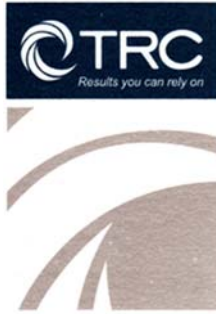


August 22, 2018



6312 NW 18<sup>th</sup> Drive  
Suite 100  
Gainesville, FL 32653

352.378.0332 PHONE  
352.378.0354 FAX

[www.TRCSolutions.com](http://www.TRCSolutions.com)

August 22, 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 July 25, 2018 through August 7, 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 ± 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.

The H<sub>2</sub>S analyzer was replaced on July 30<sup>th</sup> and calibrated on site overriding the scheduled automated calibration check on that day. Due to an extensive power outage automated calibration checks were not performed July 31<sup>st</sup> through August 3<sup>rd</sup>. 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.

During this reporting period a single automated zero check was performed. The result for this zero



checks is presented below.

<b>Date</b>	<b>Zero Check Response (ppb)</b>
7/27/2018	0.6

#### Data Capture

There were multiple occurrences 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. On July 30<sup>th</sup>, TRC personnel were on site to perform routine maintenance and replace the H<sub>2</sub>S analyzer. The replacement of the analyzer and subsequent calibration are responsible for approximately six hours of H<sub>2</sub>S data loss on July 30<sup>th</sup>. A significant power outage was responsible for the loss of H<sub>2</sub>S data from 12:50 pm on July 31<sup>st</sup> through 4:10 pm on August 3<sup>rd</sup>. Following the return of power to the monitoring location, a manual calibration check was performed on the analyzer, resulting in another three hours of H<sub>2</sub>S data loss on August 3<sup>rd</sup>.

Fourteen-day time series plots for all recorded meteorological (met) parameters are presented in the final charts. There were multiple occurrences of met data loss during this monitoring period. A significant power outage was responsible for the loss of met data from 9:20 pm on July 29<sup>th</sup> through 4:15 am on July 30<sup>th</sup>. Later, on July 30<sup>th</sup>, TRC personnel were on site to perform routine maintenance, resulting in 15 minutes of invalid precipitation data while the tipping bucket was cleaned. Lastly, due to power and communication interruptions, an extended period of met data loss occurred between 2:00 pm on August 2<sup>nd</sup> and 11:20 am on August 3<sup>rd</sup>.

