From:	Gilliam, Allen
To:	Crews, Joe; jrausch@reawire.com
Cc:	Burrow, Kealey; bhaynes58@yahoo.com
Subject:	AR0021580_REA Wire ARP000020 Sept 2015 semi annual pretreatment report compliance indeterminate_20150923
Date:	Wednesday, September 23, 2015 1:13:27 PM
Attachments:	Semi Aunnual Report.pdf

Joe,

No need for certified mail as the .pdf attachment's signatures are legible.

Upon a further review of REA's report, it appears there's been no discharge of Federally regulated wastewater to the City's sewage collection system. Is this true?

Page 2, under the column "Batch Discharge Volume", some regulated wastewater was discharged back in 7/1/11 while the rest was "shipped off-site". This is confusing when the last column reads either, "Batch discharge from recirculating pond", "Batch discharge to POTW or waste oil tank", "Batch discharge from Copper Extrusion Product Cooling Tank" or "Batch discharge from Aluminum Extrusion Cooling Water Tank".

These two columns need to correlate with each other.

This Federal regulations in 40 CFR 403.12(b) require REA to illustrate the sampling point(s) in a wastewater flow schematic. The one this office has on file and the one included in REA's semi-annual report does not indicate exactly where any samples were taken. "Sample IDs" on the certified lab's reports refer to combination of numbers and letters. These should be marked on the schematic's sampling points accordingly.

And if there was no discharge of regulated wastewater, why was there any sampling required?

This office also needs to see Ensafe's spreadsheets showing step-by-step the calculations from production based to concentration based limits when REA is discharging to the City's sewage collection system.

At this point in time, this office cannot assess REA's compliance with the Federal standards in 40 CFRs 467 and 468 and will label REA's compliance as indeterminate until more information is obtained or there is a certification statement from REA that no process wastewater has been discharged to the City's sewage collection system over the last six (6) months during the semi-annual reporting period.

Future phone conversations regarding the reporting format and identification of the sampling points needs to be made in the near future.

Sincerely,

Allen Gilliam

ADEQ State Pretreatment Coordinator
501.682.0625

ec: Brandon Haynes, Osceola Water and Wastewater Superintendent

E/NPDES/NPDES/Pretreatment/Reports

From: Crews, Joe [mailto:jcrews@reawire.com]
Sent: Tuesday, September 22, 2015 2:30 PM
To: Gilliam, Allen
Subject: Semi Aunnual Wastewater Report for Rea Wire

Please see attached for Rea Magnet Wire. I am also sending certified mail.

Joseph Crews
Human Resources/Safety Manager
Rea Magnet Wire Company
1800 S US Highway 61
Osceola, AR 72370
870-622-4404
jcrews@reawire.com

Algonquin Industries Division
1800 Highway 61 South
Osceola, AR 72370

Tel (870) 563-5207
Fax (870) 563-1207

Rea

Algonquin Industries Division
Osceola Plant

September 15, 2015

Mr. Allen Gilliam
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118

Re: Submittal of Semi-Annual Wastewater Monitoring Report
Rea Magnet Wire Company, Inc. — Algonquin Industries Division
Osceola, Arkansas Plant

Dear Mr. Gilliam:

Please find enclosed the semi-annual wastewater monitoring report for the March 2015 — August 2015 monitoring period and copies of the analytical results of the sampling to determine compliance. Note that limitations for batch discharges were calculated using the production data from a specific time period beginning with the date of the most recent batch discharge and ending with the date the samples (reported herein) were collected.

If you need any additional information, please contact me at (870) 622-4413 or by email at jrausch@reawire.com.

Sincerely,

By: John Rausch
Plant Manager, Osceola Plant
Rea Magnet Wire Company, Inc.

