Eskom	WORK INSTRUCTION	Lethabo Power Station

Title: **Environmental Spill Pollution Management Procedure**

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This document has been approved and authorised by:

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Date: 25/01/2023	**Date:** 26/01/2023	**Date:** 2023/01/27
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1. INTRODUCTION

2. SUPPORTING CLAUSES

2.1 SCOPE

This procedure details the process to be followed by any employee or contractor who is attempting to contain or clean up any spillage which occurs at, or as a result of, Lethabo Power Station activities is to be used as supplementary to LBE23003 (Environmental Non-conformance Investigation and Reporting).

2.1.1 Purpose

To provide a procedure for the containment and clean-up of spillage incidents which have or may have a negative impact on the environment.

2.1.2 Applicability

This document shall apply throughout Lethabo Power Station, its employees, contractors and suppliers wherein Eskom, Lethabo Power Station has a controlling interest.

2.2 NORMATIVE/INFORMATIVE REFERENCES

2.2.1 Normative

Identifier	Name
LBE22004	Waste Management Procedure
LBE23003	Environmental Non-conformance Investigation and Reporting
LET09022	Handling of Bulk Caustic Spillages
LET09021	Handling of Bulk Ammonia Spillages
LET09023	Handling of Bulk Lime Spillages
LET09020	Handling Bulk Acid Spillages
LEA09036	Procedure in case of an Ammonia Leak or Spillage
ENV16-L009	Position paper on ash spillages
ENV19-L010	Position paper on the illegal dumping of ash
Guideline for the Administration of Emergency Incidents as Contemplated in Section 30 of the National Environmental Management Act (Act No. 107 of 1998)	

2.2.2 Informative

- National Environmental Management Act, No 107 of 1998
- National Water Act, No 36 of 1998

2.3 DEFINITIONS

2.3.1 Classification

a) Public domain: published in any public forum without constraints (either enforced by law, or discretionary).

Definitions	Explanation
Emergency incident	means an unexpected, sudden and uncontrolled release of a hazardous substance, including from a major emission, fire or explosion, that causes, has caused or may cause significant harm to the environment, human life or property;
Employee	Includes full time and contracted workers, as defined by the OHSAct, 1993
Environment	means the surroundings within which humans exist and that are made up of- (i) the land, water and atmosphere of the earth; (ii) micro-organisms, plant and animal life; (iii) any part or combination of (i) and (ii) and the interrelationships among and between them; and (iv) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being;
First Observer	The person/s who is part of, witnesses, or discovers an environmental non-conformance and informs persons in the next level of internal (Station) reporting
Non-conformance	Is defined as a non-fulfilment of a requirement. In terms of a spill incident, this includes: • Any spillage whether contained in the Station's closed loop drain system or not (e.g. sewage spillage; ash / effluent water spillage; coal spillage; cooling water spillage; oil spillage or leak; chemical spillage); • The uncontrolled release / overflow or dumping of any substances, whether inside the station boundary or not; • An unpermitted deposition / overflow whether deliberate or unintentional, inside or outside the station boundary; • Occurrence due to malfunction of the plant which impacts on the surrounds; Occurrence due to human error which impacts on the surroundings.

Definitions	Explanation
Watercourse	means- a) a river or spring: b) a natural channel in which water flows regularly or intermittently: c) a wetland. lake or dam into which, or from which, water flows: and d) any collection of water which the Minister may, declare to be a watercourse, and a reference to a watercourse includes. where relevant, its bed and banks:

2.4 ABBREVIATIONS

Abbreviation	Description
BU	Business Unit
DFFE	Department of Forestry, Fisheries and the Environment
DWS	Department of Water and Sanitation
EH&S	Environmental, Health and Safety
NEMA	National Environmental Management Act
OHS	Occupational, Health and Safety
OPS	Operating
PPE	Personal Protective Equipment
SAP EHS	System Application Product Environmental, Health and Safety
SDS	Safety Data Sheet
SHE	Safety, Health and Environmental
SRM	Safety risk management

2.5 ROLES AND RESPONSIBILITIES

2.5.1 Environmental management

- Is the responsibility of every person at Lethabo Power Station, therefore, the onus is on every employee to report any spill pollution as per LBE23003.

2.5.2 First observer

- Must by any means possible prevent / contain the spillage from contaminating the natural environment or flowing into the station drains.
- Report the spillage to the environmental department, SRM and OPS support and Fill out spill assessment table (240-47176039)

2.5.3 The Environmental Department

- Is responsible for the verification of any reported incident (if necessary with the person/s responsible for the particular plant or section involved).

- Is responsible to assess the spillage to determine if any further clean-up / bioremediation is required to address the spillage.
- Is responsible for capturing the incident for investigation on SAP EH&S, and reporting to relevant authorities where applicable.
- Follow up on remedial actions for spillages.

2.5.4 OPS Support

- Is responsible for assisting with containment and for clean-up of the spillage.

