STANDARD

OIL SPILL CLEAN-UP AND REHABILITATION

REFERENCE REV
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COMPiled BY FUNCTIONAL RESP. AUTHORIZED BY

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Foreword

This standard has been compiled to set a uniform standard addressing oil spill emergencies and long term action following the need identification by Eskom’s Corporate Environmental Affairs Department. The standard addresses the containment and the remediation issues surrounding an oil spill. It also gives a risk rating and response reaction guideline. The standard was compiled following various discussions with staff involved in oil spills as well as response teams from various organizations.

NOTE All comments for revising and updating this document must be directed to the Environmental Liaison Committee (ELC), who will in turn liaise with the Technology Standardization Manager.

Queries concerning this standard may be directed to the compilers, Ms A Lombard at Technology Services International (TSI), Rossherville or Mr M Hunter at Distribution, Megawatt Park.

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- Mr W Fumsten – Central Region Transmission
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- Mr A Hayens – Central Region Transmission
- Mr N du Preez – Waste-Tech/Enviroserve
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- Mr R Kersandt – MRO Product Management
- Ms W Poulton – Corporate Environmental Affairs
- Various Eskom staff members who participated in the oil spill questionnaire survey

Introduction

Insulating oil and other related hydrocarbon and synthetic compounds pose a serious pollution problem when released into the environment. Not only do these compounds pose a fire hazard, but with one litre of oil having the potential to contaminate in excess of a million litres of water, it needs to be handled with care. Oil can rapidly penetrate certain soil types, which may lead to extensive soil contamination as well as ground water and surface water contamination. The Water Act 36 of 1998, states that “hydrocarbons should not touch the soil or water and if they do, they shall be removed immediately”.

1 Scope
1.1 Purpose

The purpose of this standard is to communicate a standard policy and response action following an oil spill on a site. It includes a rating system to enable a risk assessment that will assist with the reporting and especially the level of reporting of an oil spill.

This standard is applicable to any oil handling site and oil containing equipment, which includes distribution, transmission, generation sites as well as all contractors working on Eskom sites. It is of particular importance for employees in oil storage areas, maintenance teams and contractors to be familiar with the contents of this standard.

1.2 Applicability

This standard is applicable to all Eskom employees and contractors who in the event of their daily activities come across an oil spill.

2 Normative references

The following documents contain provisions that, through reference in the text, constitute requirements of this standard. At the time of publication, the editions indicated were valid. All standards and specifications are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the documents listed below. Information on currently valid national and international standards and specifications can be obtained from the Information Centre and Corporate Technology Standardization Division at Megawatt Park.

Erickson, MD:1993, Remediation of PCB Spills. Lewis publishers, Tokyo.


MRO Product Management:1999, Inland oil spill contingency plans.


ESKADABG8:Rev.0, Directive on oil spill clean-up and rehabilitation.

3 Definitions and abbreviations

3.1 Definitions

3.1.1 clean-up: The action of remediation, this may include soil excavation, bio-remediation, solvent soil wash, landfarming or electrochemical treatment.

3.1.2 containment: The prevention of the spreading of the oil spill.

3.1.3 drip: Where continuous dripping is taking place and can result in pooling of the oil.

3.1.4 explosion: A situation, which occurred due to the rupture of electrical equipment as a result of an electrical fault.

3.1.5 leak: A continuous dripping that will result in pooling of oil that will require corrective action as the electrical equipment will have to be topped-up.

3.1.6 off-site: A site, road or property not belonging to Eskom.

3.1.7 on-site: Any Eskom site (including any Eskom leased site).

3.1.8 remediation: A method of clean-up that will ensure a minimum hydrocarbon or synthetic oil presence of 1000 ppm or (0,1 %) above the background level.

3.1.9 Responsible Person: The person appointed by the relevant line manager, who will take responsibility during remedial action following a spill. This might be the environmental co-ordinator or the relevant site manager.

3.1.10 spill: Any amount of oil present out off its "normal" container - where normal refers to a transformer or a drum etc.

