

Peltier, Hannah

From: Torrence, Rufus
Sent: Wednesday, March 06, 2013 10:44 AM
To: droach@amerimax.com
Cc: Peltier, Hannah
Subject: AFIN 54-00132 AR0043389 Amerimax August 2012 Semi-Annual Report
Attachments: AMX Feb 2013 SAR.pdf



March 5, 2013

Mr. Dan Roach
Amerimax Coated Products
215 Phillips 324 Road
Helena, AR 72342

Re: Amerimax February 2013 Semi-Annual Report
(Permit No. AR000043389 AFIN 54-00132)

Dear Mr. Roach:

The Department has reviewed Amerimax's February 2013 Semi-annual Pretreatment Report and the report is complete. However, the Department has concerns.

(1). Since the math model assumes all wastewater is collected in one tank for each line, all measured concentrations must comply with the calculated allowable monthly limit. The model does not allow Amerimax to calculate a "Maximum for any 1 day" allowable limit. Therefore, all the measured concentrations must also comply with the allowable monthly limit including the maximum measured concentration. The report shows that Amerimax is compliant with this requirement.

(2) Amerimax did not show the correct allowable limits in the chart in Section 5.C in the report. The Department inserted the correct limits. Note that limits for both the Galvanized line and Aluminum line must be shown to verify compliance.

(3) Amerimax must sample the wastewater for the “Galvanized line” when the facility is coating galvanized steel and, similarly, Amerimax must sample the wastewater for the “Aluminum line” when the facility is coating aluminum.

The Department appreciates Amerimax’s continued efforts in semi-annual reporting. If you have any questions or concerns, please contact the Department at (501) 682-0626 or by email at torrence@adeq.state.ar.us .

Sincerely,



Rufus Torrence, Pretreatment Engineer
Water Division

ARKANSAS DEPARTMENT OF ENVIRONMENTAL QUALITY
5301 NORTHSHORE DRIVE • NORTH LITTLE ROCK • ARKANSAS 72111
www.adeq.state.ar.us

SEMI-ANNUAL REPORT FOR INDUSTRIAL USERS REGULATED BY 40CFR465

Use of this form is not an EPA/PC&E requirement.

