

Gage, Hannah

From: Gilliam, Allen
Sent: Friday, February 05, 2016 3:22 PM
To: Arkadelphia - Brenda Gills
Cc: 'cjohnson@crisengineers.com'; Gage, Hannah; 'jeremy.bohlen@gapac.com'
Subject: AR0020605_Arkadelphia accepting or denying Georgia Pacific kiln condensate_20160205
Attachments: Arkadelphia and Georgia Pacific South kiln condensate.pdf

Brenda,

First and foremost to be clear, ADEQ cannot make the decision ("give permission") for Arkadelphia to accept or deny GP's kiln condensate. This decision rests solely with appropriate City officials.

On behalf of Georgia Pacific (GP) Christ Engineers (Craig Johnson, P.E.) has submitted the facility's kiln process description, wastewater/product flow schematics and a priority pollutant scan (PPS). (see attachment)

Kiln condensate is not regulated under the Federal Effluent Guideline - Timber Products Processing category (40 CFR 429) @ <http://www.ecfr.gov/cgi-bin/text-idx?SID=610ff1a11fa7c5c89c0bdd3ed9c37c48&mc=true&node=pt40.30.429&rgn=div5> ; therefore, there are no indirect discharge standards to comply with.

In this office's opinion, based on the condensate's sump wastewater PPS (volatiles/acid extractables/base neutrals/pesticides - all being non-detect) and the below, there should be no adverse effect on/or upset to the City's wastewater treatment plant's processes. Other basis include:

- 1) According to this office's files, the City is currently receiving Metal Finishing wastewater at ~three (3) times the average reported flow (~20,000 gpd) of the proposed kiln condensate's volume (6,000 gpd - to be trucked in as necessary);
- 2) The Metal Finisher's wastewater analyticals show somewhat similar average concentrations for all the toxic metals in the kiln's wastewater and
- 3) The City's estimated dry weather flow (worst case scenario) fluctuates around 1 MGD; therefore, the additional 6,000 gpd from GP's kiln condensate would more than likely not even be "seen" (analytically) at the City wastewater treatment plant's influent.

This opinion in no way is to be construed as encouragement for the City to accept GP's kiln condensate. Again, the decision to accept or deny the kiln's condensate is solely at the City's discretion.

If the decision is made by the City of Arkadelphia to accept (as necessary) GP's kiln condensate, the below is required by CFR 403 Federal Pretreatment Regulations, the City's NPDES permit or suggested:

- 1) Under 40 CFR 403.5(b)(2), "[the following pollutants shall not be introduced into a POTW (publicly owned treatment works)]: Pollutants which will cause corrosive structural damage to the POTW, but in no case Discharges with pH lower than 5.0...". It was noticed the pH of the kiln's condensate was 4.54 s.u. and would have to be neutralized. The City would have to establish an upper pH limit;
- 2) Under Arkadelphia's NPDES #AR0020605, Page 3 of Part II, paragraph 7.C., "The permittee shall provide adequate notice to the Department of the following: (1) any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 or 306 of the Act if it were directly discharging those pollutants; (2) any substantial change in the volume or character of pollutants being

introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit; and (3) Any notice shall include information on (i) the quality and quantity of effluent to be introduced into the treatment works, and (ii) any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.”

- 3) For both entities regulatory “good faith efforts” a toxicity characteristic leaching procedure (TCLP per method 1311) should be conducted to have documentation the trucked condensate is not hazardous waste. This may seem overkill since the reported PPS analyticals are well below those listed in 40 CFR 261.24 (http://www.ecfr.gov/cgi-bin/text-idx?SID=c00ed7f9e1ecd8ec5cdf827d97709e1&mc=true&node=pt40.26.261&rgn=div5#se40.26.261_124), but the PPS analytical methods per 40 CFR 136 are not the same as those conducted for a TCLP (as this office is certain neither entity wants to assume a Hazardous Waste Transportation, Storage or Disposal Facility [TSDF] permit);
- 4) If the condensate is accepted by the City, a requirement for GP should be established for submittal of a periodic certification statement similar to, “I certify under penalty of law that GP’s kiln wastewater has no additional chemicals added to it and its characteristics are similar to those reported to ADEQ and the City of Arkadelphia on January 28, 2016. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowingly submitting false documents.” signed by an authorized representative of GP; and
- 5) Some form of control document “to discharge” should be requested by GP outlining any City local limits (pH, O&G, TSS, BOD, etc), reporting requirements, etc.

If there are further comments or concerns please feel free to contact this office.

Sincerely,

Allen Gilliam
ADEQ State Pretreatment Coordinator
501.682.0625

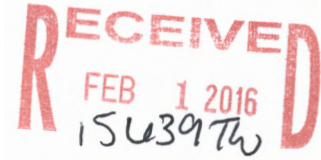
ec: Craig Johnson, P.E., Christ Engineers Associate
Jeremy Bohlen, Georgia-Pacific Wood Products South LLC, Complex Environmental Manager

E/NPDES/NPDES/Pretreatment/Reports



205 Executive Court
Little Rock, Arkansas 72205
Telephone (501) 664-1552
Fax (501) 664-8579
www.cristengineers.com
January 28, 2016

Stewart W. Noland
Leslie B. Price
Matthew D. Dunn
Richard W. Zelnick
Craig A. Johnson



Mr. Allen Gilliam
ADEQ
State Pretreatment Coordinator
5301 Northshore Drive
North Little Rock, AR 72118-5317

RE: City of Arkadelphia
Georgia-Pacific Wood Products Discharge

Dear Allen:

Please find attached correspondence from Georgia Pacific Wood Products South (GP) requesting permission to discharge kiln condensate to the City of Arkadelphia's wastewater treatment system. Attached is the original correspondence provided by GP dated November 30, 2015, and the follow-up email dated January 7, 2016, which was requested based upon our conversation the first week of January.

As noted, the GP request is for a redundant measure should their primary discharge source become unavailable. Therefore, the discharge would be a batch (tanker) discharge to the system. However, the City of Arkadelphia has a means through their current treatment process to equalize the discharge to the treatment system.

Of course, appropriate notification can be provided to the Department should their discharge be accepted to the treatment system.

Please provide any particular requirements necessary for the City of Arkadelphia to accept the GP discharge.

Should you have any questions regarding this request please don't hesitate to contact me.

Sincerely,
Crist Engineers, Inc.

A handwritten signature in blue ink that reads "Craig A. Johnson, P.E." The signature is written in a cursive style and is enclosed in a light blue rectangular box.

Craig A. Johnson, P.E.
Associate

Enclosures: November 30, 2015 Correspondence
January 7, 2016 Correspondence

Cc: Brenda Gills, Manager Water and Wastewater Utilities

Craig Johnson

From: Bohlen, Jeremy <Jeremy.Bohlen@gapac.com>
Sent: Thursday, January 07, 2016 9:26 AM
To: Craig Johnson
Cc: Stewart Noland; 'Brenda Gills'
Subject: RE: GP Wood Product South - Wastewater Additional Information
Attachments: Lumber PFD.pdf; CDK PFD.jpeg

Craig:

Further information is given below in red.

Let me know if you need anything else.

Thanks.

Jeremy Bohlen

Complex Environmental Manager
Georgia-Pacific Wood Products South LLC
No. 1 GP Lane
Gurdon, AR 71743
Office: (870) 353-4474 x535216
Mobile: (870) 353-7088
Fax: (870) 353-5339

From: Craig Johnson [mailto:cjohnson@cristengineers.com]
Sent: Tuesday, January 05, 2016 9:42 AM
To: Bohlen, Jeremy
Cc: Stewart Noland; Brenda Gills
Subject: GP Wood Product South - Wastewater Additional Information

Sent by an external sender

Jeremy – Thanks for visiting with me by phone. Outlined below is some additional information required to further process your request for the City of Arkadelphia to receive your process water. If you have any questions, please don't hesitate to contact me. My contact information is included.

1. Comprehensive detailed process narrative of the indirect-fired continuous kiln process with a process flow diagram. Please include any chemicals or additives utilized in the process and the location where they are introduced. Please indicate the chemical composition of the material rather than the trade name. Please provide MSDS informational sheets for each chemical utilized.