3.1.11 weep: Where no free running oil is visible, but the area is damp with oil. It will be an area where dust is accumulating but no effective loss of oil is evident.
3.2 Abbreviations

3.2.1 NIOSC: National Insulating Oil Steering Committee
3.2.2 PCB: polychlorinated biphenyls
3.2.3 ppm: parts per million
3.2.4 TSI: Technology Services International
3.2.5 UTO: used transformer oil

4 Requirements

4.1 General

An oil spill may be defined as being any amount of oil no longer present in its normal container or equipment. The Water Act, 1998 (Act 36 of 1998) states that “hydrocarbons should not touch the soil or water and if they do, shall be removed immediately”. Oil spills can be categorized as being small or large, historic, weep, seep, drip, leaks on Eskom or neighbouring sites or major catastrophic events. However, the immediate prevention and clean-up is considered to be essential in all of the above.

4.2 Assessment of the spillage

Assessment of the oil spill will need considerable judgement to perform. Evaluating the cause, extent and ultimate corrective action can be done using the table given in annex A. The assessment shall include the following factors:

- identifying the source of the spill;
- the age of the spill;
- life-threatening conditions;
- weather conditions;
- properties affected (Eskom, neighbours, National roads);
- traffic implications;
- threat to any water bodies;
- PCB presence;
- soil types; and
- public relations threat.

4.3 Securing of sites

Where necessary, secure the site and contain the spill to avoid further pollution, determine the spill boundaries, prevent unauthorized access to the spill site and, where required, notify all parties involved. The securing can include barricades, ropes, plastic taping or covers, or any other appropriate measures in order to prevent access or spread of the contamination.

4.4 Spill on an Eskom site

4.4.1 Limit the spillage

The need for immediate corrective action to limit the spillage cannot be overemphasised as this will minimize the environmental damage and reduce remediation costs. This can involve actions such as:
a) closing a valve;

b) repairing the leak with rags, plugs or other appropriate material;

c) repositioning the container so that the leaking area is at the highest level or lifting a fallen drum/container;

d) placing a leaking container or equipment into a collecting tray or bund area; and

e) collecting the spilt oil in a container located underneath the leak or channelling the leak into a container.

4.4.2 Containing the spillage

The containment of a spillage will involve an action that will either prevent or stop a spill from spreading. It is vital to prevent any oil spill from entering waterbodies such as drains, stormwater systems, dams or rivers. Containment of the oil near the source will minimize pollution and will enable easy clean-up and/or remediation. This shall be done using one or more of the following:

a) soil barriers;

b) sand bags;

c) bund walls; and

d) absorbent materials.

4.4.3 Removal of oil

The free oil (puddles) shall be captured and put into a suitable container such as a drum or tanker for proper disposal as soon as possible.

This oil shall not re-enter the Eskom insulating oil pool for regeneration and re-use in electrical equipment.

4.4.4 Final clean-up/remediation

After removal of excess oil, saw dust, suitable absorbents or solvents shall be used to complete the clean-up of the spill. This might include the removal of leaking equipment, cleaning of pavements, removing contaminated soil and vegetation, as well as disposing of clean-up equipment. The absorbing material shall be bagged and disposed of at a class HH registered site.

PCB material shall be incinerated, encapsulated or de-chlorinated following consultation with NIOSC who will advise on the most viable option.

4.4.5 Bio-remediation/Landfarming

Bio-remediation/landfarming are based on the principle of stimulating the relevant microbes in order to break down the hydrocarbon molecules present in an oil spill. Landfarming will entail treatment of the soil away from the affected area, whereas bio-remediation will be done in-situ. Generally these processes may need stimulation or human intervention and are normally performed after the initial remediation phase to ensure total remediation of the site. These processes will need to be completed by bio-remediation/landfarming specialists in accordance with Eskom’s approved supplier/contractor list.

4.5 Spill on a non-Eskom site
This shall be considered as a major spill greater than 25 points on the assessment scale in annex A and shall be treated as such.