Attn: Water Div/NPDES Pretreatment

| (1) IDENTIFYING INFORMATION | | | | | | | | | | | | | | | | |
|--|--|--|--|-----------------|-----|--|----------------|----------------------------|----|----------------|----------------------------|-----|------------------|-----|--|---|
| <p>A. LEGAL NAME & MAILING ADDRESS</p> <p>Amerimax Coated Products, Inc. 215 Phillips 324 Road Helena, AR 72342</p> | <p>B. FACILITY & LOCATION ADDRESS</p> <p>Amerimax Coated Products, Inc. 215 Phillips 324 Road Helena, AR 72342</p> | | | | | | | | | | | | | | | |
| <p>C. FACILITY CONTACT: Dan Roach ext 3224</p> <p>TELEPHONE NUMBER: (870) 572-5074 X 3224</p> | | | | | | | | | | | | | | | | |
| (2) REPORTING PERIOD--FISCAL YEAR From Aug 1 to Jul 31 (Both Semi-Annual Reports must cover Fiscal Year) | | | | | | | | | | | | | | | | |
| <p>A. MONTHS WHICH REPORTS ARE DUE</p> <p>August & February</p> | <p>B. PERIOD COVERED BY THIS REPORT</p> <p>FROM: September 2012 TO: February 2013</p> | | | | | | | | | | | | | | | |
| (3) DESCRIPTION OF OPERATION | | | | | | | | | | | | | | | | |
| <p>A. REGULATED PROCESSES</p> <p>40 CFR Part 465 -- Coil Coating Point Source Category</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="text-align: left; padding: 5px;">PROCESS*</th> <th style="text-align: center; padding: 5px;">PROD'N RATE(S) <small>Total for Six Months</small></th> <th style="text-align: center; padding: 5px;">PROD'N DAYS <small>Number of Operating Days</small></th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">Subpart A Steel</td> <td style="text-align: center; padding: 5px;">N/P</td> <td style="padding: 5px;"></td> </tr> <tr> <td style="padding: 5px;">Subpart B Galv</td> <td style="text-align: center; padding: 5px;">10,155,790 ft²</td> <td style="text-align: center; padding: 5px;">15</td> </tr> <tr> <td style="padding: 5px;">Subpart C Alum</td> <td style="text-align: center; padding: 5px;">93,930,238 ft²</td> <td style="text-align: center; padding: 5px;">137</td> </tr> <tr> <td style="padding: 5px;">Subpart D Canmak</td> <td style="text-align: center; padding: 5px;">N/P</td> <td style="padding: 5px;"></td> </tr> </tbody> </table> <p style="font-size: small; margin-top: 10px;">*Show Rate & Days--If process is not present, show "Not Present" or "N/P".</p> <p style="font-size: large; margin-top: 10px;">Rec'd by email dated 2-28-2013 @ 4:07 pm</p> <p style="margin-top: 10px;">① Only one production line; this line runs both galvanized and aluminum rolls.</p> | PROCESS* | PROD'N RATE(S) <small>Total for Six Months</small> | PROD'N DAYS <small>Number of Operating Days</small> | Subpart A Steel | N/P | | Subpart B Galv | 10,155,790 ft ² | 15 | Subpart C Alum | 93,930,238 ft ² | 137 | Subpart D Canmak | N/P | | <p>B. CHANGES: SUMMARIZE ANY CHANGES IN THE REGULATED PROCESSES SINCE THE LAST REPORT. ATTACH AN ADDITIONAL SHEET IF THE SPACE BELOW IS INADEQUATE. PROVIDE A NEW SCHEMATIC IF APPROPRIATE.</p> <p style="font-size: large; text-align: center; margin-top: 20px;">OR</p> <p style="font-size: large; margin-top: 20px;">AMX Feb 2013 SAR File date 2013 0304 AR 00 433 89 AR P00 10 44</p> |
| PROCESS* | PROD'N RATE(S) <small>Total for Six Months</small> | PROD'N DAYS <small>Number of Operating Days</small> | | | | | | | | | | | | | | |
| Subpart A Steel | N/P | | | | | | | | | | | | | | | |
| Subpart B Galv | 10,155,790 ft ² | 15 | | | | | | | | | | | | | | |
| Subpart C Alum | 93,930,238 ft ² | 137 | | | | | | | | | | | | | | |
| Subpart D Canmak | N/P | | | | | | | | | | | | | | | |
| <p>C. Number of Regular Employees at this Facility <u>42</u></p> | <p>D. [Reserved] SIC3479</p> | | | | | | | | | | | | | | | |

Req 2
Req 3

② Production must be entered into ANPCAN in square feet (10,76 sq ft / m²) and volume in gallons (3,785 liters/gallon) Page 1

③ The total number of prod'n days must be less than 182 (7 X 26 weeks => 182 days).

(4) FLOW MEASUREMENT (CON'D)

B. INDIVIDUAL PROCESS FLOWS DISCHARGED TO POTW IN GALLONS PER DAY (gpd)

Reg 2
Reg 3

| Operation | Ave Tot Flow ¹ | Max Tot Flow ² | Type of Discharge | No. Disc Days |
|------------------------------------|---------------------------|---------------------------|-------------------|---------------|
| Regulated: Steel Basis | N/P | | | |
| Regulated: Galv Basis | 3,571.3 | 20,541.6 | | 15 |
| Regulated: Alum Basis | 3,571.3 | 20,541.6 | | 137 |
| Regulated: Canmaking | N/P | | | |
| Total Regulated | | | | |
| §403.6(e) Unregulated ³ | | | | |
| §403.6(e) Dilute | | | | |
| Cooling Water | | | | |
| Sanitary | 1,425 | 1,425 | continuous | |
| Total Flow to POTW | | | ***** | ***** |

¹"Ave Tot Flow" is the average of "total gallons discharged in a 24-hour day" during the reporting period. Note that "Ave Tot Flow" times "No. Disc Days" must equal the actual total gallons discharged to the POTW for this six month period.
²"Max Tot Flow" is the maximum "total gallons discharged in a 24-hour day" during the reporting period.
³"Unregulated" has a precise legal meaning; see 40CFR403.6(e).