The continuous kiln consists of a long chamber with a heated inner chamber in the center. The inner chamber is heated by the exhaust from a natural gas-fired process heater (this process heater has the capability to fire sawdust, but is currently not permitted to do so under the facility's Title V air permit).

Stacks of rough, green lumber enter the kiln from either end on two sets of tracks. Dried lumber stacks exiting the heated inner chamber cool in the outer chamber while pre-heating the adjacent green lumber stack moving the opposite direction into heated inner chamber. This cooling/pre-heating process occurs on both sides of the kiln as stacks of lumber are continuously being slowly pushed in.

Process waste water is generated from lumber drying by evaporating the moisture that naturally occurs in the Southern Yellow Pine wood that is processed by the mill (no other wood species are processed) and any additional water that is created as a product of natural gas combustion. No chemicals are used in the drying process.

An overall process flow diagram for the entire lumber process is attached as well as a more detailed process flow diagram for the continuous direct-fired kiln itself.

2. Indicate the date when this process began or when you intend to commence discharging condensate or the circumstance where you would discharge to the City of Arkadelphia should the primary discharge recipient be unavailable.

Initial start-up of the new continuous kiln is slated for late February 2016.

The facility would discharge to the City of Arkadelphia POTW if there were a rupture of our wastewater line going to the City of Gurdon POTW or if the City of Gurdon POTW were to go offline for some reason.

3. The letter indicates a discharge of 6,000 gallons per day. How is the condensate discharged to the POTW? Batch process, continuous, intermittent, through an 8-hour periods, 12-hour period, etc. If the process is batched or intermittent discharge, please indicate the maximum discharge volume for such batch or intermittent discharge.

The discharge is generated on a continuous basis, but would be collected at the facility and trucked to the City of Arkadelphia POTW as a batch. It would not be piped to the City of Arkadelphia POTW.

Thank you for addressing these additional questions.

Craig A. Johnson, P.E.
Associate Engineer
Crist Engineers, Inc.
205 Executive Court
Little Rock, AR 72205
V: 501.664.1552 F: 501.664.8579
C: 501.993.2922
E: cjohnson@cristenengineers.com
www.cristengineers.com

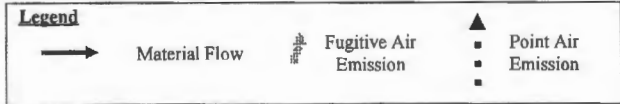
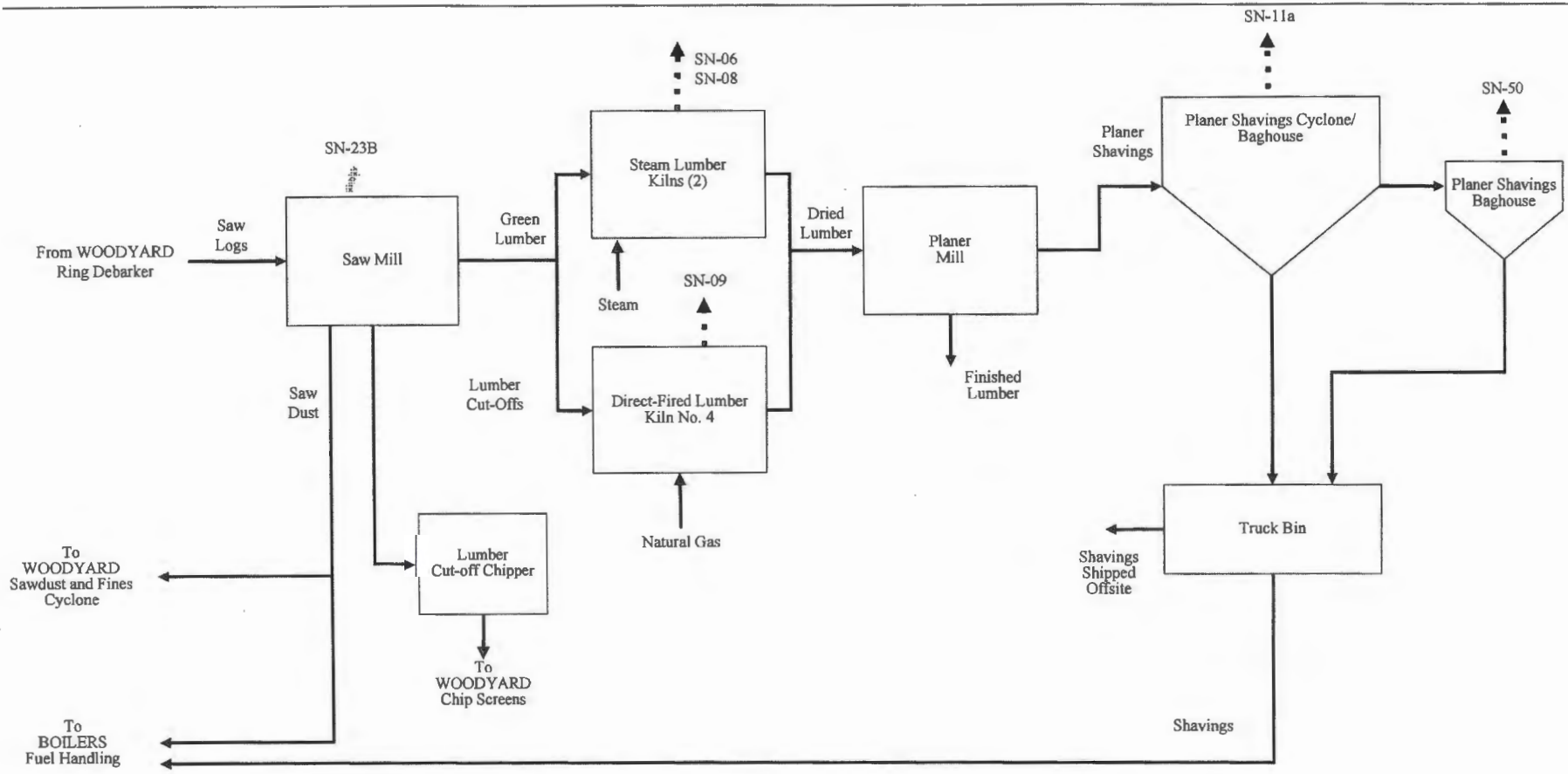
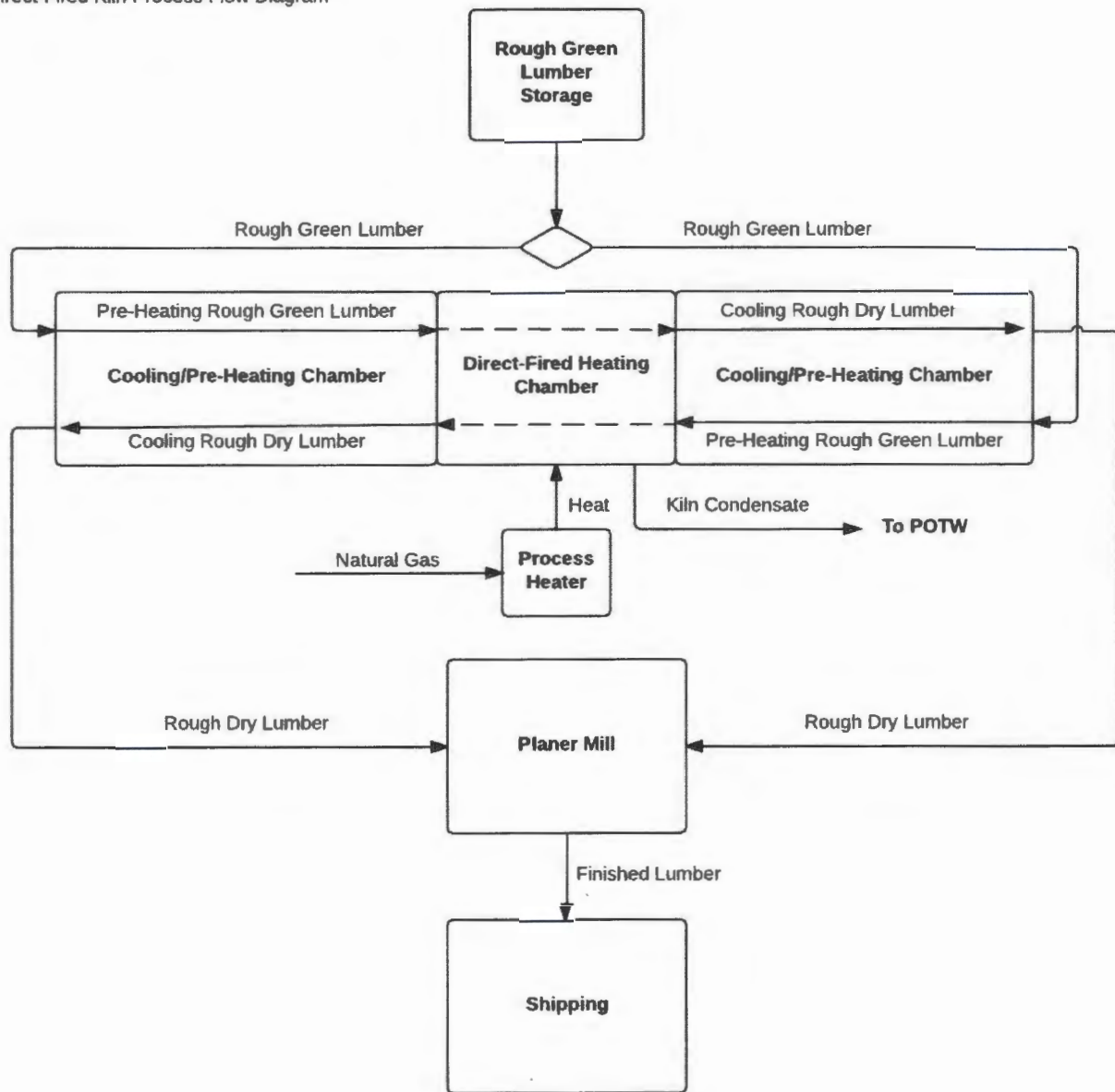


