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GLP			Effective date:	01/10/2017
SLP	✓		Ref:	OHSAS PR 4.4.6-10
WI				
TITLE:		ENVIRONMENTAL POLLUTION CONTROL – 1.15		

1.0. Purpose

The purpose of this specification is to ensure that the risk associated with pollution is identified and managed.

It is also to ensure that:

- 1.1 All possible pollution potential is identified, assessed, corrected or controlled and or safely disposed of, to prevent any health hazard or pollution of the environment.
- 1.2 Pollution Prevention Programmes are implemented and monitored
- 1.3 Rehabilitation programmes are identified and implemented.
- 1.4 A written pollution management plan is established in order to give affect to Objectives and Targets.

2.0. Scope

This specification applies to all Departments and Operations of the Eston Mill Centre of Illovo Sugar.

3.0. References

- 3.1 NOSA Element 1.15
- 3.2 ISO 14001 and NOSA CMB 001 Clause 4.4.6 & 4.3.1
- 3.3 All National and Provincial legislation, Codes of Practice and Local Authority By-Laws to which the business subscribes
- 3.4 GLG – Pollution Control - Draft

4.0. Abbreviations, Acronyms and Definitions

For the purposes of this specification, the following abbreviations and definitions apply:

4.1 POLLUTION

Any change in the environment caused by; a substance, radioactive or other waves or noise, odours, dust or heat emitted from any activity, including the storage or treatment of waste or substances, construction or provision of services, whether engaged in by any person or organ or state, where that change has an adverse effect on human health or well being or on the composition, resilience and productivity of natural or managed ecosystems or materials useful to people, or will have such an effect in the future.

4.2 DUST

Particles, which are light and small in size, contained in the atmosphere and could be harmful to human beings or the environment i.e., coal dust, malt dust, bagasse etc.

4.3 ENVIRONMENT AND ENVIRONMENTAL IMPACT

Surroundings in which an organization operates including air, water, land, natural resources, flora, fauna, humans and their interaction.

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Any change to the environment whether adverse or beneficial, wholly or partially resulting from an organization's environmental aspects.

4.4 VOC'S

Volatile organic compounds (VOCs) are emitted as gases from certain solids or liquids. VOCs include a variety of chemicals, some of which may have short- and long-term adverse health effects.

5.0. Responsibility

This specification places responsibility on:

- 5.1 Line/Departmental Manager and the SHERQ Department are responsible for implementing environmental management programmes within their areas of responsibility.
- 5.2 Employees at large are also responsible for reporting any hazards, which may lead to pollution.
- 5.3 Factory Manager and SHERQ Manager to ensure that relevant permits are valid and that permit conditions are complied with i.e. AEL conditions, dust monitoring programme, Integrated Water Management programmes, Borehole abstraction restrictions, groundwater monitoring, geohydrological survey.

6.0. Specification

6.1 ENVIRONMENTAL SURVEYS

- 6.1.1 Pollution surveys will be carried out every two years to determine whether any likely pollution problem exists either on site or to the surrounding areas in regard to:
 - 6.1.1.1 Water
 - 6.1.1.2 Effluent
 - 6.1.1.3 Hazardous Waste Disposal
 - 6.1.1.4 Assessments will take into consideration potential non point source emissions, fugitive emissions and permit requirements.

6.2 WATER

- 6.2.1 Borehole and stream water is to be sampled/tested internally on a monthly basis with samples being sent to Talbot Laboratories for analysis and 3 monthly externally by Talbot Laboratories. Samples shall include but not limited to:
 - Chemical Oxygen Demand (COD)
 - PH
 - Conductivity.

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No process waste shall be permitted to enter the storm water drainage systems.

Every effort shall be made to avoid chemical spills, which can contaminate storm water drains/boreholes etc. As far as possible, should these occur, efforts should be made to contain within effluent drains and or spills neutralised.

- 6.2.1.1 Oils and greases must not be allowed to enter drains unless approved grease traps are fitted and the sludge disposed of in the correct manner.
- 6.2.1.2 Spillages of any substances must not be washed into storm water drains, unless this can be pumped over to effluent, which will avoid the pollution of water streams/ rivers.
- 6.2.1.3 Any oil, lubricants and fuel stored on operational sites will be stored in bunded areas and contained areas in order to contain any spillages.
- 6.2.1.4 Any spillages must be managed, mitigated and where required, remediated as soon as they occur and as per the Illovo Sugar Spillage and Management of Hazardous Materials Procedures.
- 6.2.1.5 Sewage facilities need to be appropriately planned, constructed and operated.
- 6.2.1.6 Establish baseline ground and surface water quality and levels for operational monitoring purposes.
- 6.2.1.7 Where process waste water is discharged to natural surface water resources, the assimilative capacity of the receiving water body shall be assessed for the load of contaminants that is being discharged.
- 6.2.1.8 Discharges to water bodies that are recognised by professionals to be particularly sensitive due to their relative size, function or status as rare, threatened or endangered, or which supports a particular endangered species of plant or animal, shall be avoided.
- 6.2.1.9 Discharges to a wetland listed in the Ramsar Convention 78, or any other nationally / internationally proclaimed conservation area, shall be avoided regardless of the rate of discharge.
- 6.2.1.10 To limit the volume of water requiring specialised treatment, each operation shall plan and implement the segregation of liquid effluents principally along industrial, utility, sanitary and storm water categories.
- 6.2.1.11 Opportunities to prevent or reduce wastewater pollution through such measures as recycle / reuse within operations, input substitution or process modification (e.g. change in technology), shall be identified and implemented.
- 6.2.1.12 Assess compliance of wastewater discharges with the applicable (i) discharge standard (e.g. if wastewater is discharged to a surface or groundwater resource) and (ii) water quality standard for a specific reuse (e.g. irrigation).

