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
NEAS Reference Number:	
Date Received:	

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	Illovo Sugar (South Africa) (PTY) Ltd
CONTACT PERSON	Nicole Geoffrey (SHERQ Officer: Environment & Risk)
NAME	Nicole Geoffrey
ADDRESS	1 Nokwe Avenue, Ridgeside, Umhlanga Rocks, Durban, South Africa
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WASTE FACILITIY OR FACILITIES							
SOURCE (S) OF WASTE	Pea Coal and bagasse						
WASTE TO BE BENEFICIATED	Boiler Ash						
GPS CO-ORDINATES AT CORNERS OF WASTE GENERATING FACILITY OR FACILITIES	Pin Location	LATITUDE			LONGITUDE		
	A	30°	24'	0.34"S	30°	40'	1.44"E
	B	30°	24'	1.95"S	30°	40'	8.40"E
	C	30°	23'	58.67"S	30°	40'	16.65"E
	D	30°	23'	58.19"S	30°	40'	17.03"E
	E	30°	23'	57.45"S	30°	40'	16.32"E
	F	30°	23'	57.53"S	30°	40'	15.85"E
	G	30°	23'	55.12"S	30°	40'	16.76"E
	H	30°	23'	54.45"S	30°	40'	14.40"E
	I	30°	23'	53.43"S	30°	40'	12.51"E
	J	30°	23'	51.92"S	30°	40'	10.99"E
	K	30°	23'	51.83"S	30°	40'	8.79"E
	L	30°	23'	50.22"S	30°	40'	9.71"E
	M	30°	23'	48.67"S	30°	40'	8.72"E
	N	30°	23'	47.26"S	30°	40'	9.15"E
	O	30°	23'	45.25"S	30°	40'	8.36"E
	P	30°	23'	45.50"S	30°	40'	6.74"E
	Q	30°	23'	44.61"S	30°	40'	6.49"E
	R	30°	23'	43.99"S	30°	40'	5.87"E
	S	30°	23'	40.94"S	30°	40'	5.51"E
	T	30°	23'	40.83"S	30°	40'	4.53"E
	U	30°	23'	42.43"S	30°	40'	2.77"E
	V	30°	23'	41.42"S	30°	40'	1.08"E
	W	30°	23'	43.14"S	30°	40'	0.51"E
	X	30°	23'	46.83"S	30°	40'	1.71"E
	Y	30°	23'	48.16"S	30°	40'	59.01"E
	Z	30°	23'	50.63"S	30°	40'	59.37"E
	AA	30°	23'	52.95"S	30°	40'	0.66"E
	BB	30°	23'	53.00"S	30°	40'	58.81"E

	CC	30°	23'	55.38"S	30°	40'	56.55"E
	DD	30°	23'	58.12"S	30°	40'	55.90"E
	EE	30°	23'	59.18"S	30°	40'	57.96"E
	FF	30°	23'	59.96"S	30°	40'	57.96"E
BENEFICIAL USE/S	• Substitute for sand in the: ○ Construction industry. ○ Concrete Blockmaking. • Soil enhancer for farms and nurseries.						

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

Attachment 7: RISK MANAGEMENT PLAN

NOTE: refer to the SDS, for specific management tools for safety, health and environmental management in case of exposures, and emergencies.

Activity	Risk Description	Action(s) to minimize/manage the risk	Responsibility (Who is responsible to carry out the action(s)
Context • Illovo Sugar Sezela Sugar Mill and Downstream Production Plan has on their SHEQ system: – The Illovo Code of Conduct and Business Ethics. – An overarching ILLOVO SHERQ policy. – Their own in house Standard Operating Procedures (SOP) – The Illovo Integrated Risk Management System (IIRMS) to ensure that the standards to which the business conforms are unified under a single platform, guiding and measuring compliance. • Reference is to be made to the Safety Data Sheet (SDS) for management as recommended for the presence of the			• ILLSM • All stakeholders in this activity.

components in the ash from the laboratory testing and classification. The intention is to maximize the intended beneficial use of the waste, while minimising any unacceptable impacts to people, environment and economic harm.			
Ash preparation at ash dam for removal by public. i.e.: systematically desludging the dam.	• Turbulence caused within the dam body. • Spillages outside of dam containment boundary.	• Correct planning for intended purposes of each requirement: o Safety, machinery, dewatering and storage facilities. o An approach into the ash storage facility systematically by the machinery to remove the ash. o A phased approach in order to empty out the dam in sectors, planned for maximum benefit to the security of the dam wall. o Prepare storage facilities to enable the assigned recipients to safely collect their required ash quantities, while keeping within the environmental protection of the dam facility. o Minimise the effect on the environment in the ash transfer and removal from the assigned site. o Have a facility to apply moisture to the ash to minimise windblown dust.	• ISSM Manager in charge of the ash storage area. • Civils manager, • SHERQ manager
Ash removal for substitution and supplementation for sand in the: • concrete blockmaking • construction industry.	• Storage over time and running out of storage space, if demand is low. • Windblown dust if ash is dry. • Possibility for a dam wall catastrophic failure.	• The monitoring of the ash removal should at minimum match the amount of ash that is stored in the ash dam site. This is to ensure that there is no build up of ash to cause a wind borne dust problem.	• ISSM Manager in charge of the ash storage area. • Security/weighbridge operators.

