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March 2, 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,

Following is the biweekly data summary for the Georgia-Pacific (GP) hydrogen sulfide (H<sub>2</sub>S) and meteorological monitoring program, at the GP Crossett mill, covering the calendar period of January 25, 2017 through February 7, 2017.

Summary of Results

Included in this report are three plots presenting H<sub>2</sub>S concentrations calculated with varied rolling average periods (30-minute, 8-hour, and 24-hour). Please note, observed H<sub>2</sub>S concentrations were elevated on January 28<sup>th</sup>, 30<sup>th</sup>, and February 7<sup>th</sup>. The highest recorded 30-minute and 8-hour rolling averages are presented in the table below.

| Date             | Maximum Concentrations and Time Recorded |                           |
|------------------|--|---------------------------|
|                  | 30 minute                                | 8 hour                    |
| January 28, 2017 | 88.3 ppb at 08:00                        | 26.9 ppb at 11:45 – 12:12 |
| January 30, 2017 | 171.3 ppb at 06:23                       | 93.8 ppb at 08:36 – 08:38 |
| February 7, 2017 | 110.3 ppb at 21:25                       | 40.1 ppb at 23:59         |

Also included in this report is a summary of results from the daily 1-point QC checks performed during this biweekly period. The QAPP establishes goals for precision and bias 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.

Additionally, weekly automated zero adjustment have been put in place beginning February 1, 2017, so as to limit the effect of the analyzer's zero drift. There were a total of 4 zero checks performed during this biweekly report period, on account of updates made to the logging program. All zero



checks were with the acceptable range of  $\pm 1.5$  ppb, as defined in the QAPP. Results for these zero checks are presented below.

| <b>Date</b> | <b>Zero Check</b> |
|-------------|-------------------|
| 1/26/2017   | -0.7              |
| 1/31/2017   | -0.7              |
| 2/1/2017    | -0.2              |
| 2/2/2017    | 0.0               |

There were no occurrences of data loss during this monitoring period, other than those resulting from automated daily 1-point QC and weekly calibration checks. Results for available automated daily 1-point QC checks fall within the acceptable range, indicating the H<sub>2</sub>S monitor was operating in accordance with the QAPP.

Fourteen-day time series plots for all recorded meteorological (met) parameters are presented in the final table. All met parameters have 100% data capture for this report period.

