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December 18, 2017

Ms. Lori Simmons
Arkansas Department of Health
4815 West Markham Street
Little Rock, Arkansas 72205
Via email Lori.Simmons@arkansas.gov

Re: Georgia-Pacific, Crossett Mill - Biweekly Air Monitoring Report for Hydrogen Sulfide

Dear Ms. Simmons,

Please find the following biweekly report for the Georgia-Pacific (GP) Crossett Mill hydrogen sulfide (H₂S) and meteorological monitoring program covering the calendar period of November 15, 2017 through November 28, 2017.

Summary of Results

Included in this report are three plots presenting H₂S concentrations across different rolling average periods (30-minute, 8-hour, and 24-hour), daily 1-point quality control (QC) checks with precision and bias estimates and time series plots for all recorded meteorological (met) parameters for the two week period.

Data Quality

The Quality Assurance Project Plan (QAPP) establishes measurement quality objectives (MQOs) for H₂S regarding precision and bias expressed as a coefficient of variation (CV) <10% and $\pm 10\%$, respectively. Precision and bias are calculated in accordance with 40 CFR Part 58 Appendix A, Section 4.1. Precision and bias calculations are presented on page six of this report.

Results for available automated daily 1-point QC checks were within the accuracy objective, $\pm 10\%$, indicating the H₂S monitor was operating in accordance with MQOs as stated in the QAPP.

Additionally, weekly automated zero adjustments were implemented starting February 1, 2017. During this reporting period two automated zero checks were performed; within the acceptable range of ± 1.5 ppb, as defined in the QAPP. The result for these zero checks are presented below.

Date	Zero Check Response (ppb)
11/16/2017	-0.2



11/23/2017	0.2
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Data Capture

There was a single and very brief occurrence of H₂S data loss this monitoring period, in addition to those resulting from automated daily 1-point QC and weekly calibration checks. On November 16th a communication error was responsible for approximately 10 minutes of lost H₂S data.

Fourteen-day time series plots for all recorded meteorological (met) parameters are presented in the final table. There was a brief period (< 30 minutes) met data loss during this monitoring period. On November 15th all met parameters were lost for 15 minutes on account of a communication error.

Please feel free to contact me if you have any questions or need any additional data.