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

Sincerely,



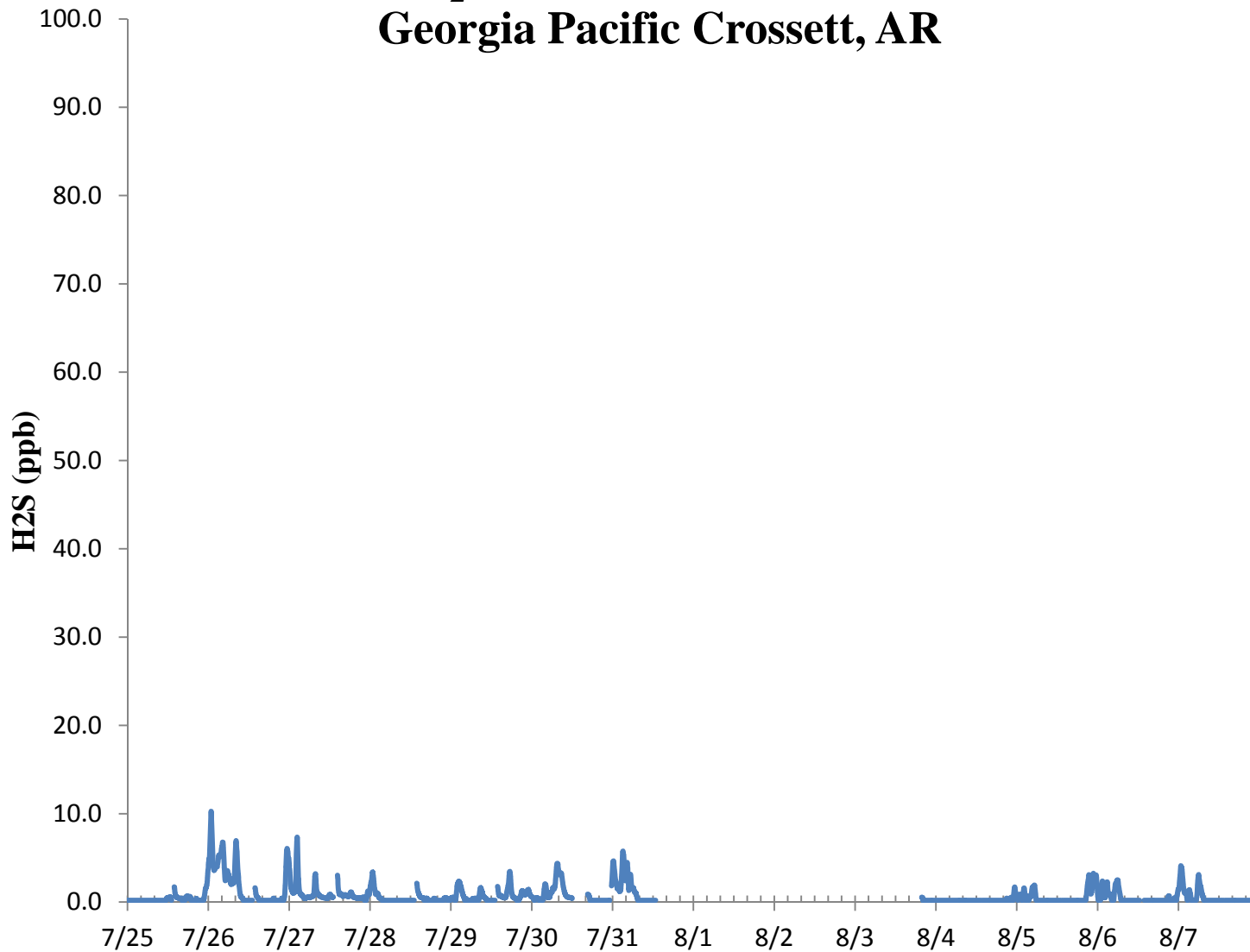

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Jonathan Bowser  
Manager, Air Quality and Meteorological Monitoring

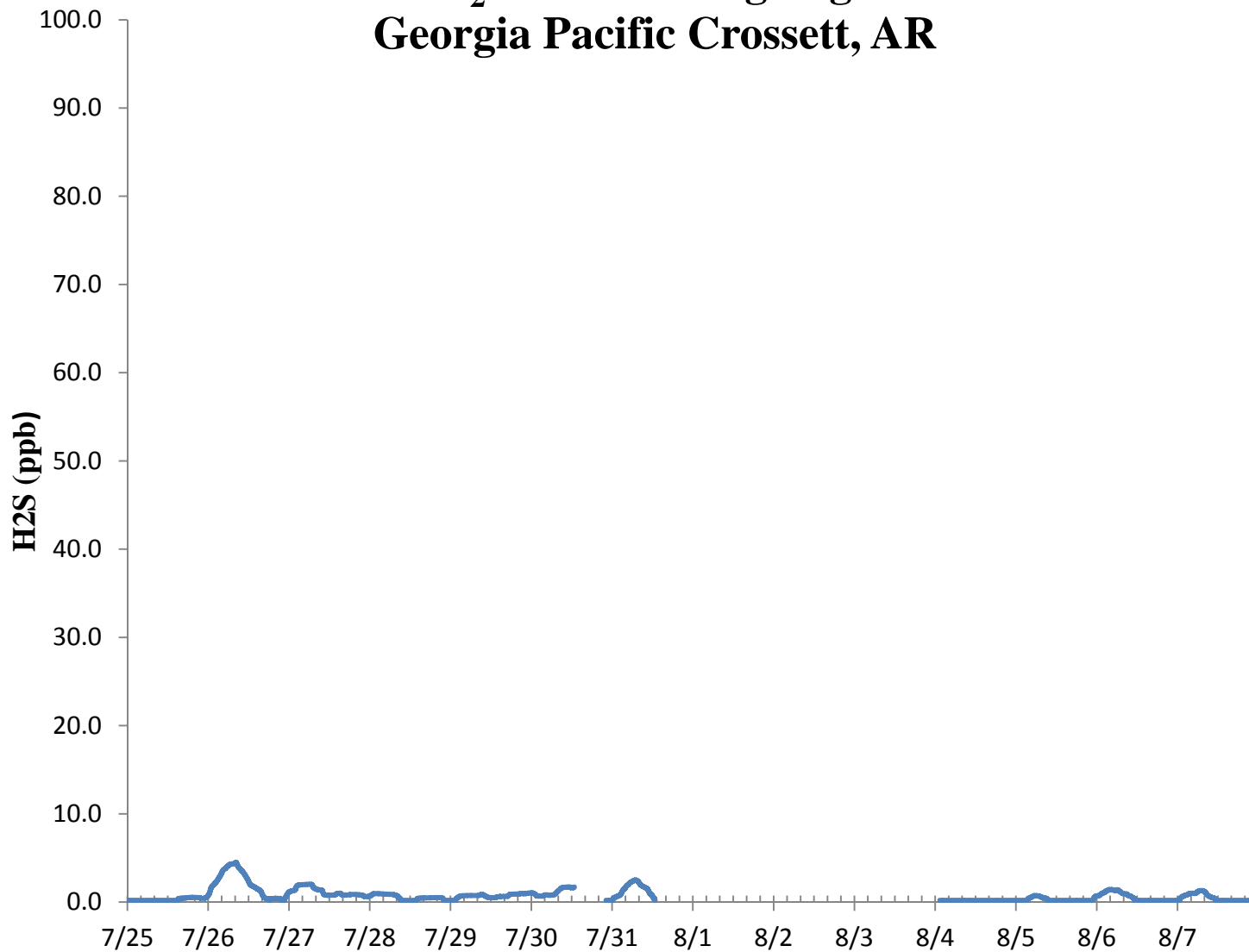
Air Measurements – Gainesville Office  
6312 NW 18th Drive, Suite 100  
Gainesville, Florida 32653  
(352) 260-1162  
Email: [jbowser@trcsolutions.com](mailto:jbowser@trcsolutions.com)

