

March 28, 2018



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March 28, 2018

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 February 20, 2018 through March 6, 2018.

#### 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  $\pm 10\%$ , 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 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  $\pm 1.5$  ppb, as defined in the QAPP. The result for these zero checks are presented below.

Date	Zero Check Response (ppb)
2/22/2018	1.0
3/1/2018	1.2

Data Capture

There was a single occurrence of H<sub>2</sub>S data loss this monitoring period, in addition to those resulting from automated daily 1-point QC and weekly calibration checks. The logging program experienced a failure in the morning of March 1<sup>st</sup>; responsible for approximately one hour of lost H<sub>2</sub>S data. The TRC logger program has since been updated in an attempt to minimize future data loss.

Fourteen-day time series plots for all recorded meteorological (met) parameters are presented in the final table. During the early morning of March 2<sup>nd</sup>, approximately 30 minutes of all met parameters were lost due to a communication error.

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

Sincerely,




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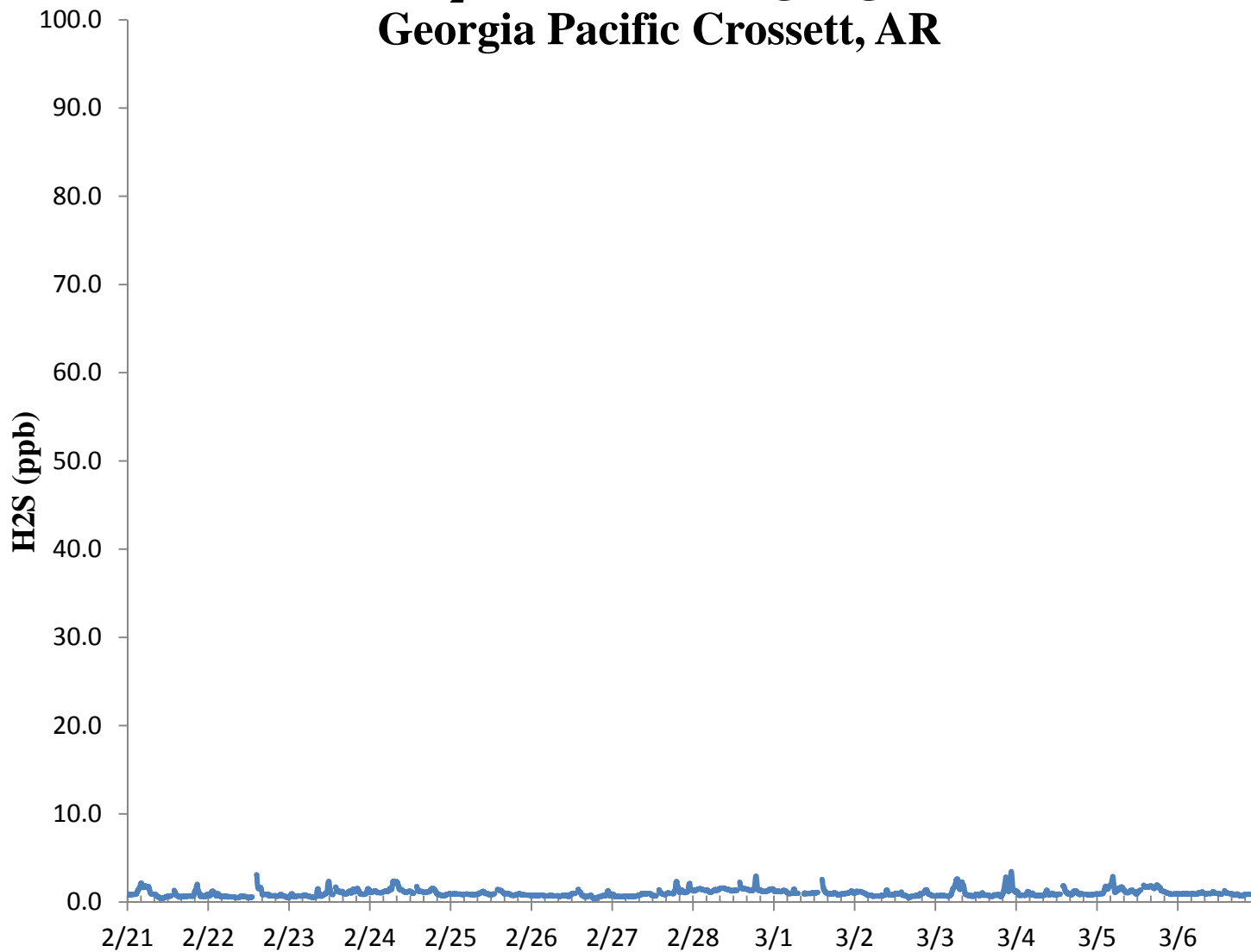
Jonathan Bowser  
 Manager, Air Quality and Meteorological Monitoring

