

PO Box 52264
2132 Saxonwold
SOUTH AFRICA
Tel +27 (0)11 407 8111
Fax +27 (0)11 222 3333

www.sappi.com

The Department of Environmental Affairs
Chief Director: Climate Change Mitigation
Attention: Ms Deborah Ramalope
Environmental House
473 Steve Biko Road
Pretoria
0001

Renée van Hoeve
Regional Environmental Manager
Tel +27 (0)11 407 8367
Fax +27 (0)11 339 6445
renee.vanhoeve@sappi.com

27 March 2019

By E-mail: GHGPPP@environment.gov.za

Dear Mam,

Sappi Southern Africa Limited Annual Pollution Prevention Plan Progress Report

As per the National Pollution Prevention Plans Regulations (General Notice No. 712) herewith the required information for calendar year 2018:

- a. Name of the person submitting annual progress report on behalf of the company:
Renée van Hoeve
- b. Company name and registration (in accordance with the Company Act):
Sappi Southern Africa Limited
Company registration number: 1951/003180/06
- c. Full details of the person submitting the annual progress report:
 - i. Name and surname
Renée van Hoeve
 - ii. Position in the company
Regional Environmental Manager
 - iii. Contact details, including address, telephone number, mobile number, email address and fax number

Sappi, 108 Oxford Road, Rosebank
(011) 407 8367
082 876 7656

renee.vanhoeve@sappi.com

086 674 9685

d. Declaration of accuracy of information provided

Name of Company: Sappi Southern Africa Limited

Company registration number: 1951/003180/06

I, Tyrone Hawkes, declare that the information provided in this report is in all respects factually true and correct to the best of my knowledge and as at the date of signature.

Signed at Rosebank on this 27th day of March 2019



Signature

Vice President: Sustainability and Business Development

Sappi Southern Africa Limited

Capacity of Signatory

- e. Overview of any material changes that are relevant to the PPP, such as the sale, purchase or transfer of a facility, a significant change in production outputs, or a significant change in the way operations are conducted.

Please note that the Pollution Prevention Plan submitted relates to Scope 1 emissions only.

As this is absolute emissions, in reality as we upgrade our operations to increase production to ensure a sustainable business, our overall emissions increase despite the specific values decreasing (emissions per ton of product manufactured reduces). In addition, industry is focused on reducing Scope 2 emissions by increasing energy self-sufficiency and this will not be apparent in the plan submitted as only Scope 1 emissions is required as per the Regulations. Furthermore, sequestration is currently excluded from the emission reporting (although biogenic CO₂ from pulp and paper production processes emitted has been calculated and stated).



For the reporting year our paper mills performed well, and operational efficiency improvements resulted in a reduction in energy intensity. Dissolving pulp production was negatively affected by new equipment installation issues.

Kindly note the following:

- For the 2016 calculation actual net calorific values were used, the 2017 and 2018 calculations reflect net calorific values for liquid, gaseous and solid fuels as provided by the South African Petroleum Industry Association and 3rd Assessment GWP.
- In 2018 the mass balance for CHP (IPCC 1A1aii) has been finalised and used for CY2018 reporting purposes.
- Restatements to the CY2017 submission:
 - Inclusion of categories 3B1a; 4A1 and 4D2; and
 - Black liquor CV changed from actual to IPCC NCV.

f. Table 1 is attached as per Annexure 1.

g. Table 2 is attached as per Annexure 2.

h. Table 3 is not reported on as emission reductions were achieved.



