

Oil Management

Summary

This document prescribes the procedures to be followed for the management of mineral oil in TransGrid.

Document Control

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Quick Guide of the Oil Management Procedure

When I am

I Must

More information

Handling oil

- Have completed an appropriate risk assessment.
- Be appropriately authorised (E2 or E3).
- Have sufficient and appropriate oil clean-up material and PPE available.
- Prevent cross-contamination.

- Section 5.1
- Section 5.2
- Authorisation to Work procedure
- Section 6.2
- Section 6.3

Storing oil

- Ensure all oil containers and equipment are banded with a capacity of at least 133% of the largest container.
- Ensure containers are leak-proof, free of damage and appropriately labelled.

- Section 6.4
- Section 6.4
- Appendix B

Storing scheduled PCB oil

Ensure all scheduled PCB waste is stored in an appropriate location and disposed of within 4 weeks of generation, otherwise transported to the PCB store at Sydney West Regional Centre.

- Section 6.4

Transporting oil

- Ensure transporting vehicles are roadworthy, clean and appropriately equipped to securely transport the load.
- Ensure the mandatory spill response equipment and documentation is available when transporting oil or oil-filled equipment with 200L of oil or greater.
- Ensure all waste tracking requirements are complied with.

- Section 6.5

Disposing of oil

Ensure oil is disposed at an appropriately licenced facility.

- Section 6.6

Managing an oil spill

Ensure the spill is contained and cleaned immediately using oil absorbent material.

- Section 7

Reporting incidents

- Report the incident in CAMMS.
- Ensure notifiable incidents are reported immediately.

- CAMMS
- Section 7.4

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1. Purpose

This procedure prescribes the procedures to be followed for the management of mineral oil in TransGrid.

2. Scope

This procedure applies to all operations in TransGrid that involves the handling, processing, transporting or storage of PCB contaminated and PCB free mineral oil.

3. Definitions

Term	Definition
Assess/Assessment	To examine and take into account all matters affecting or likely to affect the environment by reason of the proposed activity.
Authorised Officer	A person who has been assessed as competent and is approved to carry out certain work.
Dangerous Goods	Dangerous goods are substances and articles that pose an acute risk to people, property and the environment due to their chemical or physical properties.
Environmental incident	Any potential or actual adverse/negative impact on the environment that may arise from: <ul style="list-style-type: none">> A failure to comply with legislation;> A failure to comply with any TransGrid procedure;> An inadequate operating procedure;> Unforeseen circumstances, e.g. abnormal operating conditions;> Emergencies resulting in spills, discharges or adverse environmental situations; and> Equipment failure.
Mineral Oil	Oil extract of petroleum that is stable at high temperatures and has excellent insulating properties, used in oil-filled electrical equipment.
NATA	National Association of Testing Laboratories, Australia.
Non-Scheduled PCB	Material or waste containing PCBs at a concentration above 2ppm and below 50ppm.
PCB Free	Material or waste containing PCBs at a concentration of up to and including 2ppm.
PCB Material	Articles, containers, equipment and other substances containing PCBs at concentration levels above 2ppm.
Placard Load	Indicates the quantity of dangerous goods being transported that requires placards to be displayed on the transport unit.
Premises	Substation, depot, switching station, or communication facility and their associated infrastructure.

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Term	Definition
Reportable Spill	Any potential or actual adverse/negative impact on the environment that may arise from: <ul style="list-style-type: none"> > A failure to comply with legislation; > A failure to comply with any TransGrid procedure; > An inadequate operating procedure; > Unforeseen circumstances, e.g. abnormal operating conditions; > Emergencies resulting in spills, discharges or adverse environmental situations; and > Equipment failure.
Scheduled PCB	Material or waste containing PCBs at a concentration of 50ppm and above.
Site Management Plan	A document that identified all known environmental sensitivities and stipulates environmental controls that must be implemented.

4. Acronyms and Abbreviations

Term	Definition
AFFF	Aqueous Film Forming Foam
EPA	Environmental Protection Authority
IBC	Intermediate Bulk Container
NSW	New South Wales
PCB	Polychlorinated Biphenyl
PIRMP	Pollution Incident Response Management Plan
PWRA	Pre-work Risk Assessment
SWMS	Safe Work Method Statement
WARA	Work Activity Risk Assessment

5. Actions & Responsibilities

5.1 Assessment

A risk review process shall be undertaken for any work that involves the handling or transport of oil within TransGrid. This assessment is to be performed prior to any works, and all appropriate precautions and control measures shall be identified and implemented. This assessment shall be in accordance with the [Environmental Assessment Framework](#), [TransGrid's Environmental Handbook](#) and this procedure.

