## STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION



# VERIFICATION OF CONTINUED ATTAINMENT FOR THE HILLSBOROUGH-POLK COUNTY SULFUR DIOXIDE (SO<sub>2</sub>) MAINTENANCE AREA

May 31, 2022

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## 1. Background

Effective March 23, 2020, the U.S. Environmental Protection Agency (EPA) approved Florida's redesignation request and maintenance plan for the Hillsborough-Polk sulfur dioxide (SO<sub>2</sub>) maintenance area. 85 Fed. Reg. 9666 (February 20, 2020). The maintenance plan includes a section regarding verification of ongoing attainment, which requires the Florida Department of Environmental Protection (Department) to provide an annual report to EPA on or before July 1 each year, which certifies whether the area is continuing to attain the 2010 SO<sub>2</sub> national ambient air quality standard (NAAQS). This annual report must include:

- 1) The status of ongoing compliance with the SO<sub>2</sub> emission limits for the Mosaic New Wales and Mosaic Bartow facilities;
- 2) A review of annual emissions data for these facilities;
- 3) A review of the air dispersion modeling inputs and assumptions identified by EPA in coordination with the Department;
- 4) A certification that there are no changes in the air dispersion modeling inputs and assumptions that could result in a modeled violation; and
- 5) All supporting documentation and data evaluated by the Department in preparing its annual report.

This annual report addresses the items listed above to demonstrate that the Hillsborough-Polk maintenance area continues to attain the 2010 SO<sub>2</sub> NAAQS.

## 2. Status of Ongoing Compliance with the SO<sub>2</sub> Emission Limits

The attainment modeling demonstration was based on permitted SO<sub>2</sub> emissions caps of 1,090 pounds per hour (lb/hr) for the five sulfuric acid plants (SAPs) at New Wales and 1,100 lb/hr for the three SAPs at Bartow, based on a 24-hour average as determined by continuous emission monitoring systems (CEMS) data. These SO<sub>2</sub> emissions limits have been incorporated into Florida's State Implementation Plan (SIP) to make the limits permanent and federally enforceable.

Mosaic has been in compliance with the 24-hour block average SAP emissions for each facility since the limits became effective on August 31, 2019. **Appendix A** provides all of the 24-hour averages from January 1, 2021, through December 31, 2021. All of the 24-hour averages are below the respective limits for each facility, demonstrating that Mosaic continues to comply with the SO<sub>2</sub> emissions limits at both facilities, as required to maintain the NAAQS.

## 3. Review of Annual Emissions Data

**Table 1**, below, shows the 2021 annual emissions from New Wales and Bartow in relation to the potential to emit from those facilities. As the attainment modeling demonstration uses potential to emit, there has been less  $SO_2$  emitted from these facilities than was modeled.

Table 1: 2021 annual SO<sub>2</sub> emissions from New Wales and Bartow compared to the potential to emit.

Facility	2021 Actual Emissions (TPY)	Potential to Emit (TPY)	Percentage of Potential to Emit
New Wales SAPs 1-5	3,239.9	4,774	67.9%
Bartow SAPs 4-6	3,662.8	4,818	76.0%

#### 4. Review of Air Dispersion Modeling Inputs and Assumptions

The Department coordinated with EPA to determine which modeling inputs and assumptions used in the attainment modeling demonstration should be reviewed to determine whether there have been any changes that could result in a modeled violation of the 2010 SO<sub>2</sub> NAAQS. These modeling inputs and assumptions are discussed below.

#### Source-Specific Modeling Inputs and Assumptions

The stack parameters for each SAP at New Wales and Bartow have not changed since the Department submitted its attainment modeling demonstration. There has not been any construction or new buildings added at New Wales or Bartow that could change building downwash parameters.

Operations of the SAPs at both New Wales and Bartow have not changed and continue to reflect what was modeled in the attainment modeling demonstration. Therefore, no change in the temporal or spatial distribution of SO<sub>2</sub> emissions or concentrations is expected.

#### Meteorology

The Department analyzed the meteorology and wind rose data for the most recent five years of available data (2017-2021) and compared these data to the meteorology and wind rose data for the five years used in the attainment modeling demonstration (2012-2016). **Figure 1** shows the wind roses for these two periods and shows that the wind pattern is very similar between the two periods.



