

## Gage, Hannah

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**From:** Gilliam, Allen  
**Sent:** Wednesday, January 06, 2016 12:29 PM  
**To:** 'Jones Chuck'  
**Cc:** Gage, Hannah; Arkadelphia - Brenda Gills  
**Subject:** AR0020605\_Danfoss ARP001040 late Dec 15 periodic Pretreatment report\_20160105  
**Attachments:** DEC 15 Semi annual report.pdf

Chuck,

Danfoss' periodic Pretreatment report was electronically received late, reviewed, deemed complete and compliant with the reporting requirements in 40 CFR 403.12(e) and more specifically in compliance with the Metal Finishing Pretreatment standards in 40 CFR 433.17. No further actions are deemed necessary at this time.

Please take note: Danfoss' toxic organic management plan [TOMP] was received from Harbor Environmental in July 2015 and approved by ADEQ on July 21, 2015. You should have this on file and Danfoss' toxic organic management practices should be following daily.

Under 40 CFR 433.12(a), "In lieu of requiring monitoring for TTO [total toxic organics], [ADEQ] may allow dischargers to make the following certification statement (which you have within the attached report): "Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation [or 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 discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan [TOMP] submitted to [ADEQ]."

In short, Danfoss is not required to sample/analyze/report for the long list of toxic organics, just the metals (and cyanide) listed in 40 CFR 433.17 unless there's a chemistry change in Danfoss' processes that alters the toxic organics in use. In that case, a new TOMP would have to be submitted.

If you have any questions please feel free to contact this office.

Sincerely,

Allen Gilliam  
ADEQ State Pretreatment Coordinator  
501.682.0625

ec: Brenda Gills, City of Arkadelphia Utilities Manager

E/NPDES/NPDES/Pretreatment/Reports

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**From:** Jones Chuck [<mailto:Chuck.Jones@danfoss.com>]  
**Sent:** Tuesday, January 05, 2016 11:36 AM  
**To:** Gilliam, Allen  
**Subject:** Emailing - DEC 15 Semiannual report.pdf

A couple days late sir sorry lab was moving and they did not get my stuff done on time again I have spoken with them and hopefully they have it straight now.

Chuck Jones, NREMT-P  
Environmental, Health and Safety Manager  
Commercial Compressors North America

**Danfoss LLC**

One Scroll Drive

Arkadelphia, AR 71923

[chuck.jones@danfoss.com](mailto:chuck.jones@danfoss.com)

Tel.: 870-246-0714

Mobile: 501-617-3459



C. Number of Regular Employees at this Facility 195

D. [Reserved]

**(4) FLOW MEASUREMENT**

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

Process	Average	Maximum	Type of Discharge*
Regulated (Core &		62100	Continuous
Regulated (Cyanide)	18142	62100	Continuous
' 403.6(e) Unregulated*	0	0	N/A
' 403.6(e) Dilute	0	0	Batch
Cooling Water	0	0	Continuous
Sanitary	5800	10150	Continuous
<b>Total Flow to POTW</b>	23942	72250	*****

\*If batch discharged please list the period of time of each batch discharge (300 gallons/day; 500 gallons/week, 2,000 gallons/3 months, etc). Do not normalize over that period for the average flow.  
 "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.

40 CFR 433.17 Pollutant(mg/l) limits	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 Avg	0.07	1.71	2.07	0.43	2.38	0.24	1.48	0.65	--
Max Measured	.0005	.0104	0.0186	0.0156	0.125	.0208	0.220	0.010	*
Avg Measured**									*

Sample Location After Pre-Treatment

Sample Type (Grab\* or Composite) Composite

\*If Grab, list # of grabs over what period of time

Number of Samples and Frequency Collected 1

40CFR136 Preservation and Analytical Methods Use:  Yes  No (include complete Chain of Custody)

\*If a TOMP has been submitted and approved by ADEQ place N/A.

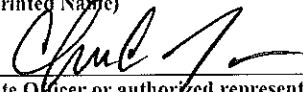
**\*\*A value here is the average of all samples taken during one (1) calendar month regardless of number of samples taken. If only one (1) sample is taken it must meet the monthly average limitation.**

**(6) CERTIFICATION (ONLY IF A TOMP HAS BEEN SUBMITTED/APPROVED BY ADEQ)**

**B. CHECK ONE:  '433.11(e) TOXIC ORGANIC ANALYSIS ATTACHED  '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.

Chuck Jones  
(Typed/Printed Name)



(Corporate Officer or authorized representative signature)

Date of Signature 1/4/16

**(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 including Best or Environmental Management Practices, Source Reduction, Waste Minimization, Lean Manufacturing, Water and/or Energy Conservaton:**

1. We continue to use mechanical separation of oil and grease prior to pre-treatment.
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_


(8) GENERAL COMMENTS

(9) SEMI-ANNUAL/PERIODIC REPORT CERTIFICATION STATEMENT REQUIRED UNDER 40 CFR 403.12(l)

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.

