



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

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

APPLICANT	Tongaat Hulett Sugar
WASTE STREAM OR PORTION OF A WASTE STREAM TO BE EXCLUDED FROM THE DEFINITION OF WASTE	Coal Ash
BENEFICIAL USE/S	Use in Blockmaking
WASTE GENERATING FACILITY OR FACILITIES	
PHYSICAL ADDRESS OF FACILITY OR FACILITIES	Refinery: 444 South Coast Road Rossburgh, Durban, 4001
	Maidstone Mill: 1 Main Ave Maidstone, Tongaat, 4380
	Voermol feeds: Main Road Maidstone, Tongaat, 4380
GPS CO-ORDINATES OF WASTE GENERATING FACILITY OR FACILITIES	Voermol/Maidstone
	29°33'05.03"S 31°07'49.69"E
	Refinery
	29°54'32.14"S 30°58'45.77"E
CONTACT PERSON	
NAME	Gidion Munyaradzi
ADDRESS	Amanzimnyama Hill Road, Tongaat, 4399.

EMAIL ADDRESS	Gidion.munyaradzi@tongaat.com	
TELEPHONE	032 439 4239	
* DETAILED DESCRIPTION OF WASTE GENERATING PROCESS	<p>Coal is burned in boilers at the Refinery and in driers at Voermol.</p> <p>The waste is the resultant ash from the burning of the coal.</p>	
PRODUCTION PROCESS FLOW CHART ATTACHED	YES	<input type="checkbox"/>
WASTE CLASSIFICATION	<input type="checkbox"/>	GENERAL
IF WASTE IS HAZARDOUS LIST THE HAZARDS OF THE WASTE	The waste is not deemed to be hazardous	
*A process flow chart must be attached to the process description		

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	3	6	1	1	24
	Contaminated runoff	Water Quality	Water pollution	2	4	2	2	16
	Dust in air Presence of stockpile	Aesthetics	Visual impact	4	4	1	2	28
	Contamination	Soils	Soil pollution	2	4	3	1	16
Handling	Dust	Health	Risk of inhalation	3	6	1	1	24
	Waste reduction	Landfill airspace	Reduction in waste to landfill	5	8	5	3	+80
	Dust	Air Quality	Reduction in air quality	4	6	1	2	36
	Contaminated runoff	Water Quality	Water pollution	2	4	2	2	16
	Dust	Aesthetics	Visual impact	4	4	1	2	28

	Contamination	Soils		Soil pollution	2	4	3	1	16
	Use of Machinery	Noise		Disturbance in residential areas	4	4	1	1	24
	Dust	Health		Risk of inhalation	4	6	1	2	36
Transportation	Dust	Air Quality		Reduction in air quality	3	6	1	2	27
	Spillage	Water Quality		Water pollution	2	4	2	2	16
	Dust	Aesthetics		Visual impact	3	2	1	2	15
	Contamination via spillage	Soils		Soil pollution	2	2	3	2	14
	Vehicle noise	Noise		Disturbance in residential areas	3	4	1	2	21
	Use of heavy vehicles	Roads and Traffic		Increase in traffic and safety risk	4	4	1	2	28
	Dust and vehicle movement	Health		Risk of inhalation	3	4	1	2	21

Use of final product	Employment opportunities	Socio economic	Job creation	4	4	3	2	+36
	Dust	Air Quality	Reduction in air quality	2	2	1	2	10
	Contamination with dust/waste	Water Quality	Water pollution	2	2	2	2	12
	Contamination with dust/waste	Soils	Soil pollution	2	2	3	2	14
	Dust	Health	Risk of inhalation	2	2	1	2	10
	Use of ash in place of raw materials	Raw material usage	Reduction in raw material usage	5	8	4	3	+75

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:

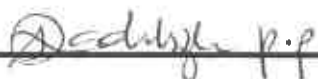
Rating		Description
SP >60	Indicates high environmental significance	An impact which could influence the decision about whether or not to proceed with the activities regardless of any possible mitigation.
SP 30 – 60	Indicates moderate environmental significance	An impact or benefit which is sufficiently 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, 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

