



**forestry, fisheries  
& the environment**

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

**RISK MANAGEMENT PLAN IN TERMS OF REGULATION 10 OF THE  
WASTE EXCLUSION REGULATIONS**

	(For official use only)
File Reference Number:	12/9/11
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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	Tronox Mineral Sands (PTY) Ltd.
CONTACT PERSON	JJ Le Roux
NAME	JJ Le Roux
ADDRESS	81/1 Trunk road, Saldanha, 7395
E-MAIL ADDRESS	jj.leroux@tronox.com
TELEPHONE	+27 (0) 27 217 3017
CELL PHONE	+27 (0) 82 040 4788

WASTE FACILITY OR FACILITIES						
SOURCE (S) OF WASTE	Tronox Mineral Sands (PTY) Ltd., Namakwa Sands Smelter Operation					
WASTE TO BE BENEFICIATED	Desulphurised Slag					
GPS CO-ORDINATES AT CORNERS OF WASTE GENERATING FACILITY OR FACILITIES	LATITUDE			LONGITUDE		
	32°	57'	49.6"	18°	02'	45.0''
	32°	57'	49.6"	18°	02'	45.7''
	32°	57'	47.6"	18°	02'	45.6''
	32°	57'	47.8"	18°	02'	46.1''
BENEFICIAL USE/S	<ul style="list-style-type: none"> <li>• Aggregate</li> <li>• Concrete product aggregate</li> <li>• Road base materials</li> <li>• Construction fill</li> <li>• Asphaltic concrete and other bituminous mixtures</li> <li>• Brick making</li> <li>• Cement production alternative raw material</li> </ul>					

WASTE GENERATING PROCESS		
MSDS ATTACHED IF HAZARDOUS	YES ✓	NO
WASTE GENERATING FACILITY	HAZARDOUS ✓	GENERAL

## RISK MANAGEMENT PLAN

1. The regulatory requirements of legislation outside the ambit of the National Environmental Management Act (Act 107 of 1998) and its Specific Environmental Management Acts remain applicable, including in particular the Occupational Health and Safety Act (No. 85 of 1993, as amended) and the National Road Traffic Act (93 of 1996, as amended).
2. Potential contamination of water with subsequent impact on aquatic biota, and exposure via inhalation, are the primary environmental risks that have been identified.
3. The producer must ensure that mechanisms are in place to record the amount of waste distributed to specific users for a permitted use. The records are to include the number of enterprises established or supported and the extent to which previously disadvantaged individuals have been supported. These records must be maintained and provided to the department upon request. Such records must further include the following, and be readily available to the Department for review upon request:
  - a. Copies of associated weighbridge tip tickets for all loads of the subject waste removed from the generating site;
  - b. Copies of completed, signed off, Waste Manifests for any load of the subject waste transported from the generating site through to an intended beneficial use off-take / facility; and
  - c. Copies of the BEE Certificates of any third party to whom the waste is made available for an authorised beneficial use

Activity	Risk Description	Action(s) to minimise/ manage the risk	Responsibility (Who is responsible to carry out the action)
Storage of the Desulphurised slag	Dust generation and subsequent inhalation.	<ul style="list-style-type: none"> <li>• Appropriate PPE must be worn by personnel where they may be exposed to air borne particulate matter from the slag.</li> <li>• All personnel who will be exposed to slag dust must be made aware of the risks related to exposure to airborne slag particulate matter.</li> <li>• Stockpiles must be sprayed with water if dust generation becomes a nuisance and exceeds regulatory dustfall limits.</li> </ul>	<p>All personnel operating the storage area and related activities.</p> <p>Supervisors are responsible for ensuring awareness.</p>
	Water and soil contamination	<ul style="list-style-type: none"> <li>• Desulphurised Slag must only be stored on an impermeable surface to avoid seepage of leachate into</li> </ul>	

Activity	Risk Description	Action(s) to minimise/ manage the risk	Responsibility (Who is responsible to carry out the action)
Desulphurised Slag handling		<ul style="list-style-type: none"> <li>• soil and groundwater.</li> <li>• Any rainwater runoff from the storage area must be contained to prevent release into the environment.</li> <li>• Any material spilled outside the storage area must be immediately recovered and placed on the stockpile, back into the process, or disposed of lawfully.</li> </ul>	
	Dust generation and inhalation	<ul style="list-style-type: none"> <li>• Appropriate PPE must be worn by personnel where they may be exposed to air borne particulate matter from the Desulphurised slag.</li> <li>• All personnel who will be exposed to Desulphurised slag dust must be made aware of the risks related to exposure to airborne Desulphurised slag particulate matter.</li> <li>• Where there is no dust extraction, water sprays (or effective alternative suppressants) must be used as a dust suppressant in processes where significant dust is generated.</li> </ul>	All personnel handling Desulphurised slag.  Supervisors are responsible for ensuring awareness.
	Water and soil contamination  Exposure to sharp edges and heavy materials.	<ul style="list-style-type: none"> <li>• Any material spilled must immediately be recovered and placed on the stockpile, back into the process, or disposed of lawfully.</li> <li>• Appropriate PPE must be worn e.g. overalls, safety glasses, boots, and gloves for hands, where applicable.</li> </ul>	


