

## Wilson, Tabatha

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**From:** Gilliam, Allen  
**Sent:** Friday, February 21, 2014 11:15 AM  
**To:** sribble@roachconveyors.com; mdavis@roachconveyors.com  
**Cc:** Fuller, Kim; Wilson, Tabatha; scottytw@centurytel.net  
**Subject:** AR0035602\_Roachs ARP001060 Feb 2014 semi-annual Pretreatment report with ADEQ reply and request\_20140220  
**Attachments:** Roach Feb 2014 Semi-Annual Report.pdf; Roach's Sampling Plan.pdf; Roach WW Schematic.pdf

G.W., Merritt or Sherri,

Roach's February 2014 semi-annual Pretreatment report (1<sup>st</sup> attachment) was received and reviewed. The results of the samples taken appear to be compliant with the Metal Finishing standards per 40 CFR 433.17.

Please contact me at you earliest convenience as this office has a few questions to be answered before compliance with the Federal Metal Finishing standards can be ascertained.

The most important question is your sampling techniques. Information in Roach's file that can be found: "Explanation for BMR Sampling and Reporting Results...Samples Collected May 10, 2010" (2<sup>nd</sup> attachment, 2<sup>nd</sup> page not understood) from your four stage phosphatizing operation is confusing.

The "fractions" do match up with the instructions given the lab on the chain of custody (see below) when the samples were taken on 8/10/11, but the semi-annual report just submitted does not specify these "fractions" to be composited. Were all 4 tanks being discharged at the same time?

The wastewater flow schematic (3<sup>rd</sup> attachment) is not detailed enough to indicate what is actually in the "holding" tanks below the spray booths.

A typical four stage phosphatizing operation this office is familiar with has a caustic/cleaning (sodium hydroxide, e.g.) "bath" followed by a fresh water rinse; phosphatizing bath (conversion coating) followed by a final fresh water rinse prior to a dry off oven then to the powder coating room followed by a bake/curing oven.

Please provide this office:

- 1) The rationale for the rationing (fractions) of the tanks' samples to be composited by the lab and
- 2) A comprehensive narrative process description of your regulated wastewater processes [required under 40 CFR 403.12(b)] indicating the chemicals (not trade names) used in each work tank. The 1<sup>st</sup> page of their MSDS usually contains this information. Chemicals used would also include their CAS numbers. If the tank is just a fresh water rinse, so state.

This office would like to discuss Roach's sampling techniques to determine if they're representative and/or why this sampling approach was decided upon.

Would it not be easier to take samples at the discharge point (1<sup>st</sup> manhole north of the building) once each tank was being discharged? Sampling directly from the tanks is not representative of the

wastewater being discharged to the City if they're not "spent" and ready to be or actually being discharged.

CHAIN OF CUSTODY REFERENCED ABOVE


**Environmental Testing & Consulting, Inc. Chain of Custody**

Client Name <i>Roach Mfg. Corp.</i>	Client Project Manager/Contact <i>Dr. Rick Clift Sherri Tribble</i>
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Project/ Site Location <i>Trumann, Arkansas</i>
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Project Number <i>-</i>	FID # <i>-</i>
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Type of Event Single Daily Weekly Monthly Quarterly <u>Semi-Annual</u>
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Environmental Testing & Consulting, Inc. 2790 Whitten Road Memphis, TN 38133 (901) 213-2400 (phone) (901) 213-2440 (fax) www.etcmemphis.com		Number of Containers	Matrix
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Date:	Time:	Sample Identification:	Number of Containers	Matrix
<i>8/10/11</i>	<i>1:20 p</i>	<i>Stage 4 - Continuous Rinse</i>	<i>2</i>	<i>WA</i>
<i>8/10/11</i>	<i>1:30 p</i>	<i>Stages 1, 2, 3 &amp; 4</i>	<i>2</i>	<i>WA</i>
<i>8/10/11</i>	<i>12:55 p</i>	<i>stage 1 - washer</i>	<i>1</i>	<i>G</i>
<i>8/10/11</i>	<i>1:05 p</i>	<i>stage 2 - washer</i>	<i>1</i>	<i>G</i>
<i>8/10/11</i>	<i>1:10 p</i>	<i>stage 3 - washer</i>	<i>1</i>	<i>G</i>
<i>8/10/11</i>	<i>1:15 p</i>	<i>stage 4 - Rinse</i>	<i>1</i>	<i>G</i>
<i>8/10/11</i>	<i>12:55 p</i>	<i>Stage 1 - washer</i>	<i>2</i>	<i>G</i>
<i>8/10/11</i>	<i>1:05 p</i>	<i>stage 2 - washer</i>	<i>2</i>	<i>G</i>
<i>8/10/11</i>	<i>1:10 p</i>	<i>Stage 3 - washer</i>	<i>2</i>	<i>G</i>

