

<p>APPLICANT</p> <p>Silicon Smelters (Pty) Ltd – Rand Carbide</p>	<p>WASTE STREAM OR PORTION OF A WASTE STREAM TO BE EXCLUDED FROM THE DEFINITION OF WASTE</p> <p>Remaining "sand" after reprocessing of waste to remove metals etc. Classification: Type 4 for water soluble concentrations and Type 3 for total concentrations (Cu, Mn, Pb)</p>
<p>BENEFICIAL USES/</p> <p>Use 1: Construction of berm (21 600m³ / 18 000tons) Location: Neighbouring property to east (Witbank Technical High School) with permission from property owner. Purpose: Screen surrounding landowners (to north and north east) from visual and noise impacts.</p> <p>Use 2: Construction of soccer field for school (28 000m³ / 23 333tons) Location: Witbank Technical High School - neighbour to east Purpose: Social contribution to community – will provide material, construction equipment and labour.</p> <p>Use 3: Material will be sold as aggregate of different sizes to the building industry (±1million tons). Location: Building sites in the region. Purpose: Address requirement for building aggregate.</p>	<p>WASTE GENERATING FACILITY OR FACILITIES</p> <p>Historically: Silicon Smelters (Pty) Ltd - Rand Carbide Currently: Reprocessing plant</p>
<p>PHYSICAL ADDRESS OF FACILITY OR FACILITIES</p> <p>Portion 101 of the farm Joubertsrust 310JS, Voortrekker (Middelburg) Road, eMalahleni</p>	

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



environmental affairs

Department:
 Environmental Affairs
 REPUBLIC OF SOUTH AFRICA

		* A process flow chart must be attached to the process description	
		IF WASTE IS HAZARDOUS LIST THE HAZARDS OF THE WASTE	
		Total Pb, Mn and Cu concentrations exceed soil and Type 4 limits. Refer to waste classification.	
WASTE CLASSIFICATION		HAZARDOUS Type 3	
		GENERAL	
PRODUCTION PROCESS FLOW CHART ATTACHED		YES X	
		NO	
* DETAILED DESCRIPTION OF WASTE GENERATING PROCESS		Reprocessing of historic waste dump. Refer to WML 12/9/11/L912/6.	
TELEPHONE		082 894 5856	
EMAIL ADDRESS		Kerry.beamish@ferroglobe.com	
		1035	
ADDRESS		P.O. Box 214, eMalaheni (Witbank)	
NAME		Ms Kerry Beamish	
CONTACT PERSON			
GPS CO-ORDINATES OF WASTE GENERATING FACILITY OR FACILITIES		25° 51' 47.25" South	
		29° 13' 46.51" East	

RISK ASSESSEMENT WITHOUT MITIGATION

Activity	Risk Description	Environmental Receptors	Assessment of Risk					Significance
			Impact	Probability	Magnitude	Duration	Scale	
<p>Construction phase: Requirement for berm, material for berm, soccer field and building aggregate</p>	<p>Material available on Rand Carbide site from the legal (WML 12/9/11/L91/6) reprocessing of a historic dump. Sufficient quantities available.</p>	<p>Neighbouring property (school) Building industry</p>	<p>Positive</p>	<p>4</p>	<p>6</p>	<p>3</p>	<p>3</p>	<p>48</p>
<p>Construction of berm and soccer field – movement and placement of material</p>	<p>Exposure to dust during movement of material and disturbances to areas.</p>	<p>Surrounding residents and scholars Vegetation</p>	<p>Potential health impact Vegetation contamination</p>	<p>3</p>	<p>6</p>	<p>2</p>	<p>2</p>	<p>30</p>
<p>Safety – movement and placement of material</p>	<p>Movement of machinery and equipment</p>	<p>Scholars</p>	<p>Injury</p>	<p>2</p>	<p>6</p>	<p>2</p>	<p>2</p>	<p>20</p>

Operational phase: Operational berm and soccer field Building industry	Inhalation or ingestion of material	Surrounding residents and scholars	Health	2	4	5	2	22
	Contamination of runoff and / or groundwater through the leaching of contaminants	Surface – and ground water	Water contamination	1	2	5	2	9
	Visual (aesthetic) and noise	Surrounding residents in terms of berm screening operations	Positive	4	6	5	2	52
	Social development – community need	Scholars from Witbank Technical High School Surrounding residents Building industry	Positive	5	8	5	2	75

The following factors and criteria must be used to assess the impacts of the activities:

Criteria	
MAGNITUDE (Severity)	10 - Very high 8 - High 6 - Moderate 4 - Low 2 - Minor
SCALE	5 - International 4 - National 3 - Regional 2 - Local 1 - Site only 0 - None
DURATION	5 - Permanent (longer than 10 years) 4 - Long-term (5 to 10 years) 3 - Medium-term (12 months to 5 years) 2 - Short-term (0 to 12 months) 1 - Immediate
PROBABILITY (Likelihood)	5 - Definite 4 - Highly probable 3 - Medium probability 2 - Low probability 1 - Improbable 0 - None

Magnitude measures the size of the impact

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

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


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I, **Kerry Beamish**, 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) **Kerry Beamish**

Designation **Environmental Manager**

Signature 

Date **2018-09-14**

Place **eMalaheni**