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)

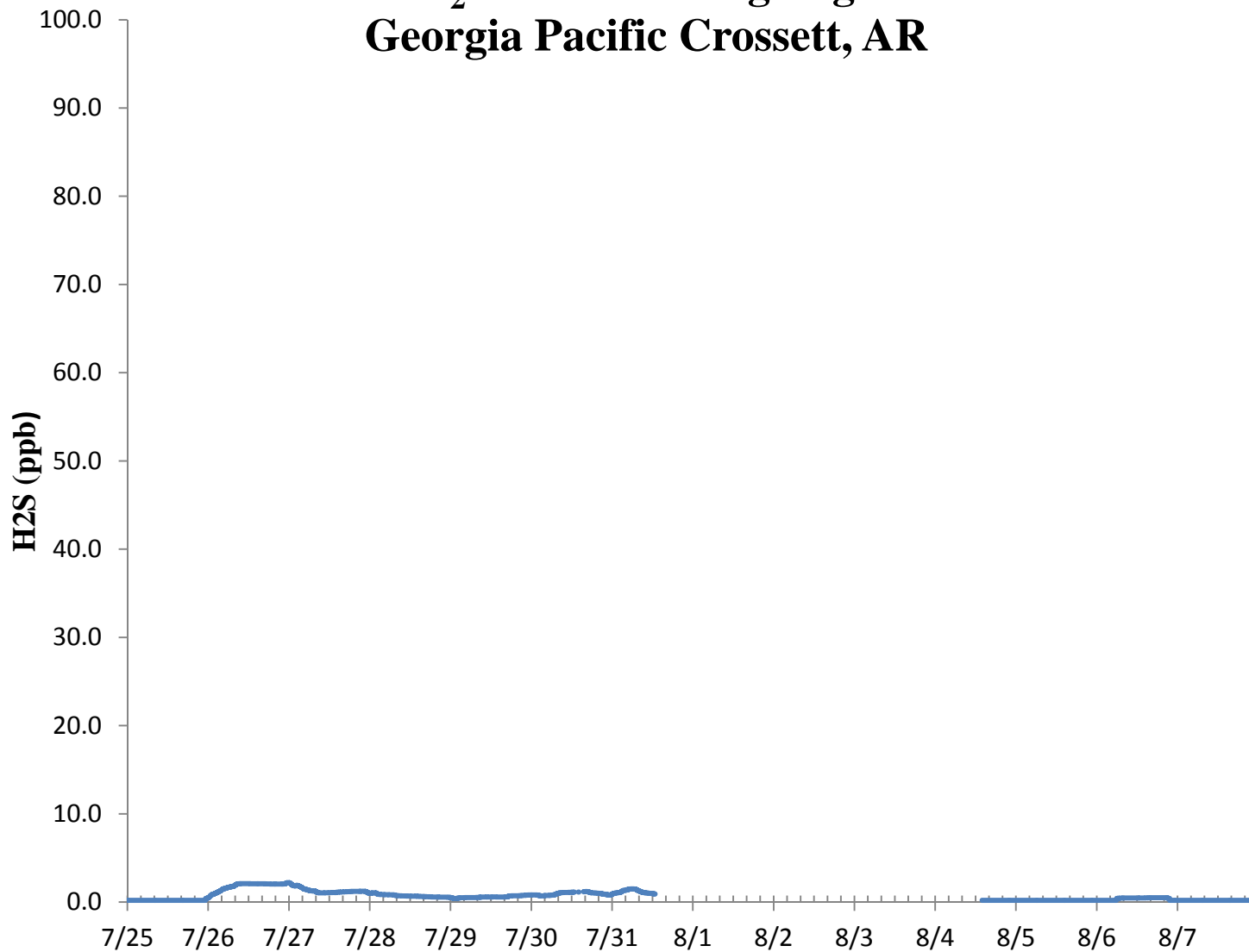
## H<sub>2</sub>S 30 Min Rolling Avg Georgia Pacific Crossett, AR