5.2 Documentation

A pre-work risk assessment is used to document the relevant precautions and control measures that are identified and implemented where an environmental risk is present. Environmental controls that have been

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identified in additional risk assessment documentation such as SWMS, WARAs or PWRA's shall also be incorporated where applicable.

The following activities TransGrid considers to be of moderate risk and requires additional assessment:

- > The transport and handling of oil above 3000L outside a Premises;
- > The transport and handling of any amount of solid or liquid PCB material (other than small quantities for testing);

For the above activities the following environmental assessment documentation shall be prepared and approved by an E4 authorised person:

- > Environmental Moderate Risk Checklist (Oil/PCB Handling and Transport), or equivalent.

Additional activities that are categorised as a moderate risk that involve the handling of oil, such as transformer refurbishments or bushing replacements the following assessment documentation shall be completed as part of the risk assessment:

- > Environmental Moderate Risk Checklist (General); &
- > Oil/PCB Management Form (if PCB) or Plan of Work Diagram (Attachment 1) or equivalent.

The Plan of Work Diagram shall include the following:

- > Environmental controls;
- > Location of spill equipment;
- > Identified drains and discharge points;
- > Supervisor and staff involved;
- > Personal protective equipment (PPE) required.

All staff and contractors handling oil shall be E2 Authorised or inducted under a site specific Site Management Plan (SMP) or Construction Environmental Management Plan (CEMP).

If handling oil where an Environmental Moderate Risk Checklist or Plan of Work Diagram is required, an E3 authorised supervisor must be present.

5.3 Legislative Requirements

Environmental Hazardous Chemical Act 1985 (EHC)

TransGrid has an EHC Licence (Licence No.38) which outlines TransGrid's obligations and controls required to keep and convey PCB materials and PCB wastes at Sydney West including:

- > Preventing harm to human health and the environment;
- > Storage, transport and disposal requirements;
- > Training of personnel in relation to incident response, management and notification to regulatory authorities;
- > Annual reporting with respect to quantities held and disposed of;
- > Must be kept in accordance with the conditions of the PCB Chemical Control Order 1997.

The PCB Chemical Control Order 1997 sets out the requirements for the management and control of activities including the generation, processing, storing, conveying and disposal of PCB material or PCB wastes.

Environmental Protection Licence (EPL)

An EPL is required under the Protection of the Environmental Operations Act 1997 (POEO Act) for the following activities within TransGrid:

- > Transporting loads within NSW exceeding 200 kg of waste mineral oil;
- > Transporting waste mineral oil interstate;
- > Storing waste mineral oil received from offsite;
- > Treatment, processing or reprocessing of waste mineral oil.

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TransGrid has the following two EPLs related to the handling, storage and transport of PCB contaminated oil within TransGrid:

- > EPL 7153 – Transport of category 1 and category 2 trackable waste;
- > EPL 7119 – Storage of hazardous, restricted, solid, liquid, clinical & related waste and asbestos waste.

The following are defined as Scheduled Activities under the POEO Act for the storage of waste on a premises at any one time, and would require a licence.

- > > 60 tonnes of PCB Free mineral oil;
- > > 5 tonnes of hazardous waste (non-scheduled waste).

Dangerous Goods Licence (DG)

The vehicle and driver must be covered by a dangerous goods licence for the following:

- Transporting any dangerous goods with a capacity of more than 500 litres or which contains more than 500 kilograms.
An exception is when intermediate bulk containers (IBCs) with a total capacity of up to 3000 litres are being transported, as long as they are not filled or emptied while on the vehicle.

Mineral oil is classed as C2 combustible liquids (flash point > 93°C) under the Australian Code for the Transport of Dangerous Goods by Road & Rail Edition 7.5, 2017 (ADG Code), and are not classified as dangerous goods for the purposes of transporting and do not require a dangerous goods licence.

However, when transporting greater than 1,000kg (or litres) of these liquids, the words “Combustible Liquid” shall be displayed in the area normally used for placarding C1 combustible liquids.