Figure 1: Wind rose data for the KGIF Winter Haven Regional Airport ASOS station for the years 2012-2016 (top) and 2017-2021 (bottom)

The most important wind direction to analyze is when the wind is traveling from Bartow towards New Wales. This is the wind direction that results in the maximum modeled concentrations because it includes impacts from both the New Wales facility plus contributions from the nearby Bartow facility. Bartow is approximately 45 degrees northeast of New Wales, so the Department looked at the proportion of time that the wind direction was in the range of 0 to 90 degrees. This range conservatively covers all potential periods when Bartow emissions could be contributing to modeled SO<sub>2</sub> concentrations near New Wales.

**Table 2** below compares the percentage of time that winds were from 0-90 degrees in the 2012-2016 meteorology dataset and the 2017-2021 meteorology dataset. There is a slight decrease in the percentage of time that winds blow from Bartow towards New Wales in the 2017-2021 dataset, which would be expected to cause a slight, but potentially insignificant, decrease in modeled concentrations.

**Table 2:** Percentage of time wind direction is from 0 to 90 degrees

Years	Wind Direction 0-90°
2012-2016	33.51%
2017-2021	26.85%

#### Land-Use in the Area

Land use in the area, which can affect the meteorological parameters, has not changed since the area attained the NAAQS.

#### Ambient Background Concentrations

The Department evaluated ambient background concentrations of  $SO_2$  at the Sydney monitor (12-057-3002). The Department used 2014-2016 data from the Sydney monitor to calculate background  $SO_2$  concentrations used in the attainment modeling demonstration.

**Table 3** shows that the one-hour  $SO_2$  design value at the Sydney monitor has decreased from 13 ppb to 6 ppb since the 2014-2016 period.

Period	Design Value
2014-2016	13 ppb
2015-2017	10 ppb
2016-2018	9 ppb
2017-2019	9 ppb
2018-2020	9 ppb
2019-2021	6 ppb

Table 3: SO<sub>2</sub> 1-hour design values at the Sydney monitor

The Department also recalculated the background SO<sub>2</sub> concentrations averaged by season and hour for the most recent three years of available data (2019-2021). **Table 4** and **Table 5** show the background concentrations for the 2014-2016 period, used in the attainment modeling demonstration, and the 2019-2021 period, respectively. The maximum background SO<sub>2</sub> value for

2014-2016 is 7.33  $\mu g/m^3.$  The maximum background SO\_2 value for 2019-2021 is 2.82  $\mu g/m^3,$  a significant decrease.

Hour	Winter	Spring	Summer	Fall
0:00	1.00	1.33	0.67	2.33
1:00	2.00	1.33	1.00	2.00
2:00	1.67	1.33	0.67	2.67
3:00	1.33	1.67	1.00	2.33
4:00	1.33	1.67	1.00	3.33
5:00	1.33	1.67	0.67	3.00
6:00	1.00	2.33	1.00	1.33
7:00	1.67	2.67	2.33	3.00
8:00	2.33	3.00	2.33	7.33
9:00	4.00	3.33	3.67	6.00
10:00	3.00	3.00	3.33	3.67
11:00	3.00	3.00	3.00	3.33
12:00	3.33	2.67	2.33	2.67
13:00	3.00	2.00	2.00	2.33
14:00	3.67	2.33	2.67	1.67
15:00	2.33	2.67	2.00	2.33
16:00	3.33	3.00	1.67	2.67
17:00	3.33	2.67	1.33	2.00
18:00	2.33	3.67	1.00	1.67
19:00	2.67	5.33	1.00	2.33
20:00	2.67	3.00	0.67	1.67
21:00	1.67	2.67	1.00	2.00
22:00	2.00	1.33	1.33	2.33
23:00	1.33	1.00	1.00	1.33

**Table 4:** Background SO2 concentrations ( $\mu g/m^3$ ) used in the<br/>attainment modeling demonstration (2014-2016)

Hour	Winter	Spring	Summer	Fall
0:00	0.90	0.78	0.64	0.76
1:00	1.07	0.68	0.66	0.90
2:00	1.13	0.69	0.74	1.02
3:00	1.07	0.79	0.73	1.05
4:00	0.86	0.76	0.61	0.79
5:00	0.84	0.73	0.57	0.82
6:00	0.80	0.73	0.59	0.82
7:00	0.82	0.83	0.74	0.82
8:00	0.80	1.71	1.14	1.00
9:00	1.07	1.29	1.24	1.19
10:00	1.44	1.77	1.45	1.27
11:00	1.48	2.13	1.68	1.26
12:00	1.21	1.47	1.78	1.06
13:00	1.93	1.83	1.60	1.01
14:00	2.10	1.95	1.42	1.01
15:00	1.84	1.91	1.40	1.06
16:00	1.65	2.31	1.11	1.29
17:00	2.29	2.82	1.19	1.10
18:00	2.33	2.49	1.30	0.99
19:00	2.62	2.14	1.28	1.06
20:00	1.52	1.84	0.96	0.91
21:00	1.22	1.16	0.76	1.05
22:00	1.07	1.00	0.69	0.95
23:00	0.96	0.87	0.68	0.74

