1/4/82

Subject: Review of Contractor Data
SAUGET, VIAR Case No. 725 158437

From: Curtis Ross, Director, CRL

To: Lisa Parnham

We have reviewed these data and found the following.

No problems, other than the detection limits are high. Samples were analyzed as medium concentration levels.

1/4/82 mg

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SAUGET
S.F. 1401
82WT06501

Sample No.
ME-8527

# INORGANICS ANALYSIS DATA SHEET

transmitted 12/28/81 kg

LABORATORY NAME CHEMTECH CASE NO. 725
LAB SAMPLE ID. NO. 3-01 QC REPORT NO. 002

## TASK 1 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) | | | ug/l or mg/kg (circle one) |
|---|---|---|---|---|---|
| 1. | Aluminum | <100 | 11. | Manganese | 20 |
| 2. | Chromium | 40 | 12. | Zinc | 48 |
| 3. | Barium | <100 | 13. | Boron | 19,700 |
| 4. | Beryllium | <5 | 14. | Vanadium | <200 |
| 5. | Cadmium | <1 | | | |
| 6. | Cobalt | <50 | | | mg/l or mg/kg (circle one) |
| 7. | Copper | <50 | | | |
| 8. | Iron | 60 | 15. | Calcium | |
| 9. | Lead | 5 | 16. | Magnesium | |
| 10. | Nickel | 40 | 17. | Sodium | |

## TASK 2 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) | | | ug/l or mg/kg (circle one) |
|---|---|---|---|---|---|
| 1. | Arsenic | 34. | 5. | Mercury | 0.2 |
| 2. | Antimony | <20 | 6. | Tin | <20 |
| 3. | Selenium | 38. | 7. | Silver | <10 |
| 4. | Thallium | <10 | | | |

## TASK 3 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) |
|---|---|---|
| 1. | Ammonia | |
| 2. | Cyanide | 71 |
| 3. | Sulfide | |

COMMENTS:

1/4/82 CM

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SAVFET
S.F. 1401
82WT06 S02

Sample No.
ME-8528

# INORGANICS ANALYSIS DATA SHEET

LABORATORY NAME CHEMTECH CASE NO. 725
LAB SAMPLE ID. NO. 3-02 QC REPORT NO. 002

## TASK 1 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) | | | ug/l or mg/kg (circle one) |
|---|---|---|---|---|---|
| 1. | Aluminum | 150 | 11. | Manganese | 76 |
| 2. | Chromium | <1 | 12. | Zinc | 9.5 |
| 3. | Barium | <10 | 13. | Boron | <10 |
| 4. | Beryllium | <0.5 | 14. | Vanadium | <20 |
| 5. | Cadmium | <0.1 | | | |
| 6. | Cobalt | <5 | | | mg/l or mg/kg (circle one) |
| 7. | Copper | <5 | | | |
| 8. | Iron | 580 | 15. | Calcium | |
| 9. | Lead | 2.4 | 16. | Magnesium | |
| 10. | Nickel | <4 | 17. | Sodium | |

## TASK 2 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) | | | ug/l or mg/kg (circle one) |
|---|---|---|---|---|---|
| 1. | Arsenic | 1.1 | 5. | Mercury | <0.02 |
| 2. | Antimony | <2 | 6. | Tin | <2 |
| 3. | Selenium | 1.1 | 7. | Silver | <1 |
| 4. | Thallium | <1 | | | |

## TASK 3 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) |
|---|---|---|
| 1. | Ammonia | |
| 2. | Cyanide | 28. |
| 3. | Sulfide | |

COMMENTS:

1/4/82 WG

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82WT06503

Sample No.
ME-8529

# INORGANICS ANALYSIS DATA SHEET

LABORATORY NAME CHEMTECH CASE NO. 725
LAB SAMPLE ID. NO. 3-03 QC REPORT NO. 001

## TASK 1 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) | | | ug/l or mg/kg (circle one) |
|---|---|---|---|---|---|
| 1. | Aluminum | <100 | 11. | Manganese | 1990 |
| 2. | Chromium | 15 | 12. | Zinc | 10 |
| 3. | Barium | <100 | 13. | Boron | 15,350 |
| 4. | Beryllium | <5 | 14. | Vanadium | <200 |
| 5. | Cadmium | <1 | | | |
| 6. | Cobalt | <50 | | | mg/l or mg/kg (circle one) |
| 7. | Copper | <50 | | | |
| 8. | Iron | <50 | 15. | Calcium | |
| 9. | Lead | <5 | 16. | Magnesium | |
| 10. | Nickel | <40 | 17. | Sodium | |