Table 1: Dangerous Goods Listing

UN No.	Waste Code	Name/Description	DG Class	Packing Group	HAZCHEM
2315	M100	Scheduled PCB, Liquid	9	II	2X
3082	M100	*Non-Scheduled PCB, Liquid	9	III	•3Z

**Non-Scheduled PCB oil is not subject to the ADG Code if transported in IBCs.*

The storage of dangerous goods shall comply with AS1940-1993 - The Storage and Handling of Flammable and Combustible Liquids. For the purposes of AS1940, mineral oil is defined as a C1 combustible liquid.

- > Class C1 – combustible liquid that has a flashpoint of 150°C or less, (i.e. >60°C, <=150°C)

For placarding/manifest requirements for both the storage and transport of dangerous goods refer to the [Hazardous Chemicals Storage and Transport Procedure](#).

5.4 Waste Tracking Requirements

PCB contaminated waste mineral oil must be tracked when transported within NSW or interstate. Drained PCB contaminated equipment is also subject to waste tracking. All waste tracking requirements are detailed in the [Waste Management Procedure](#).

All PCB free waste mineral oil shall be tracked unless subject to the exemption below:

“Non-hazardous waste oil (PCB free) destined for recycling, reprocessing or reuse within NSW is exempt from waste tracking requirements under the Environment Operations (Waste) Regulation 2014”.

6. Working with Oils

6.1 Identification

Prior to the commencement of any handling of mineral oils, the PCB concentration of the oil should be determined from records or supplier certification and the oil managed in accordance with the level of PCB contamination. Electrical plant designed as PCB free on the nameplate or manufactured post 1991 can be considered free of PCB contamination.

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Where the PCB concentration of the oil cannot be readily determined from records, oil sampling is to be undertaken in accordance with the [Oil Sampling Work Instruction](#). Unknown oil shall be treated as scheduled PCB pending receipt of the oil test results. The item or container shall be labelled with a scheduled PCB sticker marked “Awaiting test results” in the space allocated for PCB concentration.

Once the PCB concentration of oil has been identified the container shall be relabelled and managed as per its classification. Under no circumstances shall PCB contaminated oil be knowingly diluted to affect its classification.

All testing must be undertaken by a NATA accredited laboratory. All PCB waste that has not been tested by a NATA accredited laboratory is required to be retested.

TransGrid has previously labelled all in-service and decommissioned equipment with a diamond shaped stencil with the information listed in table 2. This is to be used as an indication only. A valid NATA accredited certificate must be obtained to confirm PCB concentration.

Table 2: PCB Categories

PCB Category	PCB Concentration	Label Descriptor	Colour
PCB free	Up to and including 2 ppm	“≤ 2”	Green
Non-scheduled	Greater than 2 ppm & less than 50ppm	“>2 – <50”	Orange
Scheduled	50 ppm and greater	“≥ 50”	Black

6.2 Handling

Wherever oil is being handled, sufficient and appropriate oil clean-up material must be present (at hand). Uncontaminated empty containers with removable lids are to be available in which to store spent oil absorbent materials for disposal.

Oil spill containment equipment on site may be used, but must be replaced as soon as possible. The amount of material required on site should be evaluated based on the risks associated with the planned work and if additional material is required, this should be brought on site before work commences.

As a minimum when handling any oil the following PPE shall be used:

- > Impermeable protective gloves
- > Eye protection
- > Respirator (if PCB vapours are suspected due to extreme heat i.e. a fire)

All work involving PCBs must be planned and executed in a manner that minimises the degree of handling PCB material. Care should be taken to ensure that PCB is not ingested nor otherwise allowed to enter the body by absorption through the skin. Strict hygiene precautions should be observed whilst working with PCB material.

When handling oil with processing equipment, such as pumps or treatment plant, the following precautions shall be implemented.

- > Drip trays are to be placed under all valves when in direct use and whilst connecting or disconnecting hoses;
- > Oil handling equipment is to be attended at all times whilst it is operating;
- > Camlock fittings or similar used for oil hose connections are to be wired/taped locked to ensure that they cannot inadvertently come loose whilst processing oil;
- > Drainage points including flame traps in bunded areas shall be identified and sealed/blocked if appropriate.

All oil processing shall be performed within a bunded area where practical. Where it is not possible to contain all equipment, additional controls are to be implemented to prevent or to capture all potential oil spills.

Upon completion of work, the following must be ensured:

- > Hoses are removed, drained into containers, capped and stored in a bunded area. Hoses shall not remain connected overnight unless under supervision and controls are in place.

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- > Free oil in the drip trays is to be collected in sealed containers for recycling/disposal. Drip trays are to be wiped clean and soiled rags disposed of as contaminated material.
- > All valves must be returned to the normal operating position and locked if required.