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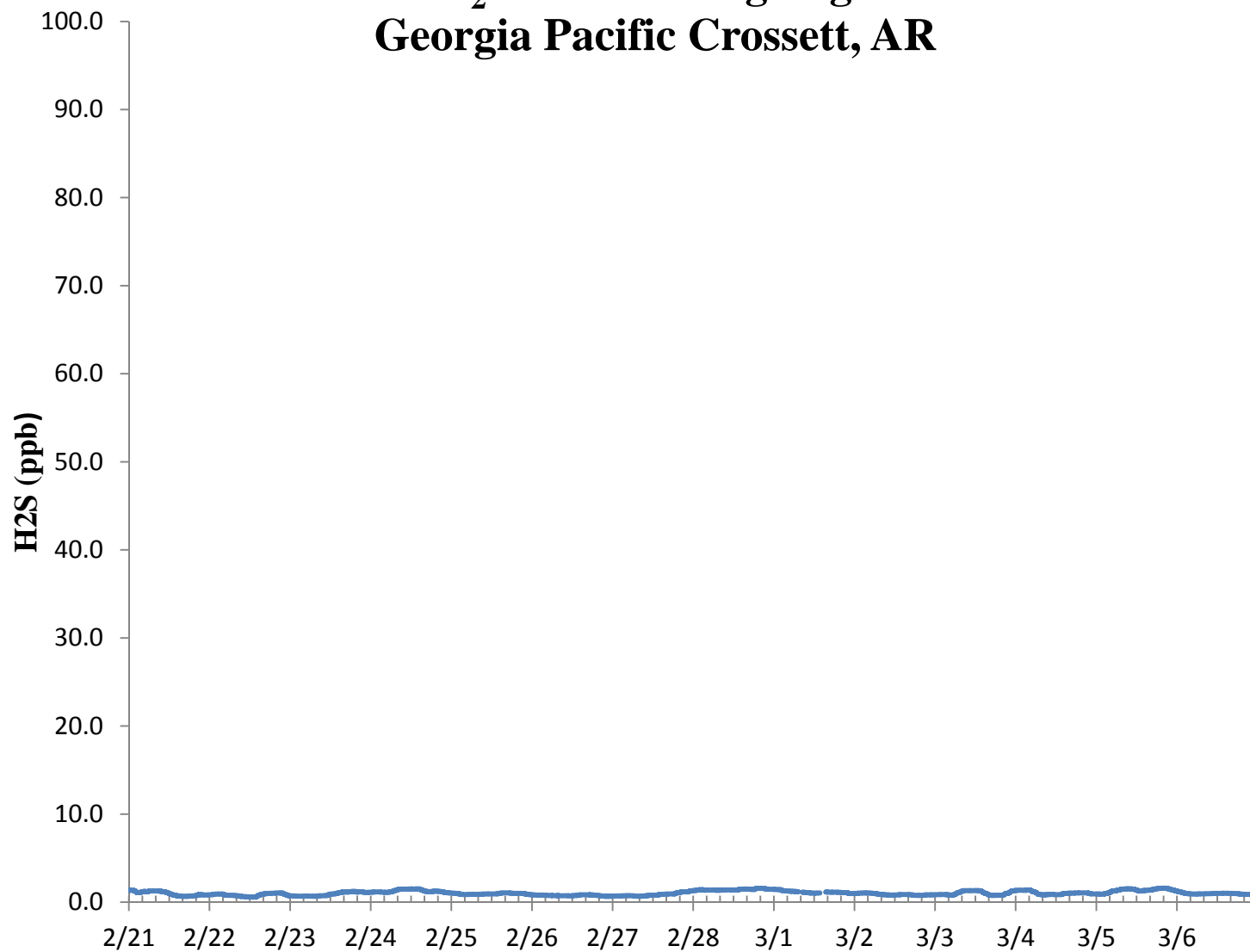
CC: Becky Keough, ADEQ Director via email: [keogh@adeq.state.ar.us](mailto:keogh@adeq.state.ar.us)  
 Kara Allen, Environmental Engineer, USEPA Region 6 via email [Allen.Kara@epa.gov](mailto:Allen.Kara@epa.gov)