**Table 5:** Background SO2 concentrations ( $\mu g/m^3$ ) for<br/>the most recent three years (2019-2021)

#### Critical Emissions Value

The critical emissions value (CEV) is the emissions level (lb/hr) at which the maximum modeled concentration is equal to the NAAQS. The CEVs calculated in the attainment demonstration modeling for New Wales and Bartow are 1,118 lb/hr and 1,163 lb/hr, respectively. The emissions data submitted with the redesignation request and attainment modeling demonstration from August 31, 2019 (the attainment date), through October 2, 2019, exceeded the CEV 2.8 percent of the time at New Wales, and 1.0 percent of the time at Bartow, while still maintaining the permitted emissions limits.

The Department analyzed the frequency that each facility's emissions exceeded their respective CEVs from January 1, 2021, through December 31, 2021 (see **Appendix B**). Emissions from New Wales exceeded the CEV 1.2 percent of the time, and emissions from Bartow exceeded the CEV 1.3 percent of the time, while still maintaining the permitted emissions limits. It is expected that these occasional spikes above the CEV, which can occur with longer-term limits such as 24-

hour average limits, are unlikely to have a significant impact on air quality, as they are unlikely to occur repeatedly at the same time as meteorological conditions conducive to high ambient concentrations of SO<sub>2</sub>.

In addition, considering that the ambient background concentrations of  $SO_2$  at the Sydney monitor have decreased since the 2014-2016 period, the CEVs of 1,118 lb/hr and 1,163 lb/hr for New Wales and Bartow are conservative. If the CEVs were recalculated with updated modeling, the updated CEVs would be higher, and the frequency that the hourly emissions would exceed the CEVs may be reduced.

## 5. Certification of Continued Attainment

The Department certifies that there are no changes in the air dispersion modeling inputs and assumptions that could result in a modeled violation, and therefore recommends that no additional action or information is necessary to verify continued attainment. The Hillsborough-Polk maintenance area is expected to continue to maintain the 2010 SO<sub>2</sub> NAAQS.

#### Appendix A New Wales and Bartow Facilities 24-Hour Block Average SAP Emissions

#### NAAQS SO2 lb/hr Daily CAPs

Mosaic

Table 1. CY 2021 SO<sub>2</sub> lb /hour, 24-hour block average (6:00 a.m. to 6:00 a.m.)

D. fr	New Wales	Bartow
Dare	Cap 1,090 PPH	Сар 1,100 РРН
1/1/2021	670	470
1/2/2021	712	526
1/3/2021	750	591
1/4/2021	809	646
1/5/2021	870	926
1/6/2021	826	1,054
1/7/2021	841	997
1/8/2021	884	1,048
1/9/2021	899	1,049
1/10/2021	880	1,036
1/11/2021	872	1,082
1/12/2021	933	822
1/13/2021	948	378
1/14/2021	937	898
1/15/2021	902	1,068
1/16/2021	919	1,088
1/17/2021	914	1,058
1/18/2021	1,005	1,051
1/19/2021	958	993
1/20/2021	962	703
1/21/2021	781	741
1/22/2021	949	924
1/23/2021	875	950
1/24/2021	909	693
1/25/2021	931	712
1/26/2021	1,008	676
1/27/2021	1,023	1,015
1/28/2021	1,006	1,067
1/29/2021	1,066	1,069
1/30/2021	1,054	1,041
1/31/2021	1,072	994
2/1/2021	1,073	1,068
2/2/2021	1,034	817
2/3/2021	1,059	713
2/4/2021	923	724
2/5/2021	896	523
2/6/2021	840	598
2/7/2021	926	566
2/8/2021	662	626
2/9/2021	660	645
2/10/2021	760	633
2/11/2021	674	663
2/12/2021	932	806