Chuck Jones  
NAME OF CORPORATE OFFICER OR AUTHORIZED REPRESENTATIVE

EHS Manager  
OFFICIAL TITLE

  
SIGNATURE

1/4/16  
DATE SIGNED



11701 I-30 Bldg 1, Ste 115 - Little Rock, AR 72209  
501-455-3233 Fax 501-455-6118

04 January 2016

Chuck Jones  
Danfoss - Scroll Technologies  
1 Scroll Drive  
Arkadelphia, AR 71923-8813

Project: Effluent Sample  
Project Number: December 2015  
SDG Number: 1512167

Enclosed are the results of analyses for samples received by the laboratory on 09-Dec-15 17:18. If you have any questions concerning this report, please feel free to contact me.

Sample Receipt Information:

Custody Seals	✓
Containers Correct	✓
COC/Labels Agree	✓
Received On Ice	✓
Temperature on Receipt	1.0°C

Sincerely,

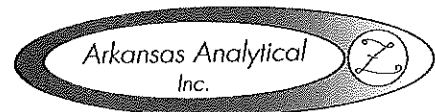
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Norma James and/or Teresa Coins  
Technical Director and/or QA Officer

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04 January 2016

Chuck Jones  
Danfoss - Scroll Technologies  
1 Scroll Drive  
Arkadelphia, AR 71923-8813  
Project: Effluent Sample  
Project Number: December 2015  
Date Received: 09-Dec-15 17:18



**CASE NARRATIVE**

Sample Delivery Group – 1512167

One OR more of the qualifiers described below may appear in this report.

**QUALITY CONTROL QUALIFIERS:**

<u>Qualifier</u>	<u>Description</u>
E20	Sample used as "parent" for the associated analytical batch.
%D3/S-01 / E1	Surrogate failed to recover within acceptance criteria (%D3/S-01). Results associated with this surrogate were qualified as "estimated" (E1).
B	Present in the Associated Blank
B1	Present in Blank, but Not In the Sample.
%D2 / E5	Laboratory Control Spike (LCS) and/or Laboratory Control Spike Duplicate (LCSD) failed to recover with acceptance criteria (%D2). Associated results were qualified as "estimated" (E5).
%D1	Matrix Spike (MS) and/or Matrix Spike Duplicate (MSD) failed acceptance criteria.
MBA	Failed criteria due the high concentration of analyte in the parent sample.
MBI	Failed criteria due an interference in the parent sample.
%D3	Quality Control Surrogate failed acceptance criteria.
NREC	Quality Control Surrogate failed.

**CALIBRATION QUALIFIERS:**

<u>Qualifier</u>	<u>Description</u>
CR	Result above highest calibration standard, but within linear calibration range.
Est3	Result at the instrument was above the concentration of the highest standard in the calibration curve.
E5	Second Source Verification Failure
E7	Internal Standard Response Failure
E11	Initial Calibration Minimum Response Factor Failure
E21	CCV Low
E-01	CCV High
E35	Low Level CCV Failure

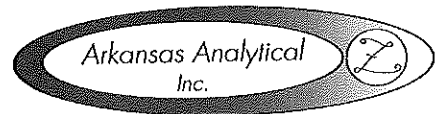
**SAMPLE RECEIPT QUALIFIERS:**

<u>Qualifier</u>	<u>Description</u>
ET	Samples received above required temperature.
ET	Samples received above required temperature. Although collected and received the same day, no ice was present to indicate the cooling preservation was attempted.
E2	Result qualified as it was received and analyzed outside of holding time. Analysis is considered a "Field" analysis.
E2	Result qualified as it was received and/or analyzed outside of holding time.
E3	Result qualified as it was received in the incorrect container and/or preservation.



04 January 2016

Chuck Jones  
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 1 Scroll Drive  
 Arkadelphia, AR 71923-8813  
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 Date Received: 09-Dec-15 17:18



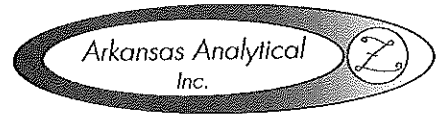
**ANALYTICAL RESULTS**

Lab Number: 1512167-01  
 Sample Name: Outfall 001 Grab  
 Date/Time Collected: 12/9/15 14:30  
 Sample Matrix: Water