Enclosures

cc: James Carlock, Superintendent
Osceola Water Department
PO Box 443
Osceola, Arkansas 72370

SEMI-ANNUAL REPORT FOR USERS REGULATED BY THE Al & Cu FORMING CATEGORIES

ATTN: Water Div/NPDES Pretreatment

(1) IDENTIFYING INFORMATION

A. LEGAL NAME & MAILING ADDRESS	B. FACILITY & LOCATION ADDRESS
Rea – Algonquin Industries Division 1800 Highway 61 South Osceola, AR 72370	Rea – Algonquin Industries Division 1800 Highway 61 South Osceola, AR 72370

C. FACILITY CONTACT: John Rausch (jrausch@reawire.com) TELEPHONE NUMBER: 870-622-4413

(2) REPORTING PERIOD--FISCAL YEAR

2015 (Both Semi-Annual Reports to Cover Fiscal Year)

A. MONTHS WHICH REPORTS ARE DUE	B. PERIOD COVERED BY THIS REPORT
September & March	FROM: March 1, 2015 – August 31, 2015

(3) DESCRIPTION OF OPERATION

A. Regulated Processes per 40 CFR Part 467 (Aluminum) Subpart A & C and 40 CFR Part 468 (Copper) Subpart A

PROCESS	PRODUCTION-OFF/LB	PRODUCTION DAYS
Rolled Aluminum		
(§467.15 Solution Heat Treatment)	28,200	3/1/2015-8/31/2015 184 days
Extruded Aluminum		
(§467.35 Core Die Cleaning)	2,192,953	3/1/2015-8/31/2015 184 days
Extruded Aluminum		
(§467.35 Press Heat Treatment) C300	0	N/A 0 days
(§467.35 Press Heat Treatment) C350	0	N/A 0 days
Rolled Copper		
(§468.14(d) Solution Heat Treatment)	0	N/A 0 days
Extruded Copper		
(§468.14(k) Pickling Rinse) C285	4,533,773	3/1/2015-8/31/2015 184 days
(§468.14(m) Pickling Bath) C285	4,533,773	3/1/2015-8/31/2015 184 days
(§468.14(e) Extrusion Heat Treatment) C285	4,533,773	3/1/2015-8/31/2015 184 days

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.

C. Number of Regular Employees at this Facility: 42

D. [Reserved]

(4) FLOW MEASUREMENT

B. INDIVIDUAL PROCESS WASTESTREAMS DISCHARGED TO POTW

Operation	Average Flow Rate (gpd)	Number of Discharge Days	Batch Discharge Volume	Type of Discharge
Process:				
§467.15 Solution Heat Treatment[1] (Aluminum Rolling)	NA	184	26,667 gallons discharged to the POTW July 1, 2011 (most recent discharge)	Batch discharge from recirculation pond
§467.35 Cleaning or Etching Rinse (Aluminum Extrusion)	NA	NA	Not in service	NA
§467.35 Cleaning or Etching Bath (Aluminum Extrusion)	NA	NA	Not in service	NA
§468.14(m) Pickling Bath (Copper Extrusion)	13.43	184	2,471 gallons shipped offsite March 23, 2015	Batch discharge to either POTW or waste oil tank
§468.14(k) Pickling Rinse (Copper Extrusion)	13.43	184	2,471 gallons shipped offsite March 23, 2015	Batch discharge to either POTW or waste oil tank
§468.14(e) Extrusion Heat Treatment (Copper Extrusion)	13.43	184	2,471 gallons shipped offsite March 23, 2015	Batch discharge from Copper Extrusion (C-285) Product Cooling Tank
§467.35 Core-Die Cleaner (Aluminum Extrusion)	20	N/A	N/A	Intermittent
§467.35 Press Heat Treatment (Aluminum Extrusion)	13.43	184	2,471 gallons shipped offsite March 23, 2015	Batch discharge from Aluminum Extrusion (C-300 & C-500) Cooling Water Tank
§468.14(d) Solution Heat Treatment[1] (Copper Forming [Rolling])	NA	184	26,667 gallons discharged to the POTW July 1, 2011 (most recent discharge)	Batch discharge from recirculation pond
§403.6(e) Unregulated:				
Air compressor condensate blowdown	10 (estimate)	144	N/A	Intermittent
Steam clean forklift wash area	5 (estimate)	144	N/A	Intermittent
§403.6(e) Dilute:				
Cooling water[1]	NA	NA	26,667 gallons discharged to the POTW July 1, 2011 (most recent discharge)	Batch discharge from recirculation pond
Sanitary	6,000 (estimate)	144	N/A	Continuous

[1]The 80,000 gallon batch discharge is comprised of several regulated and diluted source waters.