• Farm and nursery for soil enhancement/fertilizer.	• Possibility for a dam wall catastrophic failure • Economics: – Loss of a resource through wind and spillages.	• Should there be circumstances that would reduce the removal rate of the ash then the ash dam level must be closely monitored to ensure this facility does not overflow. • Service provider will be responsible for the handling of waste. Site requirement is Safety file including 37.2 agreement. Weighbridge documentation issued by SHERQ • The vehicles used to remove the ash must be maintained to prevent any break-downs and down-time. • The removal trends for ash would be monitored to determine any trends in demand, to be coordinated with the supply, to prevent build-up of the material. This would be by vehicles going over weighbridge. Each client to have their removal records and location of ash use recorded. • In order to prevent ash build up in case of reduced demand, ISSM to continue investigating other broader uses to beneficiate the ash.	
Access to ash dam and ash storage area.	**Security and safety:** • Unauthorised access to the ash area. • Unauthorised removal of ash. • Damage to infrastructure. • Theft of equipment. • Threat to safety	• Retain security and access control at the gates. • No inspection done on entry of site however as a min requirement each service provider/customer will be required to meet the min requirements for their HSE file. • Security to check no overfilled vehicles when leaving. • Checking for correct PPE. • Drivers will report to ISSM main security gate first, once paperwork is done, they will proceed to the weighbridge to ensure vehicles are weighed to determine the amount of boiler ash removed.	• ISSM Gate Security. • Construction management, • Blockmakers, • Farmers/nursery management, • Trucking contractors.

		• The SDS is to be given to each construction management, block maker, driver and stakeholders working with and handling the ash. • Correct signages at storage area: risks, dangers and PPE.	
Process of transferring boiler ash to the receiving vehicles.	• **Dust:** Windblown dust from the process of transfer with front end loader. • **Spillage:** Onto area outside of storage area.	• Loaded via front end loader supplied by ISSM into client's vehicle. • Keep the ash moist to reduce the ash from being blown about by the wind. • Place a tarp over the waste ash when fully loaded to prevent windblown ash on the road and environment.. • Ensure ash is only handled by a trained ISSM employee. • Ensure that only the responsible personnel needed for the activity are in the area for the duration of the transfer. • Ensure correct PPE is used in the area and by the drivers as per SDS. Eye protection, gloves, appropriate clothing footwear and respiratory protection is worn that is appropriate to the dust that may be generated. Eye wash bottles to be in each vehicle.. • Careful management of the transfer of ash to vehicles. • Procedure very clear for limit of vehicle load, to minimise on-site and off-site spillage of ash onto the roads, fields and working areas. • Clean-up of storage area with each batch of ash. • Ensure the area is cleaned at the end of the working day to minimise the chance of any oil grease or other materials to contaminate the ash.	• ISSM Manager responsible for waste and operations. • Truck driver.
Transporting of ash to: • blockmaking plant. • construction site. • farmer's lands.	**Spillage:** • Overfilling the receiving truck bin carrying capacity. • Windblown ash.	• Ensure the transporters, users and all personnel handling the ash are trained in the contents of the SDS with appropriate actions needed should any emergency arise. • Correct placarding of vehicles if required..	• End-user; Owner of the vehicle, • Contractors and driver; and • ISSM.

	• Road accidents which may result in spillages on the main and access roads. • Spillages which may result in accidents. • Non – compliance to the ROAD TRAFFIC ACT. (RTA), driving unsafe vehicle. • Soil contamination. • Environmental affects to the flora and fauna. • Contamination of the natural watercourses / stormwater systems.	• Ensure vehicles are well maintained with service records available. • The condition of the vehicle is to be monitored by the construction site personnel, contracted transporters and blockmakers, to include regular maintenance, driver reports for any concerns on the vehicle performance, security gate personnel to check the vehicle condition when entering the gate. • Should there be any incident on the public road an enquiry by the trucking company, contractor, blockmaker is to take place. • Procedure for off-loading of ash in the designated drop-off zones. The protocol to ensure the off-loading vehicle driver knows the process for minimising the impact of the vehicle on the environment by minimising dust and spillages outside of storage areas. • Driver to contact mill or responsible persons as given above to clear up any spillages that occur on public roads. • If the spillage is small, then the driver must have equipment to clean up the small spills. • Emergency procedures clearly outlined with issuing of the SDS in the implications of accidents and clean-up requirements. • Spillage clean-up protocols sufficient to deal with maximum loads. Including clean-ups, barriers, fires, injuries, emergency numbers, police reporting, etc. All outlined in the correct and updated SDS. • Checks for correct driver emergency equipment and training to deal with the emergency. • Keep ash moist, • Ensure the tarp over the ash is secured..	