<u>Acid Compounds</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
2,4,6-Trichlorophenol	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
2,4-Dichlorophenol	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
2,4-Dimethylphenol	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
2,4-Dinitrophenol	ug/L	< 50.0		12/10/15 17:03	A512131	625 (mod.)
2-Chlorophenol	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
2-Nitrophenol	ug/L	< 20.0		12/10/15 17:03	A512131	625 (mod.)
4-Chloro-3-methylphenol	ug/L	< 10.0	E20	12/10/15 17:03	A512131	625 (mod.)
4-Nitrophenol	ug/L	< 50.0		12/10/15 17:03	A512131	625 (mod.)
4,6-Dinitro-2-methylphenol	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
p-Chloro-m-cresol	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
Pentachlorophenol	ug/L	< 5.00		12/10/15 17:03	A512131	625 (mod.)
Phenol	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
2,4,6-Tribromophenol [surr]	%	93.7		12/10/15 17:03	A512131	625 (mod.)
2-Fluorophenol [surr]	%	55.9		12/10/15 17:03	A512131	625 (mod.)
Phenol-d5 [surr]	%	29.1		12/10/15 17:03	A512131	625 (mod.)
<u>Base/Neutral Compounds</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
1,2,4-Trichlorobenzene	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
1,2-Dichlorobenzene	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
1,2-Diphenyl Hydrazine	ug/L	< 20.0		12/10/15 17:03	A512131	625 (mod.)
1,3-Dichlorobenzene	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
1,4-Dichlorobenzene	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
2,3,7,8-TCDD Screen	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
2,4-Dinitrotoluene	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
2,6-Dinitrotoluene	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
2-Chloronaphthalene	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
3,3'-Dichlorobenzidine	ug/L	< 5.00		12/10/15 17:03	A512131	625 (mod.)
4-Bromophenyl-phenylether	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
4-Chlorophenyl-phenylether	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
Acenaphthene	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
Acenaphthylene	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
Anthracene	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
Ben-zidine	ug/L	< 50.0		12/10/15 17:03	A512131	625 (mod.)
Benzo[a]pyrene	ug/L	< 5.00		12/10/15 17:03	A512131	625 (mod.)
Benzo[b]fluoranthene	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
Benzo[g,h,i]perylene	ug/L	< 20.0		12/10/15 17:03	A512131	625 (mod.)
Benzo[k]fluoranthene	ug/L	< 5.00		12/10/15 17:03	A512131	625 (mod.)
Benzo (a) anthracene	ug/L	< 5.00		12/10/15 17:03	A512131	625 (mod.)
Bis(2-chloroethoxy)methane	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
Bis(2-chloroethyl)ether	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
Bis(2-chloroisopropyl)ether	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
Bis(2-ethylhexyl)phthalate	ug/L	10.1		12/10/15 17:03	A512131	625 (mod.)
Butylbenzylphthalate	ug/L	< 10.0		12/10/15 17:03	A512131	625 (mod.)
Chrysene	ug/L	< 5.00		12/10/15 17:03	A512131	625 (mod.)

This report must be reproduced in its entirety.

04 January 2016



Chuck Jones
Danfoss - Scroll Technologies
1 Scroll Drive
Arkadelphia, AR 71923-8813
Project: Effluent Sample
Project Number: December 2015
Date Received: 09-Dec-15 17:18

ANALYTICAL RESULTS

Lab Number: 1512167-01
Sample Name: Outfall 001 Grab
Date/Time Collected: 12/9/15 14:30
Sample Matrix: Water

Table with 7 columns: Base/Neutral Compounds, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Lists various compounds like Dibenzo[a,h]anthracene, Diethylphthalate, etc., with their respective results and analysis dates.

Table with 7 columns: Pesticides/PCBs, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Lists pesticides like Aldrin, alpha-BHC, gamma-BHC, etc., with their results and analysis dates.

04 January 2016



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ANALYTICAL RESULTS

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Sample Matrix: Water

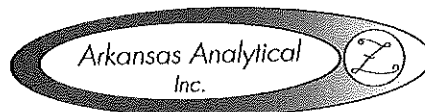
Table with 7 columns: Pesticides/PCBs, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Rows include Chlorpyrifos, Aroclor-1242, etc.

Table with 7 columns: Total Metals, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Rows include Arsenic, Cadmium, Chromium, etc.

Table with 7 columns: Volatiles, Units, Result, Qualifier(s), Date/Time Analyzed, Batch, Method. Rows include 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, etc.