## TASK 2 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) | | | ug/l or mg/kg (circle one) |
|---|---|---|---|---|---|
| 1. | Arsenic | 16. | 5. | Mercury | 0.2 |
| 2. | Antimony | <20 | 6. | Tin | <20 |
| 3. | Selenium | 26. | 7. | Silver | <10 |
| 4. | Thallium | <10 | | | |

## TASK 3 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) |
|---|---|---|
| 1. | Ammonia | |
| 2. | Cyanide | INSUFFICIENT SAMPLE |
| 3. | Sulfide | |

COMMENTS: AVERAGE OF DUPLICATES REPORTED

1/4/82 CM

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82WT06504

Sample No.
ME-8530

# INORGANICS ANALYSIS DATA SHEET

LABORATORY NAME CHEMTECH CASE NO. 725
LAB SAMPLE ID. NO. 3-04 QC REPORT NO. 002

## TASK 1 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) | | | ug/l or mg/kg (circle one) |
|---|---|---|---|---|---|
| 1. | Aluminum | 155 | 11. | Manganese | 42 |
| 2. | Chromium | <1 | 12. | Zinc | 6.8 |
| 3. | Barium | <10 | 13. | Boron | 17 |
| 4. | Beryllium | <0.5 | 14. | Vanadium | <20 |
| 5. | Cadmium | 0.61 | | | |
| 6. | Cobalt | <5 | | | mg/l or mg/kg (circle one) |
| 7. | Copper | <5 | | | |
| 8. | Iron | 425 | 15. | Calcium | |
| 9. | Lead | 2.45 | 16. | Magnesium | |
| 10. | Nickel | <4 | 17. | Sodium | |

## TASK 2 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) | | | ug/l or mg/kg (circle one) |
|---|---|---|---|---|---|
| 1. | Arsenic | 1.25 | 5. | Mercury | <0.02 |
| 2. | Antimony | 4.0 | 6. | Tin | <2 |
| 3. | Selenium | 1.5 | 7. | Silver | <1 |
| 4. | Thallium | <1 | | | |

## TASK 3 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) |
|---|---|---|
| 1. | Ammonia | |
| 2. | Cyanide | 6.8 |
| 3. | Sulfide | |

COMMENTS: AVERAGE OF DUPLICATES REPORTED (except cyanide)

1/4/82 CM

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Sample No. ME-8531

# INORGANICS ANALYSIS DATA SHEET

LABORATORY NAME CHEMTECH CASE NO. 725
LAB SAMPLE ID. NO. 3-05 QC REPORT NO. 002

## TASK 1 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) | | | ug/l or mg/kg (circle one) |
|---|---|---|---|---|---|
| 1. | Aluminum | <100 | 11. | Manganese | 5,400 |
| 2. | Chromium | 20 | 12. | Zinc | 49 |
| 3. | Barium | <100 | 13. | Boron | 21,600 |
| 4. | Beryllium | <5 | 14. | Vanadium | <200 |
| 5. | Cadmium | <1 | | | |
| 6. | Cobalt | <50 | | | mg/l or mg/kg (circle one) |
| 7. | Copper | <50 | | | |
| 8. | Iron | 630 | 15. | Calcium | |
| 9. | Lead | <5 | 16. | Magnesium | |
| 10. | Nickel | <40 | 17. | Sodium | |

## TASK 2 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) | | | ug/l or mg/kg (circle one) |
|---|---|---|---|---|---|
| 1. | Arsenic | 29. | 5. | Mercury | 0.8 |
| 2. | Antimony | <20 | 6. | Tin | 20. |
| 3. | Selenium | 31. | 7. | Silver | 10 |
| 4. | Thallium | <10 | | | |