(5) MEASURMENT OF POLLUTANTS

A. TYPE OF TREATMENT SYSTEM CHECK EACH APPLICABLE BLOCK

- ☐ Neutralization
- ☐ Chemical Precipitation and Sedimentation
- ☐ Chromium Reduction
- ☐ Cyanide Destruction
- ☐ Other _____
- ☒ None

B. COMMENTS ON TREATMENT SYSTEM

C. THE INDUSTRIAL USER MUST PERFORM SAMPLING AND ANALYSIS ON THE EFFLUENT FROM ALL REGULATED PROCESSES--CORE & ANCILLARY--(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.

Concentrations (mg/l)	Cr	Cu	Pb	Ni	Zn	TTO	O&G	CN
C-500 Cooling Water Tank (Aluminum Extrusion) Allowable Concentrations	NA	NA	NA	NA	NA	NA	NA	NA
C-500 Cooling Water Tank Measured Concentrations	NA	NA	NA	NA	NA	NA	NA	NA
C-300 Cooling Water Tank (Aluminum Extrusion) Allowable Concentrations	**0**	**NA**	**NA**	**NA**	**0**	**NA**	**0**	**0**
C-300 Cooling Water Tank Measured Concentrations	**<0.01**	**NA**	**NA**	**NA**	**<0.05**	**NA**	**<5.05**	**<0.005**
Die Cleaning Allowable Concentrations[1]	**12 | 4.8**	**NA**	**NA**	**NA**	**39 | 16.5**	**NA**	**1417 | 693**	**8 | 3.1**
Die Cleaning Measured Concentrations	**0.55**	**NA**	**NA**	**NA**	**0.735**	**NA**	**87.8**	**<0.005**
Pond Allowable Concentration	**2.098**	**9.086**	**1.167**	**11.533**	**6.864**	**NA**	**175.8**	**0.315**
Pond Measured Concentration	**<0.01**	**0.0129**	**<0.005**	**<0.01**	**<0.05**	**NA**	**<5.62**	**0.0103**
C-350 Aluminum Extrusion Tank 1 (Cleaning or Etching Bath)	NA	NA	NA	NA	NA	NA	NA	NA
C-350 Aluminum Extrusion Tank 1 Measured Concentration	NA	NA	NA	NA	NA	NA	NA	NA
C-350 Aluminum Extrusion Tank 2 (Cleaning or Etching Rinse)	NA	NA	NA	NA	NA	NA	NA	NA
C-350 Aluminum Extrusion Tank 2 Measured Concentration	NA	NA	NA	NA	NA	NA	NA	NA
C-350 Aluminum Extrusion Tank 3 (Cleaning or Etching Rinse)	NA	NA	NA	NA	NA	NA	NA	NA
C-350 Aluminum Extrusion Tank 3 Measured Concentration	NA	NA	NA	NA	NA	NA	NA	NA
C-350 Aluminum Extrusion Tank 4 (Cleaning or Etching Bath)	NA	NA	NA	NA	NA	NA	NA	NA
C-350 Aluminum Extrusion Tank 4 Measured Concentration	NA	NA	NA	NA	NA	NA	NA	NA
C-350 Cooling Water Tank (Aluminum Extrusion) Allowable Concentrations	**0**	**NA**	**NA**	**NA**	**0**	**NA**	**0**	**0**
C-350 Cooling Water Tank Measured Concentrations	**<0.01**	**NA**	**NA**	**NA**	**<0.05**	**NA**	**<5.49**	**<0.005**
C-285 Copper Extrusion Tank 1 (Pickling Bath)	NA	NA	NA	NA	NA	NA	NA	NA
C-285 Copper Extrusion Tank 1 Measured Concentration	NA	NA	NA	NA	NA	NA	NA	NA
C-285 Copper Extrusion Tank 2 (Pickling Rinse)	NA	NA	NA	NA	NA	NA	NA	NA
C-285 Copper Extrusion Tank 2 Measured Concentration	NA	NA	NA	NA	NA	NA	NA	NA
C-285 Copper Extrusion Tank 3 (Pickling Bath)	NA	NA	NA	NA	NA	NA	NA	NA
C-285 Copper Extrusion Tank 3 Measured Concentration	NA	NA	NA	NA	NA	NA	NA	NA
C-285 Copper Extrusion Tank 4 (Pickling Rinse)	NA	NA	NA	NA	NA	NA	NA	NA
C-285 Copper Extrusion Tank 4 Measured Concentration	NA	NA	NA	NA	NA	NA	NA	NA
C-285 Copper Extrusion Tank 5 (Pickling Rinse)	NA	NA	NA	NA	NA	NA	NA	NA
C-285 Copper Extrusion Tank 5 Measured Concentration	NA	NA	NA	NA	NA	NA	NA	NA
C-285 Copper Extrusion Tank 6 (Pickling Bath)	**43.67**	**253.31**	**32.76**	**321.01**	**152.86**	**NA**	**3,040**	**NA**
C-285 Copper Extrusion Tank 6 Measured Concentration[2]	**<0.01**	**<0.01**	**<0.005**	**<0.01**	**<0.05**	**NA**	**<5.75**	**<0.005**
C-285 Cooling Water Tank (Copper Extrusion) Allowable Concentrations	**0.33**	**1.85**	**0.24**	**1.85**	**0.93**	**NA**	**22**	**NA**
C-285 Cooling Water Tank Measured Concentrations[3]	**<0.01**	**<0.01**	**<0.005**	**<0.01**	**<0.05**	**NA**	**<5.75**	**<0.005**

