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December 4, 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 1, 2017 through November 14, 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)
11/2/2017	0.5



11/9/2017	-0.2
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Data Capture

There was a single occurrence of H₂S data loss this monitoring period, in addition those resulting from automated daily 1-point QC and weekly calibration checks. On November 8th TRC personnel were on-site performing maintenance on the H₂S analyzer followed by a complete calibration. Maintenance and calibration on the 8th resulted in approximately eight hours of lost H₂S data, including loss of the automated calibration check on that day.

Fourteen-day time series plots for all recorded meteorological (met) parameters are presented in the final table. There were multiple occurrences of met data loss during this monitoring period as summarized below:

- The relative humidity sensor was malfunctioning and was replaced on November 7th at 16:45, therefore approximately 156 hours of relative humidity data are missing from this monitoring period.
- Wind speed and wind direction are missing for approximately 16 hours from November 7th to November 8th on account of maintenance and calibrations of the sonic anemometer.
- Temperature data is missing for approximately 16 hours from November 7th to November 8th on account of maintenance and calibration of the sensor.
- Precipitation and relative humidity are missing for approximately one hour on the morning of November 9th on account of maintenance and calibrations of these sensors.

Please note, the period of invalid data on November 7th and 8th was longer than the time of actual maintenance on account of the time necessary to lower and raise the met tower.