Ash off-loading from vehicle.	**Spillage:**
	• Outside of dedicated storage area.
	Health
	• Windblown dust.
	Dust.
	Vehicle transportation along dirt roads to ash storage/off-loading areas near to residential areas in line of wind-blown dust.
		• Ensure that the ash is still moist to reduce the potential of windblown dust nuisance.
		• Ensure that excess water is not added to prevent any run-off.
		• Any ash spillages are not towards any natural water source.
		  o This can be prevented by ensuring the storage area has bunded walls to contain any spillages.
		  o Stormwater collection system, for spillage containment.
		  o ON farm land the ash is off-loaded away from water sources.
		• Ensure:
		  o correct and appropriate PPE is used for the full duration of the exposure to the ash.
		  o Eye wash bottles to be available in the off-loading vehicle and in the ash storage are.
		• From a cradle to grave perspective the mill would be responsible to ensure that no ash is offloaded or spilled in non-designated storage areas.
		• Ensure that the dirt roads used by trucks to access areas of storage remain moist to prevent nuisance dust annoying the residences close to the areas, particularly when the prevailing winds would blow the ash dust to the residences.
			• End-user and
			• Vehicle driver.

Storage at end user facilities	**Environment:** • Run off, • Windblown dust.	• Correct signages for risks, dangers and PPE on site and at storage site.. • As given above for off-loading protocols to prevent run-off contamination of natural water sources. • Ensure the ash remains moist. • Store small quantities at a time to prevent any loss of materials through windblown dust. Use the ash for its intended purpose as quickly as possible.	End-user.

Ash management during the process of: • concrete block making. • incorporating into construction uses. • Distribution over farm land and ploughing ash in	• Failure to use PPE during the course of the entire operation. • **Environment:** dust blown onto the surrounding areas. **Environment:** • Any wet ash possible run-off from the transfer or loading operations will affect the receiving environment if not managed correctly, especially near to natural water sources. • Any uses in the construction industry or farmlands may involve the leaching out of the heavy metals into the soils, ground water and surrounding surface water courses and soils.	• All staff working with the ash directly or indirectly are to be: o supplied with the correct PPE which must be worn at all times during exposure to the ash, o Trained/advised for sand substitution rates and ash quality in the concrete mix to prevent wastage and inferior concrete mix for blockmaking and for the intended use in the construction/civils structures, o Discern the correct water quantity to keep ash moist without causing any unnecessary run-off. o Transfer ash into the mixing processes either manually or mechanically with minimum dust creation to prevent pollution of the natural water sources. • The blockmakers and construction project areas are to have: o Hard concrete bunded areas for storage to prevent ingress of leachate into soils, sewers and water sources, and to capture any water run-off. o Minimal quantities of ash to be stored at any time. • The construction company must ensure that the ash is: o bound into any medium to minimise leaching, o The pH required to work in the concrete medium to build the particular structures is appropriate to minimise the leaching out of the heavy metals. • Farmers to plough the ash into the soil as soon as economically and practically possible to prevent nuisance dust.	• Property owner, • Users • Staff.
Secondary waste generation.	• **Environment**:. Secondary waste generation would involve ash mixed with a multitude of other items like oils, grease, as well as other	• The management of the ash platform includes the monitoring of any oil, grease, other waste stream spillages that may contaminate the ash and filter cake waste, thus rendering them unusable on the farm field.	ISSM

	items in the storage sites if they are not managed. • The ash too can contaminate items like greases and any fuel kept uncovered on site.	• Should there be a spill on this area, to immediately isolate the spill and to clean it up, together with the contaminated ash, filter cake and ash as per the systems and SDS procedures. • Ensure any item that may be contaminated by the ash is kept secured with lids on containers. • These contaminated streams are to be isolated and managed for disposal as per SHEQ protocol. • Disposal is to be safe and legal.	
Emergency responders	Positive aspect	• The SHEQ system to have all emergency protocols in place for any emergencies that may arise. • The drivers of the vehicles are to be trained in how to respond safely to any incident involving the load and who to contact in the case of any emergency. • The driver must know the protocol to manage the incident: and who to contact: Owner, emergency responders – fire, and medical.	• ISSM, • Emergency responders, • Driver and • End-user.

I, NICOLE GEOFFRET (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[1]/ Signature on behalf of the applicant:

ILLOVO SUGAR (SOUTH AFRICA) (PTY) LTD.

Name of Applicant:

SHERQ OFFICER

Designation

26 SEPTEMBER 2023

Date:

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