(5) MEASUREMENT OF POLLUTANTS

A. TYPE OF TREATMENT SYSTEM

CHECK EACH APPLICABLE BLOCK

- Neutralization
- Chemical Precipitation and Sedimentation
- Chromium Reduction
- Cyanide Destruction
- Other Filter Press _____
- None

B. COMMENTS ON TREATMENT SYSTEM

C. THE INDUSTRIAL USER MUST PERFORM SAMPLING AND ANALYSIS ON THE EFFLUENT FROM ALL REGULATED PROCESSES-- (AFTER TREATMENT, IF APPLICABLE). ATTACH THE LAB ANALYSIS WHICH SHOWS A MAXIMUM; TABULATE ALL THE ANALYTICAL DATA COLLECTED DURING THE REPORT PERIOD IN THE SPACE PROVIDED BELOW. ZERO CONCENTRATIONS ARE NOT ACCEPTABLE; LIST THE DETECTION LIMIT IF CONCENTRATION WAS BELOW DETECTION LIMIT.

| Pollutant | Cd | Cr | Cu | Pb | Ni | Ag | Zn | O&G | CN* | Phen | TTO* |
|-------------|--------------|-------------------------|----------------|----|----|----|------------------------|-----|------------------------|------|------|
| MEC (mg/l) | | N/A | N/A | | | | N/A | | N/A | | |
| AEC (mg/l) | 5.12 ALUM | 0.134 0.334 | 0.10 | | | | 0.70 0.92 0.94 | | 0.13 0.17 0.16 | | |
| AMMC (mg/l) | | <0.007 Alum and Galv | <0.006 Galv | | | | 0.19 Alum 0.20 Galv | | <0.01 Alum and Galv | | |
| AMAC (mg/l) | | <0.007 Alum and Galv | <0.006 Galv | | | | 0.19 Alum 0.20 Galv | | <0.01 Alum and Galv | | |

*Provide Conc for February report; the certification may be submitted for the August report if it is applicable.

Sample Location FINAL EFFLUENT TANK

Sample Type (Grab or Composite) GRAB

Number of Samples and Frequency Collected 2 - SEMIANNUALLY

40CFR136 Preservation and Analytical Methods Use: Yes No

(7) POLLUTION PREVENTION ACT OF 1990 [42 U.S.C. 13101 et seq.]

§6602 [42 U.S.C. 13101] Findings and Policy para (b) Policy.—*The Congress hereby declares it to be the national policy of the United States that pollution should be prevented or reduced at the source whenever feasible; pollution that cannot be prevented should be recycled in an environmentally safe manner, whenever feasible; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner whenever feasible; and disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner.*

The User may list any new or ongoing Pollution Prevention practices:

(8) GENERAL COMMENTS

(9) SIGNATORY REQUIREMENTS [40CFR403.12(f)]

I certify under penalty of law that I have personally examined and am familiar with the information in this semi-annual compliance report and all attachments, and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the report, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Dan Roach
NAME OF CORPORATE OFFICER OR AUTHORIZED REPRESENTATIVE

Plant Manager
OFFICIAL TITLE


SIGNATURE

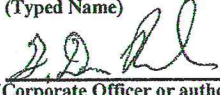
2/28/13
DATE SIGNED

(6) CERTIFICATION

A. CHECK ONE: CYANIDE ANALYSIS ATTACHED PROVIDED BELOW EPA REGION VI CYANIDE CERTIFICATION

Based on my inquiry of the person or persons directly responsible for managing compliance with pretreatment standards, I certify that, to the best of my knowledge, cyanide has not been used or generated in our processes, which are regulated by the Coil Coating [40 CFR 465.03(a)] categorical pretreatment standards, since we filed the February semi-annual compliance report; the cyanide analysis, in the February report of this calendar year contain less than 0.07 mg/l. I understand that I can submit this certification for only the August report.