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

Sincerely,

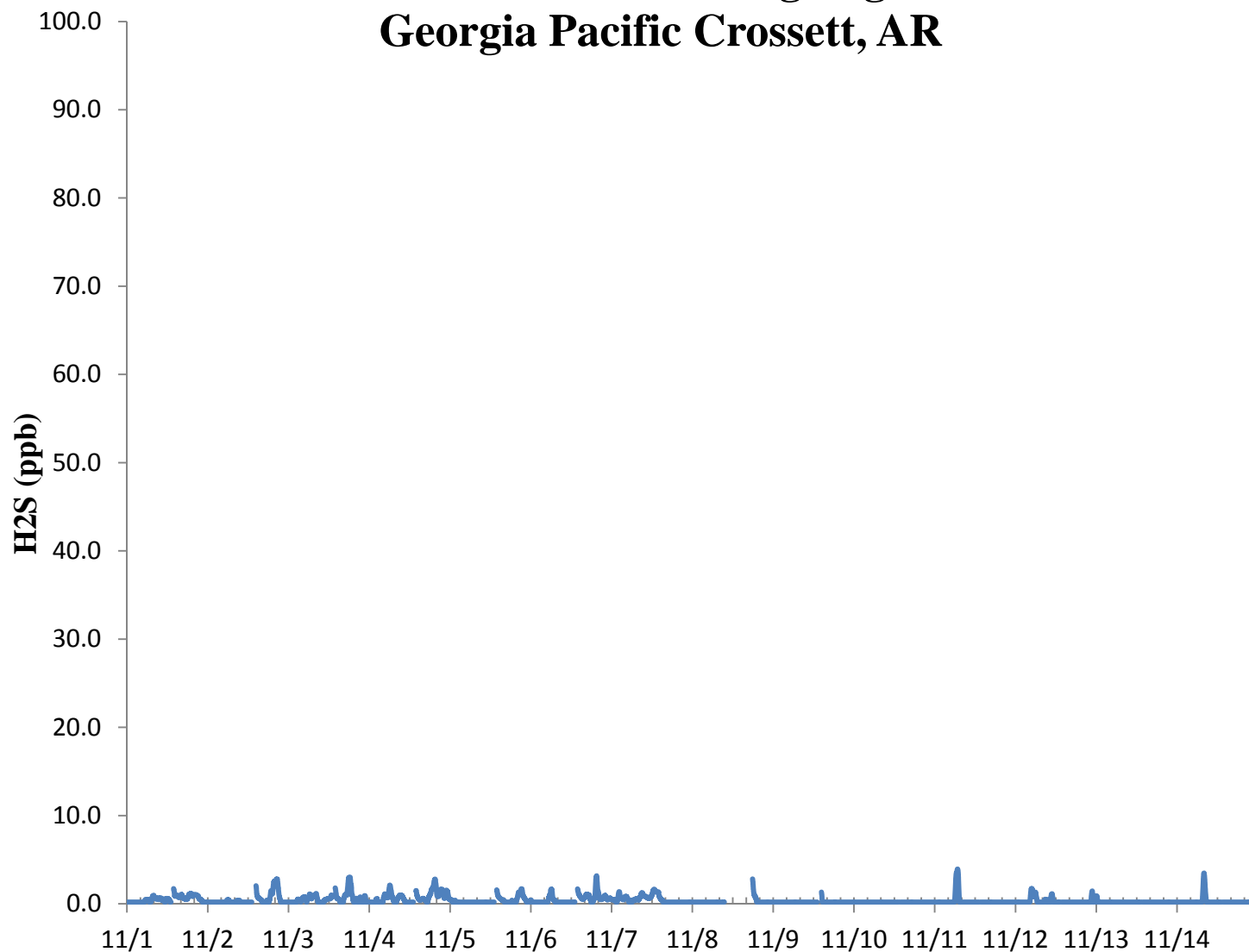


Jonathan Bowser
Manager, Air Quality and Meteorological Monitoring

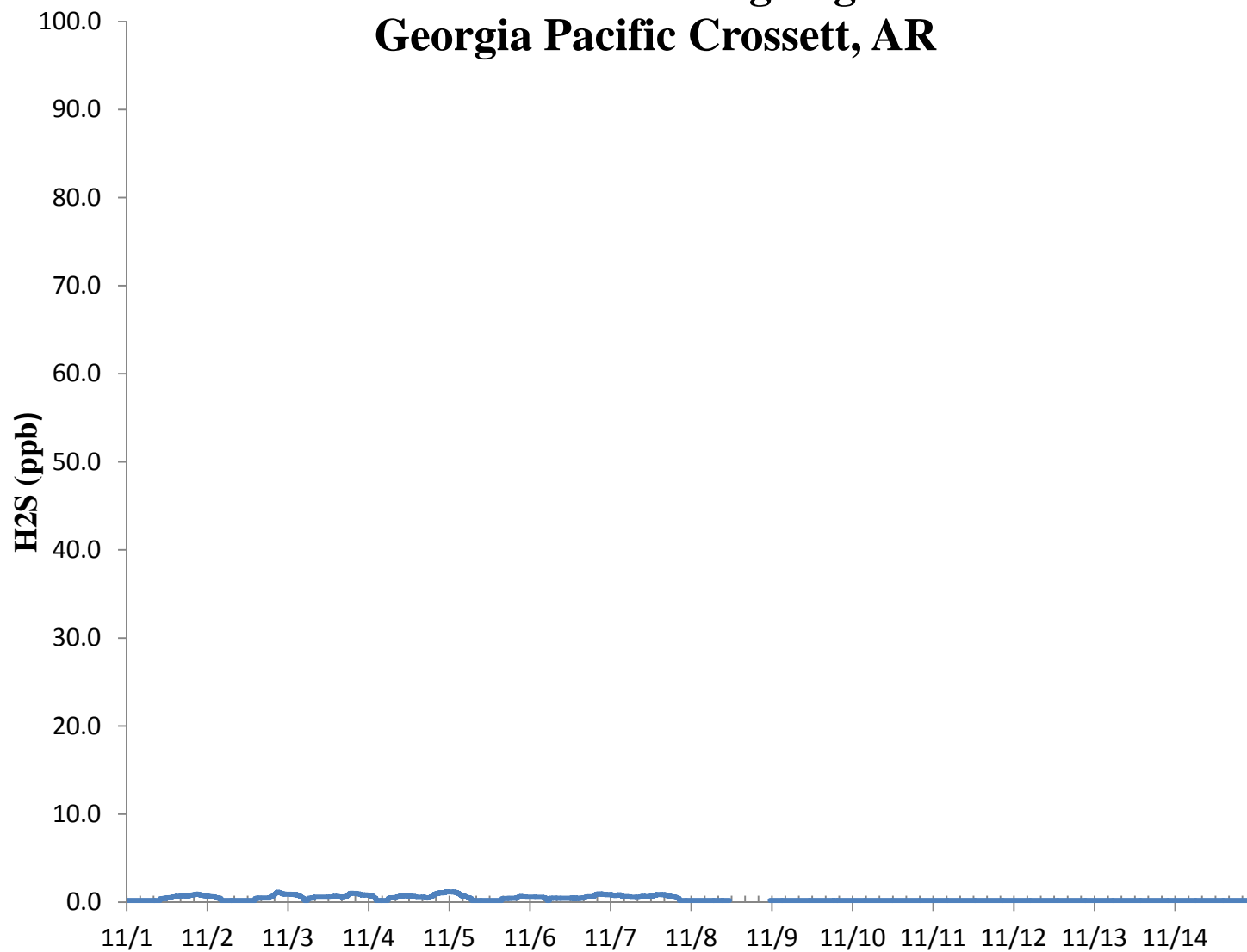
Air Measurements – Gainesville Office
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Email: jbowser@trcsolutions.com