4.6 **Recommended spill kit**

To allow for a rapid response and clean-up to an oil spill, it is mandatory for all Eskom sites and vehicles handling oil to have access to a recommended basic spill kit. The vehicle kit shall be a smaller version of the site spill clean-up kit, that meets the basic requirements for the volume of oil transported. This shall be used in the event of a spill that is less than 12 points as assessed using the table in annex A.

Adequate and relevant training shall be given to all staff, maintenance teams and contractors working with oil on an Eskom site. This shall involve the actions to be taken following an oil spill as well as the use of the recommended oil spill kit.

The recommended oil spill kit shall contain the following:

a) 2 pairs of latex or neoprene gloves;

b) 20 heavy duty disposable bags (rubbish bags);

c) 1 shovel;

d) 1 hard bristle broom;

e) 5 absorbent pads;

f) 3 bags of absorbent material (cellulosic or other efficient material); and

g) 1 pair of plastic goggles.

If a station or site is close to surface water, oil absorbing material for removal and containment of oil on water shall form part of the standard kit.

4.7 **Remediation contractors**

Because of the emergency situation surrounding an oil spill clean-up, and to avoid bureaucratic delays in obtaining necessary approvals for appointing contractors, it is recommended that annual contracts are established on an "as and when required" basis with approved and relevant hazardous or emergency response teams. This will involve the availability of such a team, and agreement on relevant costs if an unforeseen event occurs.

4.8 **Testing**

Samples for both hydrocarbon and PCB content or other synthetic oil level evaluation shall be taken and submitted to TSI or approved laboratories for analysis. This shall form part of the evaluation of the oil spill assessment as well as the remediation procedure and prior to final payment, to ensure compliance with the relevant legislation.

4.9 **Oil storage**

To limit any potential oil spill, it is recommended that all sites where insulating oil is stored are accredited in terms of Eskom's NIOSC manual. For all other oils, the relevant Eskom standards shall be adhered to.

UTO removed from equipment shall be promptly salvaged and returned to the closest, authorized regeneration facility after its removal from the equipment.

4.10 **Reporting**
All oil spills shall be assessed using the standard formats in annexes A and B. The completed forms shall be copied to the environmental co-ordinator who shall ensure that all appropriate reporting is carried out in accordance with the latest legislation.

4.11 Training

The Environmental co-ordinators responsible for the site shall ensure that appropriate training is given in the use of the spill equipment, reporting and emergency response procedures.

4.12 Preventive measures

Prevention remains better than cure and for this reason each spill shall be evaluated and analysed and appropriate preventive measures adopted. Any oil site design or facility shall be evaluated using relevant tools such as the Electrical Power Research Institute (EPRI) Mineral Oil Spill Evaluation System (MOSES) MP software that is available to the Eskom line groups.

Annex A

(normative)

Model oil spill assessment table

Using your judgement and the facts available, allocate the relevant points (1, 3 or 5) to each of the following and add them together. The cumulative score will dictate the appropriate corrective action.