Thank you for your prompt attention and if there are any immediate questions please feel free to contact this office.

Sincerely,

Allen Gilliam  
ADEQ State Pretreatment Coordinator  
501.682.0625

Ec: Scotty Jones, Trumann Water & Wastewater Manager

E/NPDES/NPDES/Pretreatment/Reports



808 HWY 463 Trumann, AR 72472 Tel 870-483-7631 Fax 870-483-7049  
www.roachconveyors.com

AXPBL

February 12, 2014

Mr. Allen Gilliam  
Pretreatment Coordinator  
Arkansas Department of Environmental Quality  
5301 Northshore Drive  
North Little Rock AR 72118-5317

FEB 18 2014

12291 TW

Re: Semi-Annual Report

Dear Mr. Gilliam:

Enclosed please find our semi-annual report for period August 1, 2013, through January 31, 2014, which includes the lab test results from August 30, 2013.

Sincerely,

ROACH MANUFACTURING CORPORATION

*G.W. Roach Jr. by Sherri Sull*

G.W. Roach, Jr.  
President

Enclosure

GWR/st

**SEMI-ANNUAL REPORT FOR INDUSTRIAL USERS REGULATED BY 40CFR433**

Use of this form is not an EPA/ADEQ requirement.

Attn: Water Div/NPDES Pretreatment

**(1) IDENTIFYING INFORMATION**

**A. LEGAL NAME & MAILING ADDRESS**

Roach Manufacturing Corporation  
P. O. Box 1310  
Trumann, AR 72472

**B. FACILITY & LOCATION ADDRESS**

Roach Manufacturing Corporation  
808 Highway 463N  
Trumann, AR 72472

**C. FACILITY CONTACT: G. W. Roach, Jr.      TELEPHONE NUMBER: 870-483-7631      e-mail: groach@roachconveyors.com**

**(2) REPORTING PERIOD- FISCAL YEAR from Feb 1 to Jan 31**

**A. MONTHS WHICH REPORTS ARE DUE**

February & August

**B. PERIOD COVERED BY THIS REPORT**

**FROM: August 1, 2013      TO: January 31, 2014**

**(3) DESCRIPTION OF OPERATION**

**A. REGULATED PROCESSES**

**CORE PROCESS(ES)**

CHECK EACH APPLICABLE BLOCK

- Electroplating
- Electroless Plating
- Anodizing
- Coating
- Chemical Etching and Milling
- Printed Circuit Board Manufacture

**ANCILLARY PROCESS(ES)\***

LIST BELOW EACH PROCESS USED IN THE FACILITY

NONE

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**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.

NONE

\* SEE 40CFR433.10(a) FOR 40 DIFFERENT OPERATIONS

**C. Number of Regular Employees at this Facility**  
219

**D. [Reserved]**

**(4) FLOW MEASUREMENT**

INDIVIDUAL & TOTAL PROCESS FLOWS DISCHARGED TO POTW IN GALLONS PER DAY

Process	Average	Maximum	Type of Discharge
Regulated (Core & Ancillary)	1,890	10,000	5 days per week
Regulated (Cyanide)			
' 403.6(e) Unregulated*			
' 403.6(e) Dilute			
Cooling Water			
Sanitary	3,000	6,000	Continuous
Total Flow to POTW	4,890	13,000	*****