## TASK 3 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) |
|---|---|---|
| 1. | Ammonia | |
| 2. | Cyanide | INSUFFICIENT SAMPLE |
| 3. | Sulfide | |

COMMENTS:

1/4/82 OMB

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Sample No.
ME-8532

# INORGANICS ANALYSIS DATA SHEET

LABORATORY NAME CHEMTECH CASE NO. 725
LAB SAMPLE ID. NO. 3-06 QC REPORT NO. 00

## TASK 1 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) | | | ug/l or mg/kg (circle one) |
|---|---|---|---|---|---|
| 1. | Aluminum | 170 | 11. | Manganese | 47 |
| 2. | Chromium | <1 | 12. | Zinc | 9.2 |
| 3. | Barium | 20 | 13. | Boron | 26 |
| 4. | Beryllium | <0.5 | 14. | Vanadium | <20 |
| 5. | Cadmium | <0.1 | | | |
| 6. | Cobalt | <5 | | | mg/l or mg/kg (circle one) |
| 7. | Copper | <5 | | | |
| 8. | Iron | 580 | 15. | Calcium | |
| 9. | Lead | 1.7 | 16. | Magnesium | |
| 10. | Nickel | <4 | 17. | Sodium | |

## TASK 2 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) | | | ug/l or mg/kg (circle one) |
|---|---|---|---|---|---|
| 1. | Arsenic | 1.8 | 5. | Mercury | <0.02 |
| 2. | Antimony | <2 | 6. | Tin | <2 |
| 3. | Selenium | 1.6 | 7. | Silver | <1 |
| 4. | Thallium | <1 | | | |

## TASK 3 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) |
|---|---|---|
| 1. | Ammonia | |
| 2. | Cyanide | 9.0 |
| 3. | Sulfide | |

COMMENTS:

1 | 48 | 5 v CW

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82 W T06 D01

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Sample No.
ME-8533

# INORGANICS ANALYSIS DATA SHEET

LABORATORY NAME CHEMTECH CASE NO. 725

LAB SAMPLE ID. NO. 3-07 QC REPORT NO. 002

## TASK 1 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) | | | ug/l or mg/kg (circle one) |
|---|---|---|---|---|---|
| 1. | Aluminum | <100 | 11. | Manganese | 320 |
| 2. | Chromium | 20 | 12. | Zinc | 24 |
| 3. | Barium | <100 | 13. | Boron | 17,100 |
| 4. | Beryllium | <5 | 14. | Vanadium | <200 |
| 5. | Cadmium | <1 | | | |
| 6. | Cobalt | <50 | | | mg/l or mg/kg (circle one) |
| 7. | Copper | <50 | | | |
| 8. | Iron | 60 | 15. | Calcium | |
| 9. | Lead | 8. | 16. | Magnesium | |
| 10. | Nickel | <40 | 17. | Sodium | |

## TASK 2 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) | | | ug/l or mg/kg (circle one) |
|---|---|---|---|---|---|
| 1. | Arsenic | 31. | 5. | Mercury | 0.2 |
| 2. | Antimony | <20 | 6. | Tin | <20 |
| 3. | Selenium | 32. | 7. | Silver | <10 |
| 4. | Thallium | <10 | | | |

## TASK 3 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) |
|---|---|---|
| 1. | Ammonia | |
| 2. | Cyanide | 57 |
| 3. | Sulfide | |

COMMENTS:

1/4/82 [illegible]

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82 WT 06 D02

Sample No. ME-8534

# INORGANICS ANALYSIS DATA SHEET

LABORATORY NAME CHEMTECH CASE NO. 725

LAB SAMPLE ID. NO. 3-08 QC REPORT NO. 002

## TASK 1 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) | | | ug/l or mg/kg (circle one) |
|---|---|---|---|---|---|
| 1. | Aluminum | 190 | 11. | Manganese | 46 |
| 2. | Chromium | 1 | 12. | Zinc | 10 |
| 3. | Barium | 10 | 13. | Boron | 25 |
| 4. | Beryllium | <0.5 | 14. | Vanadium | <20 |
| 5. | Cadmium | <0.1 | | | |
| 6. | Cobalt | <5 | | | mg/l or mg/kg (circle one) |
| 7. | Copper | <5 | | | |
| 8. | Iron | 660 | 15. | Calcium | |
| 9. | Lead | 2.9 | 16. | Magnesium | |
| 10. | Nickel | <4 | 17. | Sodium | |