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04 January 2016



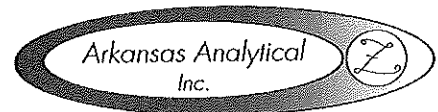
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Danfoss - Scroll Technologies  
1 Scroll Drive  
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**ANALYTICAL RESULTS**

Lab Number: 1512167-01  
Sample Name: Outfall 001 Grab  
Date/Time Collected: 12/9/15 14:30  
Sample Matrix: Water

<u>Volatiles</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
cis-1,3-Dichloropropene	ug/L	< 10.0	E3	12/10/15 11:06	A512111	624
Ethylbenzene	ug/L	< 10.0	E3	12/10/15 11:06	A512111	624
Methylene chloride	ug/L	< 20.0	E3	12/10/15 11:06	A512111	624
Tetrachloroethene	ug/L	< 10.0	E3	12/10/15 11:06	A512111	624
Toluene	ug/L	< 10.0	E3	12/10/15 11:06	A512111	624
trans-1,2-Dichloroethene	ug/L	< 10.0	E3	12/10/15 11:06	A512111	624
Trichloroethene	ug/L	< 10.0	E3	12/10/15 11:06	A512111	624
Vinyl chloride	ug/L	< 10.0	E3	12/10/15 11:06	A512111	624
trans-1,3-Dichloropropene	ug/L	< 10.0	E3	12/10/15 11:06	A512111	624
4-Bromofluorobenzene [surr]	%	94.3		12/10/15 11:06	A512111	624
1,2-Dichloroethane-d4 [surr]	%	105		12/10/15 11:06	A512111	624
Toluene-d8 [surr]	%	103		12/10/15 11:06	A512111	624
<u>Wet Chemistry</u>	<u>Units</u>	<u>Result</u>	<u>Qualifier(s)</u>	<u>Date/Time Analyzed</u>	<u>Batch</u>	<u>Method</u>
BOD-5	mg/L	22.4		12/10/15 10:00	A512136	5210 B-2001,Hach 10360
Cyanide (total)	mg/L	< 0.010		12/15/15 9:59	A512169	4500-CN B,E-1999
Oil and Grease	mg/L	10.8	E3	12/16/15 12:44	A512176	1664 Mod, Rev. B 2010
pH	S.U.	7.34		12/9/15 14:30	A512158	150.2-Dec.1982
Temperature	°C	24.0		12/9/15 14:30	A512158	2550B-2000
TSS	mg/L	25.0		12/14/15 16:00	A512165	2540 D-1997

04 January 2016



**Chuck Jones**  
**Danfoss - Scroll Technologies**  
**1 Scroll Drive**  
**Arkadelphia, AR 71923-8813**  
**Project: Effluent Sample**  
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**Date Received: 09-Dec-15 17:18**

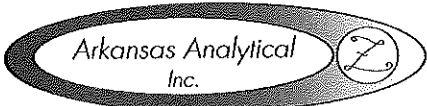
**QUALITY CONTROL RESULTS**

Volatiles -- Batch: A512111 (Water)

Prepared: 09-Dec-15 10:25 By: CT -- Analyzed: 10-Dec-15 10:41 By: ct

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
1,1,1-Trichloroethane	<10.0 ug/L	99.0% / NA	103% / 104%		0.974%	
1,1,2,2-Tetrachloroethane	<10.0 ug/L	92.0% / NA	99.9% / 108%		7.95%	
1,1,2-Trichloroethane	<10.0 ug/L	110% / NA	111% / 112%		1.31%	
1,1-Dichloroethane	<10.0 ug/L	102% / NA	106% / 112%		6.16%	
1,1-Dichloroethene	<10.0 ug/L	97.3% / NA	100% / 106%		5.63%	
1,2-Dichloroethane	<10.0 ug/L	107% / NA	108% / 114%		5.66%	
1,2-Dichloropropane	<10.0 ug/L	105% / NA	106% / 111%		4.96%	
2-Chloroethyl vinyl ether	<10.0 ug/L	110% / NA	106% / 118%		10.4%	
Acrolein	<50.0 ug/L	55.5% / NA	37.0% / 29.7%		22.0%	E21, E5
Acrylonitrile	<20.0 ug/L	115% / NA	124% / 129%		4.17%	
Benzene	<10.0 ug/L	96.8% / NA	105% / 108%		2.45%	
Bromodichloromethane	<10.0 ug/L	97.8% / NA	102% / 103%		1.04%	
Bromoform	<10.0 ug/L	105% / NA	105% / 106%		0.849%	
Bromomethane	<50.0 ug/L	122% / NA	119% / 123%		3.26%	
Carbon tetrachloride	<2.00 ug/L	101% / NA	104% / 107%		2.53%	
Chlorobenzene	<10.0 ug/L	111% / NA	110% / 106%		3.33%	
Chlorodibromomethane	<10.0 ug/L	100% / NA	107% / 101%		6.03%	
Chloroethane	<50.0 ug/L	109% / NA	113% / 126%		10.9%	
Chloroform	<10.0 ug/L	92.7% / NA	101% / 102%		0.924%	
Chloromethane	<50.0 ug/L	101% / NA	108% / 111%		2.56%	
cis-1,3-Dichloropropene	<10.0 ug/L	105% / NA	106% / 109%		2.51%	
Ethylbenzene	<10.0 ug/L	108% / NA	107% / 99.8%		6.53%	
Methylene chloride	<20.0 ug/L	92.3% / NA	89.0% / 98.8%		10.4%	
Tetrachloroethene	<10.0 ug/L	95.2% / NA	95.2% / 87.7%		8.22%	
Toluene	<10.0 ug/L	107% / NA	103% / 102%		0.429%	
trans-1,2-Dichloroethene	<10.0 ug/L	99.8% / NA	100% / 105%		5.13%	
trans-1,3-Dichloropropene	<10.0 ug/L	101% / NA	102% / 98.3%		3.32%	
Trichloroethene	<10.0 ug/L	96.5% / NA	95.4% / 99.0%		3.66%	
Vinyl chloride	<10.0 ug/L	108% / NA	114% / 117%		2.22%	
1,2-Dichloroethane-d4 [surr]	113 %	105% / NA	108% / 111%		NA	
4-Bromofluorobenzene [surr]	93.6 %	91.1% / NA	97.8% / 96.1%		NA	
Toluene-d8 [surr]	106 %	105% / NA	106% / 99.0%		NA	