Figure 2 of 4
LUMBER - Process Flow Diagram
 Georgia-Pacific Wood Products, LLC - Gurdon Plywood
 December 2015





**Georgia-Pacific
Wood Products South LLC**

Georgia-Pacific Gurdon Plywood
and Lumber Complex
#1 GP Lane,
Gurdon, Arkansas
Telephone (870) 353-4474
Fax (870) 353-5339

November 30, 2015

Ms. Brenda Gills
Utilities Manager
City of Arkadelphia
PO Box 495
Arkadelphia, AR 71923

Re: Priority Pollutant Scan and Other Analyses
Georgia-Pacific Wood Products South LLC
Gurdon Plywood and Lumber Complex

Dear Ms. Gills:

Please find enclosed an ADEQ Priority Pollution Scan (PPS) form and supporting documentation for kiln condensate discharge from Georgia-Pacific Wood Products South LLC – Gurdon Plywood and Lumber Complex's (GP) indirect-fired continuous kiln. In the event that GP is not able to discharge its kiln condensate to the local POTW, the facility would like the option of disposing of that process water at the City of Arkadelphia's POTW.

In addition to the analyses required by the PPS, other requested analyses and waste water generation rate estimates requested are summarized in the table below:

Parameter	Result
BOD ₅	<2.0 mg/L
TSS	85.00 mg/L
TKN	32.48 mg/L
NH ₃ -N	6.71 mg/L
pH	4.5 S.U.
Total Phosphorus	14.10 mg/L
Hardness (as CaCO ₃)	124.0 mg/L
Estimated Daily Volume	6,000 gal/day
Estimated Monthly Volume	186,000 gal/mo
Temperature	51.8 °C

The analytical data shown above can be found in the attached laboratory report.

We appreciate the City's cooperation regarding this matter. If you have any questions, please do not hesitate to contact Pat Miller, Regional Environmental Manager – Lumber Division, at (936) 829-1427, or Jeremy Bohlen, Complex Environmental Manager, at (870) 353-4474 x535216.

Sincerely,

A handwritten signature in black ink, appearing to read 'TR', is positioned below the word 'Sincerely,'.

Todd Robinson
Lumber Mill Manager

Attachments: Attachment A – Priority Pollutant Scan
Attachment B – Laboratory Results
Attachment C – Chain of Custody
Attachment D – Field Testing Results
Attachment E – Detection Levels for Metals Analyses

Attachment A

Priority Pollutant Scan

ARKANSAS Department of Environmental Quality
PPS REQUIREMENTS

1. Name of facility:

Georgia-Pacific Wood Products South LLC - Gurdon Lumber and Plywood Complex

2. Name, address and telephone number of laboratory:

Environmental Services Company, Inc.

13715 West Markham, Little Rock, AR 72211 (main office); (501) 221-2565

3. Is the lab certified by the State of Arkansas? Yes No

4. What are the certification dates?

Issued date July 1, 2015 Expire date July 1, 2016

5. Is the laboratory certified for all the parameters?

YES No (Explain)

6. Date and time of samples collected:

September 8, 2015; 2:53 pm through 3:45 pm

7. Date and time samples were received in the laboratory:

September 9, 2015; 2:25 pm

8. Sample location (Outfall No.):

Continuous indirect-fired kiln condensate collection sump

9. Samples collected by:

Name Jeremy Bohlen

Title Complex Environmental Manager

Telephone (870) 353-4474 x535216

10. I certify under penalty of law that 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 submitted is, to the best of my knowledge and belief, 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.

Todd Robinson Lumber Mill Manager
Printed Name of person signing Title

 _____
Signature Date signed

List all attachments to this form:

A - Laboratory Results; B - Chain of Custody; C - Field Testing Results;

D - Detection Levels for Metals Analyses

METALS AND CYANIDE	LABORATORY ANALYSIS			REQUIRED MQL (µg/l)
	RESULTS (µg/l)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/l)	
1. Antimony (Total), Recoverable	4.00	EPA 200.8	1	60
2. Arsenic (Total), Recoverable	ND	EPA 200.8	0.5	0.5
3. Beryllium (Total), Recoverable	1.00	EPA 200.8	0.5	0.5
4. Cadmium (Total), Recoverable	2.00	EPA 200.8	0.1	0.5
5. Chromium (Total), Recoverable	5.00	EPA 200.8	1	10
7. Chromium (6+), Dissolved	ND	SM 3500- Cr B	10	10
8. Copper (Total), Recoverable	57.00	EPA 200.8	0.5	0.5
9. Lead (Total), Recoverable	5.00	EPA 200.8	0.5	0.5
10. Mercury (Total), Recoverable	ND	EPA 245.7	0.0005	0.0005
12. Nickel (Total), Recoverable	25.00	EPA 200.8	0.5	0.5
13. Selenium (Total), Recoverable	ND	EPA 200.8	5	5
14. Silver (Total), Recoverable	2	EPA 200.8	0.5	0.5
15. Thallium (Total), Recoverable	2.00	EPA 200.8	0.5	0.5
16. Zinc (Total), Recoverable	482.00	EPA 200.8	1	20
129. Phenols, Total Recoverable	ND	EPA 420.1	5	5
17. Cyanide (Total), Recoverable	ND	4500-CN F	10	10

DIOXIN	LABORATORY ANALYSIS			REQUIRED MQL (µg/l)
	RESULTS (µg/l)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/l)	
18. 2,3,7,8-Tetrachloro-debenzo-p-dioxin (TCDD)	ND	EPA 625	0.00001	0.00001