<table>
<thead>
<tr>
<th>Condition</th>
<th>1</th>
<th>2</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source of the spill</td>
<td>Weep</td>
<td>Drip/Leak</td>
<td>Explosion/Incident</td>
</tr>
<tr>
<td>Age of spill</td>
<td>Historic</td>
<td>Happened recently -</td>
<td>Happened within last</td>
</tr>
<tr>
<td></td>
<td></td>
<td>spill still moist</td>
<td>24 h</td>
</tr>
<tr>
<td>Threat to any waterbody</td>
<td>No threat</td>
<td>Threat with rain</td>
<td>Access to waterway</td>
</tr>
<tr>
<td>Containment</td>
<td>Leak is minor – can be controlled, contained and plugged with oil spill kit</td>
<td>Leak is moderate – cannot be successfully managed with spill kit.</td>
<td>Leak is serious, containment is impossible</td>
</tr>
<tr>
<td>Life threatening Conditions</td>
<td>Not at all</td>
<td>Moderate</td>
<td>Serious (Explosion, fire, health and major environmental)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Environmental or health risk only)</td>
<td></td>
</tr>
<tr>
<td>Weather conditions</td>
<td>Good weather and will last until spill is cleared</td>
<td>Moderate, but may change suddenly to weather conditions which will hamper containment</td>
<td>Raining</td>
</tr>
<tr>
<td>Properties affected</td>
<td>None</td>
<td>On-site (Only Eskom's property is affected)</td>
<td>Off-site (Eskom's neighbouring properties and public roads) ≥25 points</td>
</tr>
<tr>
<td>Public relations threat</td>
<td>Small</td>
<td>Medium</td>
<td>Large</td>
</tr>
<tr>
<td>Soil types</td>
<td>Clay or compacted ground</td>
<td>Loose or loam soil</td>
<td>Sandy soil and Gravel</td>
</tr>
<tr>
<td>Traffic implications</td>
<td>Not on any road</td>
<td>Public road</td>
<td>Road closed</td>
</tr>
<tr>
<td>PCB presence*</td>
<td>None</td>
<td>Less than 50 ppm in the oil</td>
<td>Over 50 ppm in the oil will automatically</td>
</tr>
<tr>
<td>Total score</td>
<td>Sub total</td>
<td>Sub total</td>
<td>Sub total</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
</tbody>
</table>

| Signature   | Name     | Date     | Site      |

<table>
<thead>
<tr>
<th>Minor spill</th>
<th>Moderate spill</th>
<th>Major spill</th>
</tr>
</thead>
<tbody>
<tr>
<td>£ 12 points</td>
<td>13 – 24 points</td>
<td>&gt; 25 points</td>
</tr>
</tbody>
</table>

- Clean-up must be performed and a report issued to the relevant Environmental co-ordinator
- Contain and call in the assistance of the Environmental co-ordinator
- Contain, call on Environmental co-ordinator who will assess the situation and if needed call upon an emergency response team

*If the PCB levels of the oil are not known through prior testing, the spill shall be treated as a PCB spill, until such time that analysis proves otherwise.

**Annex B**

*(normative)*

**Model oil spill feedback form**

Please attach additional notes if necessary or if the space supplied is not sufficient

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Give a short description of the oil spill incident.</td>
</tr>
<tr>
<td>2</td>
<td>Give a short description on the following:</td>
</tr>
<tr>
<td></td>
<td>- What was done immediately after the spill was discovered?</td>
</tr>
<tr>
<td></td>
<td>- Could it be contained and how?</td>
</tr>
<tr>
<td></td>
<td>- Was an emergency team involved and was it a contracted team?</td>
</tr>
<tr>
<td></td>
<td>- Was free oil evident, how was this removed and what happened to this oil?</td>
</tr>
<tr>
<td></td>
<td>- Has final remediation begun and what is being done?</td>
</tr>
<tr>
<td></td>
<td>- Were PCB test results available and during which phase was this established?</td>
</tr>
<tr>
<td>3</td>
<td>Which role did you fulfill within the process?</td>
</tr>
<tr>
<td>4</td>
<td>How many litres of oil were involved?</td>
</tr>
<tr>
<td>5</td>
<td>How big was the area that was polluted?</td>
</tr>
<tr>
<td>6</td>
<td>Did any water pollution occur in the following areas?</td>
</tr>
<tr>
<td></td>
<td>- trap dam</td>
</tr>
<tr>
<td></td>
<td>- river</td>
</tr>
<tr>
<td></td>
<td>- dam (water supply)</td>
</tr>
<tr>
<td></td>
<td>- streams</td>
</tr>
<tr>
<td></td>
<td>Question</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>7</td>
<td>How would you describe the incident – major or minor?</td>
</tr>
<tr>
<td>8</td>
<td>Were there any other hazards or issues that needed attention?</td>
</tr>
<tr>
<td>9</td>
<td>What were the weather conditions?</td>
</tr>
<tr>
<td></td>
<td>- wind</td>
</tr>
<tr>
<td></td>
<td>- temperature</td>
</tr>
<tr>
<td></td>
<td>- precipitation, for example, rain or fog</td>
</tr>
<tr>
<td>10</td>
<td>What were the causes - please explain?</td>
</tr>
<tr>
<td></td>
<td>- human</td>
</tr>
<tr>
<td></td>
<td>- technical</td>
</tr>
<tr>
<td></td>
<td>- physical</td>
</tr>
<tr>
<td></td>
<td>- organizational</td>
</tr>
<tr>
<td>11</td>
<td>What was affected?</td>
</tr>
<tr>
<td></td>
<td>- installation - describe</td>
</tr>
<tr>
<td></td>
<td>- establishment</td>
</tr>
<tr>
<td></td>
<td>- off-site local</td>
</tr>
<tr>
<td></td>
<td>- off site regional</td>
</tr>
<tr>
<td>12</td>
<td>How many people were affected?</td>
</tr>
<tr>
<td></td>
<td>- staff</td>
</tr>
<tr>
<td></td>
<td>- locals</td>
</tr>
</tbody>
</table>