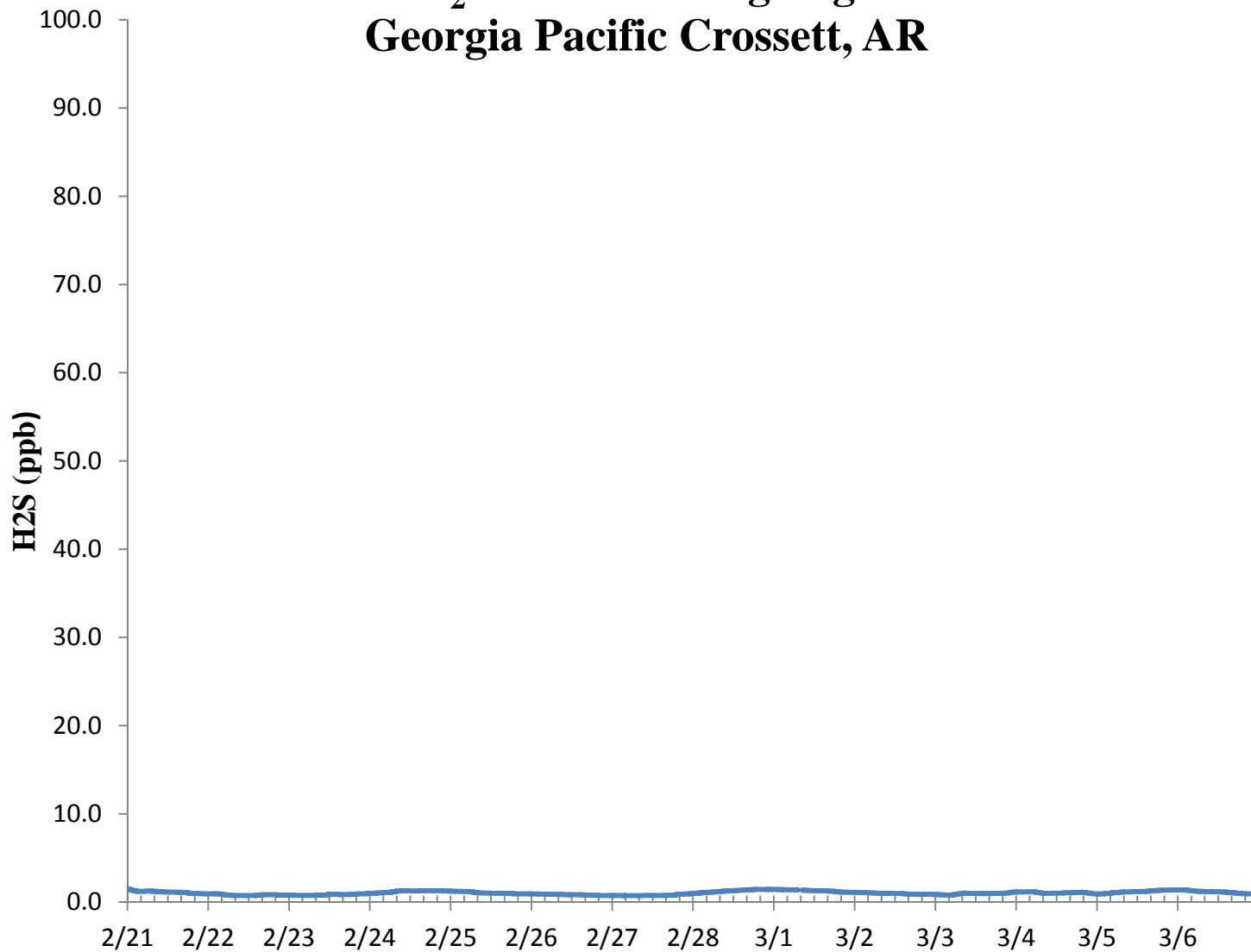
### H<sub>2</sub>S 30 Min Rolling Avg Georgia Pacific Crossett, AR