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

Sincerely,



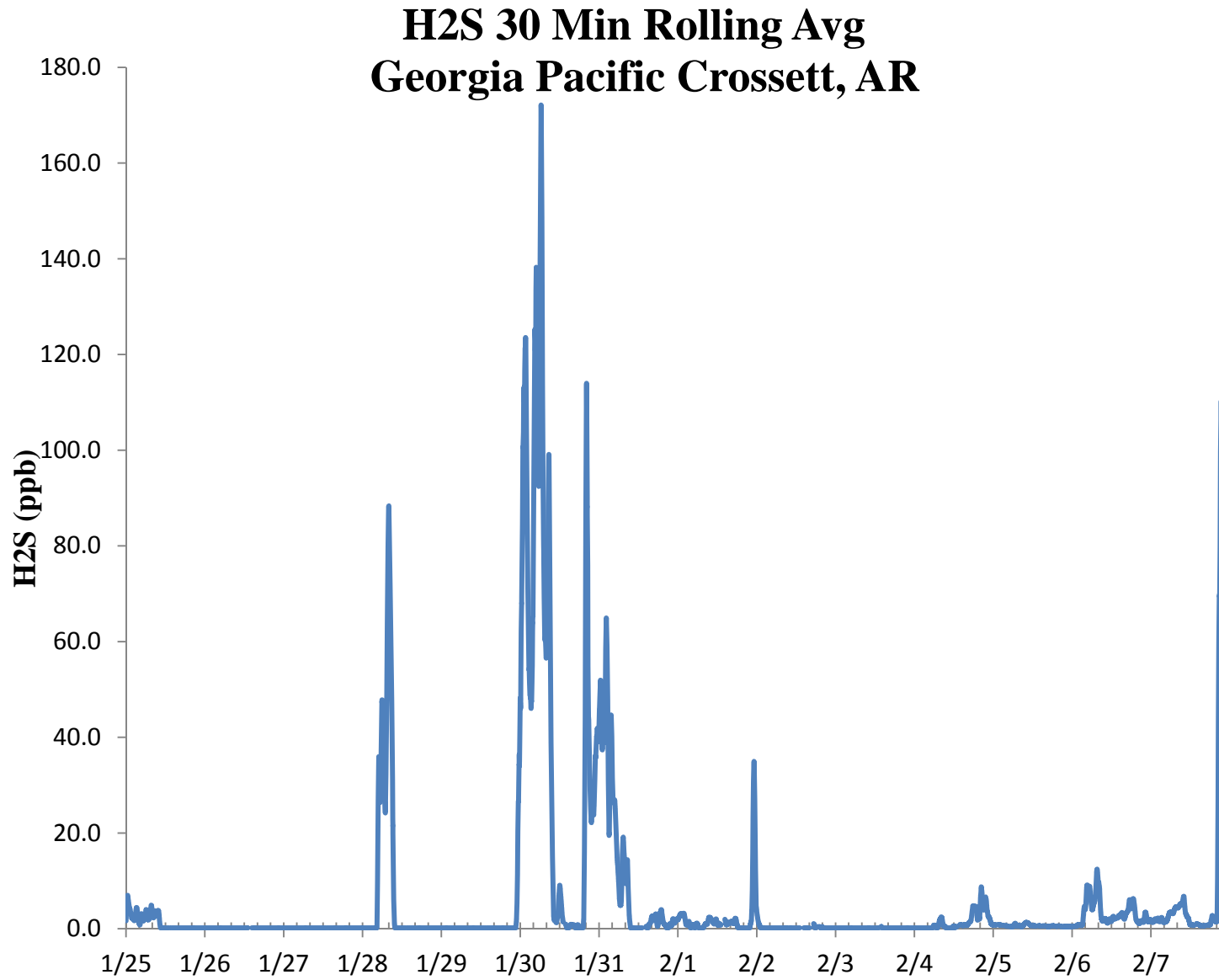

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Jonathan Bowser  
 Manager, Air Quality and Meteorological Monitoring

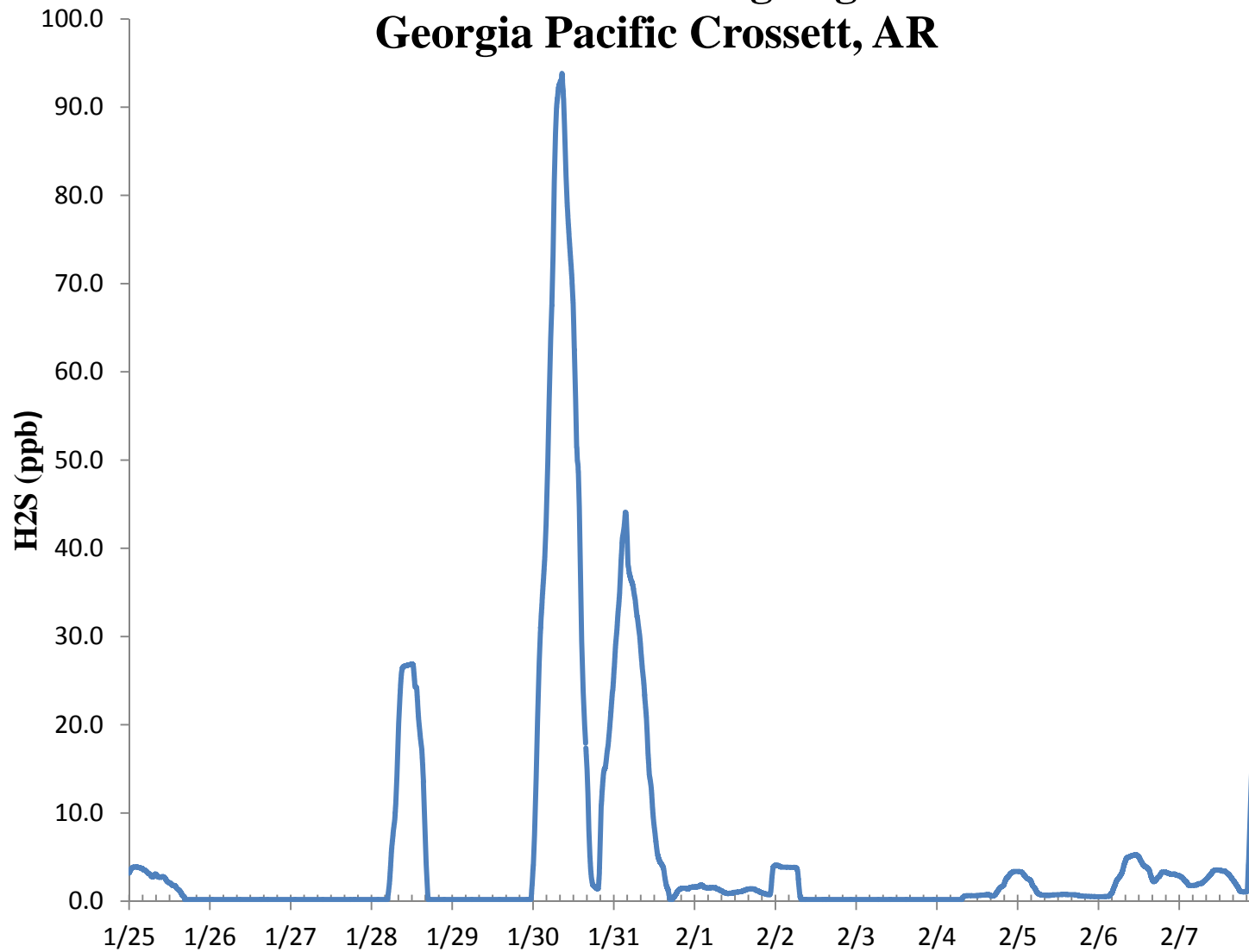
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CC: Becky Keough, ADEQ Director via email: [keogh@adeq.state.ar.us](mailto:keogh@adeq.state.ar.us)  
 Kara Allen, Environmental Engineer, USEPA Region 6 via email [Allen.Kara@epa.gov](mailto:Allen.Kara@epa.gov)