Small quantities of oil collected in drip trays or waste containers whilst undertaking sampling of equipment, must be salvaged and managed in accordance with this procedure. Under no circumstance should any oil be deliberately poured to ground, drains or waterways.

6.3 Preventing Cross Contamination of Oil

All equipment and plant that has been used in the handling of contaminated oil (i.e. PCB) must not be used to handle uncontaminated oil until the equipment has been flushed clean. All oil used to flush equipment must be disposed of as contaminated unless tested and results confirm the oil is uncontaminated.

6.4 Storage

All staff shall ensure all oil containers and oil containing equipment is stored in an appropriately bunded area as prescribed in TransGrid's Environmental Handbook and this procedure. The bund shall have the capacity of at least 133% of the volume of the largest container and is in a condition that will prevent the escape of oil in the event of a spill.

All containers used to store oil are to be leakproof, able to be sealed closed and positioned in an orientation that will minimise ingress of contaminants. Storage of oil is typically in 205L drums, 1,000L IBC's or above ground bulk holding tanks. All storage containers shall be visually inspected prior to use to ensure it is free of corrosion, contamination or other damage.

All containers that are used to store and transport waste oil are to be affixed with a completed label with details including content, contamination (if any), equipment reference and location, date stored, and responsible officer. An example label is provided in Attachment 2. Labels shall be retained on the emptied containers until the container has been disposed of or decontaminated.

Appropriate clean-up material and equipment (such as absorbents, spades, open head drums and brooms) shall be readily available in an area in close vicinity to the storage area.

Storage of PCB Waste

All scheduled PCB waste shall be stored in a clearly defined area which is bunded, roofed (or covered) and locked with no drainage outlets, and is protected from unlawful entry by the public.

Where more than one tonne of scheduled PCB waste is stored, it shall be stored at least 12 metres away from flammable or combustible liquids and the bunded area shall be clearly signed "Scheduled PCB Waste".

If the scheduled PCB waste cannot be disposed of at a licenced waste facility within four weeks of generation, the waste must be transported and stored at TransGrid's licenced PCB store at Sydney West 330kV Substation. Scheduled waste shall not be transported to any other site location or depot.

Non-scheduled scrap electrical equipment and waste oil must be stored in a bunded area that is protected from unlawful entry by the public. No more than 5 tonnes of non-scheduled waste can be kept at site at any one time. The non-scheduled PCB store is located immediately outside the PCB store at Sydney West 330kV Substation and can be utilised for bulk collections prior to disposal.

The PCB store shall comply with the Pollution Incident Response Management Plan – Sydney West 330kV Substation Procedure and be inspected at least monthly for any unauthorised entry or leakage. Records of such inspections (who and when) shall be maintained at the PCB store.

6.5 Transport

Vehicles used to transport oil and oil-filled equipment must be constructed and maintained so as to prevent any spillage of waste. Vehicles must be roadworthy, clean and appropriately equipped to securely transport the load. Vehicles must not be overloaded and the load shall be securely tied down and covered during transportation.

As a minimum, the following must be carried on the vehicle when transporting oil or oil-filled equipment with 200L of oil or greater:

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- > Radio or mobile phone
- > Electric torch;
- > 1 x 204 litre wheeled garbage bin or equivalent to house the kit & retrieve a spill;
- > A supply of oil absorbing material (at least 2 bags of dri-sorb granules & 1 roll of oil absorbing mat) sufficient to contain a volume of oil at least equal to that of the largest container being carried (excluding bulk tankers);
- > 1 x shovel & 1 x rake;
- > Protective clothing including 2 x disposable overalls, 2 x overshoes/gumboots, 2 x PVC gloves, 2 x goggles or face shields;
- > 1 x dry chemical fire extinguisher;
- > 2 x foam AFFF fire extinguishers (or equivalent); &
- > Double sided road reflectors.

Transport vehicles shall also carry a folder containing copies of:

- > Environmental Moderate Risk Checklist (Oil/PCB Handling and Transport) (where required);
- > Emergency procedures documentation;
- > Safety Data Sheet (SDS)

All staff shall ensure transport of waste oil and oil-filled equipment complies with the waste tracking requirements detailed in the [Waste Management Procedure](#).

Ensure all placard load requirements are in accordance with [Hazardous Chemicals Storage and Transport Procedure](#) as outlined in section 5.3.

