCBatchID:** HG120213-1-1
**Run ID:** HG120214-1A2
**Cleanup:** NONE
**Basis:** As Received

**Sample Aliquot:** 20 g
**Final Volume:** 20 g
**Result Units:** MG/L
**File Name:** HG120213-1

| CASNO | Target Analyte | Sample Result | Samp Qual | MS Result | MS Qual | Reporting Limit | Spike Added | MS % Rec. | Control Limits |
|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | MERCURY | 0.00006 | U | 0.00195 | | 0.0002 | 0.002 | 98 | 80 - 120% |

**Field ID:** 106029-I
**LabID:** 1202116-9MSD

**Sample Matrix:** WATER
**% Moisture:** N/A
**Date Collected:** 09-Feb-12
**Date Extracted:** 13-Feb-12
**Date Analyzed:** 14-Feb-12
**Prep Method:** METHOD

**Prep Batch:** HG120213-1
**QCBatchID:** HG120213-1-1
**Run ID:** HG120214-1A2
**Cleanup:** NONE
**Basis:** As Received

**Sample Aliquot:** 20 g
**Final Volume:** 20 g
**Result Units:** MG/L
**File Name:** HG120213-1

| CASNO | Target Analyte | MSD Result | MSD Qual | Spike Added | MSD % Rec. | Reporting Limit | RPD Limit | RPD |
|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | MERCURY | 0.00214 | | 0.002 | 107 | 0.0002 | 20 | 9 |

**Data Package ID:** *HG1202116-1*

# Mercury

## Method SW7470

## Duplicate Sample Results

**Lab Name:** **ALS Environmental -- FC**
**Work Order Number:** 1202116
**Client Name:** NMED Hazardous Waste Bureau
**ClientProject ID:** KAFB - BFF 1Q12

**Field ID:** 106029-I
**Lab ID:** 1202116-9D

**Sample Matrix:** WATER
**% Moisture:** N/A
**Date Collected:** 02/09/2012
**Date Extracted:** 02/13/2012
**Date Analyzed:** 02/14/2012

**Prep Batch:** HG120213-1
**QCBatchID:** HG120213-1-1
**Run ID:** HG120214-1A2
**Cleanup:** NONE
**Basis:** As Received
**File Name:** HG120213-1

**Sample Aliquot:** 20 g
**Final Volume:** 20 g
**Result Units:** MG/L
**Clean DF:** 1

| CASNO | Target Analyte | Sample Result | Samp Qual | Duplicate Result | Dup Qual | Reporting Limit | Dilution Factor | RPD | RPD Limit |
|---|---|---|---|---|---|---|---|---|---|
| 7439-97-6 | MERCURY | 0.00006 | U | 0.00006 | U | 0.0002 | 1 | | 20 |

**Data Package ID:** *HG1202116-1*