Dan Roach
(Typed Name)


(Corporate Officer or authorized representative signature)

Date of Signature 2/28/13

B. [Reserved]

[RESERVED]

CORPORATE ACKNOWLEDGEMENT (Optional)

STATE OF ARKANSAS)
COUNTY OF _____)

Before me, the undersigned authority, on this day personally appeared _____ of _____ a corporation, known to me to be the person whose name is subscribed to the foregoing instrument(s), and acknowledged to me that he executed the same for purposes and considerations therein expressed, in the capacity therein stated and as the act and deed of said corporation.

Given under my hand and seal of office on this _____ day of _____, 2004.

Notary Public in and for _____
County, Arkansas

My commission expires _____.

| | | | | | |
|-------|------------|------------|-----------|----------|----------|
| TOTAL | 3288 | 360 | 542,835 | 489,266 | 53,569 |
| | Alum Hours | Galv Hours | Total Gal | Alum Gal | Galv Gal |

Amerimax Average Flows and Rates for the Six Month Period

| | Aluminum | Galvanized | |
|---------------------------------------|----------|------------|----------|
| Average Flow (GPD) per Six Months = | 2688.27 | 294.34 | gpd |
| Average Production Rate (sq-ft/day) = | 47,965 | 5,186 | sq-m/day |

Allowable Limits for the Six Month Period

To Determine the Allowable Limit (mg/l). Amerimax may use actual volumes (liters) and the coated surfact area (sq-m). Therefore, the volume of wastewater discharged in the six month period for each operation equals:

| | | |
|-------|---|------------------|
| Alum: | Total Alum gallons X 3.785 liters/gallon= | 1,851,872 liters |
| Galv: | Total Galv gallons X 3.785 iters/gallon = | 202,760 liters |

The surface area coated for each operation equals:

| | | |
|-------|-------------------------------------|---------------------|
| Alum: | total sq-ft / 10.76 sq-ft/sq-meter= | 8,729,576 sq-meters |
| Galv: | total sq-ft / 10.76 sq-ft/sq-meter= | 943,847 sq-meters |

The allowable milligrams of metals in the wastewater for the six month period is:

| | Galvanized | |
|-----------|-------------------------------|------------|
| Chromium: | 0.052 mg/sq-m X 943847 sq-m = | 49,080 mg |
| Copper: | 0.21 mg/sq-m X 943847 sq-m = | 198,208 mg |
| Cyanide: | 0.028 mg/sq-m X 943847 sq-m = | 26,428 mg |
| Zinc: | 0.15 mg/sq-m X 943847 sq-m = | 141,577 mg |

| | Aluminum | |
|-----------|--------------------------------|--------------|
| Chromium: | 0.72 mg/sq-m X 8729576 sq-m = | 628,529 mg |
| Cyanide: | 0.038 mg/sq-m X 8729576 sq-m = | 331,724 mg |
| Zinc: | 0.20 mg/sq-m X 8729576 sq-m = | 1,745,915 mg |

The math model assumes two plants (one which coats alum and the other coats galv). We can also assume that an the wastewater during a six month period is captured in two tanks. One tank contains all the wastewater for the alum plant and has 1851872 liters in it. The other tanks contains all the wastewater from the galv plant and has 202760 liters in it. The concentrations of metals in the tanks are:

| | Galvanized | |
|-----------|-----------------------------|-----------|
| Chromium: | 49080 mg / 202760 liters = | 0.24 mg/l |
| Copper: | 198208 mg / 202760 liters = | 0.98 mg/l |
| Cyanide: | 26428 mg / 202760 liters = | 0.13 mg/l |
| Zinc: | 141577 mg / 202760 liters = | 0.70 mg/l |

| | Aluminum | |
|-----------|-------------------------------|-----------|
| Chromium: | 628529 mg / 1851872 liters = | 0.34 mg/l |
| Cyanide: | 331724 mg / 1851872 liters = | 0.18 mg/l |
| Zinc: | 1745915 mg / 1851872 liters = | 0.94 mg/l |