6.2.2 AIR

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- 6.2.2.1 All dust extraction equipment to be in sound and sealed working order, and must not permit dust pollution.
- 6.2.2.2 Where coal operations are not enclosed, adequate care must be taken to limit the exposure of employees working as coal handlers.
- 6.2.2.3 Dust explosion precautions must be implemented and maintained at all times.
- 6.2.2.4 Emission levels from stacks shall be monitored annually as per AEL permit conditions
- 6.2.2.5 All employees working in areas where Carbon dioxide could be present must wear oxygen deficiency meters.
- 6.2.2.6 Dust management programme to be implemented and adhered to as per AEL permit conditions. Dust samples to be taken on a monthly basis, and report developed to assess compliance to minimum emission threshold.
- 6.2.2.7 Green House Gas reporting is conducted on a monthly basis. The input data is audited on bi-annual basis and submitted to ABF for governance reporting.
- 6.2.2.8 The open burning of solid waste (such as tyres, cables, plastic and other solid waste) is prohibited at all Illovo operations;
- 6.2.2.9 An appropriate cane burning plan shall be implemented at each operation, taking employee and community health and safety into consideration.
- 6.2.2.10 The burning of straw and other organic materials in the fields shall be avoided where possible / practicable.
- 6.2.2.11 Conduct routine and major maintenance on all Plant and vehicles in accordance with the manufacturer's instructions and service programs, and shall maintain records of all inspection and maintenance works.
- 6.2.2.12 Eston entities will ensure that VOC's where practical are substituted for less harmful aqueous solvents. Collection of vapours through air extractors and subsequent treatment of gas stream by removing VOCs with control devices such as catalytic incinerators, thermal incinerators or enclosed oxidising flares.
- 6.2.2.13 Where possible, fertiliser selection will be based on the reduction of fertiliser induced nitrous oxide emissions.

6.3 POLLUTION PREVENTION PROGRAMMES

- 6.3.1 Opportunities for the prevention or reduction of pollution must be identified with the assistance of interested and affected parties.
- 6.3.2 Where the potential exist, objectives and targets must be set to promote the reduction of pollution, as this has a negative effect on the newly implemented carbon tax for air emissions.

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- 6.3.3 Environmental Management Programmes must be established to monitor progress on objectives and targets and compliance.
- 6.3.4 Warning systems must be established to provide and alert when non-compliance is possible. (Incident reports)
- 6.3.5 All pollution control instrumentation and equipment must be included on the Planned Maintenance System.
- 6.3.5.1 The oil traps at the diesel bowser and workshop wash bay are inspected and if necessary drained on a quarterly basis. The Drizit bags at the storm water drain at the Maintenance Workshop are replaced on a monthly basis. These inspections are scheduled on the Maximo Planned Maintenance System
- 6.3.6 All employees must be trained and familiar with pollution hazards and the measures necessary to avoid unnecessary pollution.
- 6.3.7 The requirements of the condition to meet and maintain the AEL licences include process changes, sampling, complaints register and complaints.
- 6.3.8 SHERQ Improvement programmes will be identified, implemented, monitored and reviewed for each fiscal year to give effect to environmental risk management.
- 6.3.9 ERM related environmental findings will be form part of SHERQ Improvement plan and will be tracked for progress on the ABF Portal.

6.4 REHABILITATION OF CONTAMINATED LAND

- 6.4.1 The operation must identify any areas where any of the following three risk factors exist / co-exist, or are likely to exist / co-exist, in areas under its control:
 - 6.4.1.1 Contaminant(s): The presence of hazardous materials, waste, or oil in any environmental media at potentially hazardous concentrations;
 - 6.4.1.2 Receptor(s): Actual or likely contact of humans, wildlife, plants, and other living organisms with the contaminants of concern, and/or
 - 6.4.1.3 Exposure pathway(s): A combination of the route of migration of the contaminant from its point of release (e.g., leaching into potable groundwater) and exposure routes (e.g., ingestion, transdermal absorption), which would allow receptor(s) to come into actual contact with contaminants.

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7.0. Records

The following Records are required as evidence of compliance with this Specification:

Doc. No.	Form Title	Custodian	Location	Retention	Destruction
	Stack Emission Monitoring	Engineering Manager	Engineering Manager	3 Years	Shredding
	Licences and Permits (Water and Air)	SHERQ Manager	SHERQ Manager	Indefinitely	Shredding
	Water Sampling	Production Manager	Laboratory	3 Years	Shredding
	Impact assessments and surveys	SHERQ Manager	SHERQ Manager	Indefinitely	Shredding
	Audit assessments and CAR's	SHERQ Manager	SHERQ Manager	Indefinitely	Shredding
	Interested and affected party complaints	SHERQ Manager	SHERQ Manager	Indefinitely	Shredding

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