## TASK 2 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) | | | ug/l or mg/kg (circle one) |
|---|---|---|---|---|---|
| 1. | Arsenic | 2.9 | 5. | Mercury | <0.02 |
| 2. | Antimony | <2 | 6. | Tin | <2. |
| 3. | Selenium | 1.8 | 7. | Silver | <1 |
| 4. | Thallium | <1 | | | |

## TASK 3 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) |
|---|---|---|
| 1. | Ammonia | |
| 2. | Cyanide | 13. |
| 3. | Sulfide | |

COMMENTS: Average of duplicate cyanide results reported

1/4/82 CMP

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SAUGET
S.F. 1401
82 WT 06 R01

Sample No.
ME-8835

# INORGANICS ANALYSIS DATA SHEET

LABORATORY NAME CHEMTECH CASE NO. 725
LAB SAMPLE ID. NO. 3-09 QC REPORT NO. 002

## TASK 1 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) | | | ug/l or mg/kg (circle one) |
|---|---|---|---|---|---|
| 1. | Aluminum | <100 | 11. | Manganese | 30 |
| 2. | Chromium | 10 | 12. | Zinc | 310 |
| 3. | Barium | <100 | 13. | Boron | <100 |
| 4. | Beryllium | <5 | 14. | Vanadium | <200 |
| 5. | Cadmium | <1 | | | |
| 6. | Cobalt | <50 | | | mg/l or mg/kg (circle one) |
| 7. | Copper | <50 | | | |
| 8. | Iron | <50 | 15. | Calcium | |
| 9. | Lead | <5 | 16. | Magnesium | |
| 10. | Nickel | <40 | 17. | Sodium | |

## TASK 2 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) | | | ug/l or mg/kg (circle one) |
|---|---|---|---|---|---|
| 1. | Arsenic | <10 | 5. | Mercury | <0.2 |
| 2. | Antimony | <20 | 6. | Tin | <20 |
| 3. | Selenium | <2 | 7. | Silver | <10 |
| 4. | Thallium | <10 | | | |

## TASK 3 (Elements to be identified and measured.)

| | | ug/l or mg/kg (circle one) |
|---|---|---|
| 1. | Ammonia | |
| 2. | Cyanide | 130. |
| 3. | Sulfide | |

COMMENTS:

# INORGANICS QUALITY ASSURANCE

CASE #: 725
# OF SAMPLES: 9
LAB: CHEMTECH

QC REPORT #: 002
DATE: 12/11/81
BATCH #: 1 (H005-3)