04 January 2016



Chuck Jones  
 Danfoss - Scroll Technologies  
 1 Scroll Drive  
 Arkadelphia, AR 71923-8813  
 Project: Effluent Sample  
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 Date Received: 09-Dec-15 17:18

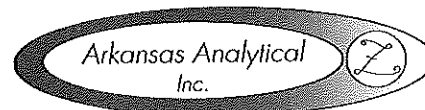
**QUALITY CONTROL RESULTS**

Base/Neutral Compounds -- Batch: A512131 (Water)

Prepared: 09-Dec-15 13:49 By: KR -- Analyzed: 10-Dec-15 16:21 By: KR

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
1,2,4-Trichlorobenzene	<10.0 ug/L	77.8% / NA	46.2% / 49.3%		6.43%	
1,2-Dichlorobenzene	<10.0 ug/L	79.0% / NA	50.2% / 49.2%		1.96%	
1,2-Diphenyl Hydrazine	<10.0 ug/L	93.4% / NA	56.6% / 55.3%		2.37%	
1,3-Dichlorobenzene	<10.0 ug/L	77.1% / NA	50.3% / 48.5%		3.58%	
1,4-Dichlorobenzene	<10.0 ug/L	82.7% / NA	51.3% / 49.9%		2.74%	
2,4,6-Trichlorophenol	<10.0 ug/L	76.4% / NA	49.8% / 48.2%		3.28%	
2,4-Dichlorophenol	<10.0 ug/L	89.9% / NA	52.9% / 57.5%		8.30%	
2,4-Dimethylphenol	<10.0 ug/L	84.8% / NA	47.5% / 53.2%		11.3%	%D1
2,4-Dinitrophenol	<10.0 ug/L	98.3% / NA	62.2% / 56.4%		7.57%	
2,4-Dinitrotoluene	<10.0 ug/L	89.3% / NA	62.1% / 54.5%		13.0%	
2,6-Dinitrotoluene	<10.0 ug/L	102% / NA	59.4% / 57.2%		3.72%	
2-Chloronaphthalene	<10.0 ug/L	94.0% / NA	51.7% / 54.7%		5.56%	
2-Chlorophenol	<10.0 ug/L	92.6% / NA	52.5% / 52.7%		0.357%	
2-Nitrophenol	<10.0 ug/L	83.5% / NA	52.0% / 58.7%		11.9%	
3,3'-Dichlorobenzidine	<5.00 ug/L	156% / NA	118% / 93.5%		23.0%	
4,6-Dinitro-2-methylphenol	<10.0 ug/L	94.9% / NA	69.7% / 61.8%		11.0%	
4-Bromophenyl-phenylether	<10.0 ug/L	97.6% / NA	58.1% / 57.7%		0.708%	
4-Chloro-3-methylphenol	<10.0 ug/L	90.1% / NA	54.5% / 55.9%		2.50%	%D1
4-Chlorophenyl-phenylether	<10.0 ug/L	97.5% / NA	53.0% / 52.0%		1.95%	
4-Nitrophenol	<10.0 ug/L	62.7% / NA	43.0% / 38.2%		11.7%	
Acenaphthene	<10.0 ug/L	95.0% / NA	52.8% / 53.2%		0.765%	
Acenaphthylene	<10.0 ug/L	97.5% / NA	52.0% / 55.2%		5.89%	
Anthracene	<10.0 ug/L	100% / NA	68.3% / 64.7%		5.41%	
Benzidine	<10.0 ug/L	57.6% / NA	50.8% / 34.9%		37.0%	D
Benzo (a) anthracene	<5.00 ug/L	101% / NA	82.6% / 71.4%		14.5%	
Benzo[a]pyrene	<5.00 ug/L	92.2% / NA	74.6% / 60.1%		21.6%	
Benzo[b]fluoranthene	<10.0 ug/L	95.6% / NA	76.6% / 62.9%		19.7%	
Benzo[g,h,i]perylene	<10.0 ug/L	91.7% / NA	85.1% / 68.8%		21.2%	
Benzo[k]fluoranthene	<5.00 ug/L	99.4% / NA	76.9% / 60.4%		24.1%	
Bis(2-chloroethoxy)methane	<10.0 ug/L	90.3% / NA	51.4% / 53.6%		4.23%	
Bis(2-chloroethyl)ether	<10.0 ug/L	93.6% / NA	53.6% / 51.6%		3.84%	
Bis(2-chloroisopropyl)ether	<10.0 ug/L	94.3% / NA	53.1% / 51.9%		2.30%	
Bis(2-ethylhexyl)phthalate	<10.0 ug/L	107% / NA	79.9% / 69.1%		14.5%	
Butylbenzylphthalate	<10.0 ug/L	110% / NA	87.6% / 71.0%		20.9%	
Chrysene	<5.00 ug/L	100% / NA	85.3% / 70.3%		19.3%	
Dibenz[a,h]anthracene	<5.00 ug/L	90.8% / NA	75.6% / 59.8%		23.3%	
Diethylphthalate	<10.0 ug/L	96.0% / NA	64.1% / 55.9%		13.5%	
Dimethylphthalate	<10.0 ug/L	99.0% / NA	57.2% / 56.4%		1.40%	
Di-n-butylphthalate	<10.0 ug/L	103% / NA	80.4% / 64.7%		21.6%	
Di-n-octylphthalate	<10.0 ug/L	93.2% / NA	73.4% / 59.6%		20.7%	E21
Fluorene	<10.0 ug/L	91.7% / NA	50.1% / 51.2%		2.19%	
Hexachlorobenzene	<5.00 ug/L	85.0% / NA	60.2% / 59.5%		1.18%	
Hexachlorobutadiene	<10.0 ug/L	73.5% / NA	49.0% / 49.7%		1.33%	
Hexachlorocyclopentadiene	<10.0 ug/L	76.5% / NA	41.0% / 39.5%		3.72%	
Hexachloroethane	<10.0 ug/L	75.6% / NA	47.9% / 48.0%		0.187%	
Indeno[1,2,3-cd]pyrene	<5.00 ug/L	90.7% / NA	76.2% / 62.4%		19.9%	
Isophorone	<10.0 ug/L	84.7% / NA	48.6% / 51.3%		5.49%	
Naphthalene	<10.0 ug/L	83.6% / NA	51.6% / 56.6%		9.16%	

