



forestry, fisheries & the environment

Department:
Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

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

	(For official use only)
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Risk Assessment for an application for exclusion of waste stream or portion of waste stream in terms of the National Environmental Management: Waste Act, 2008(Act No.59 of 2008), as amended.

Kindly note that:

1. This form is current as of 01 April 2021. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority.
2. The information must be typed within the spaces provided in the form. The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided. Spaces are provided in tabular format and will extend automatically when each space is filled with typing.
3. Incomplete forms (including information as required in the application form may be returned to the applicant for revision and the inclusion of additional information.
4. Unless protected by law, all information filled in on this application will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this application on request, during any stage of the application process.

BACKGROUND INFORMATION	
APPLICANT	Energy Partners Holdings (Pty) Ltd
CONTACT PERSON	Justin Probert
NAME	Justin Probert
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WASTE GENERATING FACILITY OR FACILITIES						
PHYSICAL ADDRESS OF FACILITY OR FACILITIES	100 Richmond Road, Queensburgh, 4064					
GPS CO-ORDINATES AT CORNERS OF WASTE GENERATING FACILITY OR FACILITIES	LATITUDE			LONGITUDE		
	-29°	51'	52.02''	30°	52'	47.62''
	-29°	51'	51.12''	30°	52'	47.97''
	-29°	51'	51.49''	30°	52'	49.41''
	-29°	51'	52.37''	30°	52'	49.13''
WASTE STREAM OR PORTION OF A WASTE STREAM TO BE EXCLUDED FROM THE DEFINITION OF WASTE	Boiler Ash					
BENEFICIAL USE/S	Aggregate in Block Making					

WASTE GENERATING PROCESS	
DETAILED DESCRIPTION OF WASTE GENERATING PROCESS ¹	Coal is fed to 3 boilers in parallel where it is combusted on a chain-grate stoker in each boiler. Combustion is controlled by a PLC-based combustion controller which monitors air and fuel flow and makes optimisations in real-time. The solid ash product of combustion falls off the end of the chain-grate into a quenching trough, from which it is extracted by a series of conveyors to an ash silo where it is stockpiled for collection and disposal. In addition to the solid ash mentioned, there are a series of cyclones and bag filters connected to each boiler which filter out fly-ash particles from the flue-gas. This is a requirement in terms of the emissions licence. The fly ash from these cyclones and bag filters is extracted periodically, and also conveyed to the ash silo for storage, collection, and disposal.
PRODUCTION PROCESS FLOW CHART ATTACHED	YES ✓
WASTE CLASSIFICATION	HAZARDOUS ✓
IF HAZARDOUS LIST THE HAZARDS OF THE WASTE	The Boiler ash is not classified as an environmental hazard in terms of SANS 10234 but is classified as

¹ A process flow chart must be attached with this form for the process description

having potential health hazards i.e H316 3 : Skin irritation (mild)
H319 2A : Serious eye irritation.

Hazardous Composition :

Barium Oxide (BaO) – 0.10%

Calcium Oxide (CaO) – 0.95%

Potassium Oxide (K₂O) - 0.77%

RISK ASSESSMENT WITHOUT MITIGATION

ACTIVITY	RISK DESCRIPTION	ENVIRONMENTAL RECEPTORS	ASSESSMENT OF RISK					SIGNIFICANCE
			Impact	Probability	Magnitude	Duration	Scale	
Loading of ash into trucks	Accidental spillage into the environment/ Loss of containment	Air	<ul style="list-style-type: none"> Air pollution - deterioration of local air quality 	5	2	1	1	20
Transportation of ash	Accidental spillage during transit	Land	<ul style="list-style-type: none"> Soil Contamination Dust generation in transit 	3	4	2	2	24
		Water	<ul style="list-style-type: none"> Contamination of surface water Percolation into ground water 	3	6	2	1	27
		Air	Air pollution – deterioration of local air quality	5	2	1	2	25
Off-loading ash	Accidental spillage into the environment/ Loss of containment	Air	Air pollution – deterioration of local air quality	5	2	1	1	20
Storage of ash	Accidental spillage into the environment	Land	Contamination through run-off onto land/soil within the vicinity of the storage area	3	2	2	1	15
		Water	Contamination through run-off into storm water channels & other water bodies within the	2	4	2	2	16

			vicinity of the storage area					
		Air	Air pollution – deterioration of local air quality	3	4	2	1	21
Handling of ash (blending, crushing, screening, etc).	Accidental spillage during handling	Land	<ul style="list-style-type: none"> • Soil Contamination • Dust generation 	3	4	3	1	24
		Water	<ul style="list-style-type: none"> • Contamination of surface water • Percolation into ground water 	2	4	3	2	18
		Air	<ul style="list-style-type: none"> • Air pollution – deterioration of local air quality 	3	4	2	2	24

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 – 10 years)
6 – Moderate	3 – Medium term (12 months to 5 years)
4 - Low	2 – Short term (< 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 – Improbably
0 – None	0 - None

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 the impact to occur. The potential impact could be most likely to occur, unlikely, etc.

Assessment of Significance of Impact

Significance rating of the potential impact illustrates the importance of the impact itself. The size of the 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 an impact, the following method should be used:

$$\text{Significance (S)} = (\text{Magnitude} + \text{Duration} + \text{Scale}) \times \text{Probability}$$

The values of S must then be categorised as follows:

RATING		DESCRIPTION
SP > 60	High significance	An impact which could influence the decision about whether or to proceed with the activities regardless of any possible mitigation
SP 30 - 60	Moderate 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	Low 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 a positive consequence/effect

I, Energy Partners Holdings (Pty) Ltd (the Applicant) hereby declare that I have read the completed 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: Waset Act, 2008 (Act 59 of 2008).



Signature of the applicant²/ Signature on behalf of the applicant:

Justin Probert

Name of Applicant:

Energy Partners Holdings (Pty) Ltd

Designation

Operations Manager

Date: 20 December 2022

² If the applicant is a juristic person, a signature on behalf of the applicant is required as well as proof of such authority.