VOLATILE COMPOUNDS	LABORATORY ANALYSIS			REQUIRED MQL (µg/l)
	RESULTS (µg/l)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/l)	
19. Acrolein	ND	EPA 624	10.53	50
20. Acrylonitrile	ND	EPA 624	4.82	20
21. Benzene	ND	EPA 624	0.45	10
22. Bromoform	ND	EPA 624	2.53	10
23. Carbon Tetrachloride	ND	EPA 624	0.57	2
24. Chlorobenzene	ND	EPA 624	0.58	10
25. chlorodibromomethane	ND	EPA 624	0.71	10
26. chloroethane	ND	EPA 624	1.24	50
27. 2-chloroethyl vinyl ether	ND	EPA 624	8.30	10
28. chloroform	ND	EPA 624	0.72	10
29. Dichlorobromomethane	ND	EPA 624	0.55	10
30. 1,1-Dichloroethane	ND	EPA 624	2.35	10
31. 1,2-Dichloroethane	ND	EPA 624	2.16	10
32. 1,1-Dichloroethylene	ND	EPA 624	1.73	10
33. 1,2-Dichloropropane	ND	EPA 624	2.65	10
34. 1,3-Dichloropropylene	ND	EPA 624	0.34	10
35. Ethylbenzene	ND	EPA 624	0.18	10
36. Methyl Bromide [Bromomethane]	ND	EPA 624	1.04	50
37. Methyl chloride [chloromethane]	ND	EPA 624	0.65	50
38. Methylene chloride	ND	EPA 624	2.51	20
39. 1,1,2,2-Tetrachloroethane	ND	EPA 624	2.31	10
40. Tetrachloroethylene	ND	EPA 624	0.50	10
41. Toluene	ND	EPA 624	0.33	10
42. 1,2-trans-Dichloroethylene	ND	EPA 624	2.14	10
43. 1,1,1-Trichloroethane	ND	EPA 624	0.37	10
44. 1,1,2-Trichloroethane	ND	EPA 624	2.37	10
45. Trichloroethylene	ND	EPA 624	0.78	10
46. vinyl chloride	ND	EPA 624	0.81	10

ACID COMPOUNDS	LABORATORY ANALYSIS			REQUIRED MQL (µg/l)
	RESULTS (µg/l)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/l)	
47. 2-Chlorophenol	ND	EPA 625	5.28	10
48. 2,4-Dichlorophenol	ND	EPA 625	3.36	10
49. 2,4-Dimethylphenol	ND	EPA 625	0.92	10
50. 4,6-Dinitro-o-Cresol [2 methyl 4,6-dinitrophenol]	ND	EPA 625	1.66	50
51. 2,4-Dinitrophenol	ND	EPA 625	2.65	50
52. 2-Nitrophenol	ND	EPA 625	1.50	20
53. 4-Nitrophenol	ND	EPA 625	7.07	50
54. p-Chloro-m-Cresol [4 chloro-3-methylphenol]	ND	EPA 625	6.76	10
55. Pentachlorophenol	ND	EPA 625	2.70	5
56. Phenol	ND	EPA 625	5.82	10
57. 2,4,6-Trichlorophenol	ND	EPA 625	2.96	10

BASE/NEUTRAL COMPOUNDS	LABORATORY ANALYSIS			REQUIRED MQL (µg/l)
	RESULTS (µg/l)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/l)	
58. Acenaphthene	ND	EPA 625	1.04	10
59. Acenaphthylene	ND	EPA 625	1.01	10
60. Anthracene	ND	EPA 625	1.26	10
61. Benzidine	ND	EPA 625	3.26	50
62. Benzo(a)anthracene	ND	EPA 625	2.22	5
63. Benzo(a)pyrene	ND	EPA 625	4.33	5
64. 3,4-Benzofluoranthene	ND	EPA 625	3.05	10
65. Benzo(ghi)perylene	ND	EPA 625	2.71	20
66. Benzo(k)fluoranthene	ND	EPA 625	4.06	5
67. Bis(2-chloroethoxy) methane	ND	EPA 625	1.32	10
68. Bis(2-chloroethyl) ether	ND	EPA 625	3.96	10
69. Bis(2-chloroisopropyl) ether	ND	EPA 625	2.98	10
70. Bis(2-ethylhexyl) phthalate	ND	EPA 625	3.19	10
71. 4-Bromophenyl phenyl ether	ND	EPA 625	4.06	10
72. Butyl benzyl phthalate	ND	EPA 625	3.04	10
73. 2-Chloronaphthalene	ND	EPA 625	1.69	10
74. 4-Chlorophenyl phenyl ether	ND	EPA 625	2.48	10
75. Chrysene	ND	EPA 625	2.04	5
76. Dibenzo (a,h) anthracene	ND	EPA 625	4.63	5
77. 1,2-Dichlorobenzene	ND	EPA 625	1.24	10
78. 1,3-Dichlorobenzene	ND	EPA 625	0.97	10
79. 1,4-Dichlorobenzene	ND	EPA 625	0.84	10
80. 3,3'-Dichlorobenzidine	ND	EPA 625	1.54	5
81. Diethyl Phthalate	ND	EPA 625	2.43	10
82. Dimethyl Phthalate	ND	EPA 625	1.36	10
83. Di-n-Butyl Phthalate	ND	EPA 625	2.27	10
84. 2,4-Dinitrotoluene	ND	EPA 625	3.60	10
85. 2,6-Dinitrotoluene	ND	EPA 625	1.99	10
86. Di-n-octyl Phthalate	ND	EPA 625	3.40	10

BASE/NEUTRAL COMPOUNDS	LABORATORY ANALYSIS			REQUIRED MQL (µg/l)
	RESULTS (µg/l)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/l)	
87. 1,2-Diphenylhydrazine	ND	EPA 625	7.30	20
89. Fluorene	ND	EPA 625	2.40	10
90. Hexachlorobenzene	ND	EPA 625	3.24	5
91. Hexachlorobutadiene	ND	EPA 625	2.56	10
92. Hexachlorocyclopentadiene	ND	EPA 625	2.75	10
93. Hexachloroethane	ND	EPA 625	1.81	20
94. Indeno (1,2,3-cd) pyrene (2,3-o-phenylene pyrene)	ND	EPA 625	3.85	5
95. Isophorone	ND	EPA 625	1.10	10
96. Naphthalene	ND	EPA 625	0.81	10
97. Nitrobenzene	ND	EPA 625	1.45	10
98. N-nitrosodimethylamine	ND	EPA 625	3.41	50
99. N-nitrosodi-n-propylamine	ND	EPA 625	2.92	20
100. N-nitrosodiphenylamine	ND	EPA 625	3.66	20
101. Phenanthrene	ND	EPA 625	0.71	10
102. Pyrene	ND	EPA 625	4.50	10
103. 1,2,4-Trichlorobenzene	ND	EPA 625	1.76	10

PESTICIDES	LABORATORY ANALYSIS			REQUIRED MQL (µg/l)
	RESULTS (µg/l)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/l)	
104. Aldrin	ND	EPA 608	0.01	0.01
105. Alpha-BHC	ND	EPA 608	0.03	0.05
106. Beta-BHC	ND	EPA 608	0.01	0.05
107. Gamma-BHC	ND	EPA 608	0.01	0.05
108. Delta-BHC	ND	EPA 608	0.01	0.05
109. chlordane	ND	EPA 608	0.10	0.2
110. 4,4'-DDT	ND	EPA 608	0.02	0.02
111. 4,4'-DDE (p,p-DDX)	ND	EPA 608	0.01	0.1
112. 4,4'-DDD 9(p,p-TDE)	ND	EPA 608	0.01	0.1
113. Dieldrin	ND	EPA 608	0.01	0.02
114. Alpha-endosulfan	ND	EPA 608	0.01	0.01
115. Beta-endosulfan	ND	EPA 608	0.01	0.02
116. Endosulfan sulfate	ND	EPA 608	0.10	0.1
117. Endrin	ND	EPA 608	0.02	0.02
118. Endrin aldehyde	ND	EPA 608	0.02	0.1
119. Heptachlor	ND	EPA 608	0.01	0.01
120. Heptachlor epoxide (BHC-hexachlorocyclohexane)	ND	EPA 608	0.01	0.01
130. chlorpyrifos	ND	EPA 608	0.04	0.07
121. PCB-1242	ND	EPA 608	0.050	0.2
122. PCB-1254	ND	EPA 608	0.050	0.2
123. PCB-1221	ND	EPA 608	0.050	0.2
124. PCB-1232	ND	EPA 608	0.050	0.2
125. PCB-1248	ND	EPA 608	0.050	0.2
126. PCB-1260	ND	EPA 608	0.050	0.2
127. PCB-1016	ND	EPA 608	0.050	0.2
128. Toxaphene	ND	EPA 608	0.25	0.3

Attachment B

Laboratory Results



Environmental Services Company, Inc.