04 January 2016



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**QUALITY CONTROL RESULTS**

**Base/Neutral Compounds -- Batch: A512131 (Water)**

Prepared: 09-Dec-15 13:49 By: KR -- Analyzed: 10-Dec-15 16:21 By: KR

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Nitrobenzene	<10.0 ug/L	88.5% / NA	54.6% / 57.7%		5.44%	
N-Nitrosodimethylamine	<10.0 ug/L	62.7% / NA	36.2% / 36.9%		1.98%	
N-Nitroso-di-n-propylamine	<10.0 ug/L	0.250% / NA	52.8% / 51.2%		2.77%	
N-Nitrosodiphenylamine/diphenylamine	<10.0 ug/L	99.0% / NA	66.1% / 61.7%		6.91%	
Pentachlorophenol	<5.00 ug/L	118% / NA	88.3% / 71.2%		19.0%	
Phenanthrene	<10.0 ug/L	97.1% / NA	69.9% / 61.2%		13.3%	
Phenol	<10.0 ug/L	53.7% / NA	29.8% / 31.2%		4.60%	
Pyrene	<10.0 ug/L	99.3% / NA	78.9% / 61.9%		24.1%	
2,4,6-Tribromophenol [surr]	92.5 %	103% / NA	72.7% / 63.5%		NA	
2-Fluorobiphenyl [surr]	83.1 %	88.2% / NA	48.2% / 48.7%		NA	
2-Fluorophenol [surr]	63.8 %	65.6% / NA	34.0% / 35.7%		NA	
Nitrobenzene-d5 [surr]	89.9 %	86.4% / NA	54.9% / 58.5%		NA	
Phenol-d5 [surr]	44.2 %	48.3% / NA	26.6% / 27.9%		NA	
Terphenyl-d14 [surr]	90.9 %	94.3% / NA	76.3% / 65.1%		NA	

**Wet Chemistry -- Batch: A512136 (Water)**

Prepared: 10-Dec-15 10:00 By: TA -- Analyzed: 10-Dec-15 10:00 By: TA

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
BOD-5	<2.00 mg/L	100% / 103%	NA / NA		2.49%	

