

 Eskom	PROCEDURE	KZN OU
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Title: **ENVIRONMENTAL
MANAGEMENT OF INSULATING
OIL IN KZN OU**

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FOREWORD

Revision History

This document supersedes Revision No. 4 of Specification or Standard No. EI-050-MVL.

Date	Revision	Compiler	Notes
02/09/2002	0	Original issue (Troy Govender)	First issue
29/09/2005	1	Troy Govender	(Page 1) – Ref No. EI-050-EMS Approved By: Changed to Peter Sebola Change of grammar in 3 rd paragraph. Heading changed in 1. (Page 2) - Added information 3-9. Approved By: Changed to Peter Sebola (Troy Govender)
23/01/2007	2	Troy Govender	Changed document template Authorised By: Changed to Price Moyo Added: Approved By: Pool Mahadeo Section 5: changed 24 hours to 14 days Section 7: added 'where practicable' Section 9: changed relevant staff to staff who handle oil
09/03/2007	3	Troy Govender	Approved By: Changed to Kurt Dedekind. Functional Resp: Changed to Lenny Babulall.
16/02/2010	4	Troy Govender	Authorised By: Changed to Azwi Mamanyuha.
01/11/2013	5	Troy Govender	New Template + Unique Identifier

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			Various changes and additions, viz. 2(e), 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.10, 4.11, 4.12 and 4.13
02/07/2014	6	Troy Govender	5. Oil Spill Assessment Table and Report
13/01/2015	7	Troy Govender	5.2 Reporting and Clean-up response time Containment: Leak is moderate - can be managed with spill kit

APPLICABILITY

This document shall apply throughout the KZN Operation Unit (KZN OU).

1. SCOPE

Oil spills contaminate soil and surface water, smothering terrestrial and marine plants and animals. Many chemicals in oil spills are toxic, and can have serious cumulative effects as they build up in ecosystems. Spills can also have severe effects on agriculture, tourism and fisheries. Clean-up operations are costly, may also harm marine life and coastal habitats.

Oil spills are at a high risk in Eskom (Distribution), due to the large quantities of oil stored, transported and used in the electricity system.

To manage and minimise the potential environmental risks associated with oil spills, the handling of oil in the KZN OU will comply as follows.

2. NORMATIVE REFERENCES

Parties using this document shall use the most recent edition(s) of the document(s) listed in this section.

- (a) All South African legislation relating to oil spills, including 'Duty of care and remediation of environmental damage' Part 1, Section 28 of the National Environmental Management Act, No. 107 (ACT 107 OF 1998) (NEMA).
- (b) Eskom Corporate Directive for the Management of Polychlorinated Biphenyls (PCB), 32-245.
- (c) KZN OU Environmental Emergency Preparedness and Response Procedure, KZN13TGP071

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3. DEFINITIONS AND ABBREVIATIONS

3.1 DEFINITIONS

3.2 ABBREVIATIONS

Abbreviation	Description
CNC	Customer Network Centre
KZN OU	KwaZulu-Natal Operating Unit
NEMA	National Environmental Management Act, No. 107 (Act 107 OF 1998)
O&M	Operations and Maintenance
PCB	Polychlorinated Biphenyls
SAP EHS	SAP Environmental, Health and Safety
SHEQS	Safety, Health, Environment, Quality and Security
TS	Technical Support

4. REQUIREMENTS

- 4.1 Staff responsible for oil management will familiarise themselves with the above-mentioned documentation.
- 4.2 All damaged equipment (e.g. transformers) containing oil must be drained of all oil before the transportation or sale of such equipment.
- 4.3 Sites where oil is held must complete the Return to Stores Form IM101 and forward to the Procurement Department, once containment is at 80% capacity, to initiate the process for the collection of the oil.
- 4.4 All **minor** and **moderate** spills must be cleaned-up using the Oil Spill Kit which must be available at all sites where insulating oil is used or stored.
- 4.5 All those who use the Oil Spill Kits, must undergo the basic training provided by the supplier of the kits, or the Eskom-provided basic training.
- 4.6 An external emergency spill clean-up company is on contract to the OU for only **major** hazardous and oil spill clean-up.
- 4.7 During office hours, CNCs must contact the Technical Support (TS) Contract Staff for a task order. TS will engage the clean-up company to undertake the clean-up and rehabilitation.

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- 4.8 Afterhours, Resource Management Centre (RMC) issues the task order; the Supervisor may engage with the clean-up company directly, but must notify the TS Contracts Staff the next working day so that a Purchase Requisition (PR) can be created.
- 4.9 All oil spills must be reported via the *Accident/Incident Notification Flash Report Revision 10* to Eskom's SHEQS Department in New Germany, as per the *Procedure for the Effective Management of Safety, Health and Environmental Related Incidents (32-95)*, within 24 hours of the spill.
- 4.10 The Eskom Environmental Manager (SHEQS) will report all **major** oil spills (scores greater than 25 as indicated on the Oil Spill Assessment Table) to the relevant authority within 24 hours of receipt from line function, after consultation with the relevant manager. Environmental Manager will forward a report to the authorities within 14 days of the incident, i.t.o. NEMA.
- 4.11 Affected landowners must be informed of the incident, within 24 hours, by the relevant line function, e.g. Senior Supervisor or Project Manager, in consultation with the Environmental Manager.
- 4.12 SHEQS Environmental Management Section will capture (monthly) all oil spills on SAP EHS to determine the rating for the Environmental Index.
- 4.13 All facilities where oil is used or stored must have the necessary liquid-tight flooring and bund walls to prevent land and water contamination.
- 4.14 Oil holding facilities (bunds) must be drained monthly, or more frequently in the event of heavy rains to ensure that the holding facility is able to cope with overflows.
- 4.15 Caution and care must be taken to ensure that the oil does not flow into storm water drains or waterways.
- 4.16 Managers and Supervisors to ensure that relevant staff is appropriately trained to manage the identified risk adequately.