Corporate Office:
13715 West Markham, Little Rock, Arkansas 72211
Phone: 501-221-2585 Fax: 501-221-1341
Email: corporate@esclabs.com

Carlsbad, New Mexico:
575-887-7-ESC (372)
Springdale, Arkansas:
478-750-1170

Web Site: www.esclabs.com

LABORATORY REPORT

Page 1 of 8

Client: Georgia Pacific Wood Products Sample Date: 09/08/15
Control Number: 1509010268 / 1509020274 Receipt Date: 09/09/15
Sample Type: Grab - Water Report Date: 10/22/15
Sample Identification: Priority Pollutant Scan

VOLATILE ORGANIC TARGET COMPOUNDS (µg/L or ppb)

<u>ANALYTE</u>	<u>RESULT</u>	<u>DETECTION LIMIT</u>	
Acrolein	ND	10.53	
Acrylonitrile	ND	4.82	
Benzene	ND	0.45	
Bromoform	ND	2.53	
Carbon Tetrachloride	ND	0.57	
Chlorobenzene	ND	0.58	
Chlorodibromomethane	ND	0.71	
Chloroethane	ND	1.24	
2-Chloroethyl vinyl ether	ND	8.30	
Chloroform	ND	0.72	
Dichlorobromomethane	ND	0.55	
1,1-Dichloroethane	ND	2.35	
1,2-Dichloroethane	ND	2.16	82.0
1,1-Dichloroethene	ND	1.73	98. AA
1,2-Dichloropropane	ND	2.65	99. P
1,3-Dichloropropene	ND	0.34	99. PC
Ethylbenzene	ND	0.18	99. R
Methyl Bromide (Bromomethane)	ND	1.04	



Environmental Services Company, Inc.

Corporate Office:
13715 West Markham, Little Rock, Arkansas 72211
Phone: 501-221-2585 Fax: 501-221-1341
Email: corporate@esclabs.com

Carlsbad, New Mexico:
575-887-7-ESC (372)
Springdale, Arkansas:
479-750-1170

Web Site: www.esclabs.com

LABORATORY REPORT

Client: Georgia Pacific Wood Products
Control Number: 1509010268 / 1509020274

Page 2 of 8

VOLATILE ORGANIC TARGET COMPOUNDS ($\mu\text{g/L}$ or ppb)

<u>ANALYTE</u>	<u>RESULT</u>	<u>DETECTION LIMIT</u>
Methyl Chloride (Chloromethane)	ND	0.65
Methylene chloride	ND	2.51
1,1,2,2-Tetrachloroethane	ND	2.31
Tetrachloroethene	ND	0.50
Toluene	ND	0.33
1,2-trans-Dichloroethylene	ND	2.14
1,1,1-Trichloroethane	ND	0.37
1,1,2-Trichloroethane	ND	2.37
Trichloroethylene	ND	0.78
Vinyl Chloride	ND	0.81

QUALITY ASSURANCE DATA

Method: EPA 624

<u>System Monitoring Compounds</u>	<u>% Recovery</u>	<u>% Recovery Limits</u>
1,2-Dichloroethane-d ₄	103.04	69-156
Toluene-d ₅	83.72	76-111
4-Bromofluorobenzene	66.19	63-131

Analysis Date: 09/22/15
Analysis Time: 15:04
Analyst: RHB

A laboratory blank was monitored for all analytes of interest.



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13715 West Markham, Little Rock, Arkansas 72211
Phone: 501-221-2505 Fax: 501-221-1341
Email: corporate@esclabs.com

Carlsbad, New Mexico:
575-887-7-ESC (372)
Springdale, Arkansas:
479-750-1170

Web Site: www.esclabs.com

LABORATORY REPORT

Client:	Georgia Pacific Wood Products	Sample Date:	09/08/15
Control Number:	1509010268 / 1509020274	Receipt Date:	09/09/15
Sample Type:	Grab – Water	Report Date:	10/22/15
Sample Identification:	Priority Pollutant Scan		

BASE/NEUTRAL EXTRACTABLE FRACTION ($\mu\text{g/L}$ or ppb)

<u>ANALYTE</u>	<u>RESULT</u>	<u>DETECTION LIMIT</u>
Acenaphthene	ND	1.04
Acenaphthylene	ND	1.01
Anthracene	ND	1.26
Benzidine	ND	3.26
Benzo (a) anthracene	ND	2.22
Benzo (a) pyrene	ND	4.33
Benzo (b) fluoranthene	ND	3.05
Benzo (ghi) perylene	ND	2.71
Benzo (k) fluoranthene	ND	4.06
Bis-(2-chloroethoxy) methane	ND	1.32
Bis (2-chloroethyl) ether	ND	3.96
Bis (2-chloroisopropyl) ether	ND	2.98
Bis (2-ethylhexyl) phthalate	ND	3.19
4-Bromophenyl phenyl ether	ND	4.06
Butyl benzyl phthalate	ND	3.04
2-Chloronaphthalene	ND	1.69
4-Chlorophenyl phenyl ether	ND	2.48
Chrysene	ND	2.04
Dibenzo (a,h) anthracene	ND	4.63
1,2-Dichlorobenzene	ND	1.24
1,3-Dichlorobenzene	ND	0.97
1,4-Dichlorobenzene	ND	0.84



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LABORATORY REPORT

Client: Georgia Pacific Wood Products

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Control Number: 1509010268 / 1509020274

BASE/NEUTRAL EXTRACTABLE FRACTION ($\mu\text{g/L}$ or ppb)

<u>ANALYTE</u>	<u>RESULT</u>	<u>DETECTION LIMIT</u>
3,3'-Dichlorobenzidine	ND	1.54
Diethyl phthalate	ND	2.43
Dimethyl phthalate	ND	1.36
Di-n-butyl phthalate	ND	2.27
2,4-Dinitrotoluene	ND	3.60
2,6-Dinitrotoluene	ND	1.99
Di-n-octyl phthalate	ND	3.40
1,2-Diphenylhydrazine	ND	7.30
Fluorene	ND	2.40
Hexachlorobenzene	ND	3.24
Hexachlorobutadiene	ND	2.56
Hexachlorocyclopentadiene	ND	2.75
Hexachloroethane	ND	1.81
Indeno (1,2,3-cd) pyrene	ND	3.85
Isophorone	ND	1.10
Naphthalene	ND	0.81
Nitrobenzene	ND	1.45
N-nitrosodimethylamine	ND	3.41
N-nitrosodi-n-propylamine	ND	2.92
N-nitrosodiphenylamine	ND	3.66
Phenanthrene	ND	0.71
Pyrene	ND	4.50
1,2,4-Trichlorobenzene	ND	1.76
2,3,7,8-TCDD	ND	0.00001



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LABORATORY REPORT

Client: Georgia Pacific Wood Products

Page 5 of 8

Control Number: 1509010268 / 1509020274

QUALITY ASSURANCE DATA

Method: EPA 625

<u>System Monitoring Compounds</u>	<u>% Recovery</u>	<u>% Recovery Limits</u>
Nitrobenzene-d ₅	88.07	35-114
2-Fluorobiphenyl	102.59	43-116
p-Terphenyl-d ₁₄	89.95	33-141

Analysis Date: 10/06/15

Analysis Time: 10:01

Analyst: RHB

A laboratory blank was monitored for all analytes of interest.