**Total Metals -- Batch: A512137 (Water)**

Prepared: 10-Dec-15 10:00 By: HF -- Analyzed: 11-Dec-15 11:56 By: HF

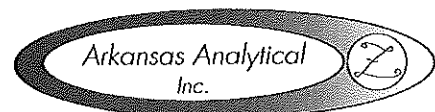
Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Arsenic	<0.0104 mg/L	102% / NA	110% / 113%		2.72%	
Cadmium	<0.000520 mg/L	105% / NA	109% / 112%		2.91%	
Chromium	<0.0104 mg/L	105% / NA	113% / 118%		2.63%	
Copper	<0.00520 mg/L	100% / NA	112% / 120%		3.05%	
Lead	<0.0156 mg/L	104% / NA	106% / 110%		3.19%	
Manganese	<0.0104 mg/L	106% / NA	108% / 111%		3.08%	
Nickel	<0.0104 mg/L	105% / NA	110% / 115%		2.88%	
Silver	<0.0208 mg/L	97.2% / NA	94.6% / 96.8%		2.26%	
Zinc	<0.00520 mg/L	102% / NA	109% / 112%		2.19%	

**Wet Chemistry -- Batch: A512165 (Water)**

Prepared: 14-Dec-15 16:00 By: TA -- Analyzed: 14-Dec-15 16:00 By: TA

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
TSS	<1.00 mg/L	99.0% / 97.0%	NA / NA		2.04%	

04 January 2016



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**QUALITY CONTROL RESULTS**

**Wet Chemistry -- Batch: A512169 (Water)**

Prepared: 14-Dec-15 13:06 By: JB -- Analyzed: 15-Dec-15 09:59 By: JB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Cyanide (total)	<0.010 mg/L	79.0% / 85.3%	96.0% / NA		7.71%	

**Wet Chemistry -- Batch: A512176 (Water)**

Prepared: 15-Dec-15 15:13 By: JB -- Analyzed: 16-Dec-15 12:44 By: JB

Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
Oil and Grease	<3.50 mg/L	94.6% / 96.1%	86.2% / NA		1.57%	

**Pesticides/PCBs -- Batch: A512362 (Water)**

Prepared: 14-Dec-15 09:44 By: MB -- Analyzed: 28-Dec-15 16:08 By: mb

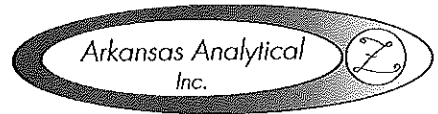
Analyte	BLK	LCS / LCSD	MS / MSD	Dup	RPD	Qualifiers
4,4'-DDD	<0.100 ug/L	125% / NA	119% / 109%		9.04%	E-01
4,4'-DDE	<0.100 ug/L	107% / NA	108% / 97.5%		9.76%	
4,4'-DDT	<0.020 ug/L	105% / NA	98.8% / 88.2%		11.4%	
Aldrin	<0.010 ug/L	66.1% / NA	49.9% / 43.7%		13.3%	
alpha-BHC	<0.050 ug/L	75.7% / NA	60.8% / 52.7%		10.9%	
beta-BHC	<0.050 ug/L	106% / NA	102% / 99.2%		3.09%	
delta-BHC	<0.050 ug/L	90.7% / NA	79.6% / 74.4%		6.69%	
Dieldrin	<0.020 ug/L	76.8% / NA	67.5% / 60.5%		11.0%	D
Endosulfan I	<0.010 ug/L	78.5% / NA	77.0% / 68.3%		11.8%	D, E21
Endosulfan II	<0.020 ug/L	81.2% / NA	79.0% / 69.8%		12.4%	D
Endosulfan sulfate	<0.100 ug/L	90.2% / NA	80.6% / 67.5%		15.5%	E-01
Endrin	<0.020 ug/L	104% / NA	100% / 89.9%		10.7%	D, E-01
Endrin aldehyde	<0.100 ug/L	100% / NA	90.6% / 68.6%		23.6%	E21
gamma-BHC (Lindane)	<0.050 ug/L	73.8% / NA	64.9% / 57.3%		12.5%	
Heptachlor	<0.010 ug/L	65.8% / NA	50.1% / 44.0%		13.1%	
Heptachlor epoxide	<0.010 ug/L	78.4% / NA	73.6% / 64.5%		12.5%	
DCBP [surr]	83.5 %	65.7% / NA	67.4% / 51.9%		NA	
TCMX [surr]	60.0 %	59.4% / NA	46.9% / 37.5%		NA	