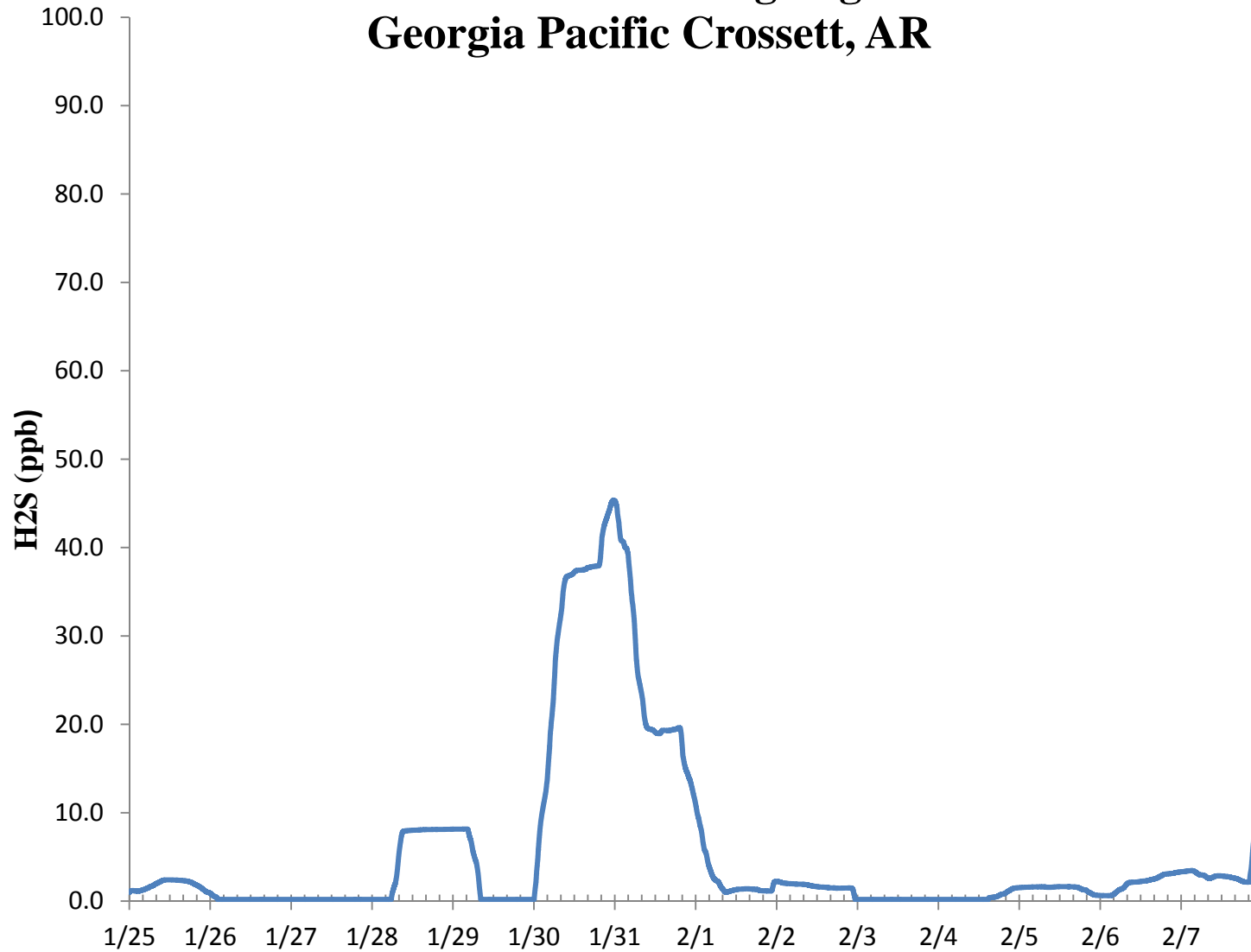




### H2S 8 Hr Rolling Avg Georgia Pacific Crossett, AR



## 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) | Audit Val (X) | d (Eqn. 1)                             | 25th Percentile        | d <sup>2</sup> | d     | d  <sup>2</sup>      |          |
| 1/25/2017 13:00   | 68.6         | 70.0          | -2.0                                   | -3.214                 | 4.000          | 2.000 | 4.000                |          |
| 1/26/2017 13:00   | 67.5         | 70.0          | -3.6                                   | <b>75th Percentile</b> | 12.755         | 3.571 | 12.755               |          |
| 1/27/2017 13:00   | 67.5         | 70.0          | -3.6                                   | -1.571                 | 12.755         | 3.571 | 12.755               |          |
| 1/28/2017 13:00   | 67.6         | 70.0          | -3.4                                   |                        | 11.755         | 3.429 | 11.755               |          |
| 1/29/2017 13:00   | 67.7         | 70.0          | -3.3                                   |                        | 10.796         | 3.286 | 10.796               |          |
| 1/30/2017 13:00   | 68.3         | 70.0          | -2.4                                   |                        | 5.898          | 2.429 | 5.898                |          |
| 1/31/2017 13:00   | 67.9         | 70.0          | -3.0                                   |                        | 9.000          | 3.000 | 9.000                |          |
| 2/1/2017 13:00    | 69.3         | 70.0          | -1.0                                   |                        | 1.000          | 1.000 | 1.000                |          |
| 2/2/2017 16:00    | 68.5         | 70.0          | -2.1                                   |                        | 4.592          | 2.143 | 4.592                |          |
| 2/3/2017 13:00    | 68.9         | 70.0          | -1.6                                   |                        | 2.469          | 1.571 | 2.469                |          |
| 2/4/2017 13:00    | 68.5         | 70.0          | -2.1                                   |                        | 4.592          | 2.143 | 4.592                |          |
| 2/5/2017 13:00    | 69.1         | 70.0          | -1.3                                   |                        | 1.653          | 1.286 | 1.653                |          |
| 2/6/2017 13:00    | 69.3         | 70.0          | -1.0                                   |                        | 1.000          | 1.000 | 1.000                |          |
| 2/7/2017 13:00    | 68.9         | 70.0          | -1.6                                   |                        | 2.469          | 1.571 | 2.469                |          |

|            |                      |                       |                         |                     |
|------------|----------------------|-----------------------|-------------------------|---------------------|
| <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         | 0.944                | 4.456                 | 32.000                  | 2.286               |
| <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         | -32.000              | 84.735                | 84.735                  | 0.944               |

|                         |                     |
|-------------------------|---------------------|
| <b>Bias (%) (Eqn 3)</b> | Both Signs Positive |
| 2.73                    | FALSE               |
| <b>Signed Bias (%)</b>  | Both Signs Negative |
| -2.73                   | TRUE                |

|                       |      |
|-----------------------|------|
| <b>CV (%) (Eqn 2)</b> | 1.28 |
|-----------------------|------|

|                                |                                |
|--------------------------------|--------------------------------|
| <b>Upper Probability Limit</b> | <b>Lower Probability Limit</b> |
| -0.43                          | -4.14                          |

The graph displays 'Percent Differences' on the y-axis, ranging from -15.0 to 15.0 in increments of 5.0. The x-axis represents 14 data points corresponding to the dates in the table above. The data points are approximately: -2.0, -3.6, -3.6, -3.4, -3.3, -2.4, -3.0, -1.0, -2.1, -1.6, -2.1, -1.3, -1.0, -1.6. The line shows a slight downward trend from the first point to the middle, followed by a slight upward trend towards the end.



Meteorological Summary