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LABORATORY REPORT

Client: Georgia Pacific Wood Products Page 6 of 8
Control Number: 1509010268 / 1509020274

ACID EXTRACTABLE FRACTION ($\mu\text{g/L}$ or ppb)

<u>ANALYTE</u>	<u>RESULT</u>	<u>DETECTION LIMIT</u>
2-Chlorophenol	ND	5.28
2,4-Dichlorophenol	ND	3.36
2,4-Dimethylphenol	ND	0.92
4,6-Dinitro-2-methylphenol	ND	1.66
2,4-Dinitrophenol	ND	2.65
2-Nitrophenol	ND	1.50
4-Nitrophenol	ND	7.07
4-Chloro-3-methylphenol	ND	6.76
Pentachlorophenol	ND	2.70
Phenol	ND	5.82
2,4,6-Trichlorophenol	ND	2.96

QUALITY ASSURANCE DATA

Method: EPA 625

<u>System Monitoring Compounds</u>	<u>% Recovery</u>	<u>% Recovery Limits</u>
Phenol-d ₅	35.73	10-94
2-Fluorophenol	45.79	21-100
2,4,6-Tribromophenol	71.45	10-123

Analysis Date: 10/06/15
Analysis Time: 10:01
Analyst: RHB



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LABORATORY REPORT

Client: Georgia Pacific Wood Products

Page 7 of 8

Control Number: 1509010268 / 1509020274

CHLORINATED PESTICIDES ($\mu\text{g/L}$ or ppb)

<u>ANALYTE</u>	<u>RESULT</u>	<u>DETECTION LIMIT</u>
Aldrin	ND	0.01
alpha-BHC	ND	0.03
beta-BHC	ND	0.01
gamma-BHC (Lindane)	ND	0.01
delta-BHC	ND	0.01
Chlordane	ND	0.10
Chlorpyrifos	ND	0.04
4,4'-DDT	ND	0.02
4,4'-DDE	ND	0.01
4,4'-DDD	ND	0.01
Dieldrin	ND	0.01
alpha-Endosulfan	ND	0.01
beta-Endosulfan	ND	0.01
Endosulfan Sulfate	ND	0.10
Endrin	ND	0.02
Endrin Aldehyde	ND	0.02
Heptachlor	ND	0.01
Heptachlor Epoxide	ND	0.01
Toxaphene	ND	0.25

A laboratory blank was monitored for all analytes of interest.



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Email: corporate@esclabs.com

Carlsbad, New Mexico:
575-887-7-ESC (372)
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479-750-1170

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LABORATORY REPORT

Client: Georgia Pacific Wood Products
Control Number: 1509010268 / 1509020274

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PCB ($\mu\text{g/L}$ or ppb)

<u>ANALYTE</u>	<u>RESULT</u>	<u>DETECTION LIMIT</u>
PCB-1242	ND	0.050
PCB-1254	ND	0.050
PCB-1221	ND	0.050
PCB-1232	ND	0.050
PCB-1248	ND	0.050
PCB-1260	ND	0.050
PCB-1016	ND	0.050

QUALITY ASSURANCE DATA

Method: EPA 608

<u>System Monitoring Compounds</u>	<u>% Recoveries</u>
2,4,5,6-tetrachloro- <i>m</i> -xylene	83.90
Decachlorobiphenyl	98.35

Analysis Date: 09/30/15
Analysis Time: 00:13
Analyst: RHB

A laboratory blank was monitored for all analytes of interest.

Data release authorized by :

Richard Brown

Environmental Services Company, Inc.

Corporate Office
13715 West Markham
Little Rock, AR 72211
Tel. (501)221-2565 Fax (501)221-1341

Northwest Arkansas Branch
1107 Century Avenue
Springdale, AR 72762
Tel. (479)750-1170 Fax (479)750-1172

Control Number: 1509010268	Sample Date : 09/08/15	Collected By: JB
Customer Name : GEORGIA PACIFIC WOOD PROD SO LLC	Sample Time : 1536	Delivery By : TMO
Customer Number : 2137	Sample Type : GRAB WATER	Work Order :
Report Date : 10/26/15	Sample From : PPS	Purchase Order :

Laboratory Analysis

Analysis							Quality Assurance		
Date	Time	By	Parameter	Result	Notes	Quantity	Method	Precision % RPD	Accuracy % Recovery
09/09	1730	NTR	BOD, 5-day	< 2.0 mg/L			SM 2001 5210 B	6.45	99.5 *
09/15	1142	RAH	Beryllium	1.00 ug/L			EPA 200.8	6.90	108.5 *
09/11	0815	NTR	Cyanide Total (as CN)	< 10.0000 ug/L			1999 4500-CN #	1.34	90.3 *
09/12	1015	NTR	Hardness (as CaCO3)	124.0 mg/L			SM 1997 2340 C	10.53	98.0 *
09/18	1400	NTR	Ammonia Nitrogen	6.71 mg/L			SM 1997 4500-NH3 F	1.03	97.5
09/16	1520	NTR	Kjeldahl Nitrogen Total	32.48 mg/L			SM 1997 4500-NorgB	0.22	95.2 *
09/08	1448	JB	pH	4.5 S.U.			SM 2000 4500-H+B		
09/15	1142	RAH	Chromium	5.00 ug/L			EPA 200.8	0.06	103.8 *
09/10	1245	NTR	Phosphorous, Total (as P)	14.10 mg/L			EPA 365.3	0.00	98.8 *
09/17	1200	ATL	Solids, Total Suspended	85.00 mg/L			SM 1997 2540 D	25.00	N/A *
09/15	1142	RAH	Nickel	25.00 ug/L			EPA 200.8	2.13	104.2 *
09/15	1142	RAH	Copper	57.00 ug/L			EPA 200.8	0.14	105.1 *
09/15	1142	RAH	Zinc	482.00 ug/L			EPA 200.8	2.39	113.8 *
09/15	1142	RAH	Arsenic	< 0.50 ug/L			EPA 200.8	3.37	107.6 *
09/15	1142	RAH	Selenium	< 5.00 ug/L			EPA 200.8	6.14	114.0 *
09/08	1448	JB	Temperature	51.80 °C			SM 2000 2550 B		
09/09	1450	NTR	Chromium, Hexavalent	< 10.00 ug/L			SM18th 3500-Cr D	1.28	102.7
09/15	1142	RAH	Silver	2 ug/L			EPA 200.8	5.71	105.4 *
09/15	1142	RAH	Cadmium	2.00 ug/L			EPA 200.8	2.43	107.4 *
09/15	1142	RAH	Antimony	4.00 ug/L			EPA 200.8	2.63	105.8 *
09/18	1527	RAH	Mercury, ug/L	< 0.00500 ug/L			EPA 245.7	6.30	97.5 *

* QA data shown is from a different sample or standard on the same date.

Report for Control Number: 1509010268 Continued on Next Page

<u>Laboratory Analysis</u>						<u>Quality Assurance</u>		
<u>Analysis</u>			<u>Result</u>	<u>Notes</u>	<u>Quantity</u>	<u>Method</u>	<u>Precision</u>	<u>Accuracy</u>
<u>Date</u>	<u>Time</u>	<u>By</u>	<u>Parameter</u>				<u>% RPD</u>	<u>% Recovery</u>
09/15	1142	RAH	Thallium	2.00 ug/L		EPA 200.8	4.12	102.8 *
09/15	1142	RAH	Lead	5.00 ug/L		EPA 200.8	2.36	102.6 *
09/30	0013	RHB	Chlorpyrifos	< 0.0400 ug/L		608 EPA		
09/10	0600	NTR	Phenolics, Low Range	< 5.000 ug/L		EPA 420.1	2.36	88.1

* QA data shown is from a different sample or standard on the same date.

All equipment used is checked and/or calibrated daily. All NPDES testing is conducted in accordance with 40 CFR Part 136. A minimum of 10% spiked and duplicate samples is run on each parameter where applicable for Quality Assurance purposes. Quality Assurance Plan on file with Arkansas Department of Environmental Quality. Analysis time indicates the time of the start of the analytical batch in which the specific sample was included.

Signature


 Environmental Services Co., Inc.

Environmental Services Company, Inc.

Corporate Office
 13715 West Markham
 Little Rock, AR 72211
 Tel. (501)221-2565 Fax (501)221-1341

Northwest Arkansas Branch
 1107 Century Avenue
 Springdale, AR 72762
 Tel. (479)750-1170 Fax (479)750-1172

Control Number: 1509010269

Customer Name : GEORGIA PACIFIC WOOD PROD SO LLC

Customer Number : 2137

Report Date : 09/23/15

Sample Date : 09/08/15

Sample Time : 1542

Sample Type : GRABWATER

Sample From : SAMPLE DUPLICATE

Collected By: JB

Delivery By : TMO

Work Order :


Purchase Order :

Laboratory Analysis

<u>Analysis</u>				<u>Laboratory Analysis</u>			<u>Quality Assurance</u>		
<u>Date</u>	<u>Time</u>	<u>By</u>	<u>Parameter</u>	<u>Result</u>	<u>Notes</u>	<u>Quantity</u>	<u>Method</u>	<u>Precision</u>	<u>Accuracy</u>
								<u>% RPD</u>	<u>% Recovery</u>
09/18	1527	RAH	Mercury, ug/L	< 0.00500 ug/L			EPA 245.7	6.30	97.5 *

* QA data shown is from a different sample or standard on the same date.

