

Gage, Hannah

From: Gilliam, Allen
Sent: Tuesday, June 28, 2016 10:13 AM
To: 'etidquist@Ensafe.com'; 'jcrews@reawire.com'; 'jcrews@reawire.com'
Cc: Gage, Hannah; Leamons, Bryan; Osceola Brandon Haynes
Subject: AR0021580_Rea Wire ARP000020 April 2016 further explanation of dilution factor_20160628
Attachments: Algonquin Sept 2015 - Feb 2016 Allowable Limits Calculations.xls; Algonquin Sept 2015 - Feb 2016 WW Monitoring Report_simplified.doc

Eric,

Apologies for the tardy response to your attempts to explain REA Wire's dilution flows and how they are used in the calculations determining equivalent concentration limits from production based limits.

Your correspondence and attached calculations will be filed on-line to help substantiate/validate your assumptions.

Sincerely,

Allen Gilliam
ADEQ State Pretreatment Coordinator
501.682.0625

ec: Brandon Haynes, Osceola Water and Wastewater Superintendent

E/NPDES/NPDES/Pretreatment/Reports

From: Eric Tidquist [mailto:etidquist@Ensafe.com]
Sent: Friday, April 15, 2016 2:20 PM
To: Gilliam, Allen
Cc: Crews, Joe; Geoff Pope
Subject: RE: AR0021580_Rea Wire ARP000020 March 2016 Semi Annual Monitoring Report compliance indeterminate_20160412

Allen,

I wanted to provide some clarification about the September 2015 – February 2016 semi-annual wastewater monitoring report for Rea Magnet Wire Company – Algonquin Industries Division. Please see the attached spreadsheet for the pond dilution calculation. This calculation is based on the following reasoning:

- Approximately all the water that was removed from the pond (discharged to the POTW or pumped out and shipped offsite) during the reporting period (51,000 gallons) was replaced by tap water that was used for non-contact cooling when the recirculation loop between the pond and the drawing/milling machines was under repair. Therefore, the wastewater that was sampled during this reporting period was diluted with respect to the concentration of parameters that had been added to the water in the pond from regulated wastewater streams since the pond was last cleaned out (estimated 7/1/2011). It was necessary to factor this dilution into the calculated parameter concentration limits to avoid comparing analytical results to limits that were based solely on production and therefore would have been higher than appropriate and easier to comply with.
- The concentration limit considering dilution is calculated by multiplying the production-based concentration limit (which is calculated based on production since the pond was last cleaned out) by the difference between

the pond capacity (80,000 gallons) and the amount of water that was removed from the pond since it was last cleaned out (51,000 gallons). This product is then divided by the pond capacity.

- This calculation assumes that all water removed from the pond since the last time it was cleaned out was not diluted prior to discharge. This is a conservative assumption because, in reality, each small discharge from the pond was replaced by clean water, resulting in a decreased parameter concentration in each successive discharge. This means that less of each parameter left the pond (and more stayed in the pond) with each discharge relative to the initial concentration before any dilution occurred.

Please let me know if you have any additional questions or comments about the dilution calculation. Additionally, Joe Crews has informed me that the processes that are not in service or that generate wastewater that is not currently discharged to the Osceola POTW are not expected to discharge wastewater to the POTW in the future. For clarity, these have all been removed from the semi-annual wastewater monitoring report. The simplified report is attached. Unless a change at the facility necessitates reporting of additional wastewater streams contributing to the POTW in the future, this is the report template Rea will use moving forward.

Eric Tidquist
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From: Gilliam, Allen [<mailto:GILLIAM@adeq.state.ar.us>]
Sent: Tuesday, April 12, 2016 12:13 PM
To: Crews, Joe; Rausch, John
Cc: Gage, Hannah; McWilliams, Clark; 'bhaynes58@yahoo.com'
Subject: AR0021580_Rea Wire ARP000020 March 2016 Semi Annual Monitoring Report compliance indeterminate_20160412

Joseph,

Rea Magnet Wire's March 2016 semi-annual report was electronically received and reviewed.

Compliance with the Federally regulated wastestreams (40 CFRs 467 and 468) cannot be determined based on "cooling water¹" is "The batch discharges are comprised of several regulated and diluted streams". There is no calculation shown taking into account the amount of dilution water that contributes to the regulated wastestream(s).