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

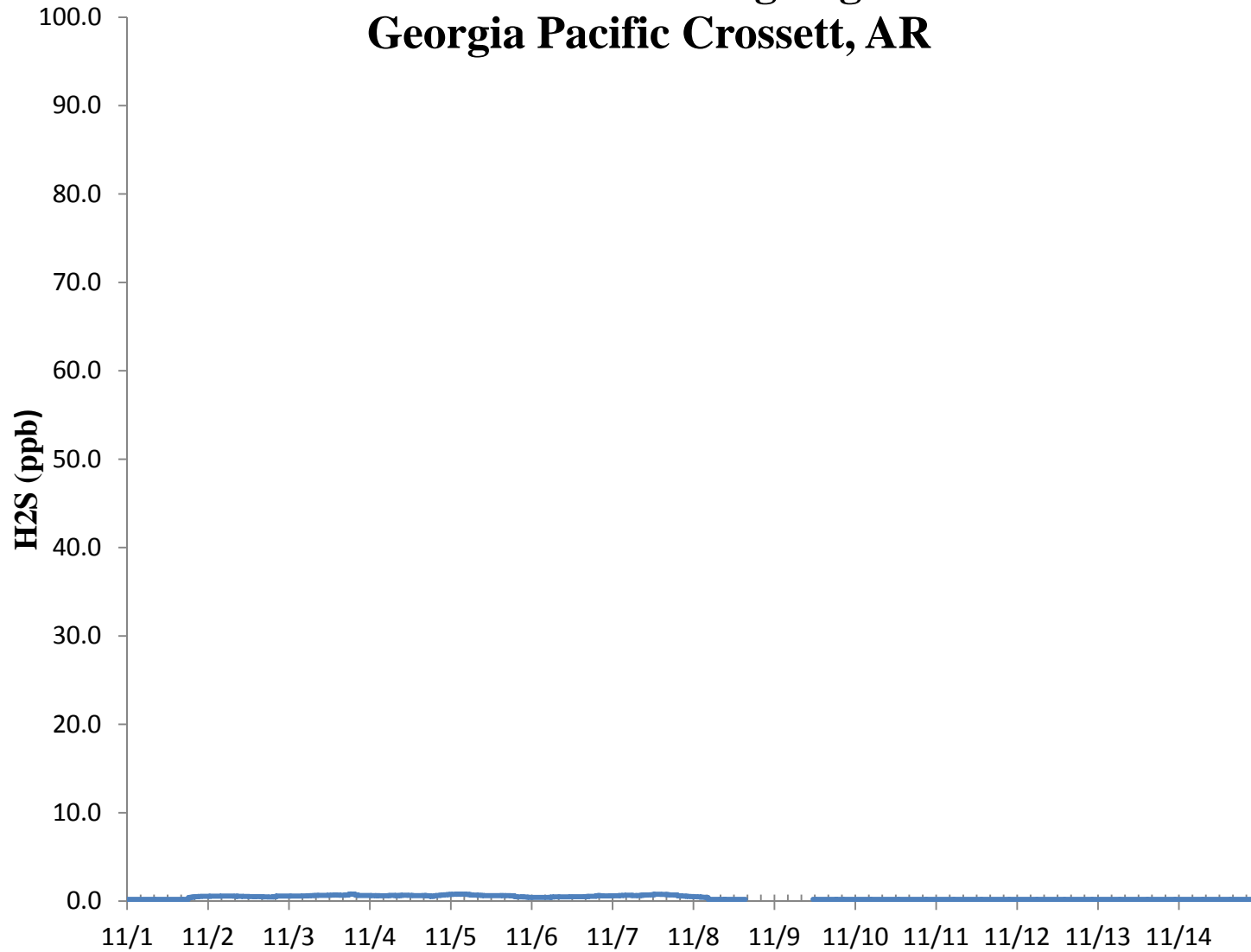
H2S 30 Min Rolling Avg Georgia Pacific Crossett, AR



