



# environmental affairs

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA

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

<b>APPLICANT</b>	Tongaat Hulett Sugar
<b>WASTE STREAM OR PORTION OF A WASTE STREAM TO BE EXCLUDED FROM THE DEFINITION OF WASTE</b>	Boiler Ash
<b>BENEFICIAL USE/S</b>	Soil conditioner
<b>WASTE GENERATING FACILITY OR FACILITIES</b>	
<b>PHYSICAL ADDRESS OF FACILITY OR FACILITIES</b>	Felixton Mill Mills Walk, Felixton, Empangeni 3875
	Amatikulu Mill Mill Road, Amatikulu 3801
<b>GPS CO-ORDINATES OF WASTE GENERATING FACILITY OR FACILITIES</b>	Felixton Mill 28°50'06.21"S 31°53'29.15"E
	Amatikulu Mill 29°02'41.51"S 31°31'41.96"E
<b>CONTACT PERSON</b>	
<b>NAME</b>	Gidion Munyaradzi
<b>ADDRESS</b>	Amanzimnyama Hill Road, Tongaat, 4399.

<b>EMAIL ADDRESS</b>	Gidion.munyaradzi@tongaat.com	
<b>TELEPHONE</b>	032 439 4239	
<b>* DETAILED DESCRIPTION OF WASTE GENERATING PROCESS</b>	<p>Coal and bagasse (which comprises the fibres remaining after the sugar has been extracted from the cane) are burned in Babcock Boilers (plus one John Thompson Boiler at Amatikulu which burns only bagasse) to produce steam for power on the Mills.</p> <p>The waste is the resultant ash from the burning of the coal and bagasse.</p> <p>At Felixton, the ratio of coal to bagasse burned is 1% coal and 99% bagasse, whilst at Amatikulu the ratios are approximately 2% coal and 98% bagasse.</p>	
<b>PRODUCTION PROCESS FLOW CHART ATTACHED</b>	YES	<input type="checkbox"/>
<b>WASTE CLASSIFICATION</b>	<input type="checkbox"/>	GENERAL
<b>IF WASTE IS HAZARDOUS LIST THE HAZARDS OF THE WASTE</b>	The waste is not deemed to be hazardous	
<b>*A process flow chart must be attached to the process description</b>		

### RISK ASSESSEMENT WITHOUT MITIGATION

Activity	Risk Description	Environmental Receptors	Assessment of Risk					Significance
			Impact	Probability	Magnitude	Duration	Scale	
Storage	Dust	Air Quality	Reduction in air quality	2	5	1	1	14
	Contaminated runoff	Water Quality	Water pollution	2	5	2	2	18
	Dust in air Presence of stockpile	Aesthetics	Visual impact	2	3	1	2	12
	Contamination	Soils	Soil pollution	0	0	0	0	0
Handling	Dust	Health	Risk of inhalation	2	5	1	1	14
	Waste reduction	Landfill airspace	Reduction in waste to landfill	5	6	5	3	+60
	Dust	Air Quality	Reduction in air quality	3	5	1	2	24
	Contaminated runoff	Water Quality	Water pollution	2	3	2	2	14
Dust	Aesthetics	Aesthetics	Visual impact	2	2	1	2	10

	Contamination	Soils	Soil pollution	0	0	0	0	0	0
	Use of Machinery	Noise	Disturbance in residential areas	2	3	1	1	1	10
	Dust	Health	Risk of inhalation	3	4	1	2	2	21
Transportation	Dust	Air Quality	Reduction in air quality	3	4	1	2	2	21
	Spillage	Water Quality	Water pollution	2	3	2	2	2	14
	Dust	Aesthetics	Visual impact	2	2	1	2	2	10
	Contamination via spillage	Soils	Soil pollution	0	0	0	0	0	0
	Vehicle noise	Noise	Disturbance in residential areas	2	4	1	2	2	14
	Use of heavy vehicles	Roads and Traffic	Increase in traffic and safety risk	4	4	1	2	2	28
	Dust and vehicle movement	Health	Risk of inhalation	3	3	1	2	2	18
Use of final product	Employment opportunities	Socio economic	Job creation	2	3	3	2	2	+16

	<b>Dust</b>	<b>Air Quality</b>	<b>Reduction in air quality</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>21</b>
	<b>Contamination with dust/waste</b>	<b>Water Quality</b>	<b>Water pollution</b>	<b>3</b>	<b>5</b>	<b>2</b>	<b>2</b>	<b>27</b>
	<b>Contamination with dust/waste</b>	<b>Soils</b>	<b>Soil pollution</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	<b>Dust</b>	<b>Health</b>	<b>Risk of inhalation</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>21</b>
	<b>Use of ash in place of raw materials</b>	<b>Raw material usage</b>	<b>Reduction in raw material usage</b>	<b>5</b>	<b>8</b>	<b>4</b>	<b>3</b>	<b>+75</b>

**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:

**Significance Points (SP) = (Magnitude + Duration + Scale) x Probability**

The values of SP are then ranged as follows:

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

I, GIDION MUNYARADZI 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) GIDION MUNYARADZI

Designation SHEQS EXECUTIVE

Signature  P.P

Date 08-01-2020 Place AMATIKULU

**FOR OFFICE USE ONLY**

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

## 1.1 AMATIKULU/FELIXTON MILL