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0.4	New Wales	Bartow
Date	Cap 1,090 PPH	Сар 1,100 РРН
2/13/2021	859	564
2/14/2021	779	574
2/15/2021	677	863
2/16/2021	782	1,054
2/17/2021	895	997
2/18/2021	719	1,015
2/19/2021	718	1,018
2/20/2021	572	1,068
2/21/2021	682	1,089
2/22/2021	574	1,078
2/23/2021	15	951
2/24/2021	230	905
2/25/2021	526	1,062
2/26/2021	704	1,072
2/27/2021	750	1,075
2/28/2021	536	1.069
3/1/2021	498	1.056
3/2/2021	661	1.082
3/3/2021	484	1.079
3/4/2021	570	1,086
3/5/2021	356	1,085
3/6/2021	508	745
3/7/2021	742	508
3/8/2021	982	399
3/9/2021	1.017	401
3/10/2021	904	530
3/11/2021	891	487
3/12/2021	785	505
3/13/2021	929	803
3/14/2021	954	949
3/15/2021	984	920
3/16/2021	978	728
3/17/2021	826	837
3/18/2021	706	742
3/19/2021	939	932
3/20/2021	936	928
3/21/2021	912	933
3/22/2021	877	893
3/23/2021	844	997
3/24/2021	729	1.000
3/25/2021	661	960
3/26/2021	676	915
3/27/2021	746	950
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#### Table 1. CY 2021 SO<sub>2</sub> lb /hour, 24-hour block average (6:00 a.m. to 6:00 a.m.)

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2021 50210	New Wales	Rentow
Date	Can 1.090 PPH	Сар 1.100 РРН
3/28/2021	800	984
3/20/2021	791	904
3/30/2021	723	625
3/30/2021	723	950
4/1/2021	520	540
4/1/2021	440	207
4/2/2021	200	147
4/3/2021	520	147
4/4/2021	979	922
4/5/2021	0/0	032
4/7/2021	720	7/0
4/7/2021	/ 32	990
4/0/2021	030	770
4/7/2021	000	<del>73∠</del> 220
4/10/2021	907	339
4/11/2021	818	200
4/12/2021	905	322
4/13/2021	920	101
4/14/2021	993	156
4/15/2021	1,008	368
4/16/2021	886	36/
4/17/2021	662	459
4/18/2021	/34	488
4/19/2021	83/	51/
4/20/2021	920	676
4/21/2021	819	670
4/22/2021	939	689
4/23/2021	983	716
4/24/2021	1,035	751
4/25/2021	1,023	443
4/26/2021	972	465
4/27/2021	967	452
4/28/2021	922	474
4/29/2021	927	448
4/30/2021	1,028	725
5/1/2021	839	755
5/2/2021	840	719
5/3/2021	879	732
5/4/2021	923	575
5/5/2021	965	482
5/6/2021	459	785
5/7/2021	294	917
5/8/2021	486	1,044
5/9/2021	704	1,012

#### Table 1. CY 2021 SO<sub>2</sub> lb /hour, 24-hour block average (6:00 a.m. to 6:00 a.m.)

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	New Wales	Bartow
Date	Cap 1,090 PPH	Сар 1,100 РРН
5/10/2021	989	725
5/11/2021	1,056	809
5/12/2021	972	836
5/13/2021	890	891
5/14/2021	923	943
5/15/2021	927	966
5/16/2021	923	990
5/17/2021	863	922
5/18/2021	469	860
5/19/2021	679	915
5/20/2021	665	875
5/21/2021	545	888
5/22/2021	627	882
5/23/2021	664	968
5/24/2021	677	956
5/25/2021	631	932
5/26/2021	740	980
5/27/2021	686	965
5/28/2021	882	944
5/29/2021	828	990
5/30/2021	710	945
5/31/2021	737	925
6/1/2021	657	971
6/2/2021	645	908
6/3/2021	642	892
6/4/2021	652	897
6/5/2021	598	902
6/6/2021	608	914
6/7/2021	567	439
6/8/2021	521	932
6/9/2021	684	965
6/10/2021	776	974
6/11/2021	660	953
6/12/2021	763	986
6/13/2021	823	1,009
6/14/2021	862	1,003
6/15/2021	759	970
6/16/2021	494	814
6/17/2021	533	583
6/18/2021	426	860
6/19/2021	477	881
6/20/2021	818	832
5/21/2021	860	571
		-