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Signature 
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Corporate Office
 13715 West Markham
 Little Rock, AR 72211
 Tel. (501)221-2565 Fax (501)221-1341

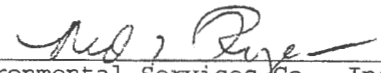
Northwest Arkansas Branch
 1107 Century Avenue
 Springdale, AR 72762
 Tel. (479)750-1170 Fax (479)750-1172

Control Number: 1509010270	Sample Date : 09/09/15	Collected By: JB
Customer Name : GEORGIA PACIFIC WOOD PROD SO LLC	Sample Time : 1545	Delivery By : TMO
Customer Number : 2137	Sample Type : GRAB WWATER	Work Order :
Report Date : 09/23/15	Sample From : FIELD BLANK	Purchase Order :

<u>Laboratory Analysis</u>							<u>Quality Assurance</u>	
<u>Analysis</u>			<u>Result</u>	<u>Notes</u>	<u>Quantity</u>	<u>Method</u>	<u>Precision</u>	<u>Accuracy</u>
<u>Date</u>	<u>Time</u>	<u>By</u>					<u>Parameter</u>	<u>% RPD</u>
09/18	1527	RAH	Mercury, ug/L	< 0.00500 ug/L		EPA 245.7	6.30	97.5 *

* QA data shown is from a different sample or standard on the same date.

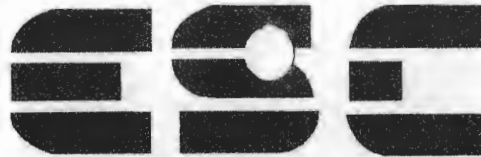
All equipment used is checked and/or calibrated daily. All NPDES testing is conducted in accordance with 40 CFR Part 136. A minimum of 10% spiked and duplicate samples is run on each parameter where applicable for Quality Assurance purposes. Quality Assurance Plan on file with Arkansas Department of Environmental Quality. Analysis time indicates the time of the start of the analytical batch in which the specific sample was included.

Signature 
 Environmental Services Co., Inc.

Attachment C

Chain of Custody

Environmental Services Company, Inc.
 Corporate Office
 13715 West Markham P.O. Box 55146
 Little Rock, AR 72211 Little Rock, AR 72215
 website: www.esclabs.com



Springdale, Arkansas
 479-750-1170

Carlsbad, New Mexico
 575-887-1ESC

Phone: 501-221-2565 Fax: 501-221-1341

CHAIN OF CUSTODY

Client Information		Project Information							Requested Parameters								
Company Name: Georgia Pacific Wood Products		Permit/Project #:							Hexavalent Cr (44.PS)	Phenolics (99.PS)	Metals* (See Comments Section)	Volatiles (82.D)	BNA (98.AA) Peats(99.P), Dioxin(1.E), PCB(99.R)	Chloropyrifos(99.PC)	Cn (9.PS)	Mercury(80.UG)	
Address: #1 GP Lane		Purchase Order #:															
Gurdon, AR 71743		Work order #															
Telephone: 870-353-4474 x535216		Sampler Name(s): <u>Jeremy Bohlen</u>															
FAX: 870-353-5339		and Signature(s):															
Contact: Mr. Jeremy Bohlen																	
ESC Client Number: 2137 Special																	
Sample Identification		Sample Collection				Sample Containers											
Identification	ESC Control #	Date	Time	Type	Matrix	Type	Volume	Preservative	#	Hexavalent Cr (44.PS)	Phenolics (99.PS)	Metals* (See Comments Section)	Volatiles (82.D)	BNA (98.AA) Peats(99.P), Dioxin(1.E), PCB(99.R)	Chloropyrifos(99.PC)	Cn (9.PS)	Mercury(80.UG)
Priority Pollutant Scan (PPS)	1509010268	9/8/2015	3:22 pm	Grab	W.Water	Plastic	8 oz	Cool ≤ 6° C	2	X							
		9/8/2015	3:03 pm	Grab	W.Water	Glass	1 Liter	Cool <6° C, H2SO4 TO PH <2	1		X						
		9/8/2015	3:24 pm	Grab	W.Water	Plastic	1 Liter	HNO3 to pH <2	1			X					
		9/8/2015	2:53 pm	Grab	W.Water	Glass	1 Liter	Cool ≤ 6° C	4					X			
		9/8/2015	3:19 pm	Grab	W.Water	Plastic	1 Liter	Cool <6° C, NaOH to pH > 10	1							X	
		9/8/2015	3:36/3:33 pm	Grab	W.Water	VOA	40 mls	HCL	2				X				
		9/8/2015	3:06/3:07 pm	Grab	W.Water	Glass	1 L Amber	Cool ≤ 6° C	2						X		
9-269 Sample Duplicate	1509010269	9/8/2015	3:42 pm	Grab	W.Water	Glass	250 ml	None B.C.I	1								X
Field Blank	1509010270	9/8/2015	3:45 pm	Grab	W.Water	Glass	250 ml	None	1								X
Relinquished By: (Signature and Printed Name) 		Date	Time	Received By: (Signature and Printed Name) 		Date	Time	Custody Seals: Used? <input checked="" type="checkbox"/> Intact? <input type="checkbox"/>									
Relinquished By: (Signature and Printed Name) 		Date	Time	Received By: (Signature and Printed Name) 		Date	Time	Turnaround: Regular <input checked="" type="checkbox"/> Special <input type="checkbox"/>									
Relinquished By: (Signature and Printed Name) 		Date	Time	Received for Lab By: (Signature and Printed Name) 		Date	Time	Were samples properly preserved: Yes <input type="checkbox"/> No <input type="checkbox"/>									
Comments:		Flow Data		Field Test		Time	Analyst	Result	Result	Units							
Metals: Be (4.PS), Cr (24.PS), Ni (28.PS), Cu (29.PS), Zn (30.PS), As (33.PS), Se (34.PS), Ag (47.PS), Cd (48.PS), Sb (51.PS), Tl (81.PS), Pb (82.PS), Metal Digestion (00.MD)		Analyst:		pH:						IS.U.							
		Time:		Temp.:						°F							
		Reading:		DO:						mg/L							
		Units:		Debris:													
		Fecal Start:															
This Document is Page 2 of 2																	

Attachment D

Field Testing Results



Georgia-Pacific

pH Meter Calibration / verification for sample collection at ~~outfall-004~~

~~pH Calibration Procedures for YSI 60 Ph System~~

~~Hach Sension + pH Meter~~

Continuous Kila process
water discharge

Calibration
Procedures
attached

1. Immerse probe in pH 7 buffer. Be sure that the buffer covers the black thermistor on the side of the gray probe bulkhead
2. Press error up and down keys simultaneously to enter calibration menu.
3. Press Enter. The pH value of the buffer will be displayed. When the decimal point stops flashing, press and hold the ENTER again, until the display reads SAVE
4. Three point calibration is required, place the probe in pH 4 buffer or pH 10 doesn't matter and press ENTER
5. The pH of the buffer will display and a decimal point will flash.
6. When the decimal point stop flashing press and hold ENTER until the display reads SAVE
7. Repeat step 4-6 for the third buffer.
8. At the end of calibration, press MODE and rinse the sensor to begin pH measurement.
9. Immerse probe in pH 4 buffer. Be sure that the buffer covers the black thermistor on the side of the gray probe bulkhead and record reading for buffer 4 below must be within + or-1 unit 3.9 to 4.1 read only one decimal point
10. Immerse probe in pH 7 buffer. Be sure that the buffer covers the black thermistor on the side of the gray probe bulkhead and record reading for buffer 4 below must be within + or-1 unit 6.9 to 7.1 round to only one decimal point
11. Immerse probe in pH 10 buffer. Be sure that the buffer covers the black thermistor on the side of the gray probe bulkhead and record reading for buffer 4 below must be within + or-1 unit 9.9 to 10.1 read only one decimal point

pH reading after calibration 4 buffer 4.00 +- .1 unit

pH reading after calibration 7 buffer 7.06 +- .1 unit

pH reading after calibration 10 buffer 10.04 +- .1 unit

I certify that this calibration and testing was completed accurately and to the best of my knowledge. Calibration and testing completed by Jeremy Baker

Date 9/8/2015 Time 1:58 pm

SAMPLE VERIFICATION

Time pH was tested on sample 2:48 pm pH reading of sample 4.54 su

Date pH was tested on sample 9/8/2015 Time pH sample taken 2:47

~~Date outfall water sample taken~~ Time grab Sample taken

51.8°C

Verify the date, time and signature of Analyst is on sample bottles and recorded on e Chain of Custody _____ and by whom _____

Verify sample after testing is cooled to 4 degrees C with ice _____

Note, that BOD sample holding time is within 48 hours of sampling.

