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October 20, 2017

Ms. Lori Simmons  
Arkansas Department of Health  
4815 West Markham Street  
Little Rock, Arkansas 72205  
Via email [Lori.Simmons@arkansas.gov](mailto: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 (H<sub>2</sub>S) and meteorological monitoring program covering the calendar period of September 20, 2017 through October 3, 2017.

Summary of Results

Included in this report are three plots presenting H<sub>2</sub>S 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 H<sub>2</sub>S regarding precision and bias expressed as a coefficient of variation (CV) <10% and ± 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, ± 10%, indicating the H<sub>2</sub>S 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)
9/21/2017	-0.1



9/28/2017	0.0
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Data Capture

There were no occurrences of H<sub>2</sub>S data loss this monitoring period, other than those resulting from automated daily 1-point QC and weekly calibration checks.

Fourteen-day time series plots for all recorded meteorological (met) parameters are presented in the final table. On September 27<sup>th</sup> TRC personnel were onsite to clean out the precipitation tipping bucket sensor, resulting in approximately 35 minutes of data loss.

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

Sincerely,



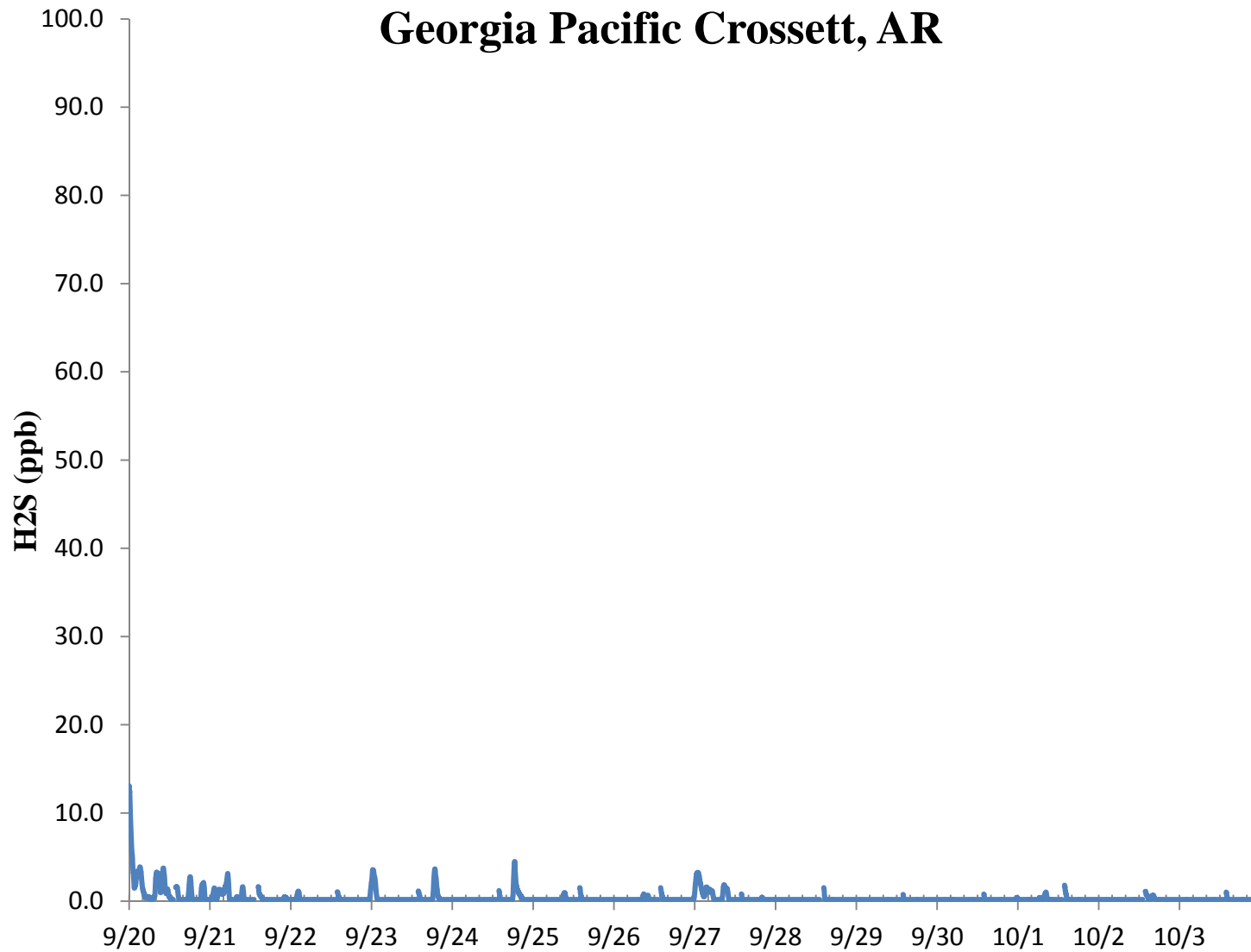
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Jonathan Bowser  
Manager, Air Quality and Meteorological Monitoring