\*"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 \_\_\_\_\_

None

B. COMMENTS ON TREATMENT SYSTEM

C. THE INDUSTRIAL USER MUST PERFORM SAMPLING AND ANALYSIS OF 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.

Pollutant(mg/l)	Cd	Cr	Cu	Pb	Ni	Ag	Zn	CN	TTO*
Max for 1 day	0.11	2.77	3.38	0.69	3.98	0.43	2.61	1.20	2.13
Monthly Ave	0.07	1.71	2.07	0.43	2.38	0.24	1.48	0.65	--
Max Measured	<0.0001	0.0693	0.0932	<0.0005	0.111	<0.0001	0.102	<0.01	----
Ave Measured	<0.0001	0.00535	0.0895	<0.0005	0.0795	<0.0001	0.102	<0.01	----

Sample Location at process tanks of 4-stage washer

Sample Type (Grab or Composite) composite

Number of Samples and Frequency Collected two, once per report period

40CFR136 Preservation and Analytical Methods Use:  Yes  No

**(6) CERTIFICATION**

A. [Reserved]

[Reserved]

B. CHECK ONE: ' 433.11(e) TOXIC ORGANIC ANALYSIS ATTACHED    X ' 433.12(a) TTO CERTIFICATION

Based on my inquiry of the person or persons directly responsible for managing compliance with the pretreatment standard for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing of the last semi-annual compliance report. I further certify that this facility is implementing the toxic organic management plan submitted to Arkansas Department of Environmental Quality.

G. W. Roach, Jr.  
(Typed Name)

  
(Corporate Officer or authorized representative)

Date of Signature 1-12-14

**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 \_\_\_\_\_, 200\_\_.

\_\_\_\_\_  
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 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:**

Roach Manufacturing Corporation is implementing the Toxic Organics Management Plan dated July 2013 and approved by ADEQ with letter dated August 6, 2013.

**(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 document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate 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.

G. W. Roach, Jr.  
NAME OF CORPORATE OFFICER OR AUTHORIZED REPRESENTATIVE

President  
OFFICIAL TITLE

  
SIGNATURE

1-12-14  
DATE SIGNED



# ENVIRONMENTAL TESTING & CONSULTING, INC.

2780 Whitten Road

Memphis, Tennessee 38133

(901) 213-2400

Fax (901) 213-2440

"A Laboratory Management Partner"

9/4/2013

Roach Conveyors  
Ms. Sherri Tribble  
808 Highway 463 North  
Truman, AR, 72472

Ref: Analytical Testing  
ETC Report Number: 13-242-0264  
Client Project Description: Semi-Annual  
Trumann, AR

Dear Ms. Sherri Tribble:

Environmental Testing and Consulting, Inc. received sample(s) on 8/30/2013 for the analyses presented in the following report.

The above referenced project has been analyzed per your instructions. The analyses were performed in accordance with the applicable analytical method.

The analytical data has been validated using standard quality control measures performed as required by the analytical method. Quality Assurance, method validations, instrumentation maintenance and calibration for all parameters (NELAP and non-NELAP) were performed in accordance with guidelines established by the USEPA and NELAC unless otherwise indicated. Any parameter for which the laboratory is not officially NELAP accredited is indicated by a '~' symbol. These are not included in the scope because NELAP accreditation is either not available or has not been applied for. Additional certifications may be held/are available for parameters, where NELAP accreditation is not required or applicable. A full list of certifications is available upon request.

The results are shown on the attached Report of Analysis(s). Results for solid matrices are reported on an as-received basis unless otherwise indicated. This report shall not be reproduced except in full and relates only to the samples included in this report.

Please do not hesitate to contact me or client services if you have any questions or need additional information.

Sincerely,

Randy Thomas  
Project Manager

*Laboratory's liability in any claim relating to analyses performed shall be limited to, at laboratory's option, repeating the analysis in question at laboratory's expense, or the refund of the charges paid for performance of said analysis.*

Alabama #40750	Louisiana #04015	VA NELAP #460181	Texas #T104704180-11-6	Arkansas #88-0650
Mississippi	California #09267CA	NC #415	Oklahoma #9311	Virginia #00106
Kentucky #90047	Tennessee #TN02027	EPA #TN00012	Kentucky UST #41	Kansas #E-10396





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"A Laboratory Management Partner"