40CFR136 Preservation and Analytical Methods Use: ☒ Yes ☐ No

[1] Listed as daily maximum and monthly average respectively
[2] Samples for C-285 Copper Extrusion Tank 6 and Cooling Water Tank were taken from the C-285 line cooling tower.
[3] Samples for C-285 Copper Extrusion Tank 6 and Cooling Water Tank were taken from the C-285 line cooling tower.

(6) CERTIFICATION

A. CHECK ONE: ☒ CYANIDE ANALYSIS ATTACHED ☐ CYANIDE CERTIFICATION PROVIDED BELOW (September SAR Only)

In accordance with §467.03(a), 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 and will not be used or generated in our processes which are regulated by the Aluminum Forming (40 CFR 467.35) categorical pretreatment standards since analyzing the first wastewater sample in January, February, or March of this calendar year; and that the results of the first analysis contained less than 0.07 mg/l cyanide.

_____
(Typed Name)

_____
(Corporate Officer or authorized representative

Date of Signature _____

B. CHECK ONE: ☐ REQUIRED TOXIC ORGANIC ANALYSIS ATTACHED ☒ O&G ANALYSIS ATTACHED

In accordance with §467.03(b) & §468.03(b), as an alternative monitoring procedure for pretreatment, the POTW user may measure and limit oil and grease to the levels shown in Section 5.C in lieu of measuring and regulating total toxic organics (TTO).

CORPORATE ACKNOWLEDGEMENT (Optional)

STATE OF ARKANSAS
COUNTY OF MISSISSIPPI

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 _____, 199__.

_____
Notary Public in and for _____
County, Arkansas

My commission expires _____.

(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 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 environmental should be employed only as a last resort and should be conducted in an environmentally safe manner.*

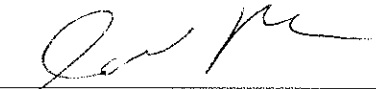
The User may list any new or ongoing Pollution Prevention practices:

(8) GENERAL COMMENTS

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

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.