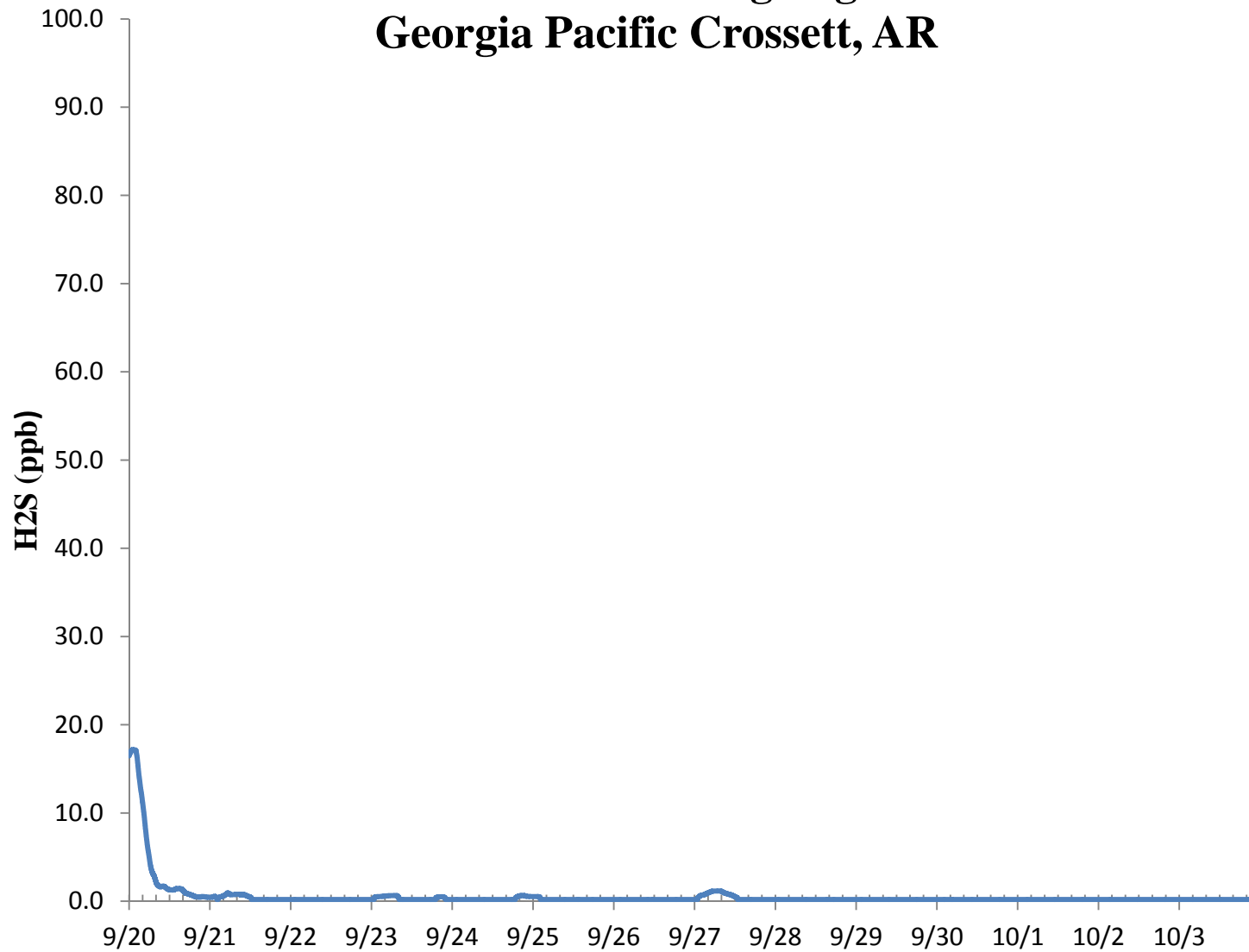
Air Measurements – Gainesville Office  
6312 NW 18th Drive, Suite 100  
Gainesville, Florida 32653  
(352) 260-1162  
Email: [jbowser@trcsolutions.com](mailto:jbowser@trcsolutions.com)