This has been an ongoing source of confusion since your previous State Pretreatment coordinator retired. This office can believe Rea is in compliance simply because of its minute discharge over its six month reporting period and the sheer amount of production during the same time period.

The production based standards under CFRs 467 and 468 converted to alternative mass limitations do not show the use of the combined wastestream per 40 CFR 403.6(e)(1)(ii); thence to the equivalent concentration limitations you're comparing lab analysis to for compliance.

The boxed note on page 7 of your wastewater schematic, "403.6(d) Dilution is not applicable to facilities with only production based-based streams" is not correct and should be removed. This report even refers to "Summary of Calculated Equivalent Concentration Limits for Pond Discharges, mg/L (considering dilution)" on page 9(?) with a table of Rea's production history.

It may be just that one missing link (a mathematical calculation) that shows the use of a dilution factor to further substantiate compliance. This office cannot link the table above it to the one referenced above.

The table in Section (4), "B. Individual Process Wastestreams Discharged to POTW" has been greatly cleared up as well as the wastewater flow schematic over the past two years. This office greatly appreciates your patience and understanding why these needed to be clarified.

To further simplify your reports, could the "not in use" processes on pages 2 and 3 and the wastewater flow schematic be removed in future reports?

Again, this office appreciates your patience and understanding as I have not visited Rea nor have any baseline information from your previous State Coordinator to work with to fully understand all of Rea's active/intermittently active/no longer active processes.

Respectfully,

Allen Gilliam
ADEQ State Pretreatment Coordinator
501.682.0625

cc: Brandon Haynes, Osceola Water and Wastewater Superintendent

E/NPDES/NPDES/Pretreatment/Reports

-----Original Message-----

From: Crews, Joe [<mailto:jcrews@reawire.com>]
Sent: Thursday, March 24, 2016 9:40 AM
To: Gilliam, Allen
Subject: Rea Semi Annual Monitoring Report

Allen,

I apologize about not getting this to you last week. Attached is report and I will put in mail today.

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

Calculations for Equivalent Concentration Limits for REA /Algonquin Industries Division for Rolling Operations Wastewater that Discharges from Pond to the POTW

To calculate concentrations:	
Pond Volume, gal:	80,000
Volume removed from pond since last date pond cleaned, gal:	51,000
To calculate cumulative limit:	
Estimated date pond cleaned:	7/1/2011
Date Sample taken:	2/1/2016
days since pond cleaned	1676

Summary of Calculated Equivalent Concentration Limits for Pond Discharge, mg/L (based on a discharge at the time of sample)		
Parameter	Daily Maximum *	Monthly Average
Chromium	NA	2.099
Cyanide	NA	0.315
Zinc	NA	7.116
Copper	NA	9.086
Lead	NA	1.167
Nickel	NA	11.533
TTOal **	NA	NA
TTOcu **	NA	NA
Oil and Grease	NA	175.802

* daily maximums are inappropriate limitations for batch discharges
 ** Oil and Grease limitations are to be used in place of TTO limitations

Summary of Calculated Equivalent Concentration Limits for Pond Discharge, mg/L (considering dilution)*	
Parameter	Monthly Average
Chromium	0.760
Cyanide	0.114
Zinc	2.580
Copper	3.294
Lead	0.423
Nickel	4.181
TTOal **	NA
TTOcu **	NA
Oil and Grease	63.728

* Pond discharge dilution calculation conservatively assumes all water discharged from the pond since the last time the pond was cleaned out was not diluted prior to discharge, ignoring the fact that each discharge from the pond was replaced by clean water, resulting in increased dilution with each successive discharge. This assumption results in the minimum calculated allowable concentration.