JOHN RAUSCH
NAME OF CORPORATE OFFICER OR AUTHORIZED REPRESENTATIVE


SIGNATURE

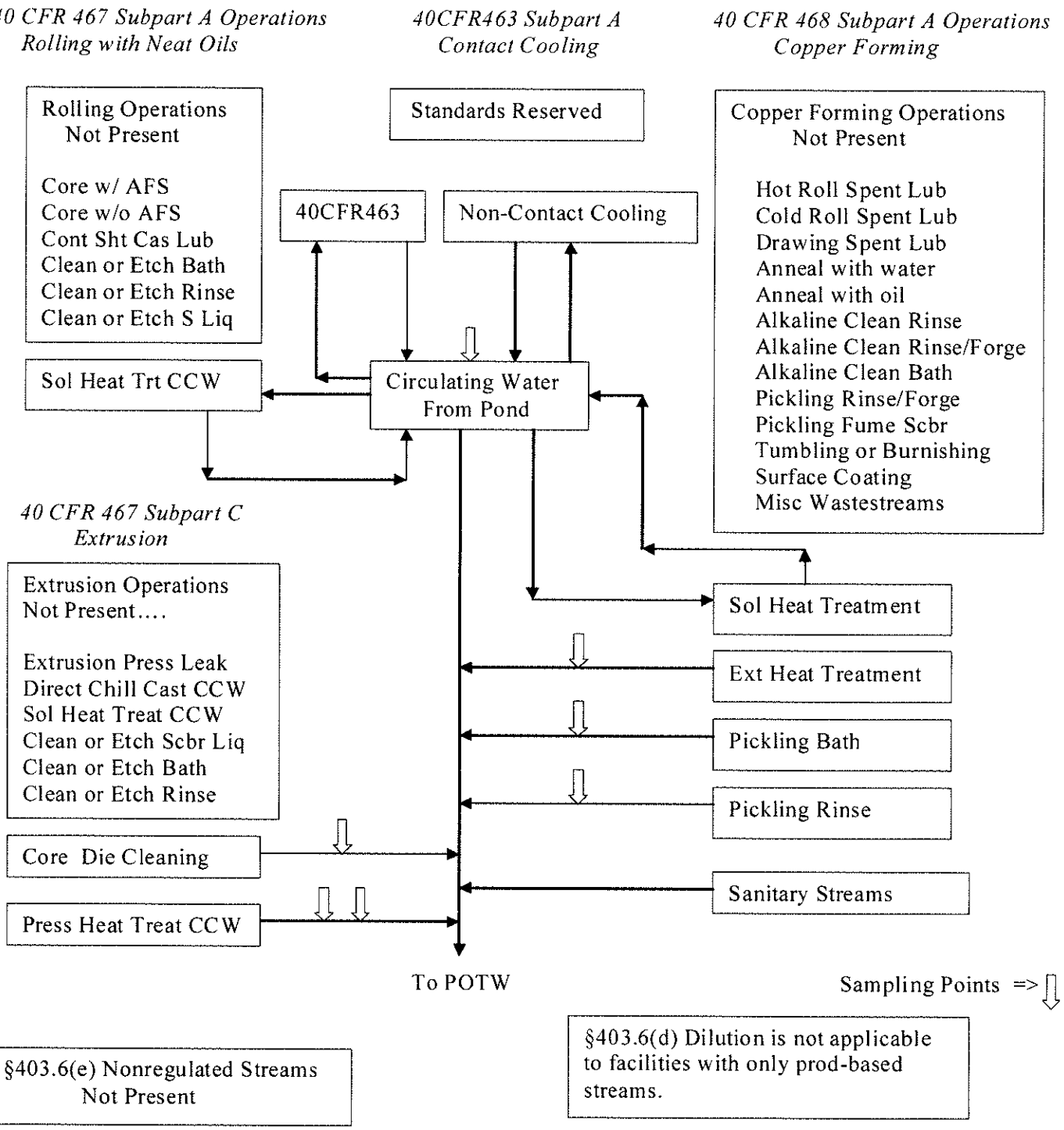
PLANT MANGER
OFFICIAL TITLE

9-15-15
DATE SIGNED

ATTACHMENT 1

Flow Schematics

Algonquin Industries Osceola, Arkansas March 2011



§403.6(e) Nonregulated Streams Not Present

§403.6(d) Dilution is not applicable to facilities with only prod-based streams.

ı stream is not present, show NOT PRESENT or N/P. If a stream is present, the wastewater can enter the POTW but currently has no flow, show 0.0 gpd. If a stream is pre : the wastewater cannot enter the POTW, show Zero Discharge or Z/D. If an unregulated stream is present but the User has decided not to declare it at this time, show N/P.

