



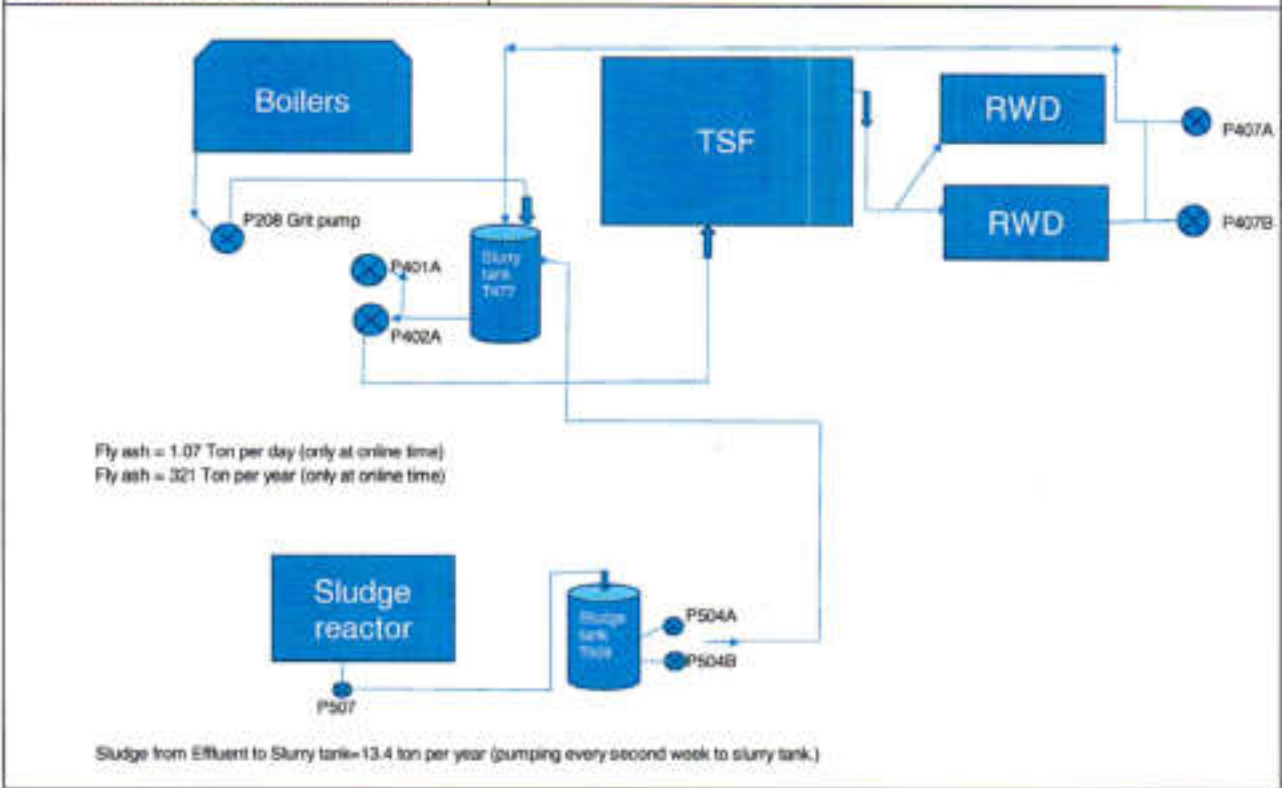
environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

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

APPLICANT	Karbochem Pty Ltd
WASTE STREAM OR PORTION OF A WASTE STREAM TO BE EXCLUDED FROM THE DEFINITION OF WASTE	Fly ash & Biological sludge mixture
BENEFICIAL USE/S	Bricks and block making Road Construction
WASTE GENERATING FACILITY OR FACILITIES	
PHYSICAL ADDRESS OF FACILITY OR FACILITIES	Newcastle Chemical Park, Karbochem Road
	Subsection 1 of Erf 13661, Newcastle, KZN
GPS CO-ORDINATES OF WASTE GENERATING FACILITY OR FACILITIES	Karbochem TSF
	27°46'32"S
	29°58'50"E°
CONTACT PERSON	
NAME	Leon Vermaak
ADDRESS	Newcastle Chemical Park, Karbochem Road
	Newcastle, 2940
EMAIL ADDRESS	LeonVe@karbochem.co.za
TELEPHONE	+27 (34) 370 1413/1273

<p>* DETAILED DESCRIPTION OF WASTE GENERATING PROCESS</p>	<p>Fly ash originates from the boiler plant while biological sludge is from the on-site wastewater treatment plant. The ash and sludge is mixed in a slurry tank before it is pumped to the TSF. .</p>	
<p>PRODUCTION PROCESS FLOW CHART ATTACHED</p>	<p>YES</p>	<p>NO</p>
<p>WASTE CLASSIFICATION</p>	<p>HAZARDOUS</p>	<p>GENERAL</p>
<p>IF WASTE IS HAZARDOUS LIST THE HAZARDS OF THE WASTE</p>	<p>Skin irritation and eye damage due to pH = 11.5</p>	



RISK ASSESSEMENT WITHOUT MITIGATION

Activity	Risk Description	Environmental Receptors	Impact	Magnitude	Duration	Scale	Probability	SP rating
Loading of ash onto trucks	Dust generation during loading ash onto trucks resulting in an air quality impact due to increase in particulate matter concentrations	Air	Moderate	6	1	1	4	32
	Spillage of ash outside designated loading areas contaminating surface runoff and storm water	Surface water	Low	6	2	1	3	27
	Spillage of ash outside designated loading areas contaminating soils	Soil	Low	4	3	1	2	16
	Dust inhalation (respirable fraction)	Humans	Moderate	8	1	1	3	30
	Dust causing eye irritation	Humans	Moderate	8	1	1	3	30
	Skin contact with ash with pH > 11	Humans	Moderate	6	1	1	4	32
Transportation of ash	Dust generation during transportation of ash	Air	Moderate	8	1	2	4	44
	Spillage of ash during transportation along roads contaminating surface runoff and storm water	Surface water & Aquatic life	Low	4	2	3	3	27
	Spillage of ash during transportation along roads contaminating soil	Soil	Low	4	2	3	3	27
	Dust generation during handling of ash	Air	Moderate	8	1	2	4	44
Handling of ash	Dust inhalation	Humans	Moderate	8	1	1	4	40
	Dust causing eye irritation	Humans	Moderate	8	1	1	4	40

Activity	Risk Description	Environmental Receptors	Impact	Magnitude	Duration	Scale	Probability	SP rating
	Skin contact (pH 11)	Humans	Moderate	8	1	1	4	40
Off-loading of ash	Dust generation during transfer of ash from trucks to new storage area	Air	Moderate	8	1	2	4	44
Storage of ash	Poor/no lining of storage area resulting in contaminants of concern leaching to groundwater	Groundwater	Moderate	6	4	2	3	36
	Contaminated surface runoff or leachate from Ash during rainfall entering stormwater system	Surface water	Moderate	8	2	2	3	36
	Poor/no lining of storage area resulting in contaminants of concern leaching into soil	Soil	Moderate	8	4	1	4	52
	Dust generation during conducive weather conditions	Air	Moderate	8	1	2	4	44

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, Leon Laurens Vermaak 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) Leon Laurens Vermaak

Designation Operations Manager

Signature 

Date 16.9.2020 Place Newcastle

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