Sincerely,

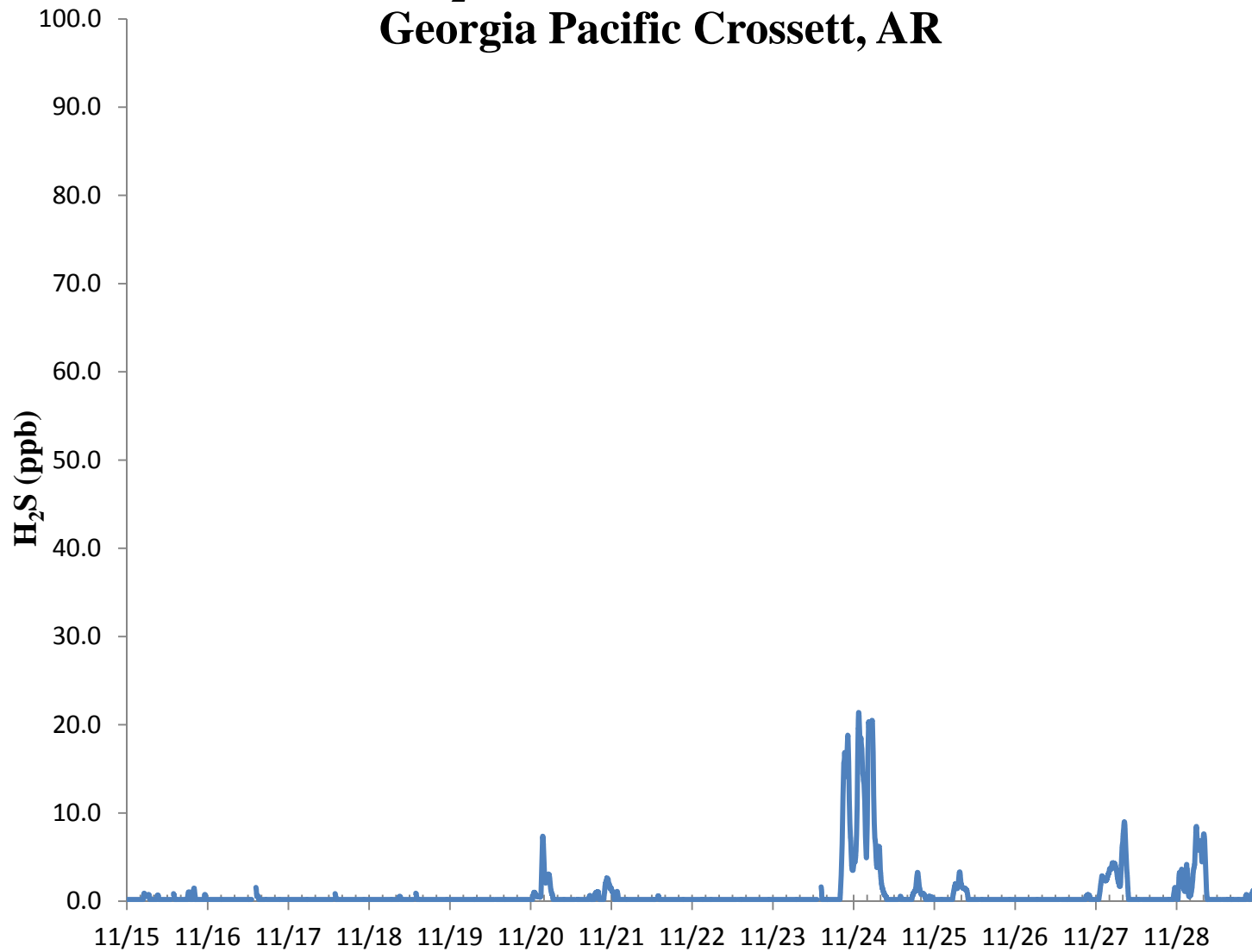


Jonathan Bowser
Manager, Air Quality and Meteorological Monitoring

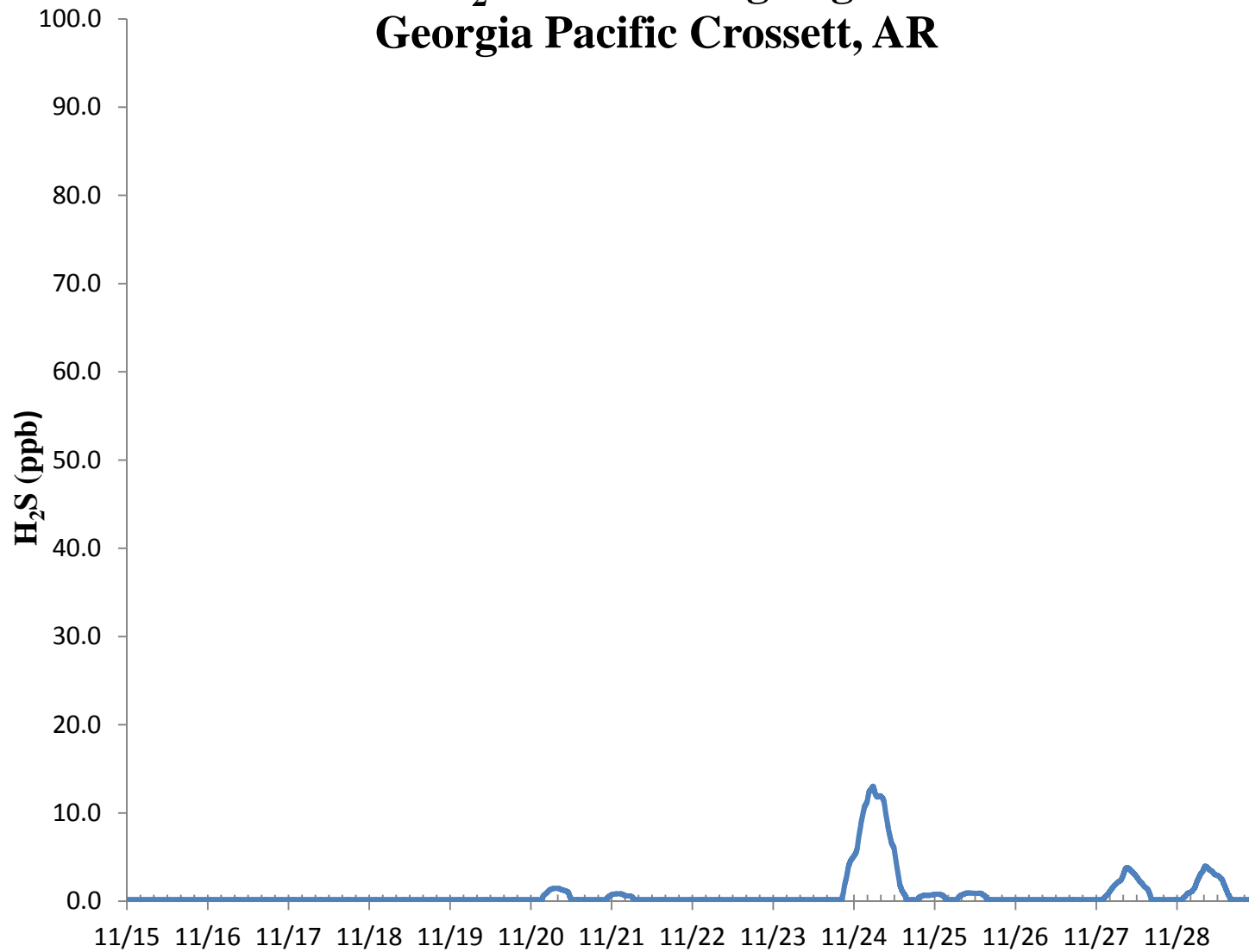
Air Measurements – Gainesville Office
6312 NW 18th Drive, Suite 100
Gainesville, Florida 32653
(352) 260-1162
Email: jbowser@trcsolutions.com

CC: Becky Keough, ADEQ Director via email: keogh@adeq.state.ar.us
Kara Allen, Environmental Engineer, USEPA Region 6 via email Allen.Kara@epa.gov