Describe the possible risks.

<p>| 13| What were the ecological effects?                                        |
|   | - pollution/contamination/damage                                         |
|   | - residential area                                                        |
|   | - common wild fauna/flora                                                 |
|   | - water catchment areas                                                   |
|   | - land                                                                    |
|   | - marine or other fresh water                                             |
| 14| What were the material losses (in Rands)?                                |
|   | - material (costs to Eskom)                                               |
|   | - response                                                                |
|   | - clean-up                                                                |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Was any community life disrupted?</td>
</tr>
<tr>
<td>16</td>
<td>Was any utility such as electricity, sewage or water interrupted?</td>
</tr>
<tr>
<td>17</td>
<td>Was there significant public concern?</td>
</tr>
<tr>
<td>18</td>
<td>Who was notified within Eskom?</td>
</tr>
<tr>
<td>19</td>
<td>Who was notified outside of Eskom?</td>
</tr>
<tr>
<td>20</td>
<td>What lessons were learnt from this?</td>
</tr>
<tr>
<td></td>
<td>- measures to prevent recurrence</td>
</tr>
<tr>
<td></td>
<td>- measures to mitigate consequences</td>
</tr>
<tr>
<td></td>
<td>- useful references</td>
</tr>
<tr>
<td>21</td>
<td>Did you experience a lack of:</td>
</tr>
<tr>
<td></td>
<td>- guidance</td>
</tr>
<tr>
<td></td>
<td>- expertise</td>
</tr>
<tr>
<td></td>
<td>- standards</td>
</tr>
<tr>
<td></td>
<td>- directives</td>
</tr>
<tr>
<td></td>
<td>- reference material</td>
</tr>
<tr>
<td></td>
<td>- Eskom assistance</td>
</tr>
<tr>
<td></td>
<td>- Outside assistance</td>
</tr>
<tr>
<td>22</td>
<td>Any recommendations</td>
</tr>
<tr>
<td>23</td>
<td>Any other comments</td>
</tr>
</tbody>
</table>

Name ____________________________ Signature _____________________________________

Date ____________________________ Site _________________________________________
DIRECTIVE

TITLE: DIRECTIVE ON TRANSFORMER OIL SAMPLING AND SAMPLE TRANSPORTATION

REFERENCE: ESKADABC
DATE: OCTOBER 2000
PAGE: 1
REVISION DATE: OCTOBER 2003

COMPILED BY
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FUNCTIONAL RESP.
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This document has been seen and accepted by:
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Executive Director Generation
R P J Maroga
Executive Director Distribution
S J Lennon
Executive Director Resources and Strategy

CONTENTS

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1 Preamble

Quality of product and customer focus is of the utmost importance to Eskom with the ultimate objective of an uninterrupted power supply to the customers. The Eskom network incorporates numerous generation, transmission and distribution transformers that need to be maintained to enable Eskom to meet this objective.