Signature of §403.12(b) Professional

Date

I certify under penalty of law that I have personally examined and am familiar with the information in this document and that this document was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Plant Manager or the authorized §403.12(l) official

Date

AGQ Diagram (March 21, 2011)

ATTACHMENT 2

Sampling and Analysis Results

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Geoff Pope
Ensafe
5724 Summer Trees Drive
Memphis, TN 38134

Report Summary

Thursday August 20, 2015

Report Number: L782471
Samples Received: 08/13/15
Client Project: 0888817280

Description: Osceola, AR

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By: Pamela A. Langford

Pam Langford , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197,
FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016,
NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002,
SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612,
MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1,
TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Geoff Pope
Ensafe
5724 Summer Trees Drive
Memphis, TN 38134

August 20, 2015

Date Received : August 13, 2015
Description : Osceola, AR

Sample ID : C300 CWT

Collected By : Eric Tidquist
Collection Date : 08/12/15 10:33

ESC Sample # : L782471-01

Site ID :

Project # : 0888817280

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Cyanide	BDL	0.00500	mg/l	4500CN E-2011	08/20/15	1
Chromium,Hexavalent	BDL	0.0100	mg/l	3500Cr B-2011	08/13/15	1
Oil & Grease (Hexane Extr)	BDL	5.05	mg/l	1664A	08/17/15	1
Zinc	BDL	0.0500	mg/l	200.7	08/18/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

.
Reported: 08/20/15 15:09 Printed: 08/20/15 15:09

ESC LAB SCIENCES
YOUR LAB OF CHOICE

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Geoff Pope
Ensafe
5724 Summer Trees Drive
Memphis, TN 38134

August 20, 2015

ESC Sample # : L782471-02

Site ID :

Project # : 0888817280

Date Received : August 13, 2015
Description : Osceola, AR

Sample ID : C350 CWT

Collected By : Eric Tidquist
Collection Date : 08/12/15 10:37

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Cyanide	BDL	0.00500	mg/l	4500CN E-2011	08/20/15	1
Chromium,Hexavalent	BDL	0.0100	mg/l	3500Cr B-2011	08/13/15	1
Oil & Grease (Hexane Extr)	BDL	5.49	mg/l	1664A	08/17/15	1
Zinc	BDL	0.0500	mg/l	200.7	08/18/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 08/20/15 15:09 Printed: 08/20/15 15:09

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Geoff Pope
Ensafe
5724 Summer Trees Drive
Memphis, TN 38134

August 20, 2015

ESC Sample # : L782471-03

Date Received : August 13, 2015
Description : Osceola, AR

Site ID :

Sample ID : C285 CWT

Project # : 0888817280

Collected By : Eric Tidquist
Collection Date : 08/12/15 10:45

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Cyanide	BDL	0.00500	mg/l	4500CN E-2011	08/20/15	1
Chromium,Hexavalent	BDL	0.0100	mg/l	3500Cr B-2011	08/13/15	1
Oil & Grease (Hexane Extr)	BDL	5.75	mg/l	1664A	08/17/15	1
Zinc	BDL	0.0500	mg/l	200.7	08/18/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

.
Reported: 08/20/15 15:09 Printed: 08/20/15 15:09

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Geoff Pope
Ensafe
5724 Summer Trees Drive
Memphis, TN 38134

August 20, 2015

ESC Sample # : L782471-04

Site ID :

Project # : 0888817280

Date Received : August 13, 2015
Description : Osceola, AR

Sample ID : DCA

Collected By : Eric Tidquist
Collection Date : 08/12/15 10:53

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Cyanide	BDL	0.00500	mg/l	4500CN E-2011	08/20/15	1
Chromium,Hexavalent	0.550	0.0500	mg/l	3500Cr B-2011	08/13/15	5
Oil & Grease (Hexane Extr)	87.8	5.88	mg/l	1664A	08/17/15	1
Zinc	0.735	0.450	mg/l	200.7	08/20/15	9

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

.
Reported: 08/20/15 15:09 Printed: 08/20/15 15:09
L782471-04 (OGHEX) - pH=14

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Geoff Pope
Ensafe
5724 Summer Trees Drive
Memphis, TN 38134

August 20, 2015

ESC Sample # : L782471-05

Site ID :