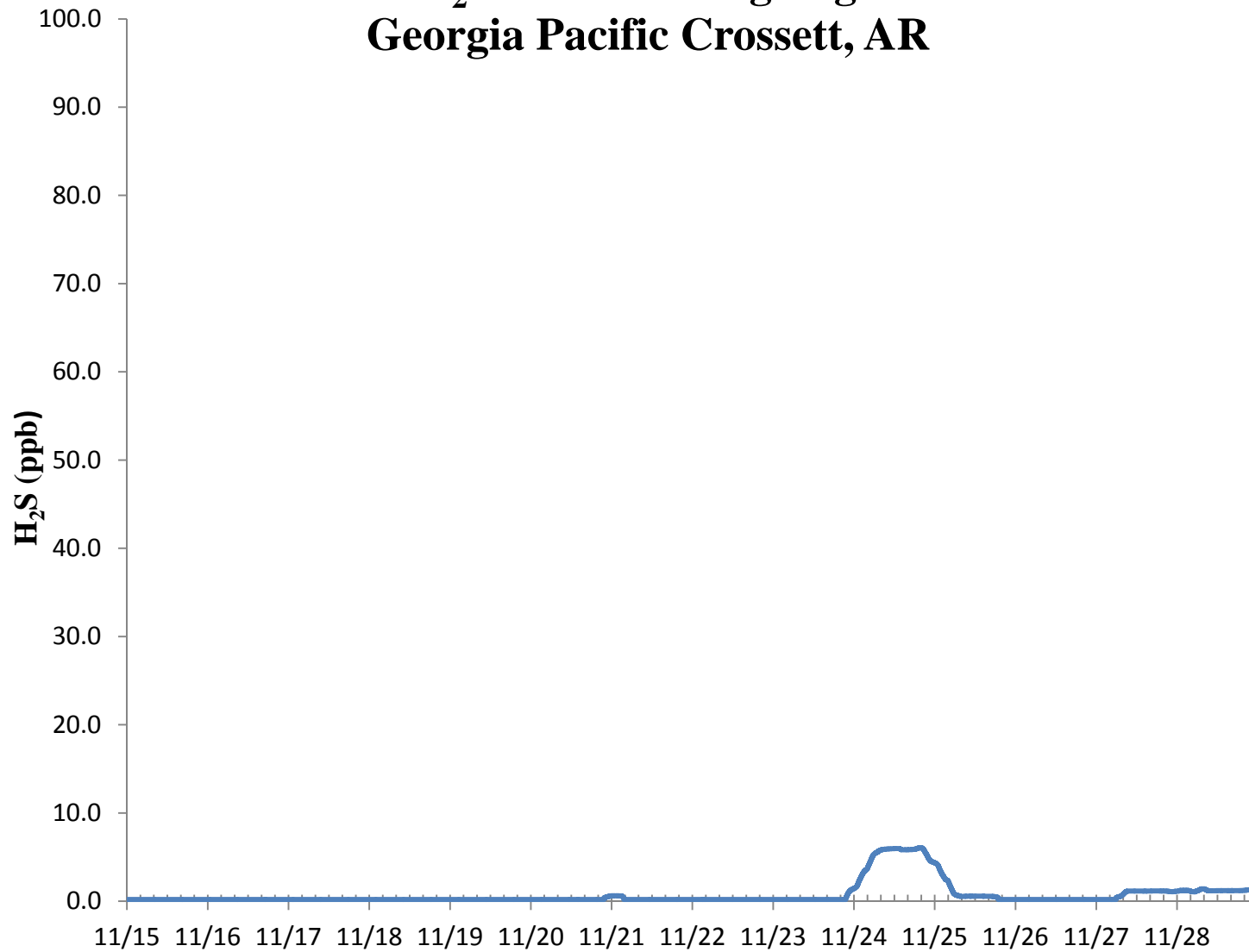
H₂S 30 Min Rolling Avg Georgia Pacific Crossett, AR