**QUALIFIER(S)**

- \*%D1: Matrix Spike and/or Matrix Spike Duplicate Percent Recovery Does Not Meet Laboratory Acceptance Criteria
- \*D: RPD Value Does Not Meet Laboratory Acceptance Criteria
- \*E-01: Estimated Result; This Analyte Failed "High" in the CCV; If the sample is non-detect for this analyte, the CCV demonstrated the analyte would have been detected were it present.
- \*E20: Estimated Result Due to Matrix Spike and/or Matrix Spike Duplicate Failure; This sample was used as the "parent sample" in MS/MSD prep.
- \*E21: Estimated Result; This Analyte failed (low) in the CCV.
- \*E3: Estimated Result Due to Incorrect Sample Preservation or Container
- \*E5: Estimated Result Due to Quality Control Failure



04 January 2016

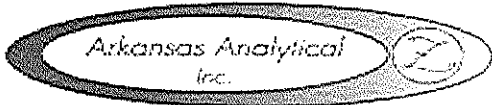


Chuck Jones  
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All Analysis performed according to EPA approved methodology when available :  
SW 846, Revised December, 1996; EPA 600/4-79-020, Revised March, 1983; Standard Methods.  
Instrument calibration and quality control samples performed at or above frequency specified in analytical method.

Reviewed by: Norma James / Teresa Coins  
Norma James and/or Teresa Coins  
Technical Director and/or QA Officer



8100 NATIONAL DRIVE, LITTLE ROCK, AR 72209  
 501-455-3233  
 FAX 501-455-6118

**CHAIN OF CUSTODY RECORD**

TURN AROUND TIME  
 RUSH 24HR. 48 HR.  
 5 DAY REG  
 OTHER \_\_\_\_\_

FOR LAB/OFFICE USE ONLY

LAB # \_\_\_\_\_

CLIENT # \_\_\_\_\_

P.O.# \_\_\_\_\_

STANDARD METHODS PRESERVATION PER EPA 40 CFR

C4= COOL TO 4.C  
 S<2= SULFURIC ACID TO pH<2  
 N<2= NITRIC ACID TO pH<2  
 T= THIOSULFATE FOR DECHLORINATION  
 W= WINKLER AZIDE MODIFICATION  
 P= MEMBRANE ELECTRODE  
 NaOH= pH >12

15111cas

NAME OF COMPANY, CITY, OR PROJECT

PROJECT NO:

SAMPLER(S) NAME (PRINT)

Dan Foss

Industrial wastewater

*Randy P...*

SAMPLE NO:	SAMPLE ID AND/OR COLLECTION LOCATION	START	END	COMP	FIELD ANALYSIS				D.O (W)	CONTAINER TYPE	ANALYSIS REQUIRED
		DATE/TIME	DATE/TIME	GRAB	pH	TEMP	FLOW	CL2	D.O(P)	PRESERVATIVE	
	Outfall 001	12/9/15	1/4/30	C						1/4 Gal C4	1512167-
				C						2 ATC C4	TTO-BNA, Pest
				C						(4)50 ml vial C4	TTO VOL - 0
				G						50 ml vial P N<2	As,Cd,Cr,Cu,Pb,Mn,Ni,Ag,Zn
				G						1L ATC S<2	O/G
				G						500 mL P NaOH	CN-
				G	7.34	24.				On site	pH, temp
METHOD OF SHIPMENT (CIRCLE)		FIELD CALIBRATION RECORD			NOTES/COMMENTS/OBSERVATIONS						
FED EX WALK IN AA UPS OTHER					All containers at C4 One Scroll Drive Arkadelphia AR 71923 Chuck Jones Phone 870 246-0714						
Calibration record		pH 7	7.00	700	12/9/15						
		pH 4	4.01	601							
TYPE OF SAMPLE(S): (CIRCLE)		pH 10	10.00	1000	1/4/30						
WATER SOIL W/W SLUDGE OTHER		D.O				FIELD ANALYSIS CONDUCTED BY: (CIRCLE) AA CLIENT					

	Yes	No
Custody Seals:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Containers Correct:	<input type="checkbox"/>	<input type="checkbox"/>
COC/Labels Agree:	<input type="checkbox"/>	<input type="checkbox"/>
Received on Ice:	<input type="checkbox"/>	<input type="checkbox"/>
Temperature on Receipt:	1°C	
Temperature Gun ID:	HHT # 2	

RELINQUISHED BY: *[Signature]* DATE/TIME: 12.9.15-  
 RECEIVED BY: \_\_\_\_\_ DATE/TIME: \_\_\_\_\_  
 RELINQUISHED BY: \_\_\_\_\_ DATE/TIME: \_\_\_\_\_  
 RECEIVED BY: \_\_\_\_\_ DATE/TIME: \_\_\_\_\_  
 RELINQUISHED BY: \_\_\_\_\_ DATE/TIME: \_\_\_\_\_  
 RECEIVED BY (LAB): *Stanley James* DATE/TIME: 12.9.15, 1718

Incorrect Container/Preservation  
 Incorrect container and/or preservation  
 for Volatiles analysis(es).  
 Data will be qualified.  
 Headspace - ⊗