H2S 8 Hr Rolling Avg Georgia Pacific Crossett, AR

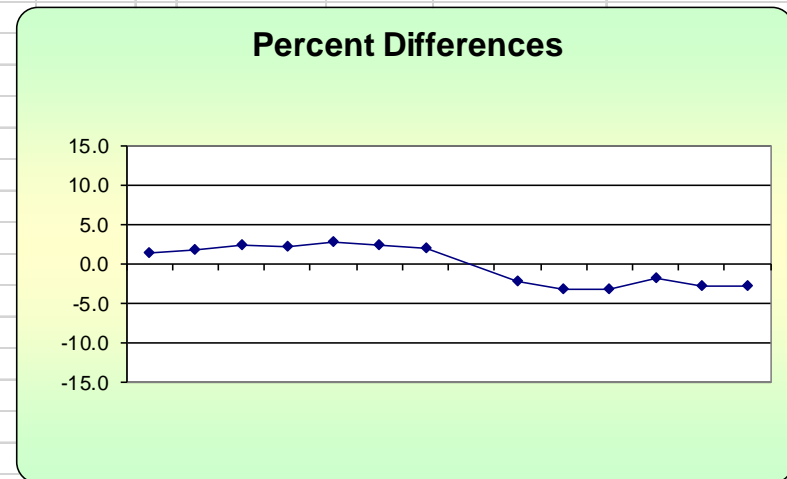


H2S 24 Hr Rolling Avg Georgia Pacific Crossett, AR



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		
11/1/2017 13:00	71.0	70.0	1.4	-2.714	2.041	1.429	2.041		
11/2/2017 13:00	71.3	70.0	1.9	75th Percentile	3.449	1.857	3.449		
11/3/2017 13:00	71.7	70.0	2.4	2.143	5.898	2.429	5.898	n	S_d
11/4/2017 13:00	71.5	70.0	2.1		4.592	2.143	4.592	13	2.520
11/5/2017 13:00	71.9	70.0	2.7		7.367	2.714	7.367	n-1	Σd
11/6/2017 13:00	71.6	70.0	2.3		5.224	2.286	5.224	12	-1.000
11/7/2017 13:00	71.4	70.0	2.0		4.000	2.000	4.000		S_{d2}
11/9/2017 13:00	68.5	70.0	-2.1		4.592	2.143	4.592		2.683
11/10/2017 13:00	67.7	70.0	-3.3		10.796	3.286	10.796		Σ d
11/11/2017 13:00	67.8	70.0	-3.1		9.878	3.143	9.878		30.714
11/12/2017 13:00	68.8	70.0	-1.7		2.939	1.714	2.939		Σ d ²
11/13/2017 13:00	68.0	70.0	-2.9		8.163	2.857	8.163		76.306
11/14/2017 13:00	68.1	70.0	-2.7		7.367	2.714	7.367		0.558
									Bias (%) (Eqn 3)
									2.64
									Signed Bias (%)
									+/-2.64
									CV (%) (Eqn 2)
									3.48
									Upper Probability Limit
									4.86
									Lower Probability Limit
									-5.02



Meteorological Summary