rolled aluminum off lb = production + 10% repassed + 10% scrap = production x 120%				
Rolled Aluminum				
Operational days	Production			Calculated Daily Production (off-lb/day)
	Aluminum passed through (prorated for month) (lbs)	Aluminum passed through (off lbs)		
Jun-11	29	9,333	10,826	373
Jul-11	31	14,496	17,395	561
Aug-11	31	14,577	17,492	564
Sep-11	30	6,369	7,643	255
Oct-11	31	13,829	16,595	535
Nov-11	30	18,751	22,501	750
Dec-11	31	13,710	16,452	531
Jan-12	31	17,418	20,902	674
Feb-12	29	21,207	25,448	878
Mar-12	31	10,279	12,335	398
Apr-12	30	19,458	23,350	778
May-12	31	18,787	22,544	727
Jun-12	30	7,350	8,820	294
Jul-12	31	2,259	2,711	87
Aug-12	31	9,674	11,609	374
Sep-12	30	8,453	10,144	338
Oct-12	31	14,376	17,251	556
Nov-12	30	10,420	12,504	417
Dec-12	31	5,300	6,360	205
Jan-13	31	14,684	17,621	568
Feb-13	29	7,703	9,244	319
Mar-13	13	148,692	74,826	5,756
Apr-13	30	46,739	56,087	1,870
May-13	31	29,184	35,021	1,130
Jun-13	30	24,294	29,153	972
Jul-13	31	7,509	9,011	291
Aug-13	31	36,002	43,202	1,394
Sep-13	30	22,159	26,591	886
Oct-13	0	0	0	0
Nov-13	0	0	0	0
Dec-13	0	0	0	0
Jan-14	31	16,251	19,501	629
Feb-14	28	2,086	2,503	89
Mar-14	31	23,733	28,480	919
Apr-14	30	10,174	12,209	407
May-14	31	25,550	30,660	989
Jun-14	30	22,946	27,535	918
Jul-14	31	23,039	27,647	892
Aug-14	31	20,077	24,093	777
Sep-14	30	21,431	25,717	857
Oct-14	31	11,935	14,322	462
Nov-14	0	0	0	0
Dec-14	31	2,037	2,444	79
Jan-15	31	16,045	19,254	621
Feb-15	0	0	0	0
Mar-15	31	4,700	5,640	182
Apr-15	30	4,700	5,640	188
May-15	31	4,700	5,640	182
Jun-15	30	4,700	5,640	188
Jul-15	31	4,700	5,640	182
Aug-15	31	4,700	5,640	182
Sep-15	0	0	0	0
Oct-15	0	0	0	0
Nov-15	0	0	0	0
Dec-15	0	0	0	0
Jan-16	0	0	0	0
Feb-16	1	0	0	0
Mar-16	NA	NA	NA	NA
Totals	1,323	787,116	840,561	635

rolled copper off lb = production + 30% repassed + 10% scrap = production x 140%				
Rolled Copper				
Operational days	Production			Calculated Daily Production (off-lb/day)
	Copper Produced (lbs)	Copper passed through (prorated for month) (off lbs)		
Jun-11	29	338,460	458,049	15,795
Jul-11	31	94,480	132,272	4,267
Aug-11	31	175,834	246,168	7,941
Sep-11	30	159,806	223,728	7,458
Oct-11	31	199,949	279,929	9,030
Nov-11	30	305,333	427,466	14,249
Dec-11	31	75,079	105,111	3,391
Jan-12	31	308,029	431,241	13,911
Feb-12	29	376,078	526,509	18,155
Mar-12	31	245,296	343,414	11,078
Apr-12	30	249,902	349,863	11,662
May-12	31	283,812	397,337	12,817
Jun-12	30	102,944	144,122	4,804
Jul-12	31	171,515	240,121	7,746
Aug-12	31	123,754	173,256	5,589
Sep-12	30	145,675	203,945	6,798
Oct-12	31	185,416	259,582	8,374
Nov-12	30	403,666	565,132	18,838
Dec-12	31	246,481	345,073	11,131
Jan-13	31	295,934	414,308	13,365
Feb-13	28	291,155	407,617	14,558
Mar-13	31	186,479	261,071	8,422
Apr-13	30	284,801	398,721	13,291
May-13	31	58,724	82,214	2,652
Jun-13	30	74,182	103,855	3,462
Jul-13	31	5,777	8,088	261
Aug-13	31	226,839	317,575	10,244
Sep-13	0	0	0	0
Oct-13	31	112,245	157,143	5,069
Nov-13	30	209,150	292,810	9,760
Dec-13	31	65,581	91,813	2,962
Jan-14	31	28,358	39,701	1,281
Feb-14	28	72,956	102,138	3,648
Mar-14	31	147,738	206,833	6,672
Apr-14	30	71,111	99,555	3,319
May-14	31	35,744	50,042	1,614
Jun-14	30	100,094	140,132	4,671
Jul-14	31	90,369	126,516	4,081
Aug-14	31	75,558	105,781	3,412
Sep-14	30	89,915	125,881	4,196
Oct-14	0	0	0	0
Nov-14	0	0	0	0
Dec-14	0	0	0	0
Jan-15	0	0	0	0
Feb-15	0	0	0	0
Mar-15	0	0	0	0
Apr-15	0	0	0	0
May-15	0	0	0	0
Jun-15	0	0	0	0
Jul-15	0	0	0	0
Aug-15	0	0	0	0
Sep-15	0	0	0	0
Oct-15	0	0	0	0
Nov-15	0	0	0	0
Dec-15	0	0	0	0
Jan-16	0	0	0	0
Feb-16	1	0	0	0
Mar-16	NA	NA	NA	NA
Totals	1,187	6,714,219	9,384,112	7,906