Project # : 0888817280

Date Received : August 13, 2015
Description : Osceola, AR

Sample ID : POND

Collected By : Eric Tidquist
Collection Date : 08/12/15 11:03

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Cyanide	0.0103	0.00500	mg/l	4500CN E-2011	08/20/15	1
Chromium,Hexavalent	BDL	0.0100	mg/l	3500Cr B-2011	08/13/15	1
Oil & Grease (Hexane Extr)	BDL	5.62	mg/l	1664A	08/17/15	1
Zinc	BDL	0.0500	mg/l	200.7	08/18/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

.
Reported: 08/20/15 15:09 Printed: 08/20/15 15:09

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Geoff Pope
Ensafe
5724 Summer Trees Drive
Memphis, TN 38134

August 20, 2015

ESC Sample # : L782471-06

Date Received : August 13, 2015
Description : Osceola, AR

Site ID :

Sample ID : C285 CWT

Project # : 0888817280

Collected By : Eric Tidquist
Collection Date : 08/12/15 10:45

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Copper	BDL	0.0100	mg/l	200.7	08/18/15	1
Lead	BDL	0.00500	mg/l	200.7	08/18/15	1
Nickel	BDL	0.0100	mg/l	200.7	08/18/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

.
Reported: 08/20/15 15:09 Printed: 08/20/15 15:09

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Geoff Pope
Ensafe
5724 Summer Trees Drive
Memphis, TN 38134

August 20, 2015

Date Received : August 13, 2015
Description : Osceola, AR

Sample ID : POND

Collected By : Eric Tidquist
Collection Date : 08/12/15 11:03

ESC Sample # : L782471-07

Site ID :

Project # : 0888817280

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Copper	0.0129	0.0100	mg/l	200.7	08/18/15	1
Lead	BDL	0.00500	mg/l	200.7	08/18/15	1
Nickel	BDL	0.0100	mg/l	200.7	08/18/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

.
Reported: 08/20/15 15:09 Printed: 08/20/15 15:09

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L782471-04	WG809181	SAMP	Oil & Grease (Hexane Extr)	R3063101	T2
	WG809843	SAMP	Zinc	R3064900	T2

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
T2	(ESC) - Additional method/sample information: The laboratory analysis was performed from an unpreserved, insufficiently or inadequately preserved sample.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods,it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Ensafe
Geoff Pope
5724 Summer Trees Drive

Memphis, TN 38134

Quality Assurance Report
Level II

L782471

August 20, 2015

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Chromium,Hexavalent	< .01	mg/l			WG808853	08/13/15 10:28
Oil & Grease (Hexane Extr)	< 5	mg/l			WG809181	08/17/15 09:36
Copper	< .01	mg/l			WG809078	08/18/15 01:27
Lead	< .005	mg/l			WG809078	08/18/15 01:27
Nickel	< .01	mg/l			WG809078	08/18/15 01:27
Zinc	< .05	mg/l			WG809078	08/18/15 01:27
Zinc	< .05	mg/l			WG809843	08/20/15 08:50
Cyanide	< .005	mg/l			WG810217	08/20/15 11:29

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Chromium,Hexavalent	mg/l	0.00	0.00	0.00	20	L782460-09	WG808853
Cyanide	mg/l	0.00	0.00	0.00	20	L783165-02	WG810217
Cyanide	mg/l	0.0845	0.0705	18.1	20	L782921-03	WG810217

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Chromium,Hexavalent	mg/l	.6	0.624	104.	85-115	WG808853
Oil & Grease (Hexane Extr)	mg/l	40	37.7	94.3	78-114	WG809181
Copper	mg/l	1	1.03	103.	85-115	WG809078
Lead	mg/l	1	1.05	105.	85-115	WG809078
Nickel	mg/l	1	1.04	104.	85-115	WG809078
Zinc	mg/l	1	1.01	101.	85-115	WG809078
Zinc	mg/l	1	1.00	100.	85-115	WG809843
Cyanide	mg/l	.1	0.0961	96.1	90-110	WG810217