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5. OIL SPILL ASSESSMENT TABLE AND REPORT

5.1 Guidelines for Completing the Table

- (a) This oil spill assessment table and report is in line with Environmental Management of Insulating Oil in KZN OU, KZN13TGP-072
- (b) Supervisor (or relevant delegated employee) to complete the table using judgment and facts available for all oil spillages greater than 10 litres;
- (c) Allocate relevant points (1, 3 or 5) to each of the 11 elements on the table;
- (d) A score of zero (0) is allocated to column 1 of items 3, 5, 7, 9, 10 and 13
- (e) If the PCB level of the oil is not known, **the spill will be treated as a PCB spill**, until such time that analysis proves otherwise.
- (f) The relevant Eskom Environmental Practitioner may be consulted for guidance, if required;
- (g) Add the scores at the bottom of each of the three (3) columns to obtain the subtotal;
- (h) Add the three (3) subtotal scores to obtain the **Total Score**.
- (i) For the report, attach additional notes if necessary or if the space supplied is not sufficient.

5.2 Reporting and Clean-up response time

	Incident notification, Assessment table and Oil Spill Report dates	Clean-up initiation date	Clean-up completion date
Minor spills	14 days since incident	Within 48 hours	Within 7 days
Moderate spills	7 days since incident	Within 24 hours	Within 14 days
Major spills	48 hours since incident	immediately	Within 90 days

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5.3 OIL SPILL ASSESSMENT TABLE

ISSUE/RATING		1	3	5
Source of the spill	Weep		Drip/Leak	Explosion/Incident
Age of spill	Historic		Happened recently - spill still moist	Happened within last 24 hours
Threat to any water body (river, lake, dam)	No threat	0	Into waterbody if rains	Spilling into waterbody
Containment	Leak is minor - can be controlled, contained and plugged with oil spill kit		Leak is moderate - can be managed with spill kit	Leak is serious, containment is impossible
Life threatening Conditions	Not at all	0	Moderate (Environmental or health risk only)	Serious (Explosion, fire, health and major environmental)
Weather conditions	Good weather and will prolong till spill is cleared		Moderate, but may change suddenly to weather conditions which will hamper containment	Raining
Properties affected	None	0	On-site (Only Eskom's property is affected)	Off-site (off Eskom's properties and public roads) ≥25 points
Public relations threat	Small		Medium	Large
Soil types	Clay or compacted ground		Loose or loam soil	Sandy soil and Gravel
Traffic implications	Not on any road	0	Public road	Road closed
PCB presence*	None	0	Less than 50 ppm in the oil	Over 50 ppm in the oil will automatically get ≥25 points
TOTAL SCORE	SUB TOTAL		SUB TOTAL	SUB TOTAL

MINOR SPILL ≤ 12	MODERATE SPILL = 13-24	MAJOR SPILL ≥ 25
1. Clean-up using portable oil spill kit 2. Forward incident notification and report (below) to the Eskom Environmental Advisor	1. Contain and clean-up using portable oil spill kits 2. Forward incident notification and oil spill report to the Eskom Environmental Advisor	1. Contain the spill and inform the Eskom Environmental Advisor 2. Call Eskom's contracted emergency response team to initiate clean-up 3. Forward incident notification and oil spill report to the Eskom Environmental Advisor

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5.4 OIL SPILL REPORT

Please attach additional notes, if necessary or if the space below is not sufficient.

1. The nature of the incident

1.1	Date of incident	
1.2	Time of incident	
1.3	Line or substation name	
1.4	Location or GPS co-ordinates	
1.5	CNC/Dept	
1.6	Municipality name	

2. Risks posed by the incident to public health, safety and property (tick if applicable)

2.1	Public health	
2.2	Safety	
2.3	3 rd party property	
2.4	Environmental (soil, water, trees, birds, animals affected)	

3. Toxicity of the substances or by-products released

3.1	Approximate quantity of oil spilled	
3.2	PCB status/level (known or cannot be determined)	
3.3	Did the facility burn/catch of fire? (YES/NO)	

4. Root cause of the spill (tick one or more)

Manpower (management failure; lack of skill)		Material (handling, storage)	
Machine (equipment, technology)		Mother nature (environment, e.g. lightening, floods, winds, theft)	
Measurement (calibration system)		Method (training)	

5. Measures taken to minimise impacts

5.1	Date clean-up started	
5.2	Expected date of clean-up to be completed	
5.3	Method of clean-up: spill kit or external service provider (name)	

6. Measures taken or to be taken to avoid a recurrence/repetition of such an incident:

6.1	Plant (repair or replacement)	
6.2	People (training provided)	
6.3	Procedure (revised existing or developed a new procedure)	

COMPILED BY

DATE:

SIGNATURE:

POSITION/DEPARTMENT:

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