



# environmental affairs

Department:  
Environmental Affairs  
REPUBLIC OF SOUTH AFRICA

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

<b>APPLICANT</b>	Mondi Limited
<b>WASTE STREAM OR PORTION OF A WASTE STREAM</b>	Ash from Combustion
<b>BENEFICIAL USE/S</b>	Brickmaking
	Block making
	Production of cement
	Landfill capping
<b>WASTE GENERATING FACILITY</b>	Mondi Limited: Merebank Mill

<b>PHYSICAL ADDRESS OF FACILITY</b>	234 Travancore Drive, Merebank, KwaZulu Natal
<b>GPS CO-ORDINATES OF WASTE GENERATING FACILITY</b>	<ol style="list-style-type: none"> <li>1. North east corner of the mill: Latitude: 29°57'35.8"S; Longitude: 30°58'14.6"E</li> <li>2. South East corner of the mill: Latitude: 29°57'45.1"S Longitude: 30°58'11.8"E</li> <li>3. South West corner of the mill: Latitude: 29°57'33.1"S Longitude: 30°57'51.2"E</li> <li>4. North west corner of the mill : Latitude: 29°57'25.5"S Longitude 30°57'56.9"E</li> </ol>
<b>CONTACT PERSON</b>	
<b>NAME</b>	Mr. R. Gafoor
<b>ADDRESS</b>	234 Travancore Drive, Merebank, 4052
<b>EMAIL ADDRESS</b>	rafiq.gafoor@mondigroup.com
<b>TELEPHONE</b>	031 451 2319 082 804 9203
<b>* DETAILED DESCRIPTION OF WASTE GENERATING PROCESS</b>	<p>Coal fired 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.</p> <p>The mill uses a combination of 2 coal boilers, a Multi- Fuel Boiler (MFB) (which uses biomass and ash from the coal boilers) and a gas boiler to generate the steam and energy required for the paper making process. Steam is used in the paper making process, primarily to dry the paper. The coal boilers and the MFB are mainly used to meet the mills steam demand. Steam produced from the coal boilers and the MFB is used to generate electricity where it is transferred to the mill. In the case where a coal boiler or the MFB are shut down, the gas boiler is brought on line to meet the steam demand.</p>

<b>PRODUCTION PROCESS FLOW CHART ATTACHED</b>	<b>YES</b>	<b>NO</b>	
<b>IDENTIFICATION OF HAZARDS</b>	<b>Environmental Hazards: Dust, Leachate</b>		
<b>WASTE CLASSIFICATION</b>	<b>HAZARDOUS</b>	<b>GENERAL</b>	<b>X</b>
<b>* A process flow chart must be attached to the process description</b>			

**RISK ASSESSEMENT 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	Deterioration of local air quality	3	4	2	2	24
		Soil	Soil contamination	3	4	3	2	27

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

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		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	
<b>MAGNITUDE (Severity)</b>	<b>DURATION</b>
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
<b>SCALE</b>	<b>PROBABILITY (Likelihood)</b>
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, RAFIQ GAFOOR 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) RAFIQ GAFOOR

Designation ENVIRONMENTAL MANAGER

Signature 

Date 29/8/2018 Place DURBAN

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