Activity	Risk Description	Action(s) to minimise/ manage the risk	Responsibility (Who is responsible to carry out the action)
Transporting of Desulphurised slag	<p>Potential for Desulphurised slag dust to become air-borne during transportation.</p> <p>Potential water and soil contamination</p>	<ul style="list-style-type: none"> <li>• Tarpaulins, or other appropriate cover, must be used to cover Desulphurised slag during transportation if there is potential for Desulphurised slag dust entrainment from the vehicle load bay or for Desulphurised slag to be thrown off the vehicle.</li> <li>• A copy of the SDS must be present and the transporter be aware of the environmental and health risks associated with transporting the Desulphurised slag.</li> <li>• In addition to appropriate covering, as stated above, vehicles must not be overloaded to prevent spillage.</li> <li>• The transporter must have a spill recovery procedure which must be implemented in the event of a material spill. Training and verification on this procedure must be undertaken for all drivers/operators. The procedure must include appropriate PPE to be used.</li> <li>• A copy of the SDS must be present and the transporter be aware of the environmental and health risks associated with transporting the Desulphurised slag.</li> </ul>	<p>Transporter</p> <p>Transporter</p>
Desulphurised Slag processing	Dust generation and subsequent inhalation.	<ul style="list-style-type: none"> <li>• Appropriate PPE must be worn by personnel where they may be exposed to air borne particulate matter from the Desulphurised slag.</li> <li>• All personnel who will be exposed to Desulphurised slag dust must be made aware of the risks related to exposure to airborne Desulphurised slag particulate</li> </ul>	<p>All personnel handling Desulphurised slag.</p> <p>Supervisors are responsible for ensuring awareness.</p>

Activity	Risk Description	Action(s) to minimise/ manage the risk	Responsibility (Who is responsible to carry out the action)
		<ul style="list-style-type: none"> <li>Where there is no dust extraction, water sprays (or effective alternative suppressants) must be used as a dust suppressant in processes where significant dust is generated.</li> </ul>	
	Exposure to sharp edges and heavy materials.	<ul style="list-style-type: none"> <li>Appropriate PPE must be worn e.g. overalls, safety glasses, boots, and gloves for hands, where applicable.</li> </ul>	
	Water contamination	<ul style="list-style-type: none"> <li>Desulphurised Slag must be suitably encapsulated, fused, or cemented or prevented from exposure to rainfall (incl. surface storm water flows), surface water bodies and groundwater in any intended end-use thereof.</li> <li>Desulphurised Slag must be used for the approved end-uses only.</li> </ul>	
Desulphurised Slag beneficiation (end-use)	Dust generation and subsequent inhalation	<ul style="list-style-type: none"> <li>Desulphurised Slag must be suitably encapsulated, covered, fused, or cemented in manner that will prevent the release of respirable Desulphurised slag particulates.</li> <li>Desulphurised Slag must be used for the approved beneficial uses only.</li> </ul>	End user
	Exposure to sharp edges and heavy materials.	<ul style="list-style-type: none"> <li>Appropriate PPE must be worn e.g. overalls, safety glasses, boots, and gloves for hands, where applicable.</li> </ul>	

Activity	Risk Description	Action(s) to minimise/ manage the risk	Responsibility (Who is responsible to carry out the action)
End of life	Water contamination, Dust generation and subsequent inhalation.	<ul style="list-style-type: none"> <li>Waste and rubble which contains Desulphurised slag and is generated from the approved end-uses must be stored, handled, and disposed of in accordance with the regulatory requirements applicable at the time.</li> </ul>	End user

I, Marius Vlok (the Applicant) hereby declare that I have read the completed Risk Management Plan 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).

  
Signature of the applicant<sup>1</sup>/ Signature on behalf of the applicant:

M Vlok  
Name of Applicant:

SME MANAGER  
Designation

07/06/2021  
Date:

<sup>1</sup> If the applicant is a juristic person, a signature on behalf of the applicant is required as well as proof of such authority.