



environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

**RISK ASSESSMENT IN TERMS OF REGULATION 8 OF THE WASTE
EXCLUSION REGULATIONS**

APPLICANT	Sappi Southern Africa Limited – Tugela Mill
WASTE STREAM OR PORTION OF A WASTE STREAM	Ash from Combustion
BENEFICIAL USES	Brickmaking
	Block making
	Cover material
	Cement production
	Paving manufacture
WASTE GENERATING FACILITY	Sappi Tugela Mill

PHYSICAL ADDRESS OF FACILITY	1 Old Main Road, Mandeni		
GPS CO-ORDINATES OF WASTE GENERATING FACILITY	Latitude: 29° 9' 12.49"S Longitude: 31° 24' 26.88"E		
CONTACT PERSON			
NAME	Kerisha Govender		
ADDRESS	Private Bag X6034, 4490		
EMAIL ADDRESS	Kerisha.Govender@sappi.com		
TELEPHONE	032 456 1456		
* DETAILED DESCRIPTION OF WASTE GENERATING PROCESS	Boilers are used to generate steam and electricity for pulp and paper production. Ash is generated through the combustion process. Fine ash (fly ash) is extracted from the flue gas using electrostatic precipitators. Ash particles that are too large to be entrained in the flue gas, drop to the bottom of coal combustion installations where it is removed as coarse ash.		
PRODUCTION PROCESS FLOW CHART ATTACHED	YES	X	NO
IDENTIFICATION OF HAZARDS	Environmental Hazards: Dust, Leachate		
WASTE CLASSIFICATION	HAZARDOUS		GENERAL
			X
* A process flow chart must be attached to the process description			

RISK ASSESSMENT WITHOUT MITIGATION

Activity	Risk Description	Environmental receptors	Impact	Assessment of the risk					
				Probability	Magnitude	Duration	Scale	Significance	
Storage	Accidental spillage into the environment	Soil	Soil contamination	3	4	3	1	24	
		Surface water	Contamination transported to surface water	2	4	3	2	18	
		Groundwater	Percolation into groundwater	2	4	3	2	18	
		Leachate from stockpiled material during rainfall	Soil	Soil contamination	3	4	3	1	24
		Surface water	Contamination transported to surface water	2	4	3	2	18	
		Groundwater	Percolation into groundwater	2	4	3	2	18	
Transportation	Windblown ash	Air	Deterioration of local air quality	3	4	2	2	24	
	Air borne ash	Air	Deterioration of local air quality	3	4	2	2	24	
	Accidental spillage into the environment	Soil	Soil contamination	3	4	3	2	27	
		Surface water	Contamination transported to surface water	2	4	3	2	18	

Activity	Risk Description	Environmental receptors	Impact	Assessment of the risk					
				Probability	Magnitude	Duration	Scale	Significance	
Manufacturing	Windblown ash	Groundwater	Percolation into groundwater	3	4	3	2	27	
		Air	Deterioration of local air quality	3	4	2	2	24	
		Visual	Visual impact from windblown waste	3	4	2	2	24	
		Air	Deterioration of local air quality	3	4	2	2	24	
Use as landfill cover material	Leachate generation during rainfall	Soil	Soil contamination	3	4	3	1	24	
		Surface water	Contamination transported to surface water	2	4	3	2	18	
		Groundwater	Percolation into groundwater	2	4	3	2	18	
		Groundwater	Percolation into groundwater	2	4	3	2	18	

The following factors and criteria must be used to assess the impacts of the activities:

Criteria	
MAGNITUDE (Severity)	DURATION
10 - Very high	5 - Permanent (longer than 10 years)
8 - High	4 - Long-term (5 to 10 years)
6 - Moderate	3 - Medium-term (12 months to 5 years)
4 - Low	2 - Short-term (0 to 12 months)
2 - Minor	1 - Immediate
SCALE	PROBABILITY (Likelihood)
5 - International	5 - Definite
4 - National	4 - Highly probable
3 - Regional	3 - Medium probability
2 - Local	2 - Low probability
1 - Site only	1 - Improbable
0 - None	0 - None

Magnitude
Magnitude measures the size of the impact

Duration
Duration refers to the lifetime of the impact i.e. how long it will last

Scale
The scale refers to the extent of the impact.

Probability
The probability refers to the chance of impact to occur. The potential impact could be most likely to occur, unlikely, etc.

Assessment of Significance of Impact

Significance rating of the potential impacts illustrates the importance of the impact itself. The size of area affected by pollution may be extremely high but the significance of this effect is dependent on the concentration or level of pollution in that area. In order to determine the significance of impact, the following method was used:

$$\text{Significance Points (SP)} = (\text{Magnitude} + \text{Duration} + \text{Scale}) \times \text{Probability}$$

The values of SP are then ranged as follows:

Rating	Description
SP >60	Indicates high environmental significance An impact which could influence the decision about whether or not to proceed with the activities regardless of any possible mitigation.
SP 30 – 60	Indicates moderate environmental significance An impact or benefit which is sufficiently important to require management and which could have an influence on the decision unless it is mitigated.
SP <30	Indicates low environmental significance Impacts with little real effect and which will not have an influence on or require modification of the activities.
+	Positive impact An impact that is likely to result in positive consequences/effects

I, KELISHA COVENEY hereby declare that I have read the completed the Risk Assessment form and hereby confirm that the information is to the best of my knowledge true and correct.

Furthermore, I declare that I am fully aware of my responsibilities in terms of the Waste Exclusion Regulations, and that failure to comply with these Regulations may constitute an offence in terms of the National Environmental Management: Waste Act, 2008 (Act 59 of 2008).

Applicant (Full names) KELISHA COVENEY

Designation ENVIRONMENTAL ENGINEER

Signature 

Date 21/08/2018 Place MANDENI

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Date Received				
Decision Taken	Authorised		Not Authorised(provide reasons)	
	Reference Number			