## H<sub>2</sub>S 8 Hr Rolling Avg Georgia Pacific Crossett, AR



## H<sub>2</sub>S 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>	
2/21/2018 13:00	69.7	70.0	-0.4	-2.607	0.184	0.429	0.184	
2/22/2018 13:00	69.3	70.0	-1.0	75th Percentile	1.000	1.000	1.000	
2/23/2018 13:00	70.8	70.0	1.1	-0.464	1.306	1.143	1.306	
2/24/2018 13:00	70.8	70.0	1.1		1.306	1.143	1.306	
2/25/2018 13:00	69.6	70.0	-0.6		0.327	0.571	0.327	
2/26/2018 13:00	68.1	70.0	-2.7		7.367	2.714	7.367	
2/27/2018 13:00	68.7	70.0	-1.9		3.449	1.857	3.449	
2/28/2018 13:00	70.4	70.0	0.6		0.327	0.571	0.327	
3/1/2018 13:00	69.3	70.0	-1.0		1.000	1.000	1.000	
3/2/2018 13:00	66.4	70.0	-5.1		26.449	5.143	26.449	
3/3/2018 13:00	65.7	70.0	-6.1		37.735	6.143	37.735	
3/4/2018 13:00	68.4	70.0	-2.3		5.224	2.286	5.224	
3/5/2018 13:00	68.8	70.0	-1.7		2.939	1.714	2.939	
3/6/2018 13:00	64.9	70.0	-7.3		53.082	7.286	53.082	

<b>n</b>	<b>S<sub>d</sub></b>	<b>S<sub>d2</sub></b>	<b>Σ d </b>	<b>"AB" (Eqn 4)</b>
14	2.609	16.675	33.000	2.357
<b>n-1</b>	<b>Σd</b>	<b>Σd<sup>2</sup></b>	<b>Σ d <sup>2</sup></b>	<b>"AS" (Eqn 5)</b>
13	-27.286	141.694	141.694	2.217

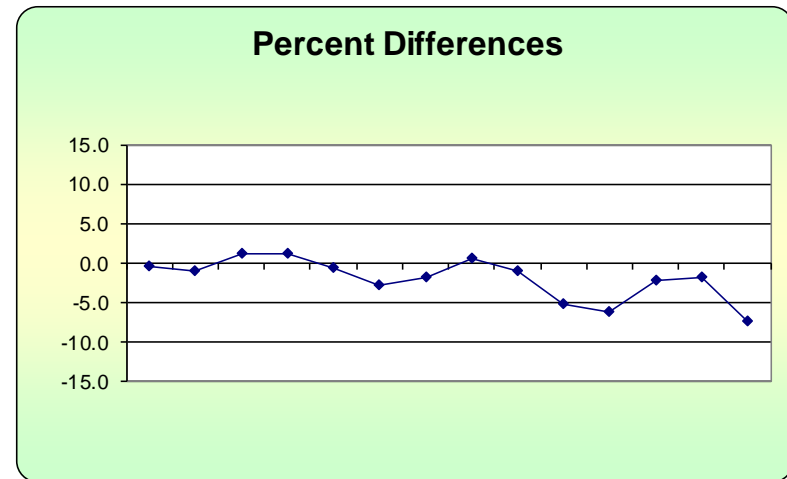
<b>Bias (%) (Eqn 3)</b>	Both Signs Positive
3.41	FALSE
<b>Signed Bias (%)</b>	Both Signs Negative
-3.41	TRUE

<b>CV (%) (Eqn 2)</b>	3.55
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<b>Upper Probability Limit</b>	<b>Lower Probability Limit</b>
3.17	-7.06



Meteorological Summary