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Chromium,Hexavalent	mg/l	0.624	0.624	104.	85-115	0.00	20	WG808853
Oil & Grease (Hexane Extr)	mg/l	37.0	37.7	92.0	78-114	1.87	20	WG809181
Copper	mg/l	1.03	1.03	103.	85-115	0.00	20	WG809078
Lead	mg/l	1.05	1.05	105.	85-115	0.00	20	WG809078
Nickel	mg/l	1.04	1.04	104.	85-115	0.00	20	WG809078
Zinc	mg/l	1.01	1.01	101.	85-115	0.00	20	WG809078

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

ESC LAB SCIENCES
YOUR LAB OF CHOICE

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Ensafe
Geoff Pope
5724 Summer Trees Drive

Memphis, TN 38134

Quality Assurance Report
Level II

L782471

August 20, 2015

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Zinc	mg/l	0.994	1.00	99.0	85-115	1.00	20	WG809843
Cyanide	mg/l	0.108	0.0961	108.	90-110	11.7	20	WG810217

Matrix Spike

Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Chromium,Hexavalent	mg/l	0.505	0.00	.5	101.	85-115	L782460-09	WG808853
Oil & Grease (Hexane Extr)	mg/l	38.9	29.9	40	22.4*	78-114	L782520-02	WG809181
Copper	mg/l	1.06	0.00739	1	105.	75-125	L782471-01	WG809078
Lead	mg/l	1.07	-0.00448	1	107.	75-125	L782471-01	WG809078
Nickel	mg/l	1.09	0.00104	1	108.	75-125	L782471-01	WG809078
Zinc	mg/l	1.09	0.0393	1	105.	75-125	L782471-01	WG809078
Copper	mg/l	1.06	0.0425	1	102.	75-125	L782530-02	WG809078
Lead	mg/l	1.06	0.000621	1	105.	75-125	L782530-02	WG809078
Nickel	mg/l	1.07	0.00867	1	106.	75-125	L782530-02	WG809078
Zinc	mg/l	1.25	0.257	1	100.	75-125	L782530-02	WG809078
Zinc	mg/l	0.998	0.00406	1	99.0	75-125	L782779-03	WG809843
Cyanide	mg/l	0.189	0.0165	.2	86.2*	90-110	L783167-02	WG810217

Matrix Spike Duplicate

Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Chromium,Hexavalent	mg/l	0.504	0.505	101.	85-115	0.198	20	L782460-09	WG808853
Oil & Grease (Hexane Extr)	mg/l	49.6	38.9	49.2*	78-114	24.2*	18	L782520-02	WG809181
Copper	mg/l	1.06	1.06	105.	75-125	0.00	20	L782471-01	WG809078
Lead	mg/l	1.07	1.07	108.	75-125	0.00	20	L782471-01	WG809078
Nickel	mg/l	1.08	1.09	108.	75-125	0.00	20	L782471-01	WG809078
Zinc	mg/l	1.09	1.09	105.	75-125	0.00	20	L782471-01	WG809078
Copper	mg/l	1.07	1.06	103.	75-125	1.00	20	L782530-02	WG809078
Lead	mg/l	1.06	1.06	106.	75-125	0.00	20	L782530-02	WG809078
Nickel	mg/l	1.07	1.07	106.	75-125	0.00	20	L782530-02	WG809078
Zinc	mg/l	1.26	1.25	100.	75-125	0.00	20	L782530-02	WG809078
Zinc	mg/l	0.983	0.998	97.9	75-125	2.00	20	L782779-03	WG809843
Cyanide	mg/l	0.173	0.189	78.2*	90-110	8.84	20	L783167-02	WG810217

Serial Dilution

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Ensafe
Geoff Pope
5724 Summer Trees Drive

Memphis, TN 38134

Quality Assurance Report
Level II

L782471

August 20, 2015

Serial Dilution

Batch number /Run number / Sample number cross reference

WG808853: R3061364: L782471-01 02 03 04 05
WG809181: R3063101: L782471-01 02 03 04 05
WG809078: R3063462 R3063509: L782471-01 02 03 05 06 07
WG809843: R3064824 R3064900: L782471-04
WG810217: R3065085: L782471-01 02 03 04 05

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Ensafe
Geoff Pope
5724 Summer Trees Drive

Memphis, TN 38134

Quality Assurance Report
Level II

L782471

August 20, 2015

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.