07154

Roach Conveyors  
Ms. Sherri Tribble  
808 Highway 463 North  
Truman, AR 72472

Project Semi-Annual  
Information : Trumann, AR

Report Date : 09/04/2013  
Received : 8/30/2013

*Randell H. Thomas*

Report Number : **13-242-0264**

## REPORT OF ANALYSIS

Randy Thomas  
Project Manager

Lab No : **94719**

Matrix: **Aqueous**

Sample ID : **Stage 4-Continuous Rinse**

Sampled: **8/30/2013 13:00**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Total Cyanide	<0.010	mg/L	0.010	1	09/03/13 10:30	EWB	4500-CN-E
Total Cadmium	<0.100	µg/L	0.100	1	09/03/13 18:29	RQE	EPA-200.8
Total Chromium	<b>5.35</b>	µg/L	1.00	1	09/03/13 18:29	RQE	EPA-200.8
Total Copper	<b>89.5</b>	µg/L	0.500	1	09/03/13 18:29	RQE	EPA-200.8
Total Lead	<0.500	µg/L	0.500	1	09/03/13 18:29	RQE	EPA-200.8
Total Nickel	<b>79.5</b>	µg/L	0.500	1	09/03/13 18:29	RQE	EPA-200.8
Total Silver	<0.100	µg/L	0.100	1	09/03/13 18:29	RQE	EPA-200.8
Total Zinc	<b>102</b>	µg/L	5.00	1	09/03/13 18:29	RQE	EPA-200.8

### Qualifiers/ Definitions

\* Outside QC limit  
MQL Method Quantitation Limit

DF Dilution Factor



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"A Laboratory Management Partner"

07154

Roach Conveyors

Ms. Sherri Tribble

808 Highway 463 North

Truman, AR 72472

Project Semi-Annual  
Information : Trumann, AR

Report Date : 09/04/2013

Received : 8/30/2013

*Randell H. Thomas*

Report Number : **13-242-0264**

## REPORT OF ANALYSIS

Randy Thomas  
Project Manager

Lab No : **94720**

Matrix: **Aqueous**

Sample ID : **Stage 1,2,3 & 4**

Sampled: **8/30/2013 12:45**

Test	Results	Units	MQL	DF	Date / Time Analyzed	By	Analytical Method
Total Cyanide	<0.010	mg/L	0.010	1	09/03/13 10:30	EWB	4500-CN-E
Total Cadmium	<0.100	µg/L	0.100	1	09/03/13 18:36	RQE	EPA-200.8
Total Chromium	<b>6.93</b>	µg/L	1.00	1	09/03/13 18:36	RQE	EPA-200.8
Total Copper	<b>93.2</b>	µg/L	0.500	1	09/03/13 18:36	RQE	EPA-200.8
Total Lead	<0.500	µg/L	0.500	1	09/03/13 18:36	RQE	EPA-200.8
Total Nickel	<b>111</b>	µg/L	0.500	1	09/03/13 18:36	RQE	EPA-200.8
Total Silver	<0.100	µg/L	0.100	1	09/03/13 18:36	RQE	EPA-200.8
Total Zinc	<b>62.2</b>	µg/L	5.00	1	09/03/13 18:36	RQE	EPA-200.8

### Qualifiers/ Definitions

\* Outside QC limit  
MQL Method Quantitation Limit

DF Dilution Factor

**Cooler Receipt Form**

Customer Number: **07154**

Customer Name: **Roach Conveyors**

Report Number: **13-242-0264**

**Shipping Method**

Fed Ex    UPS    US Postal    Client    Lab    Courier    Other : \_\_\_\_\_

Shipping container/cooler uncompromised?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Custody seals intact on shipping container/cooler?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> Not Required
Custody seals intact on sample bottles?	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> Not Required
Chain of Custody (COC) present?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
COC agrees with sample label(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
COC properly completed	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Samples in proper containers?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Sample containers intact?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Sufficient sample volume for indicated test(s)?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
All samples received within holding time?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Cooler temperature in compliance?	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Cooler/Samples arrived at the laboratory on ice. Samples were considered acceptable as cooling process had begun.	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Water - Sample containers properly preserved	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> N/A
Water - VOA vials free of headspace	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Trip Blanks received with VOAs	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
Soil VOA method 5035 – compliance criteria met	<input type="radio"/> Yes	<input type="radio"/> No	<input checked="" type="radio"/> N/A
<input type="checkbox"/> High concentration container (48 hr)		<input type="checkbox"/> Low concentration EnCore samplers (48 hr)	
<input type="checkbox"/> High concentration pre-weighed (methanol -14 d)		<input type="checkbox"/> Low conc pre-weighed vials (Sod Bis -14 d)	
Special precautions or instructions included?	<input type="radio"/> Yes	<input checked="" type="radio"/> No	

Comments:

Any regulatory non-compliance issues will be recorded on non-compliance report.