H₂S 8 Hr Rolling Avg Georgia Pacific Crossett, AR

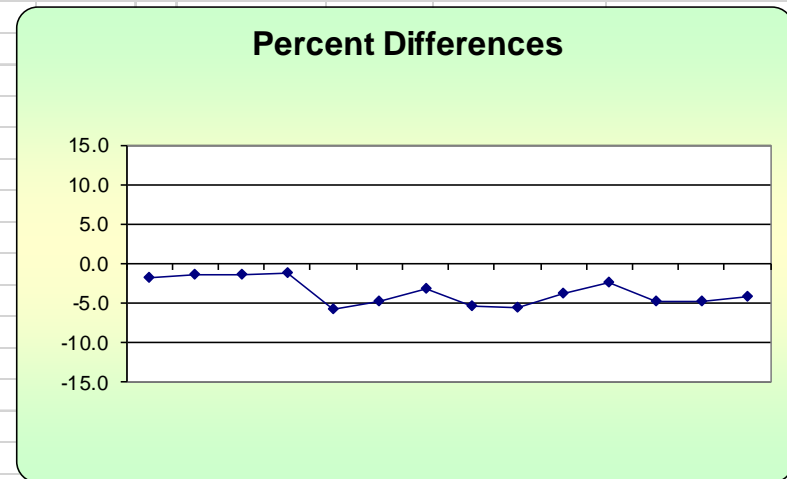


H₂S 24 Hr Rolling Avg Georgia Pacific Crossett, AR



H₂S Assessment

GP - Crossett, AR			Compound of Interest: H ₂ S					CV _{ub} (%)	Bias (%)																				
Date	Meas Val (Y)	Input Val (X)	d (Eqn. 1)	25th Percentile	d ²	d	d ²																						
11/15/2017 13:00	68.8	70.0	-1.7	-4.821	2.939	1.714	2.939																						
11/16/2017 13:00	69.0	70.0	-1.4	75th Percentile	2.041	1.429	2.041	<table border="1"> <tr> <td>n</td> <td>S_d</td> <td>S_{d2}</td> <td>Σ d </td> <td>"AB" (Eqn 4)</td> </tr> <tr> <td>14</td> <td>1.685</td> <td>11.602</td> <td>50.571</td> <td>3.612</td> </tr> <tr> <td>n-1</td> <td>Σd</td> <td>Σd²</td> <td>Σ d ²</td> <td>"AS" (Eqn 5)</td> </tr> <tr> <td>13</td> <td>-50.571</td> <td>219.592</td> <td>219.592</td> <td>1.685</td> </tr> </table>	n	S _d	S _{d2}	Σ d	"AB" (Eqn 4)	14	1.685	11.602	50.571	3.612	n-1	Σd	Σd ²	Σ d ²	"AS" (Eqn 5)	13	-50.571	219.592	219.592	1.685	
n	S _d	S _{d2}	Σ d	"AB" (Eqn 4)																									
14	1.685	11.602	50.571	3.612																									
n-1	Σd	Σd ²	Σ d ²	"AS" (Eqn 5)																									
13	-50.571	219.592	219.592	1.685																									
11/17/2017 13:00	69.0	70.0	-1.4	-1.893	2.041	1.429	2.041																						
11/18/2017 13:00	69.2	70.0	-1.1		1.306	1.143	1.306																						
11/19/2017 13:00	65.9	70.0	-5.9		34.306	5.857	34.306																						
11/20/2017 13:00	66.7	70.0	-4.7		22.224	4.714	22.224																						
11/21/2017 13:00	67.7	70.0	-3.3		10.796	3.286	10.796																						
11/22/2017 13:00	66.3	70.0	-5.3		27.939	5.286	27.939	<table border="1"> <tr> <td>Bias (%) (Eqn 3)</td> <td>Both Signs Positive</td> </tr> <tr> <td>4.41</td> <td>FALSE</td> </tr> </table>	Bias (%) (Eqn 3)	Both Signs Positive	4.41	FALSE																	
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4.41	FALSE																												
11/23/2017 13:00	66.1	70.0	-5.6		31.041	5.571	31.041																						
11/24/2017 13:00	67.3	70.0	-3.9		14.878	3.857	14.878	<table border="1"> <tr> <td>CV (%) (Eqn 2)</td> <td>Signed Bias (%)</td> <td>Both Signs Negative</td> </tr> <tr> <td>2.29</td> <td>-4.41</td> <td>TRUE</td> </tr> </table>	CV (%) (Eqn 2)	Signed Bias (%)	Both Signs Negative	2.29	-4.41	TRUE															
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2.29	-4.41	TRUE																											
11/25/2017 13:00	68.3	70.0	-2.4		5.898	2.429	5.898																						
11/26/2017 13:00	66.6	70.0	-4.9		23.592	4.857	23.592																						
11/27/2017 13:00	66.7	70.0	-4.7		22.224	4.714	22.224																						
11/28/2017 13:00	67.0	70.0	-4.3		18.367	4.286	18.367	<table border="1"> <tr> <td>Upper Probability Limit</td> <td>Lower Probability Limit</td> </tr> <tr> <td>-0.31</td> <td>-6.92</td> </tr> </table>	Upper Probability Limit	Lower Probability Limit	-0.31	-6.92																	
Upper Probability Limit	Lower Probability Limit																												
-0.31	-6.92																												



Meteorological Summary