sappi

Annexure 1

Table 1

Activity (IPCC Source Category)	GHGs CO ₂ eq	2017	2018	2019	2020	Preceding Year 2016	Total GHG Emissions (2017-2020)	Methodology
1A2d	CO ₂ CH ₄ N ₂ O	1,994,668 6,824 22,581	1,749,495 5,895 19,234	-	-	2,067,848 7,359 22,261	3,744,162 12,719 41,815	Table D1: Net calorific values for liquid, gaseous and solid fuels as provided by the South African Petroleum Industry Association and Table A1 emission factors taken from Technical Guidelines for Monitoring, Reporting and Verification of Greenhouse Gas Emissions by Industry (April 2017).
1A1a1i	CO ₂ CH ₄ N ₂ O	54,024 176 331	161,041 513 964	-	-	9,150 38 115	215,065 689 1,295	Table D1: Net calorific values for liquid, gaseous and solid fuels as provided by the South African Petroleum Industry Association and Table A1 emission factors taken from Technical Guidelines for Monitoring, Reporting and Verification of Greenhouse Gas Emissions by Industry (April 2017).
1A2j	CO ₂ CH ₄ N ₂ O	- 369 586	- 196 336	-	-	- 638 1,014	- 565 922	Table D1: Net calorific values for liquid, gaseous and solid fuels as provided by the South African Petroleum Industry Association and Table A1 emission factors taken from Technical Guidelines for Monitoring, Reporting and Verification of Greenhouse Gas Emissions by Industry (April 2017).
1A2f	CO ₂ CH ₄ N ₂ O	-	83,048 202 390	-	-	-	83,048 202 390	Table D1: Net calorific values for liquid, gaseous and solid fuels as provided by the South African Petroleum Industry Association and Table A1 emission factors taken from Technical Guidelines for Monitoring, Reporting and Verification of Greenhouse Gas Emissions by Industry (April 2017).
2A2	CO ₂ CH ₄ N ₂ O	-	14,222 13 33	-	-	-	14,222 13 33	Table C1: Default IPCC emissions factors for Industrial Process and Product Use (dolomitic lime) taken from Technical Guidelines for Monitoring, Reporting and Verification of Greenhouse Gas Emissions by Industry (April 2017). IPCC Guidelines Volume 3 Chapter 2 Table 2.4
3B1a	CO ₂ CH ₄ N ₂ O	-	-	-	-	-	-	In the absence of an approved methodology, the stock-difference method (carbon stock change as an annual average difference between estimates at two points in time) was used.
4A1	CO ₂ CH ₄ N ₂ O	178,586	169,161	-	-	181,791	347,746	Emissions determined with IPCC waste model.
4D2	CO ₂ CH ₄ N ₂ O	-	-	-	-	-	-	Well-managed Aerobic Treatment Plant
Total by gas	CO ₂ CH ₄ N ₂ O	2,048,691 185,955 23,498	2,007,806 175,978 20,957	-	-	2,076,997 189,826 23,389	4,056,497 361,933 44,455	Table 41.2: Type of treatment and discharge pathway with corresponding methane correction factor (MCF), 2006 IPCC Volume 5, Chapter 6 Waste water treatment and discharge.
		2,258,144	2,204,741	-	-	2,290,212	4,462,885	

sappi

Annexure 2

Table 2

Mitigation measure	Description of mitigation measure	Anticipated implementation period	Assumptions used to estimate anticipated GHG emission reduction	GHG to be abated	Actual emission reduction (tonnes CO ₂ e)									
					Y1 2017	Y2 2018	Y3 2019	Y4 2020	Y5	Total over 5 years				
Heat Recovery and Steam Reduction	Repair steam leaks (phased 3 year approach)	Phased until Dec 2020	Optimisation of steam will result in a reduction of coal consumption on the coal fired boilers. This is based on a steam to coal ratio of 7.	CO ₂	-	9,911.3								
				CH ₄	-	38.6								
				N ₂ O	-	50.3								
				CO ₂	-	30,974.4								
Reduced Coal Consumption	Increase renewable energy	Dec-20	Assume stable operations as to increase renewable energy production.	CH ₄	-	513.0								
				N ₂ O	-	2,490.6								
				CH ₄	3,205.0	9,425.5								
Landfill	Reduce waste to landfill	Phased until Dec 2020	Emissions determined with IPCC waste model.	CH ₄										
NCV change	Net calorific values for liquid, gaseous and solid fuels as provided by the South African Petroleum Industry Association used for the 2017 submission, For the 2016 submission net calorific values for fuels as reported by the operators were used.			CO ₂	28,306.1									
				CH ₄	665.4									
				N ₂ O	-108.5									
Total (CO₂e)					32,068.0	53,403.7								