Correct allowable monthly limits

AMX_Production_Based_Standards

AMERIMAX COATED PRODUCTS

HELENA, AR

Report Date: September 2012 to February 2013

| | | |
|---------------------------------------|----------------|----------------------|
| Total days in reporting period | Data Entry Ccl | |
| Total Flow for the period (gal) | 152.00 | |
| Average Flow (gpd) | 542,835 | |
| Max Flow (gpd) | 3,571.29 | 13,517.31 liters/day |
| | 20,541.60 | 77,749.96 liters/day |

Galvanized Line
Prod'n Rate (Total Sq Footage for 3/1/2012 thru 8/31/2012) .. 10,155,790 943,847 m²

Aluminum Line
Prod'n Rate (Total Sq Footage for 9/1/2011 thru 1/12/2012) .. 93,930,238 8,729,576 m²

| | Cr | CN | Zn | Cu |
|---|-----------|---------|-----------|---------|
| Daily Maximum Aluminum | | | | |
| 465.35 Regulatory Allowance (mg/sqmeter) | 0.18 | 0.085 | 0.49 | |
| Plant Allowable (mg/period) | 1,571,324 | 826,310 | 4,277,482 | |
| (ex. Cr: 93930238 / 10.76 * 0.18 = 1571324) | | | | |
| Daily Maximum Galvanized Steel | | | | |
| 465.25 Regulatory Allowance (mg/sqmeter) | 0.13 | 0.07 | 0.35 | 0.44 |
| Plant Allowable (mg/period) | 122,700 | 66,069 | 330,346 | 415,293 |
| (ex. Cr: 10155790 / 10.76 * 0.13 = 122700) | | | | |

Daily Maximum

Plant Allowable (mg/day) 11144.89 5890.65 30314.73 2732.19
(ex. Cr: (1571324 + 122700) / 152 = 11144.89)

Plant Allowable (mg/liter) 0.14 0.08 0.39 0.04
(ex. Cr: 11144 / 77749.96 = 0.82)

Measured (mg/liter) (during aluminum production) <0.007 <0.01 0.190 <0.006
Measured (mg/liter) (during galvanized production) <0.007 <0.01 0.200 <0.006

Monthly Average Aluminum
465.35 Regulatory Allowance (mg/sqmeter) 0.072 0.039 0.20
Plant Allowable (mg/period) 628,529 331,724 1,745,915
(ex. Cr: 93930238 / 10.76 * 0.072 = 628529)

Monthly Average Galvanized Steel
465.25 Regulatory Allowance (mg/sqmeter) 0.052 0.028 0.15 0.21
Plant Allowable (mg/period) 49,080 26,428 141,577 198,209
(ex. Cr: 10155790 / 10.76 * 0.052 = 49080)

Monthly Average

Plant Allowable (mg/day) 4457.96 2356.26 12417.71 1304.00
(ex. Cr: (628529 + 49080) / 152 = 4457.96)

Plant Allowable (mg/liter) 0.33 0.17 0.92 0.10
(ex. Cr: 4458 / 13517.31 = 0.33)

Measured (mg/liter) (during aluminum production) <0.007 <0.01 0.190 <0.006
Measured (mg/liter) (during galvanized production) <0.007 <0.01 0.200 <0.006

The "Plant Allowable" for Galv & Alum should be compared with the analyses submitted by AMX; AMX must sample at least once during the time when the line is running Galv and at least once when the line is running Aluminum. The assumption made is that the one analysis is representative of the six month period for the basis metal of concern.

Does not comply with model. Model assumes all wastewater flows to two tanks and allowable conc limits are independent of the number of days in reporting period.