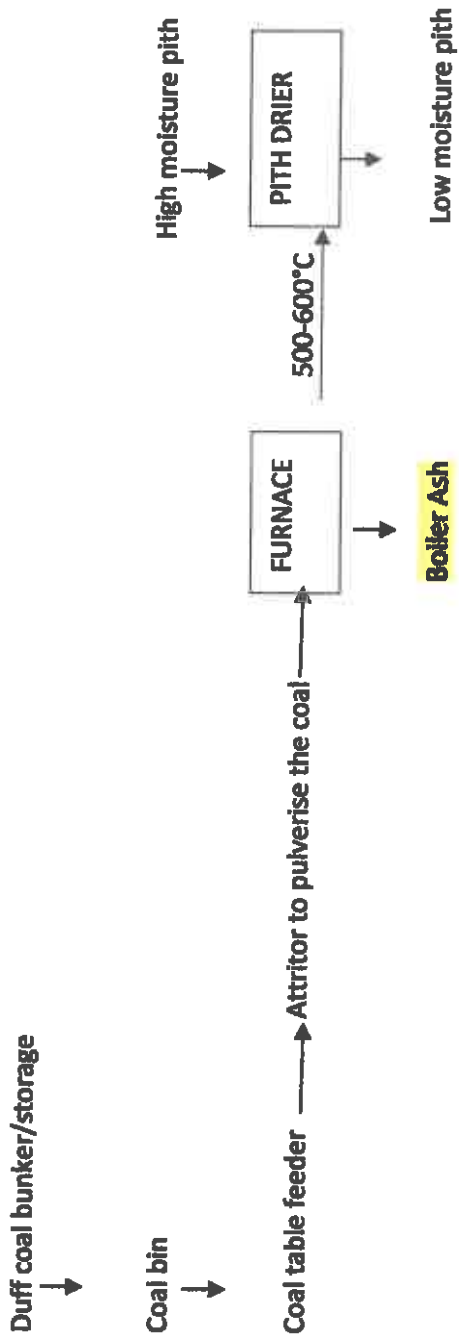
Signature 

Date 08-01-2020 Place AMATIKELU

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Date Received				
Decision Taken	Authorised	<input type="checkbox"/>	Not Authorised (provide reasons)	<input type="checkbox"/>
Reference Number				

Voermol

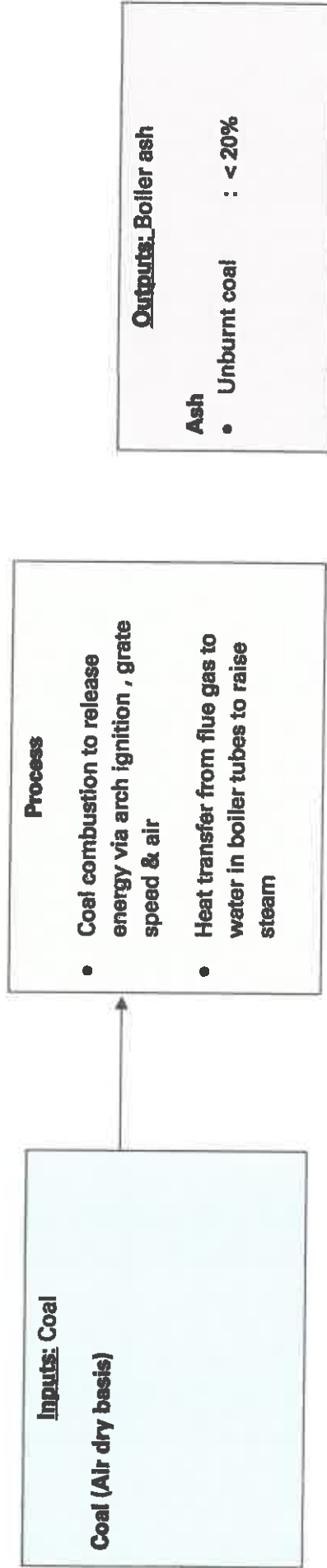




Steam Generation - PFD

Date

Revision



Refinery

BLOCK No : 10

Figure 1: STEAM & ELECTRICITY GENERATION BLOCK ASSESSMENT