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

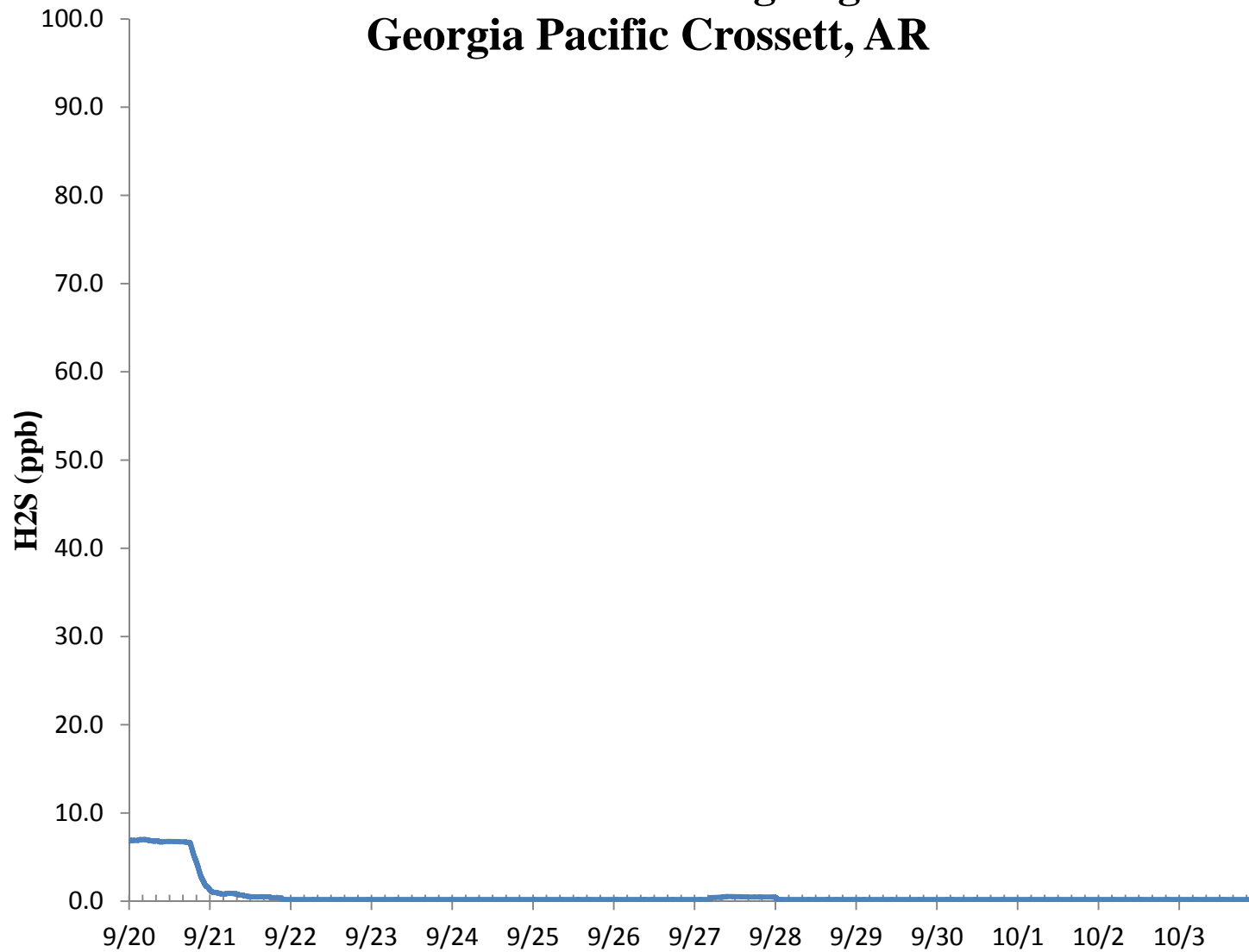
## H2S 30 Min Rolling Avg Georgia Pacific Crossett, AR