CHAIN OF CUSTODY / ANALYSIS REQUEST FORM

Client: **AMERIMAX**
 Project Reference: **WASTE WATER SAMPLES**
 Project Manager: **GORDON DOCKERY**
 Sampled By: _____

AIC Control No: **164579**
 AIC Proposal No: _____
 Carrier: _____
 Received Temperature °C: **15.7**
 Remarks: _____

| By: | AIC No. | Sample Identification | Date/Time Collected | Sample Matrix | | No of BOTTLES | Analyses Requested | | | | Field pH calibration on @ Buffer: | | |
|-----|---------|-----------------------|---------------------|---------------|------|---------------|--------------------|------|----------------|----------------|-----------------------------------|----------------|----------------|
| | | | | WATER | SOIL | | GRA B | COMP | CR, CN, ZN, Cu | CR, CR, ZN, Cu | | CR, CN, ZN, Cu | CR, CN, ZN, Cu |
| | 1 | GALV RUN 1 | 2-1-13 9AM | ✓ | | 1 | | | | | | | |
| | 1 | GALV RUN 2 | 2-1-13 9AM | ✓ | | 1 | | | | | | | |
| | 2 | ALUM RUN 3 | 2-1-13 4PM | ✓ | | 1 | | | | | | | |
| | 2 | ALUM RUN 4 | 2-1-13 4PM | ✓ | | 1 | | | | | | | |

Container Type Preservative: _____
 G = Glass NO = none P = Plastic S = Sulfuric acid pH2
 V = VOA vials N = Nitric acid pH2

Turnaround Time Requested: (Please circle) **10** DAYS
 Expedited results requested by: **GORDON DOCKERY**
 Who should AIC contact with questions: **GORDON DOCKERY**
 Phone: **870 975 0574** Fax: _____
 Report Attention to: **GORDON DOCKERY**
 Report Address to: **215 P.C. 324, HELLEN, AR 72342**
GDOCKERY@AMERIMAX.COM

Received Date/Time: _____
 Received By: _____
 Relinquished Date/Time: _____
 Relinquished By: _____
 Comments: _____

Field pH calibration on @ Buffer: _____
 T = Sodium Thiosulfate
 Z = Zinc acetate

Received in Lab Date/Time: **2-4-13 9:30AM**
 By: **JAN LUBNER**

12751827 0310058521



Amerimax Coated Products, Inc.
215 Phillips 324 Road
Helena, AR 72342

ANALYTICAL RESULTS

AIC No. 164579-1

Sample Identification: GALV Run 1,2 2-1-13 9am

| Analyte | Result | RL | Units | Qualifier |
|---|-----------------------------------|-------|---------------|-----------|
| Total Cyanide SM 4500-CN C,E Prep: 04-Feb-2013 0950 by 302 | < 0.01 | 0.01 | mg/l | |
| | Analyzed: 04-Feb-2013 1807 by 302 | | Batch: W42432 | |
| Chromium EPA 200.7 Prep: 04-Feb-2013 1330 by 271 | < 0.007 | 0.007 | mg/l | |
| | Analyzed: 05-Feb-2013 1334 by 305 | | Batch: S33952 | |
| Copper EPA 200.7 Prep: 04-Feb-2013 1330 by 271 | < 0.006 | 0.006 | mg/l | |
| | Analyzed: 04-Feb-2013 2026 by 305 | | Batch: S33952 | |
| Zinc EPA 200.7 Prep: 04-Feb-2013 1330 by 271 | 0.20 | 0.002 | mg/l | |
| | Analyzed: 04-Feb-2013 2026 by 305 | | Batch: S33952 | |

AIC No. 164579-2

Sample Identification: ALUM Run 3,4 2-1-13 4pm

| Analyte | Result | RL | Units | Qualifier |
|---|-----------------------------------|-------|---------------|-----------|
| Total Cyanide SM 4500-CN C,E Prep: 04-Feb-2013 0950 by 302 | < 0.01 | 0.01 | mg/l | |
| | Analyzed: 04-Feb-2013 1809 by 302 | | Batch: W42432 | |
| Chromium EPA 200.7 Prep: 04-Feb-2013 1330 by 271 | < 0.007 | 0.007 | mg/l | |
| | Analyzed: 05-Feb-2013 1339 by 305 | | Batch: S33952 | |
| Zinc EPA 200.7 Prep: 04-Feb-2013 1330 by 271 | 0.19 | 0.002 | mg/l | |
| | Analyzed: 04-Feb-2013 1820 by 305 | | Batch: S33952 | |