## TASK I/INDUCTIVELY COUPLED PLASMA

| | | | Al (µg/l) | Sb (µg/l) | Ba (µg/l) | Be (µg/l) | Cd (µg/l) | Co (µg/l) | Cu (µg/l) | Fe (µg/l) | Pb (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| I. INITIAL CALIBRATION VERIFICATION | REFERENCE STANDARD SOURCE: | FOUND | * | * | * | * | * | * | * | * | * |
| | | TRUE | | | | | | | | | |
| | | % RECOVERY | | | | | | | | | |
| | BLANK VALUE | RESULTS | * * | * * | * * | * * | * * | * * | * * | * * | * * |
| II. CONTINUING CALIBRATION VERIFICATION | PREPARATION BLANK 1 | RESULTS | <100 | <10 | <100 | <5 | <0.5 | <10 | <20 | <20 | <2 |
| | PREPARATION BLANK 2 | RESULTS | <100 | <10 | <100 | <5 | <0.5 | <10 | <20 | <20 | <2 |
| | STANDARD SOLUTION 1 SOURCE: AA Std | FOUND | 3000 | 750 | 2900 | 370 | 2.2 | 700 | 1500 | 770 | 39 |
| | | TRUE | 3000 | 750 | 3000 | 375 | 2.0 | 750 | 1500 | 750 | 35 |
| | | % RECOVERY | 100.0 | 98.7 | 96.7 | 98.7 | 110.0 | 93.3 | 100.0 | 102.7 | 111.4 |
| | STANDARD SOLUTION 2 SOURCE: AA Std | FOUND | 1000 | 230 | 1000 | 125 | 2.3 | 250 | 490 | 240 | 10 |
| | | TRUE | 1000 | 250 | 1000 | 125 | 2.5 | 250 | 500 | 250 | 10 |
| | | % RECOVERY | 100.0 | 92.0 | 100.0 | 100.0 | 92.3 | 100.0 | 98.0 | 96.0 | 100.0 |
| | STANDARD SOLUTION 3 SOURCE: EPA | FOUND | 700 | 20 | | | 3.3 | 150 | 160 | 150 | 19 |
| | | TRUE | 700 | 30 | | | 3.0 | 140 | 160 | 150 | 18 |
| | | % RECOVERY | 100.0 | 66.7 | | | 110.0 | 107.1 | 100.0 | 100.0 | 105.6 |
| | STANDARD SOLUTION 4 SOURCE: | FOUND | | | | | | | | | |
| | | TRUE | | | | | | | | | |
| | | % RECOVERY | | | | | | | | | |
| III. DUPLICATE SAMPLE RESULTS | DUPLICATE 1 SAMPLE NO. ME8529 | SAMPLE RESULT | <100 | 10 | <100 | <5 | <1 | <50 | <50 | <50 | <5 |
| | | DUPLICATE RESULT | <100 | 20 | <100 | <5 | <1 | <50 | <50 | <50 | <5 |
| | | RPD % | 0 | 66.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | DUPLICATE 2 SAMPLE NO. ME8530 | SAMPLE RESULT | 1600 | <10 | <100 | <5 | 6.1 | <50 | <50 | 4300 | 23 |
| | | DUPLICATE RESULT | 1500 | <10 | <100 | <5 | 6.1 | <50 | <50 | 4300 | 26 |
| | | RPD % | 6.5 | 0 | 0 | 0 | 0 | 0 | 0 | 2.4 | 12.2 |
| IV. SPIKED SAMPLE RESULTS | SPIKE 1 SAMPLE NO. ME8529 | SAMPLE RESULT | <100 | 15 | <100 | <5 | <1 | <50 | <50 | <50 | <5 |
| | | SPIKE RESULT | 1800 | 225 | 2000 | 260 | 110 | 1000 | 1000 | 1040 | 22 |
| | | SPIKE ADDED | 2000 | 250 | 2000 | 250 | 100 | 1000 | 1000 | 1000 | 25 |
| | | % RECOVERY | 90.0 | 90.0 | 100.0 | 104.0 | 110.0 | 100.0 | 100.0 | 104.0 | 88.0 |
| | SPIKE 2 SAMPLE NO. ME8530 | SAMPLE RESULT | 1550 | <10 | <100 | <5 | 6.1 | <50 | <50 | 4325 | 27.5 |
| | | SPIKE RESULT | 2250 | 200 | 2000 | 240 | 107 | 1040 | 1020 | 995 | 99.5 |
| | | SPIKE ADDED | 2000 | 250 | 2000 | 250 | 100 | 1000 | 1000 | 1000 | 100 |
| | | % RECOVERY | 112.5 | 80.0 | 100.0 | 96.0 | 107.0 | 104.0 | 102.0 | 99.5 | 99.5 |

## INORGANICS QUALITY ASSURANCE

CASE #: 725
# OF SAMPLES: 9
LAB: CHEMTECH

QC REPORT #: 002
DATE: 12/11/91
BATCH #: 1(H005-3)