## 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>
7/25/2018 13:00	69.1	70.0	-1.3	-2.143	1.653	1.286	1.653
7/26/2018 13:00	68.5	70.0	-2.1	75th Percentile	4.592	2.143	4.592
7/27/2018 13:00	69.5	70.0	-0.7	-0.714	0.510	0.714	0.510
7/28/2018 13:00	69.7	70.0	-0.4		0.184	0.429	0.184
7/29/2018 13:00	69.6	70.0	-0.6		0.327	0.571	0.327
8/4/2018 13:00	69.0	70.0	-1.4		2.041	1.429	2.041
8/5/2018 13:00	68.6	70.0	-2.0		4.000	2.000	4.000
8/6/2018 13:00	68.4	70.0	-2.3		5.224	2.286	5.224
8/7/2018 13:00	67.9	70.0	-3.0		9.000	3.000	9.000

n	S <sub>d</sub>	S <sub>d2</sub>	Σ d	"AB" (Eqn 4)
9	0.880	2.925	13.857	1.540
n-1	Σd	Σd <sup>2</sup>	Σ d  <sup>2</sup>	"AS" (Eqn 5)
8	-13.857	27.531	27.531	0.880

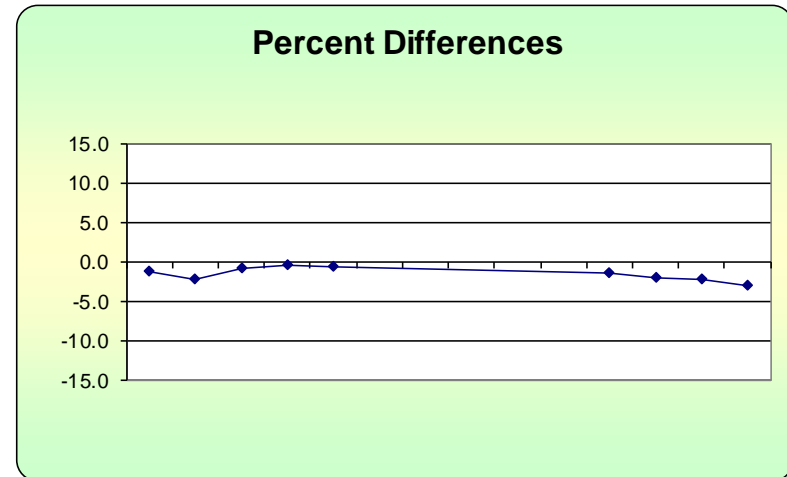
Bias (%) (Eqn 3)	Both Signs Positive
2.09	FALSE
Signed Bias (%)	Both Signs Negative
-2.09	TRUE

CV (%) (Eqn 2)	1.33
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Upper Probability Limit	Lower Probability Limit
0.19	-3.26



Meteorological Summary