Signature:

Date & Time:

Environmental Testing & Consulting, Inc. Chain of Custody

Page 1 of 1

Client Name <b>Roach Mfg. Corp.</b>	Client Project Manager/Contact <b>Dr. Rick Clift Sherril Tribble</b>	Phone # <b>870-215-2676 870-483-7631</b>
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13-242-0264  
07154  
08-30-2013  
14:43:02

Project Site Location <b>Trumann, Arkansas</b>	email Address <b>rcclift@astate.edu</b>
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Project Number -	FID # -	Purchase Order Number -
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Type of Event Single Daily Weekly Monthly Quarterly <b>Semi-Annual</b>	Method of Shipment <b>Personal Delivery</b>
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<input checked="" type="checkbox"/> NPDES	<input type="checkbox"/> RUSH - Additional charges apply
<input type="checkbox"/> Wastewater	<input type="checkbox"/> The following require a Statement of Work
<input type="checkbox"/> UST	<input type="checkbox"/> Special Report Requirements
<input type="checkbox"/> Other Program	<input type="checkbox"/> Special Detection Limit(s)
	<input type="checkbox"/> Special Method Requirements

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Date	Time	Sample Identification	Number of Containers	Matrix	(G)rab or (C)omposite	Required Analytes:								
						Metals: Cd, Cr, Cu, Pb, Ni, Ag, Zn	Total Cyanide							
8/30/13	1:10 pm	Stage 4 Continuous Rinse	2	WW	C	X	X							
8/30/13	12:45 p	stage 1, 2, 3 & 4	2	WW	C	X	X							

Matrix  
WW - Wastewater GW - Groundwater DW - Drinking Water S - Soil O - Oil L - Non aqueous liquid  
Other: \_\_\_\_\_

Sampled by (Name/Title): (Print)  
**Erwin Clark - Roach  
Rick Clift - Consultant**

Client Remarks/Comments  
-

**For Laboratory Use Only**

Lot	Locker Temp	Lab Comments
① N	CPD	

Relinquished by: (SIGNATURE)  
Date Time

Relinquished by: (SIGNATURE)  
Date Time

Relinquished by: (SIGNATURE)  
**Rebecca [Signature]**  
8/30/13 2:22 p

Received by: (SIGNATURE) Date Time

Received by: (SIGNATURE) Date Time

Received for lab by: (SIGNATURE) Date Time  
**J. Smith** 8-30-13 14:20

**Explanations for BMR Sampling and Reported Results  
Roach Manufacturing Corporation  
Samples Collected May 10, 2010**

1. One composite sample was collected during routine operations on May 10. Four grab samples were taken from the fourth stage continuous rinse and composited based on flow to represent "average" daily concentrations discharged from the process. The results for this composite sample (stage 4 – rinse) are given in the attached analytical report from Environmental Testing & Consulting (ETC), report no. 10-131-9200.
2. Grab samples were collected from Stages 1, 2, and 3 on May 10 so that calculations could be made to represent "maximum" daily concentrations discharged from the process on days when all four stages are dumped and recharged. All stages were dumped and recharged during the week of May 10. The grab samples from Stages 1 and 2 (both perform the same operation of clean water rinsing) were composited based on tank volume for analysis of metals and cyanide. The grab sample from Stage 3 was analyzed for metals and not cyanide since this is a phosphoric acid tank which should not retain cyanides in solution. Grab samples from Stages 1, 2, and 3 were composited in the lab based on tank volumes for TTO analysis. The results for these samples are given in the attached analytical report from ETC, report no. 10-131-0201.
3. Calculations of the "maximum" daily concentrations are shown below using the attached sampling results and the tank volume weighted fractions.

