



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

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

APPLICANT	Mondi Limited
WASTE STREAM OR PORTION OF A WASTE STREAM	Gypsum from flue-gas desulfurisation
BENEFICIAL USE/S	Soil conditioner
	Inert products including board manufacture
WASTE GENERATING FACILITY	Mondi Limited: Merebank Mill
PHYSICAL ADDRESS OF FACILITY	234 Travancore Drive, Merebank, KwaZulu Natal
GPS CO-ORDINATES OF WASTE GENERATING FACILITY	1. North east corner of the mill: Latitude: 29°57'35.8"S; Longitude: 30°58'14.6"E 2. South East corner of the mill: Latitude: 29°57'45.1"S Longitude: 30°58'11.8"E 3. South West corner of the mill: Latitude: 29°57'33.1"S Longitude: 30°57'51.2"E 4. North west corner of the mill : Latitude: 29°57'25.5"S Longitude 30°57'56.9"E
CONTACT PERSON	
NAME	Mr. R. Gafoor
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* DETAILED DESCRIPTION OF WASTE GENERATING PROCESS	Synthetic gypsum is generated as a by-product of flue-gas desulfurization (FGD) systems used to reduce sulphur dioxide emissions from coal-fired powerplants. These FGD systems not only keep the air clean, but they also provide a sustainable, ecologically sound source of pure gypsum. Sulphur dioxide emission control systems used by coal-fired power plants remove sulphur from combustion gases using "scrubbers." One particular type of scrubber that uses lime or limestone reagent and a forced oxidation system produces FGD gypsum, which is chemically nearly identical to mined natural gypsum and provides a wide-range of environmentally friendly applications.		
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 ASSESSEMENT WITHOUT MITIGATION

Activity	Risk Description	Environmental receptors	Impact	Assessment of the risk				
				Probability	Magnitude	Duration	Scale	Significance
Storage	Leachate from stockpiled material during rainfall	Soil	Soil contamination	4	6	3	1	40
		Surface water	Contamination transported to surface water	3	4	3	2	27
		Groundwater	Percolation to groundwater	4	4	3	2	36
Transportation	Airborne material	Air	Deterioration of local air quality	5	4	1	2	35
		Air	Deterioration of local air quality	5	4	1	2	35
		Soil	Soil contamination	2	4	2	1	14
Processing	Accidental spillage into the environment	Surface water	Contamination transported to surface water	2	4	2	2	16
		Groundwater	Percolation to groundwater	2	4	2	2	16
		Soil	Soil contamination	2	4	2	1	14
		Surface water	Contamination transported to surface water	2	4	2	2	16

Activity	Risk Description	Environmental receptors	Impact	Assessment of the risk				
				Probability	Magnitude	Duration	Scale	Significance
		Groundwater	Percolation to groundwater	2	4	2	2	16
	Leachate generation	Soil	Soil contamination	4	6	3	1	40
		Surface water	Contamination transported to surface water	3	4	3	2	27
		Groundwater	Percolation to groundwater	4	4	3	2	36
Land Application	Air borne material	Air	Deterioration of local air quality	3	4	2	2	24
	Concentration of contaminants due to incorrect application rates	Soil	Soil contamination	4	6	3	1	40
		Surface water	Contamination transported to surface water	3	4	3	2	27
		Groundwater	Percolation to groundwater	4	4	3	2	36

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, RAFIQ GAFDOR 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 GAFDOR

Designation ENVIRONMENTAL MANAGER

Signature 

Date 29 AUG. 2018 Place DURBAN

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