### TASK I (CONTINUED)/INDUCTIVELY COUPLED PLASMA

| | | | Ni (µg/l) | Mn (µg/l) | Zn (µg/l) | V (µg/l) | Co (µg/l) | Mg (µg/l) | Na (µg/l) | S (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|
| I. INITIAL CALIBRATION VERIFICATION | REFERENCE STANDARD SOURCE: | FOUND | * | * | * | * | | | | * |
| | | TRUE | | | | | | | | |
| | | % RECOVERY | | | | | | | | |
| | BLANK VALUE | RESULTS | * * | * * | * * | * * | | | | * * |
| II. CONTINUING CALIBRATION VERIFICATION | PREPARATION BLANK 1 | RESULTS | <20 | <10 | <3 | <100 | | | | <30 |
| | PREPARATION BLANK 2 | RESULTS | <20 | <10 | <3 | <100 | | | | <30 |
| | STANDARD SOLUTION 1 SOURCE: AA Std | FOUND | 760 | 750 | 760 | 3000 | | | | 2880 |
| | | TRUE | 750 | 750 | 750 | 3000 | | | | 3000 |
| | | % RECOVERY | 101.3 | 100.0 | 101.3 | 100.0 | | | | 96.0 |
| | STANDARD SOLUTION 2 SOURCE: AA Std | FOUND | 240 | 250 | 240 | 900 | | | | 970 |
| | | TRUE | 250 | 250 | 250 | 1000 | | | | 1000 |
| | | % RECOVERY | 96.0 | 100.0 | 96.0 | 90.0 | | | | 97.0 |
| | STANDARD SOLUTION 3 SOURCE: EPA | FOUND | 120 | 60 | 26 | 300 | | | | |
| | | TRUE | 140 | 55 | 24 | 400 | | | | |
| | | % RECOVERY | 85.7 | 109.1 | 108.3 | 75.0 | | | | |
| | STANDARD SOLUTION 4 SOURCE: Synthetic | FOUND | | | | | | | | 530 |
| | | TRUE | | | | | | | | 500 |
| | | % RECOVERY | | | | | | | | 106.0 |
| III. DUPLICATE SAMPLE RESULTS | DUPLICATE 1 SAMPLE NO. ME8529 | SAMPLE RESULT | <40 | 1980 | 10 | <200 | | | | 15300 |
| | | DUPLICATE RESULT | <40 | 2000 | 10 | <200 | | | | 15400 |
| | | RPD % | 0 | 1.0 | 0 | 0 | | | | 0.65 |
| | DUPLICATE 2 SAMPLE NO. ME8530 | SAMPLE RESULT | <40 | 420 | 76 | <200 | | | | 190 |
| | | DUPLICATE RESULT | <40 | 420 | 60 | <200 | | | | 150 |
| | | RPD % | 0 | 0 | 23.5 | 0 | | | | 23.5 |
| IV. SPIKED SAMPLE RESULTS | SPIKE 1 SAMPLE NO. ME8529 | SAMPLE RESULT | <40 | 995 | 10 | <200 | | | | 1535 |
| | | SPIKE RESULT | 960 | 1005 | 1054 | 2000 | | | | 3645 |
| | | SPIKE ADDED | 1000 | 1000 | 1000 | 2000 | | | | 4000 |
| | | % RECOVERY | 96.0 | 100.5 | 105.4 | 100.0 | | | | 91.1 |
| | SPIKE 2 SAMPLE NO. ME8530 | SAMPLE RESULT | <40 | 420 | 68 | <200 | | | | 170 |
| | | SPIKE RESULT | 960 | 1000 | 1046 | 2200 | | | | 2050 |
| | | SPIKE ADDED | 1000 | 1000 | 1000 | 2000 | | | | 2000 |
| | | % RECOVERY | 96.0 | 100.0 | 104.6 | 110.0 | | | | 102.5 |

## INORGANICS QUALITY ASSURANCE

CASE #: 725
# OF SAMPLES: 9
LAB: CHEMTECH

QC REPORT #: 002
DATE: 12/11/86
BATCH #: 1 (H005-3)