2.5.5 Chemical Services

- If the chemical/oil has spilled into a watercourse, is responsible for taking samples and reporting the quality to the environmental department.

2.5.6 Safety Risk Management

- Assess health and safety risks of spilled chemical.
- Advise on appropriate PPE to be worn for the clean-up activities.

2.5.7 Fire Risk management

- Provide SDS of spilled chemical/ oil.

2.6 PROCESS FOR MONITORING

- Inspections after the spill have occurred, during clean-up and after the clean-up activities have occurred.
- Inspection after the first rain where a chemical spillage has occurred in the natural environment.
- Quarterly groundwater monitoring at Lethabo Power Station as Water Use license.

2.7 RELATED/SUPPORTING DOCUMENTS

- 240-47176039 - Spill assessment table
- 240-47176095 - Spill assessment feedback form

3 WORK INSTRUCTION

3.1 If possible, the first observer must immediately try to prevent / contain the spillage from spreading or further contaminating the natural environment or spilling into the station drains by e.g.:

- Closing a valve / tap with the permission of the relevant Assistant Shift Supervisor.
- Plugging / repairing the leak.
- Positioning a container underneath the leak to catch the pollutant.
- Placing a leaking container / machine in a bunded area or drip tray.

3.2 In preventing / controlling a spillage, the first observer should not interfere with the normal running of plant without the permission of the relevant Shift Supervisor.

3.3 Prevention / containment of the spillage may be done by using sand or absorbent material (drizit), and placing it on and around the spillage.

3.4 The first observer must also report the spillage to the environmental department, SRM and his/her immediate supervisor as soon as possible, as per LBE23003 (i.e. use the Spill assessment Table 240-47176039.)

Note: The first observer should follow the precautionary principle i.e. if a spillage occurs and the environmental impact is uncertain; assume that there is a negative environmental impact.

3.5 In the event of a bulk chemical spill at the Water Treatment Plant, inform the Shift Supervisor at the Water Treatment Plant, Environmental Department and SRM.

3.6 Environmental Department to assess the immediate environmental risks, determine if any further clean-up or bioremediation is required to address the spillage and determine whether the spillages should be reported to authorities.

3.7 SRM and Fire Risk to assess the immediate health and safety risks and mitigation measures thereof.

3.8 Once initial containment of the spillage has occurred, or if the spillage still poses a risk of spreading, Station Cleaning must be contacted to further address the problem.

3.9 Any spillage must be contained by either berming up the contaminating matter with either:

- Ash/Soil
- Absorbing material
- Sand bags / booms
- A container / drip tray
- Bund walls
- or a combination of the above

3.10 In the case of a water-related spillage, the spillage must be directed into the station drain system. Chemical Services must be notified immediately to collect a sample.

3.11 Always use personal protective equipment (PPE) e.g. gloves, overall, masks or respirators and goggles when containing / cleaning a spillage as per instruction from SRM and Fire Risk management.

3.12 Contaminated ash/soil or absorbing material and contaminated PPE, must be disposed of as hazardous waste as per LBE22004, as soon as reasonably possible.

3.13 In the event of a bulk chemical spill at the Water Treatment Plant, Chemical Services will initiate the relevant clean-up procedures.

Note: In case a specific clean-up procedure has not been developed, clean-up of the spillage should be initiated as per the chemical SDS.

3.14 In case of ash spillages ENV16-L009 (Position paper on ash spillages) will be followed and to be read with latest ash spillages and dumping position paper.

3.15 The spill assessment feedback form (240-47176095) should be completed and sent to the environmental department after the clean-up of the spill is complete.

4. AUTHORISATION

This document has been seen and accepted by:

Name	Designation
H Sewsunker	Technical Plant Manager
S Maringa	Risk and assurance Manager
C Govinden	Engineering Manager - Acting
L Monnakgotla	Maintenance Manager
M Tsoaeli	Finance Manager
V Mokoena	Operating Manager
A Macholo	Outage Manager
M Holtzhausen	Programme Manager
T Mocoancoeng	HR Manager
M Hariram	Environmental Manager
S Vilakazi	SRM Manager

5. REVISIONS

Date	Rev.	Compiler	Remarks
2008-03-20	00	M Hariram	Change LBA00123 to.
2010-07-15	01	M Hariram	Change format to incorporate ISO9001 Standard Change number to LBE22005PC
2013-01-15	02	O Makhalemele	Removed WCL we are using INO only. WCL is used by medical and safety, also removed it on the 7.2.3 and left only INO
2017-06-05	03	WFL de Klerk	Changed Format (Removed Initial Response and Clean-up prevention) Referenced the following documents: • Spill assessment table • Spill assessment feedback form • Ash spillages briefing note • NEMA Section 30 Guideline document
2020-02-06	04	WFL de Klerk	Inclusion of position paper for ash spillages
2023-01-16	05	L Moreoane	Update of Abbreviations Delete abbreviations that are no longer relevant

6. DEVELOPMENT TEAM

- None

7. ACKNOWLEDGEMENTS

- None