#### Table 1. CY 2021 SO<sub>2</sub> lb /hour, 24-hour block average (6:00 a.m. to 6:00 a.m.)

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0	New Wales	Bartow
Date	Cap 1,090 PPH	Сар 1,100 РРН
6/22/2021	813	669
6/23/2021	580	597
6/24/2021	518	417
6/25/2021	740	856
6/26/2021	864	924
6/27/2021	956	935
6/28/2021	928	918
6/29/2021	859	916
6/30/2021	786	674
7/1/2021	888	992
7/2/2021	845	498
7/3/2021	880	401
7/4/2021	913	658
7/5/2021	869	752
7/6/2021	900	742
7/7/2021	802	757
7/8/2021	792	774
7/9/2021	979	956
7/10/2021	986	988
7/11/2021	950	968
7/12/2021	953	984
7/13/2021	946	1 100
7/14/2021	917	948
7/15/2021	953	965
7/16/2021	1.057	982
7/17/2021	1,007	985
7/18/2021	1,035	987
7/19/2021	1.049	959
7/20/2021	1,020	961
7/21/2021	1.037	1.018
7/22/2021	821	959
7/23/2021	803	965
7/24/2021	1.009	978
7/25/2021	1.020	980
7/26/2021	1,038	972
7/27/2021	1,000	952
7/28/2021	1,000	952
7/20/2021	1,047	7.52
7/20/2021	090	916
7/31/2021	70V 000	010
<u>7/31/2021</u> 8/1/2021	990	700
8/2/2021	77/	990
0/2/2021	900	9/0
8/3/2021	812	1,001

#### Table 1. CY 2021 SO<sub>2</sub> lb /hour, 24-hour block average (6:00 a.m. to 6:00 a.m.)

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	New Wales	Bartow
Date	Cap 1,090 PPH	Cap 1,100 PPH
8/4/2021	815	1.005
8/5/2021	794	1.020
8/6/2021	794	1.024
8/7/2021	775	997
8/8/2021	696	1.030
8/9/2021	810	954
8/10/2021	664	759
8/11/2021	872	721
8/12/2021	855	881
8/13/2021	274	370
8/14/2021	517	314
8/15/2021	798	305
8/16/2021	831	315
8/17/2021	615	314
8/18/2021	199	479
8/19/2021	170	783
8/20/2021	134	954
8/21/2021	79	985
8/22/2021	53	1,000
8/23/2021	99	993
8/24/2021	179	1,052
8/25/2021	432	994
8/26/2021	465	700
8/27/2021	699	973
8/28/2021	627	1.046
8/29/2021	635	1.043
8/30/2021	625	1,065
8/31/2021	642	953
9/1/2021	609	971
9/2/2021	724	1,053
9/3/2021	647	1,070
9/4/2021	731	1,077
9/5/2021	620	1,084
9/6/2021	677	1,039
9/7/2021	850	1,016
9/8/2021	706	983
9/9/2021	494	1,003
9/10/2021	302	951
9/11/2021	453	1,019
9/12/2021	595	963
9/13/2021	525	984
9/14/2021	515	869
9/15/2021	554	1,039

#### Table 1. CY 2021 SO<sub>2</sub> lb /hour, 24-hour block average (6:00 a.m. to 6:00 a.m.)

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Derte	New Wales	Bartow
Date	Cap 1,090 PPH	Cap 1,100 PPH
9/16/2021	626	975
9/17/2021	516	1,017
9/18/2021	572	660
9/19/2021	548	632
9/20/2021	555	578
9/21/2021	469	563
9/22/2021	456	633
9/23/2021	456	682
9/24/2021	303	490
9/25/2021	326	460
9/26/2021	428	912
9/27/2021	410	916
9/28/2021	648	1,027
9/29/2021	607	917
9/30/2021	534	792
10/1/2021	406	533
10/2/2021	458	667
10/3/2021	543	938
10/4/2021	604	850
10/5/2021	534	949
10/6/2021	419	933
10/7/2021	426	711
10/8/2021	526	888
10/9/2021	551	941
0/10/2021	550	815
0/11/2021	671	933
0/12/2021	745	934
0/13/2021	748	959
0/14/2021	612	1,026
0/15/2021	728	1,059
0/16/2021	756	329
0/17/2021	721	958
0/18/2021	511	353
10/19/2021	616	713
10/20/2021	686	1,056
10/21/2021	665	1,017
10/22/2021	625	1,059
0/23/2021	678	1,040
10/24/2021	670	1,063
10/25/2021	670	1,055
10/26/2021	727	735
0/27/2021	768	964
0/28/2021	885	1,044