### TASK H/FLAMELESS ATOMIC ABSORPTION

| | | | Ag (µg/l) | As (µg/l) | Sb (µg/l) | Se (µg/l) | Hg (µg/l) | Tl (µg/l) |
|---|---|---|---|---|---|---|---|---|
| I. INITIAL CALIBRATION VERIFICATION | REFERENCE STANDARD SOURCE: | FOUND | * | * | * | * | * | * |
| | | TRUE | | | | | | |
| | | % RECOVERY | | | | | | |
| | BLANK VALUE | RESULTS | ** | ** | ** | ** | ** | ** |
| II. CONTINUING CALIBRATION VERIFICATION | PREPARATION BLANK 1 | RESULTS | <10 | <5 | <5 | <1 | <10 | <3 |
| | PREPARATION BLANK 2 | RESULTS | <10 | <5 | <5 | <1 | <10 | <3 |
| | STANDARD SOLUTION 1 SOURCE: AA Std | FOUND | 730 | 74 | 149 | 78 | 150 | 70 |
| | | TRUE | 750 | 75 | 150 | 75 | 150 | 75 |
| | | % RECOVERY | 97.3 | 98.7 | 99.3 | 98.7 | 100.0 | 93.3 |
| | STANDARD SOLUTION 2 SOURCE: AA Std | FOUND | 250 | 29 | 47 | | 50 | |
| | | TRUE | 250 | 25 | 50 | | 56 | |
| | | % RECOVERY | 100.0 | 116.0 | 94.0 | | 112.0 | |
| | STANDARD SOLUTION 3 SOURCE: EPA | FOUND | 20 | 48 | 54 | 6.5 | | 29 |
| | | TRUE | 24.5 | 40 | 48.8 | 7.0 | | 31.5 |
| | | % RECOVERY | 81.6 | 120.0 | 110.7 | 98.5 | | 92.1 |
| | STANDARD SOLUTION 4 SOURCE: Synthetic | FOUND | | | | | 83 | |
| | | TRUE | | | | | 75 | |
| | | % RECOVERY | | | | | 110.7 | |
| III. DUPLICATE SAMPLE RESULTS | DUPLICATE 1 SAMPLE NO. ME 8529 | SAMPLE RESULT | <10 | 17 | <20 | 25 | <20 | <10 |
| | | DUPLICATE RESULT | <10 | 15 | <20 | 27 | <20 | <10 |
| | | RPD % | 0 | 12.5 | 0 | 7.7 | 0 | 0 |
| | DUPLICATE 2 SAMPLE NO. ME 8530 | SAMPLE RESULT | <10 | 15 | 45 | 16 | <20 | <10 |
| | | DUPLICATE RESULT | <10 | 10 | 34 | 14 | <20 | <10 |
| | | RPD % | 0 | 40.0 | 27.8 | 13.3 | 0 | 0 |
| IV. SPIKED SAMPLE RESULTS | SPIKE 1 SAMPLE NO. ME 8529 | SAMPLE RESULT | <10 | 16 | <20 | 26 | <20 | <10 |
| | | SPIKE RESULT | 500 | 106 | 230 | 78 | 106 | 36 |
| | | SPIKE ADDED | 500 | 100 | 200 | 100 | 100 | 100 |
| | | % RECOVERY | 100.0 | 106.0 | 115.0 | 78.0 | 106.0 | 36.0 |
| | SPIKE 2 SAMPLE NO. ME 8530 | SAMPLE RESULT | <10 | 12.5 | 39.5 | 15 | <20 | <10 |
| | | SPIKE RESULT | 500 | 103.5 | 191 | 115 | 174 | 72 |
| | | SPIKE ADDED | 500 | 100 | 200 | 100 | 200 | 100 |
| | | % RECOVERY | 100.0 | 103.5 | 95.5 | 115.0 | 87.0 | 72.0 |

# INORGANICS QUALITY ASSURANCE

CASE #: 725
# OF SAMPLES: 9
LAB: CHEMTECH

QC REPORT #: 002
DATE: 2/11/81
BATCH #: 1 (H-005-3)