Attach completed copy of this form with the Chain of Custody.









Hach Senslon + pH Meter Calibration Procedure

Calibration

Calibration procedure

This procedure is for general use with liquid calibration solutions. Refer to the documents that are included with each probe for additional information.

1. Pour the buffers or calibration solutions into the labeled calibration tubes.
2. Rinse the probe with deionized water and put the probe into the first calibration tube. Be sure that there are no air bubbles under the probe tip.
3. Push . The parameter flashes.
4. Use the arrow keys to change the parameter, if applicable.
5. Push  to select the parameter.
6. Push  to measure the first calibration solution. The next calibration solution is shown.
7. Rinse the probe with deionized water and put the probe into the second calibration tube. Be sure that there are no air bubbles under the probe tip.
8. Push  to measure the second calibration solution. The next calibration solution is shown.
9. Rinse the probe with deionized water and put the probe into the third calibration tube. Be sure that there are no air bubbles under the probe tip.
10. Push  to measure the third calibration solution. When the calibration is good, the display briefly shows OK and then goes to the standby mode.

Note: To calibrate with only 1 or 2 standards when additional standards are supplied, push  after the first or second standard is measured.

Attachment E

Detection Levels for Metals Analyses

METALS AND CYANIDE	LABORATORY ANALYSIS			REQUIRED MQL (µg/l)
	RESULTS (µg/l)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/l)	
1. Antimony (Total), Recoverable		EPA 200.8	1	60
2. Arsenic (Total), Recoverable		EPA 200.8	0.5	0.5
3. Beryllium (Total), Recoverable		EPA 200.8	0.5	0.5
4. Cadmium (Total), Recoverable		EPA 200.8	0.1	0.5
5. Chromium (Total), Recoverable		EPA 200.8	1	10
7. Chromium (6+), Dissolved		SM 4500- Cr D	10	10
8. Copper (Total), Recoverable		EPA 200.8	0.5	0.5
9. Lead (Total), Recoverable		EPA 200.8	0.5	0.5
10. Mercury (Total), Recoverable		EPA 1631E	0.0005	0.0005
12. Nickel (Total), Recoverable		EPA 200.8	0.5	0.5
13. Selenium (Total), Recoverable		EPA 200.8	5	5
14. Silver (Total), Recoverable		EPA 200.8	0.5	0.5
15. Thallium (Total), Recoverable		EPA 200.8	0.5	0.5
16. Zinc (Total), Recoverable		EPA 200.8	1	20
129. Phenols, Total Recoverable		EPA 420.1	5	5
17. Cyanide (Total), Recoverable		SM 4500- CN F	10	10

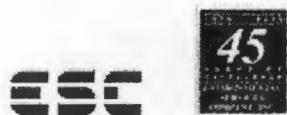
DIOXIN	LABORATORY ANALYSIS			REQUIRED MQL (µg/l)
	RESULTS (µg/l)	APPROVED EPA METHOD USED	DETECTION LEVEL ACHIEVED (µg/l)	
18. 2,3,7,8-Tetrachloro-debenzo-p-dioxin (TCDD)	ND	1613	0.00001	0.00001

Bohlen, Jeremy

From: Debra Woosley <debraw@esclabs.com>
Sent: Thursday, November 05, 2015 4:41 PM
To: Bohlen, Jeremy
Subject: RE: Detection Limits

Sent by an external sender

Jeremy,
See my highlights below. Thanks.



Debra Woosley, Sr. Vice President
Environmental Services Company, Inc.
13715 West Markham
Little Rock, AR 72211
501-221-2565 x 112
1-888-ESC-First
debraw@esclabs.com
www.esclabs.com

From: Bohlen, Jeremy [<mailto:Jeremy.Bohlen@gapac.com>]
Sent: Thursday, November 5, 2015 4:18 PM
To: Debra Woosley <debraw@esclabs.com>
Subject: RE: Detection Limits

Thanks, Debbie.

I have a couple of questions:

1. The list you provided states that the achieved detection level for hexavalent chromium is 10 using method SM 4500-Cr D, but my lab report indicates that method SM18th 3500-Cr D was used. What is the achieved detection level for the method indicated on the report? SM 3500-CR B is actually the correct method and the detection limit 10 ug/L.
2. The list you provided states that the achieved detection level for cyanide is 10 using method SM 4500-CN F, but my lab report indicates that method SM 4500-CN # was used. What is the achieved detection level for the method indicated on the report? That is just a typo. So sorry. It is supposed to be an F.

Thanks, again.

From: Debra Woosley [<mailto:debraw@esclabs.com>]
Sent: Thursday, November 05, 2015 3:52 PM
To: Bohlen, Jeremy
Subject: Detection Limits

Sent by an external sender

Hope this is what you need!

Thanks!

ESC



Debra Woosley, Sr. Vice President
Environmental Services Company, Inc.
13715 West Markham
Little Rock, AR 72211
501-221-2565 x 112
1-888-ESC-First
debraw@esclabs.com
www.esclabs.com

Environmental Services Company, Inc.
 Corporate Office
 13715 West Markham P.O. Box 55146
 Little Rock, AR 72211 Little Rock, AR 72215
 website: www.esclabs.com



Springdale, Arkansas
 479-750-1170

Carlsbad, New Mexico
 575-887-1ESC

Phone: 501-221-2565 Fax: 501-221-1341

CHAIN OF CUSTODY

Client Information						Project Information					Requested Parameters							
Company Name:		Georgia Pacific Wood Products				Permit/Project #:					TSS(28.), BOD ₅ (5.), TKN(16-A), NH ₃ N(15-A), Total P(25) Hardness(12)							
Address:		#1 IP Lane Gurdon, AR 71743				Purchase Order #:												
Telephone:		870-353-4474 x535216				Work Order #:												
FAX:		870-353-5339				Sampler Name(s):		Jeremy Bohlen										
Contact:		Mr. Jeremy Bohlen				and Signature(s):		<i>[Signature]</i>										
ESC Client Number:		2137 Special																
Sample Identification			Sample Collection			Sample Containers												
Identification	ESC Control #	Date	Time	Type	Matrix	Type	Volume	Preservative	#									
	1509010268	9/8/2015	3:12	Grab	Water	Plastic	1 Liter	Cool ≤ 6° C	1	X								
	1	9/8/2015	3:28 pm	Grab	Water	Plastic	8 oz	Cool ≤ 6° C, H ₂ SO ₄ to pH <2	1		X							
		9/8/2015	3:16 pm	Grab	Water	Plastic	1 Liter	HNO ₃ to pH <2	1			X						
Relinquished By: (Signature and Printed Name)		Date	Time	Received By: (Signature and Printed Name)		Date	Time	Custody Seals:		Used?	Intact?							
<i>[Signature]</i> Jeremy Bohlen		9/9/2015	11:09 am	<i>[Signature]</i> Timothy O'Neal		9-9-15	11:09	Turnaround:		Regular	Special							
Relinquished By: (Signature and Printed Name)		Date	Time	Received By: (Signature and Printed Name)		Date	Time	Were samples properly preserved:		Yes	No							
<i>[Signature]</i> Timothy O'Neal		9-9-15	1425	<i>[Signature]</i> David (C-1) Hunt		9/9/15	1425	Yes										
Flow Data						Field Test		Time	Analyst	Result	Result	Units						
Analyst: <i>[Signature]</i>						pH		2:48 pm	JD	4.54		SU						
Time: 2:48 pm						Temp.		2:48 pm	JD	57.8		°C						
Reading:																		
Units:																		
Chlorinated? Y N						Fecal Start:												