<u>Stage</u>	<u>Volume</u>	<u>Fraction</u>
1 & 2	4620 gal	0.500
3	3300 gal	0.357
4	1320 gal	0.143

<b>Cd</b>	$(0.5 + 0.143)(0.0001) + 0.357(0.00107) = <0.001 \text{ mg/l}$
<b>Cr</b>	$0.5(0.0292) + 0.357(0.0718) + 0.143(0.00315) = 0.041 \text{ mg/l}$
<b>Cu</b>	$0.5(0.216) + 0.357(0.079) + 0.143(0.033) = 0.141 \text{ mg/l}$
<b>Pb</b>	$0.5(0.00477) + 0.357(0.005) + 0.143(0.005) = <0.005 \text{ mg/l}$
<b>Ni</b>	$0.5(0.0425) + 0.357(0.568) + 0.143(0.0247) = 0.228 \text{ mg/l}$
<b>Ag</b>	$0.5(0.00023) + 0.357(0.00107) + 0.143(0.0001) = <0.001 \text{ mg/l}$
<b>Zn</b>	$0.5(0.278) + 0.357(1.46) + 0.143(0.0813) = 0.672 \text{ mg/l}$
<b>CN</b>	<0.01 mg/l based on samples from stages 1, 2 and 4
	Bis(2-ethylhexyl) phthalate                      0.385 mg/l
	1,2-Diphenylhydrazine/Azobenzene   0.012 mg/l
<b>TTO</b>	$0.385 + 0.012 = 0.397 \text{ mg/l}$

4. In the future, grab samples from Stages 1, 2, 3, and 4 will be collected and composited based on take volumes prior to analysis to represent "maximum" daily concentrations.

PARTS WASHER SAMPLING  
STAGE 4 - CONTINUOUS RINSE

Sample Personnel: *Erwin Clark / R. Cliff*

Date: *May 10, 2010*

Time	Meter Reading (1)	Gallons (2)	Fraction of Total Gallons (4)	Grab Sample Metals/CN	Composite Volume (5)	Grab Sample for TTO (6)
6:00 AM	6913080	NA	NA	NA	NA	NA
<del>7:00 AM</del> 7:05 AM	6913280	200	0.206	ST4-1	206	ST4-1
9:00 AM	6913510	230	0.237	ST4-2	237	ST4-2
11:00 AM	6913810	300	0.309	ST4-3	309	ST4-3
1:00 PM	6914050	240	0.248	ST4-4	248	ST4-4
TOTAL (3):		970 0	TOTAL = 1.0	TOTAL = 1000 ml		

- (1) Water meter reading for water line feeding stage 4 of washer.
- (2) Subtract meter readings, for example 7 am reading minus 5 am reading.
- (3) Sum of gallons for 7am, 9 am, 11 am, and 1 pm.
- (4) Divide gallons in column (2) by total (3)
- (5) Multiply fraction in column (4) by 1000 to determine portion from grab sample for Metals/CN compositing. Shake grab sample bottle, then using graduated cylinder, measure the portion from grab sample and pour into 1000 ml beaker. After combining all four portions, stir beaker and fill appropriate sample containers for Metals and Cyanide (do not over fill). Complete sample label and chain-of-custody record.
- (6) Collect sample directly from tank using glass beaker, being careful to not agitate sample, pour directly into appropriate viles (2 viles per sample time). Completely fill viles and place cap so as to exclude all air (no air bubbles in vile). Complete sample labels and chain-of-custody record. Place the fractions on vile labels for composition by the laboratory (ETC) prior to analysis.



VOLUME OF METAL  
THROUGH WASH-OFF  
EACH DAY

22,290 Lbs.