#### Table 1. CY 2021 SO<sub>2</sub> lb /hour, 24-hour block average (6:00 a.m. to 6:00 a.m.)

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<u> </u>	New Wales	Bartow
Date	Cap 1,090 PPH	Сар 1,100 РРН
0/29/2021	848	1,028
0/30/2021	740	1,027
0/31/2021	757	1,039
11/1/2021	697	1,020
11/2/2021	848	1,040
11/3/2021	865	1,017
11/4/2021	762	1,042
11/5/2021	424	1,053
11/6/2021	411	1,062
11/7/2021	376	1,059
1/8/2021	381	1.060
11/9/2021	597	1.059
1/10/2021	764	1,054
1/11/2021	807	1.048
1/12/2021	715	1.050
1/13/2021	833	1.046
1/14/2021	995	1.054
1/15/2021	961	1,053
1/16/2021	997	824
1/17/2021	743	956
1/18/2021	569	952
1/19/2021	730	1.054
1/20/2021	805	1.044
1/21/2021	843	1.047
1/22/2021	773	1.035
1/23/2021	781	1.044
1/24/2021	881	1.040
1/25/2021	870	1.022
/26/2021	851	1.018
/27/2021	879	1.008
1/28/2021	855	1.012
/29/2021	855	894
1/30/2021	931	788
2/1/2021	869	949
2/2/2021	653	488
2/3/2021	747	510
2/4/2021	764	348
$\frac{2}{7}$ $\frac{2}{5}$ $\frac{2}{2021}$	789	690
2/6/2021	809	720
2/7/2021	854	710
12/8/2021	870	716
12/0/2021	728	713
2/7/2021	720	713
4/ IV/ ZVZT	/ 20	/ 20

Table 1. CY 2021 SO<sub>2</sub> lb /hour, 24-hour block average (6:00 a.m. to 6:00 a.m.)

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Derfe	New Wales	Bartow
Dale	Cap 1,090 PPH	Сар 1,100 РРН
12/11/2021	761	597
12/12/2021	640	597
12/13/2021	0	722
12/14/2021	58	727
12/15/2021	229	725
12/16/2021	321	725
12/17/2021	571	725
12/18/2021	580	722
12/19/2021	542	729
12/20/2021	658	726
12/21/2021	805	717
12/22/2021	904	602
12/23/2021	832	755
12/24/2021	827	833
12/25/2021	794	1,050
12/26/2021	921	1,048
12/27/2021	978	970
2/28/2021	979	1,007
2/29/2021	1,016	841
12/30/2021	1,028	920
12/31/2021	1,063	1,053

#### Table 1. CY 2021 SO<sub>2</sub> lb /hour, 24-hour block average (6:00 a.m. to 6:00 a.m.)

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## Appendix B New Wales and Bartow Facilities - Frequency of SO<sub>2</sub> Emissions over the CEV

Month	Hours Over CEV (hr)	Operating Hours (hr)	Percent Over CEV
January 2021	13	743	1.7%
February 2021	35	648	5.4%
March 2021	14	719	1.9%
April 2021	2	704	0.3%
May 2021	8	744	1.1%
June 2021	4	713	0.6%
July 2021	27	744	3.6%
August 2021	4	744	0.5%
September 2021	6	720	0.8%
October 2021	3	743	0.4%
November 2021	0	720	0.0%
December 2021	1	744	0.1%
Total	117	8,685	1.3%

**Table 1.** Bartow Sulfuric Acid Plants –Hours Over the Critical Emission Value (CEV)

**Table 2.** New Wales Sulfuric Acid Plants –Hours Over the Critical Emission Value (CEV)

Month	Hours Over	Operating	Percent
	CEV (hr)	Hours (hr)	<b>Over CEV</b>
January 2021	9	744	1.2%
February 2021	19	651	2.9%
March 2021	30	744	4.0%
April 2021	6	720	0.8%
May 2021	6	744	0.8%
June 2021	1	720	0.1%
July 2021	11	744	1.5%
August 2021	1	744	0.1%
September 2021	0	720	0.0%
October 2021	1	744	0.1%
November 2021	5	720	0.7%
December 2021	12	702	1.7%
Total	101	8,697	1.2%