TASK II/COLD VAPOR ATOMIC ABSORPTION

| | | | Hg (µg/l) |
|---|---|---|---|
| I. INITIAL CALIBRATION VERIFICATION | REFERENCE STANDARD SOURCE: | FOUND | * |
| | | TRUE | |
| | | % RECOVERY | |
| | BLANK VALUE | RESULTS | * * |
| II. CONTINUING CALIBRATION VERIFICATION | PREPARATION BLANK 1 | RESULTS | <0.1 |
| | PREPARATION BLANK 2 | RESULTS | <0.2 |
| | STANDARD SOLUTION 1 SOURCE: AA Std | FOUND | 2.0 |
| | | TRUE | 2.0 |
| | | % RECOVERY | 100% |
| | STANDARD SOLUTION 2 SOURCE: AA Std | FOUND | |
| | | TRUE | |
| | | % RECOVERY | |
| | STANDARD SOLUTION 3 SOURCE: EPA | FOUND | 0.63 |
| | | TRUE | 0.67 |
| | | % RECOVERY | 94.0 |
| | STANDARD SOLUTION 4 SOURCE: | FOUND | |
| | | TRUE | |
| | | % RECOVERY | |
| III. DUPLICATE SAMPLE RESULTS | DUPLICATE 1 SAMPLE NO. ME 8530 | SAMPLE RESULT | <0.2 |
| | | DUPLICATE RESULT | <0.2 |
| | | RPD % | 0 |
| | DUPLICATE 2 SAMPLE NO. | SAMPLE RESULT | |
| | | DUPLICATE RESULT | |
| | | RPD % | |
| IV. SPIKED SAMPLE RESULTS | SPIKE 1 SAMPLE NO. ME 8529 | SAMPLE RESULT | 0.2 |
| | | SPIKE RESULT | 0.8 |
| | | SPIKE ADDED | 1.0 |
| | | % RECOVERY | 80.0 |
| | SPIKE 2 SAMPLE NO. ME 8530 | SAMPLE RESULT | <0.2 |
| | | SPIKE RESULT | 1.0 |
| | | SPIKE ADDED | 1.0 |
| | | % RECOVERY | 100.0 |

# INORGANICS QUALITY ASSURANCE

CASE # : 725

# OF SAMPLES: 9

LAB: CHEMTECH

QC REPORT # : 002

DATE: 12/11/81

BATCH # : 1

TASK III/CYANIDE

| | | | CYANIDE (mg/l) |
|---|---|---|---|
| I. INITIAL CALIBRATION VERIFICATION | REFERENCE STANDARD | FOUND | |
| | | TRUE | |
| | SOURCE: | % RECOVERY | |
| | BLANK VALUE | RESULTS | |
| II. CONTINUING CALIBRATION VERIFICATION | PREPARATION BLANK 1 | RESULTS | |
| | PREPARATION BLANK 2 | RESULTS | |
| | STANDARD SOLUTION 1 EPA QC | FOUND | 0.352 |
| | | TRUE | 0.363 |
| | SOURCE: | % RECOVERY | 97.0 |
| | STANDARD SOLUTION 2 | FOUND | |
| | | TRUE | |
| | SOURCE: | % RECOVERY | |
| | STANDARD SOLUTION 3 | FOUND | |
| | | TRUE | |
| | SOURCE: | % RECOVERY | |
| | STANDARD SOLUTION 4 | FOUND | |
| | | TRUE | |
| | SOURCE: | % RECOVERY | |
| III. DUPLICATE SAMPLE RESULTS | DUPLICATE 1 | SAMPLE RESULT | 0.065 |
| | SAMPLE NO. ME8534 | DUPLICATE RESULT | 0.065 |
| | | RPD % | 0 |
| | DUPLICATE 2 | SAMPLE RESULT | |
| | SAMPLE NO. | DUPLICATE RESULT | |
| | | RPD % | |
| IV. SPIKED SAMPLE RESULTS | SPIKE 1 | SAMPLE RESULT | 0.139 |
| | SAMPLE NO. ME8528 | SPIKE RESULT (net) | 0.307 |
| | | SPIKE ADDED | 0.400 |
| | | % RECOVERY | 76.8 |
| | SPIKE 2 | SAMPLE RESULT | |
| | SAMPLE NO. | SPIKE RESULT | |
| | | SPIKE ADDED | |
| | | % RECOVERY | |

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## Notes to Q.A. Report

NOTES: 1. For the initial calibration verification, an asterisk is noted, meaning the following:

*New analytical curve prepared for each batch by running a minimum of 3 working standards.

2. For the blank value, two asterisks appear:

**Zero calibrating point set at distilled water blank

3. All reagent blanks were below one-half the detection limit

Alan Schoffman, Ph.D.
Director, Analytical Services