Input Values For Determining Effluent Guideline Limits for REA /Algonquin Industries Division for Aluminum Die Cleaning Wastestream

To calculate concentrations:	
Die Cleaning Flow Rate, gpc	5
To calculate cumulative limit:	
Beginning date of period of semiannual report	8/31/2015
End date of period of semiannual report	2/29/2016
Date Sample taken:	2/1/2016
Days from beginning of semi annual report through sample date	154

Summary of Calculated Equivalent Concentration Limits for Caustic Soda Rinse of Extrusion Die Discharge, mg/L		
Parameter	Daily Maximum	Monthly Average
Chromium	47	19.2
Cyanide	31	12.6
Zinc	154	66.2
TTOal *	NA	NA
Oil and Grease	5673	2773.6

* Oil and Grease limitations are to be used in place of TTO limitations

extruded aluminum off lb = production + 10% scrap =		110%		
production x				
2015	Extruded Aluminum (All lines) Production			
	Operational days	Aluminum Produced (lbs)	Aluminum passed through (prorated for month) (off lbs)	Calculated Daily Production (off-lb/day)
Sep-15	30	365,492	402,041	13,401
Oct-15	31	365,492	402,041	12,969
Nov-15	30	365,492	402,041	13,401
Dec-15	31	365,492	402,041	12,969
Jan-16	31	365,492	402,041	12,969
Feb-16	1	365,492	13,863	13,863
Mar-16	NA	0	NA	NA
Apr-16	NA	0	NA	NA
May-16	NA	0	NA	NA
Jun-16	NA	0	NA	NA
Jul-16	NA	0	NA	NA
Aug-16	NA	0	NA	NA
Totals	154	2,192,953	2,024,070	13,143

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

ATTN: Water Div/NPDES Pretreatment

(1) IDENTIFYING INFORMATION

<p>A. LEGAL NAME & MAILING ADDRESS</p> <p align="center">Rea – Algonquin Industries Division 1800 Highway 61 South Osceola, AR 72370</p>	<p>B. FACILITY & LOCATION ADDRESS</p> <p align="center">Rea – Algonquin Industries Division 1800 Highway 61 South Osceola, AR 72370</p>
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C. FACILITY CONTACT: John Rausch (jrausch@reawire.com)	TELEPHONE NUMBER: 870-622-4413
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(2) REPORTING PERIOD--FISCAL YEAR

A. MONTHS WHICH REPORTS ARE DUE	B. PERIOD COVERED BY THIS REPORT
September & March	FROM: September 1, 2015 – February 29, 2016

(3) DESCRIPTION OF OPERATION

<p>A. Regulated Processes per 40 CFR Part 467 (Aluminum) Subpart A & C and 40 CFR Part 468 (Copper) Subpart A</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">PROCESS</th> <th style="text-align: center;">PRODUCTION-OFF/LB</th> <th style="text-align: center;">PRODUCTION DAYS</th> </tr> </thead> <tbody> <tr> <td>Extruded Aluminum (§467.35 Core Die Cleaning)</td> <td align="center">1,949,480</td> <td align="center">9/1/2015-2/29/2016 182 days</td> </tr> </tbody> </table>	PROCESS	PRODUCTION-OFF/LB	PRODUCTION DAYS	Extruded Aluminum (§467.35 Core Die Cleaning)	1,949,480	9/1/2015-2/29/2016 182 days	<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>
PROCESS	PRODUCTION-OFF/LB	PRODUCTION DAYS					
Extruded Aluminum (§467.35 Core Die Cleaning)	1,949,480	9/1/2015-2/29/2016 182 days					