Amerimax Coated Products, Inc.
215 Phillips 324 Road
Helena, AR 72342

LABORATORY CONTROL SAMPLE RESULTS

| Analyte | Spike Amount | % | Limits | RPD | Limit | Batch | Preparation Date | Analysis Date | Dil | Qual |
|---------------|--------------|------|----------|-----|-------|--------|---------------------|---------------------|-----|------|
| Total Cyanide | 0.1 mg/l | 105 | 85.0-115 | | | W42432 | 04Feb13 0950 by 302 | 04Feb13 1743 by 302 | | |
| Chromium | 0.5 mg/l | 99.5 | 85.0-115 | | | S33952 | 04Feb13 1330 by 271 | 05Feb13 1403 by 305 | | |
| Copper | 0.5 mg/l | 98.9 | 85.0-115 | | | S33952 | 04Feb13 1330 by 271 | 04Feb13 1845 by 305 | | |
| Zinc | 0.5 mg/l | 100 | 85.0-115 | | | S33952 | 04Feb13 1330 by 271 | 04Feb13 1845 by 305 | | |

MATRIX SPIKE SAMPLE RESULTS

| Analyte | Sample | Spike Amount | % | Limits | Batch | Preparation Date | Analysis Date | Dil | Qual |
|---------------|------------------------------|--------------|-------|----------|--------|---------------------|---------------------|-----|------|
| Total Cyanide | 164470-1 | 0.1 mg/l | 99.8 | 75.0-125 | W42432 | 04Feb13 0950 by 302 | 04Feb13 1747 by 302 | | |
| | 164470-1 | 0.1 mg/l | 102 | 75.0-125 | W42432 | 04Feb13 0950 by 302 | 04Feb13 1748 by 302 | | |
| | Relative Percent Difference: | | 2.49 | 20.0 | W42432 | | | | |
| Chromium | 164560-1 | 0.5 mg/l | 97.2 | 75.0-125 | S33952 | 04Feb13 1330 by 271 | 05Feb13 1407 by 305 | | |
| | 164560-1 | 0.5 mg/l | 92.8 | 75.0-125 | S33952 | 04Feb13 1330 by 271 | 05Feb13 1412 by 305 | | |
| | Relative Percent Difference: | | 4.44 | 20.0 | S33952 | | | | |
| Copper | 164560-1 | 0.5 mg/l | 98.5 | 75.0-125 | S33952 | 04Feb13 1330 by 271 | 04Feb13 1850 by 305 | | |
| | 164560-1 | 0.5 mg/l | 97.9 | 75.0-125 | S33952 | 04Feb13 1330 by 271 | 04Feb13 1854 by 305 | | |
| | Relative Percent Difference: | | 0.595 | 20.0 | S33952 | | | | |
| Zinc | 164560-1 | 0.5 mg/l | 92.1 | 75.0-125 | S33952 | 04Feb13 1330 by 271 | 04Feb13 1850 by 305 | | |
| | 164560-1 | 0.5 mg/l | 91.4 | 75.0-125 | S33952 | 04Feb13 1330 by 271 | 04Feb13 1854 by 305 | | |
| | Relative Percent Difference: | | 0.676 | 20.0 | S33952 | | | | |

LABORATORY BLANK RESULTS

| Analyte | Result | RL | PQL | QC Sample | Preparation Date | Analysis Date | Qual |
|---------------|--------------|-------|-------|-----------|---------------------|---------------------|------|
| Total Cyanide | < 0.01 mg/l | 0.01 | 0.01 | W42432-1 | 04Feb13 0950 by 302 | 04Feb13 1741 by 302 | |
| Chromium | < 0.007 mg/l | 0.007 | 0.007 | S33952-1 | 04Feb13 1330 by 271 | 05Feb13 1358 by 305 | |
| Copper | < 0.006 mg/l | 0.006 | 0.006 | S33952-1 | 04Feb13 1330 by 271 | 04Feb13 1841 by 305 | |
| Zinc | < 0.002 mg/l | 0.002 | 0.002 | S33952-1 | 04Feb13 1330 by 271 | 04Feb13 1841 by 305 | |