TANK  
DESCRIPTION

TANK CAPACITY

WATER FLOW  
PER 8 HR. SHIFT

WATER DUMP  
FREQUENCIES

RINSE STAGE 1

3300 GAL.

0 GAL.

3 MONTHS

RINSE STAGE 2

1300 GAL.

0 GAL.

3 MONTHS

WASH STAGE 3

3300 GAL.

0 GAL.

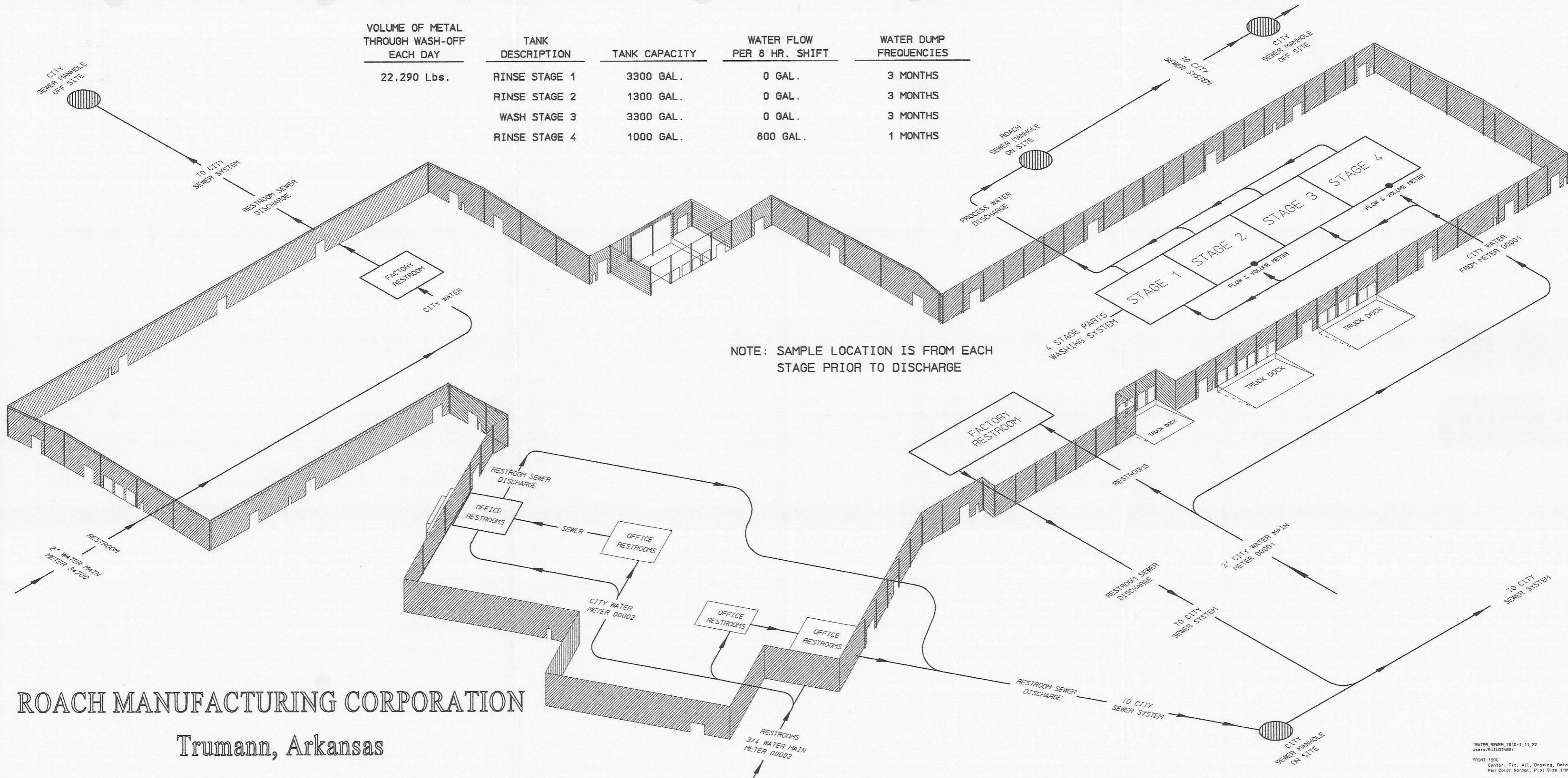
3 MONTHS

RINSE STAGE 4

1000 GAL.

800 GAL.

1 MONTHS



NOTE: SAMPLE LOCATION IS FROM EACH  
STAGE PRIOR TO DISCHARGE

ROACH MANUFACTURING CORPORATION

Trumann, Arkansas