Insulating oil is the lifeblood of a transformer where it surrounds the coils as well as the windings and serves as both an insulant and coolant. With the vital parts of the transformer submerged in large volumes of oil, fault conditions, such as overheating and arcing occurring within the transformer may be detected at early stages. The oil will reveal the moisture levels and the overall condition of the cellulose material as well as the potential remaining lifespan.

Insulating oil analysis is known to be one of the most powerful tools in establishing the internal condition of power equipment. The most significant method of testing the condition of the equipment is by taking either routine or periodic oil samples and sending them for analysis to an accredited laboratory.
Quality sampling techniques contribute vastly to the outcome and eventual action following the transformer oil analysis. To achieve the desired analysis, factors such as cleanliness and weather conditions and the attitude and overall technique of the sampler are critical. Incorrect sampling may not only result in costly resampling but also in expensive and unnecessary maintenance.

It was realised by the Insulating Oil Steering Committee that a need to train oil samplers exists within Eskom. It was decided to establish a transformer oil sampling course that will not only train the samplers, but will also ensure certification for quality purposes.

The Insulating Oil Steering Committee has identified a suitable training course that will meet the need for training all Eskom employees who are required to take oil samples.

2 Definitions

**transformer oil**: Oil that consists of a hydrocarbon mixture of the three main types namely napthenes, aromatics and paraffins. The oil shall contain a larger portion of napthenes and shall be classed as a Napthenic transformer oil. The oil shall contain no added inhibitors and shall be classed as uninhibited.

3 Directive

All Eskom employees who take transformer oil samples for analysis shall attend the Oil Sampler training course co-ordinated by Quantum College, Rosherville and presented by Rotek and TSI.

This certification will be valid for three years, where-after the sampler will need to undergo an assessment.

4 Responsibilities

The Business Unit shall ensure that:

a) all employees required to take transformer oil samples have attended and passed the Oil Sampler training course.

b) all oil samples are taken in accordance with the procedures prescribed on the Oil Sampler training course,

c) all oil samples are transported in accordance with EHTHUA 02(B)000.
ESKOM DIRECTIVE

TITLE: CORPORATE DIRECTIVE FOR THE DECHLORINATION OF POLYCHLORINATED BIPHENYL (PCB) CONTAMINATED OIL

REFERENCE: ESKAD
REV: 0
DATE: January 2000
PAGE: 1
REVISION DATE: OCTOBER 2003

COMPILED BY: A E Lombard
FUNCTIONAL RESP.: M E Hunter
AUTHORIZED BY: A Morgan
NIOSC Chairperson
CE Eskom

This document has been seen and accepted by:
JM Matsau, Executive Director (Distribution)
DM Mogatlhe, Executive Director (Transmission)
E Matya, Executive Director Designate (Generation)

CONTENTS

Preamble
Policy
Strategy
References

1 Preamble

PCB is the generic name for a group of hazardous dielectric fluids used in electrical equipment. Spillage of and exposure to PCB can cause adverse health effects and environmental pollution.

Since 1979, no new PCB products have been brought into Eskom, but a large quantity of Napthenic oil used in transformers have been contaminated with PCB. This poses an environmental and safety risks if correct disposal procedures are not followed.

2 Policy

The well being, health and safety of staff, customers and every member of the community is of paramount importance to Eskom.

PCB will be managed in accordance with internationally accepted standards and in compliance with South African Legislation as well as Eskom Directives.
3 Strategy

3.1 The relevant Executive Directors will ensure that Eskom and its contractors will comply with legislation and accepted practices as reflected in the Eskom Corporate Standard (ESKASAAC2), with regard to the storage, handling, use, transport and disposal of PCB.