## H2S 8 Hr Rolling Avg Georgia Pacific Crossett, AR

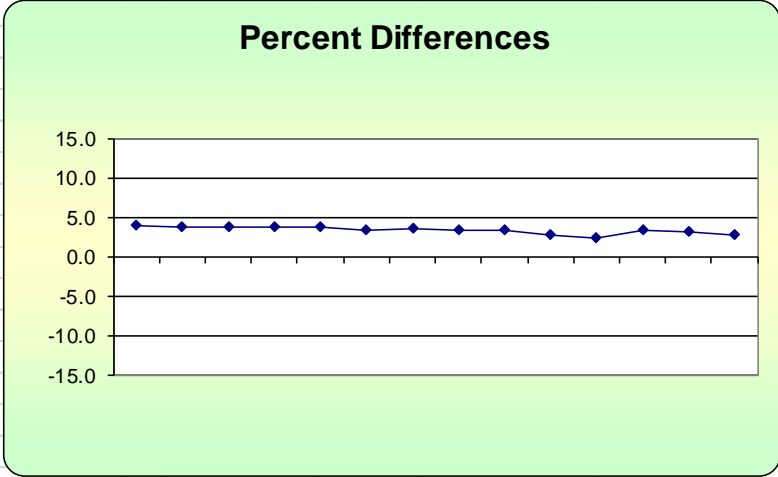


## H2S 24 Hr Rolling Avg Georgia Pacific Crossett, AR



### H<sub>2</sub>S Assessment

GP - Crossett, AR			Compound of Interest: H <sub>2</sub> S				CV <sub>ub</sub> (%)	Bias (%)																				
Date	Meas Val (Y)	Input Val (X)	d (Eqn. 1)	25th Percentile	d <sup>2</sup>	d	d  <sup>2</sup>																					
9/20/2017 13:00	72.8	70.0	4.0	3.179	16.000	4.000	16.000																					
9/21/2017 13:00	72.7	70.0	3.9	75th Percentile	14.878	3.857	14.878	<table border="1"> <tr> <td>n</td> <td>S<sub>d</sub></td> <td>S<sub>d2</sub></td> <td>Σ d </td> <td>"AB" (Eqn 4)</td> </tr> <tr> <td>14</td> <td>0.473</td> <td>3.080</td> <td>47.571</td> <td>3.398</td> </tr> <tr> <td>n-1</td> <td>Σd</td> <td>Σd<sup>2</sup></td> <td>Σ d <sup>2</sup></td> <td>"AS" (Eqn 5)</td> </tr> <tr> <td>13</td> <td>47.571</td> <td>164.551</td> <td>164.551</td> <td>0.473</td> </tr> </table>	n	S <sub>d</sub>	S <sub>d2</sub>	Σ d	"AB" (Eqn 4)	14	0.473	3.080	47.571	3.398	n-1	Σd	Σd <sup>2</sup>	Σ d  <sup>2</sup>	"AS" (Eqn 5)	13	47.571	164.551	164.551	0.473
n	S <sub>d</sub>	S <sub>d2</sub>	Σ d	"AB" (Eqn 4)																								
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13	47.571	164.551	164.551	0.473																								
9/22/2017 13:00	72.7	70.0	3.9	3.821	14.878	3.857	14.878																					
9/23/2017 13:00	72.7	70.0	3.9		14.878	3.857	14.878																					
9/24/2017 13:00	72.6	70.0	3.7		13.796	3.714	13.796																					
9/25/2017 13:00	72.4	70.0	3.4		11.755	3.429	11.755																					
9/26/2017 13:00	72.5	70.0	3.6		12.755	3.571	12.755	<table border="1"> <tr> <td>Bias (%) (Eqn 3)</td> <td>Both Signs Positive</td> </tr> <tr> <td>3.62</td> <td>TRUE</td> </tr> <tr> <td>Signed Bias (%)</td> <td>Both Signs Negative</td> </tr> <tr> <td>+3.62</td> <td>FALSE</td> </tr> </table>	Bias (%) (Eqn 3)	Both Signs Positive	3.62	TRUE	Signed Bias (%)	Both Signs Negative	+3.62	FALSE												
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9/27/2017 13:00	72.4	70.0	3.4		11.755	3.429	11.755																					
9/28/2017 13:00	72.3	70.0	3.3		10.796	3.286	10.796	<table border="1"> <tr> <td>CV (%) (Eqn 2)</td> <td></td> </tr> <tr> <td>0.64</td> <td></td> </tr> </table>	CV (%) (Eqn 2)		0.64																	
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9/29/2017 13:00	71.9	70.0	2.7		7.367	2.714	7.367																					
9/30/2017 13:00	71.7	70.0	2.4		5.898	2.429	5.898																					
10/1/2017 13:00	72.4	70.0	3.4		11.755	3.429	11.755	<table border="1"> <tr> <td>Upper Probability Limit</td> <td>Lower Probability Limit</td> </tr> <tr> <td>4.32</td> <td>2.47</td> </tr> </table>	Upper Probability Limit	Lower Probability Limit	4.32	2.47																
Upper Probability Limit	Lower Probability Limit																											
4.32	2.47																											
10/2/2017 13:00	72.2	70.0	3.1		9.878	3.143	9.878																					
10/3/2017 13:00	72.0	70.0	2.9		8.163	2.857	8.163																					



Meteorological Summary