C. Number of Regular Employees at this Facility: <u>51</u>	D. [Reserved]
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(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:				
§467.35 Core-Die Cleaner (Aluminum Extrusion)	5 (estimate)	26 (estimate)	Estimated discharge rate of 5 gallons per die cleaning event and estimated frequency of one die cleaning event per week	Intermittent
§403.6(e) Unregulated:				
Air compressor condensate blowdown	10 (estimate)	144	NA	Intermittent
Steam clean forklift wash area	5 (estimate)	144	NA	Intermittent
§403.6(e) Dilute:				
Cooling water ¹	280.22	182	Three batches (approx. 15,000 gallons each) discharged to the POTW on Sept. 2, 2015, Nov. 11, 2015, Dec. 17, 2015; 6,000 gallons shipped offsite Sept. 5, 2015	Batch discharge from recirculation pond
Sanitary	6,000 (estimate)	144	NA	Continuous

¹The batch discharges are comprised of several regulated and diluted source waters.

(5) MEASUREMENT 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	
Die Cleaning Allowable Concentrations ¹	47	19.2	NA	NA	NA	154	66.2	NA	5673	2774	31	12.6
Die Cleaning Measured Concentrations	<0.01		NA	NA	NA	0.173		NA	7.18		0.0126	
Pond Allowable Concentration	0.760		3.294	0.423	4.181	2.580		NA	63.728		0.114	
Pond Measured Concentration	<0.01		0.0285	<0.005	<0.01	<0.05		NA	<5.49		<0.005	

40CFR136 Preservation and Analytical Methods Use: Yes No

(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 _____

¹ Listed as daily maximum and monthly average respectively

(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 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(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

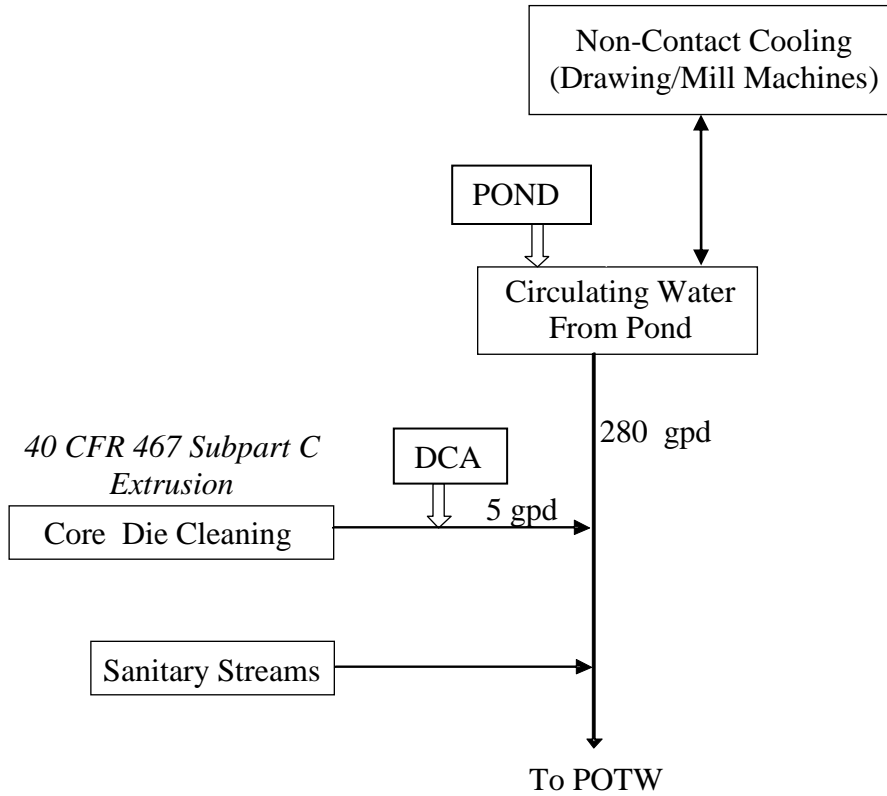
PLANT MANGER
OFFICIAL TITLE

DATE SIGNED

ATTACHMENT 1

Flow Schematics

Algonquin Industries Osceola, Arkansas April 2016



Sampling Points => ↓

§403.6(e) Nonregulated Streams
Not Present

If a 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 present but 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 (April 2016)

ATTACHMENT 2

Sampling and Analysis Results