32 Disposal will be effected by approved and registered contractors.

33 Pure PCB will NOT undergo dechlorination - (this will typically be found in Capacitor cans and have names such as Askarel)

3.4 In order to phase PCB contaminated oil out of the Eskom insulating oil pool, the following action will be taken:

- Equipment containing insulating oil with a PCB count in excess of 500 parts per million (ppm) (classed as PCB), will be drained and the oil replaced with non-PCB certified regenerated oil.
- Equipment containing insulating oil with a PCB count between 50 – 499 ppm (classed as PCB contaminated), undergoing repairs or treatment, will be re-filled with non-PCB certified regenerated oil.
- Equipment containing insulating oil with a PCB count of between 20 – 49 ppm, undergoing repairs on site may be re-filled with the same oil following regeneration treatment.
- Insulating oil containing PCB between 20 – 49 ppm, leaving a site will be treated on an ad hoc basis, following consultation with Eskom’s Assets Disposal Manager.
- The above oil will undergo blending (mixing with oil containing PCB < 20 ppm) or dechlorination for the sole purpose of disposal.
- The dechlorinated oil will NOT re-enter the Eskom insulating oil pool.
- **NOTE:** ALL INSULATING OIL DISPOSAL WILL ONLY BE PERFORMED FOLLOWING CONSULTATION WITH ESKOM’S ASSETS DISPOSAL MANAGER AND THE NATIONAL INSULATING OIL STEERING COMMITTEE (NIOSC).

4 Reference documents


Corporate Standard - Management of Polychlorinated Biphenyl ESKASAAC2.
DIRECTIVE

DIRECTIVE ON OIL SPILL CLEAN-UP AND REHABILITATION

REFERENCE: ESKADABG8
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DIRECTIVE

This directive was compiled when a need was identified by Eskom's Corporate Environmental Affairs Department for a standardized approach for the assessment, management and reporting of oil spills to minimize incidents as well as to reduce remediation costs in terms of the latest legislation.

The purpose of this document is to direct the response actions following an oil spill on a site, in accordance with the standard ESKASABT0.

Insulating oil and related hydrocarbon compounds and synthetic oils pose a serious pollution problem when released into the environment. Not only do these compounds pose a fire hazard, but with one litre of oil having the potential to contaminate in excess of a million litres of water, it needs to be handled with care. Oil can rapidly penetrate certain soil types, which may lead to extensive soil contamination, as well as groundwater and surface water contamination. The Water Act, 1998 (Act 36 of 1998), states that "hydrocarbons should not touch the soil or water and if they do, they shall be removed immediately".

DEFINITIONS

1 Preamble

2 Definitions
2.1 clean-up: The act of remediation, this may include soil excavation, bioremediation, landfarming, solvent soil wash or electrochemical treatment.

2.2 containment: The prevention of the spreading of the oil spill.

2.3 remediation: A method of clean-up that will ensure a minimum hydrocarbon or synthetic oil presence of 1000 parts per million (ppm) or (0.1 %) above the background level.

2.4 spill: Any amount of oil present out of its "normal" container – where normal refers to a transformer or a drum etc.

3 Directive

All Eskom employees, contractors and maintenance teams shall, in the event of an oil spill take immediate corrective and effective action in accordance with the Eskom standard ESKASABT0, to limit the spill and minimize the environmental damage and consequential remedial costs.

4 Responsibilities

The Business units shall ensure that:

4.2.1 All employees, maintenance teams and contractors working on their sites or other persons who have access to oil, are well versed and trained in the contents of the Eskom standard ESKASABT0.

4.2.2 The Environmental co-ordinators responsible for the site ensure that appropriate training in the use of spill equipment, reporting and emergency response is given to the relevant staff.

4.2.3 All assessments, corrective action and reporting of oil spills are managed in terms of the Eskom standard ESKASABT0 in consultation with the responsible Environmental co-ordinator.

4.2.4 All waste absorbent material recovered from an oil spill property is disposed of in a class HH registered site following consultation with NIOSC.

4.2.5 All reporting of oil spills has been recorded.

4.2.6 Only Eskom approved remediation suppliers/contractors are used in the spill remediation process.

4.2.7 Preventive measures are taken by ensuring that each site is in possession of a relevant spill kit, which shall be freely accessible.

4.2.8 The Environmental co-ordinators ensure the availability and the visibility of relevant emergency response contact numbers on each site.