For TransGrid Vehicles:

The [Pollution Incident Response Management Plan – Transportation of Waste](#) (PIRMP) outlines vehicle and equipment requirements when transporting PCB wastes under EPL 7153.

For loads greater than 200kg (or litres) of PCB waste, copies of the following must accompany the waste:

- > [Pollution Incident Response Management Plan – Transportation of Waste](#);
- > EPL 7153.

For Non-TransGrid Vehicles:

All PCB contaminated material shall only be transported by an appropriate EPA licenced transporter. The licence must specifically permit the “Transport of Trackable Waste”.

6.6 Disposal

Oil-filled equipment destined for disposal is generally drained into 205L drums or IBCs prior to transport. Draining of residual oil may be required for some equipment, which may be left unsupervised over a period of time to drain by gravity means only. In this case the equipment must be sufficiently banded, in a secure and in a stable condition that is unlikely to be disturbed. After draining, all valves/plugs must be properly closed prior to transport.

If time has passed between the draining oil-filled equipment and its transport, there may be a build-up of free oil which has drained from the equipment. This additional oil shall be considered and removed if the risk is unacceptable.

Refer to the [Waste Management Procedure](#) for appropriate disposal options for oil and oil-filled equipment.

In NSW, scheduled and non-scheduled PCB waste shall only be disposed of to a NSW EPA licenced facility. Outside NSW, scheduled and non-scheduled waste shall only be disposed of to a service provider who is licenced in the state which the waste is being disposed.

7. Spills

In the event of a spill, the primary objective at all times is to prevent the escape of any pollutant from TransGrid property. The spill must be contained and contamination of land, waterways and other materials must be prevented.

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Detailed and site specific instructions for the control of spills shall be included in the site specific Substation Emergency Response Manuals.

Refer to the [Waste Management Procedure](#) for appropriate disposal options and any waste tracking requirements for all wastes generated as a result of a spill.

7.1 Small Spill (less than 500L)

Within Bunded Area:

The area is to be cleaned immediately using oil absorbent materials. A check must be made to ensure that no oil has or may escape the bunded area.

Outside a Bunded Area:

The area is to be cleaned using appropriate oil absorbent materials. All soil/gravel showing evidence of contamination must be collected and treated as contaminated material.

7.2 Large Spill

Where there is immediate risk of oil leaving the site, or more than 500L being contained in fixed containment structures, the Site Emergency Response Procedures must be strictly followed. These procedures are in the Emergency Response Manuals in the Control Room at each Substation.

Note that the presence or likelihood of heavy rain should be a factor when evaluating the risk of oil leaving site.

In the event of a loss of a large volume of oil into an oil containment system, action should be taken to remove the oil collected at the earliest possible time so that the risk of oil escaping from the oil containment system is minimised.

7.3 Spills Involving PCB

Where the spill involves PCB material, the incident response shall include the following requirements:

- > Staff will immediately report incidents to their Team Leaders/Managers.
- > Notifiable incidents shall be reported immediately to the EPA by the Substations Manager or Corporate Environment Manager.
- > Sealable drums are to be used for storing contaminated wastes. The drums shall be labelled, stored, transported and disposed of in accordance with this procedure.
- > PCB contaminated liquids shall be contained by using absorbent, earth bunds or other viable method. Oils and PCB contaminated materials are not permitted to flow into drains or waterways. Place used absorbent material in appropriately labelled drums.
- > If soil, sand, gravel, paving, etc., has been contaminated by a spill of PCB-contaminated oil, samples of the soil, sand, gravel, etc., and of the oil shall be tested to determine the appropriate method of disposal.
- > Any clothing (including aprons, gloves, overalls, wet weather gear, boots, mask filters, etc.) that comes in contact with PCB shall be treated as PCB waste and disposed of according to this procedure.
- > Contaminated land shall be managed in accordance with TransGrid procedure - Contaminated Land Management.

7.4 Reportable Spills

All environmental incidents or near misses must be reported. Any person becoming aware of an environmental incident must immediately notify their Team Leader or Manager. All environmental incidents shall be recorded through the ARMS Incident Reporting process via The WIRE or smartphone application.

For incidents that need to be reported to external authorities, follow the [HSE External Notification of Incidents](#) and the [Environmental High Consequence Incidents Guideline](#).

The Corporate Environment Manager and the appropriate line manager should be notified verbally of any incident that is likely to require external notification to seek advice on any reporting requirements.

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7.5 Pollution Incidents That Require Immediate Notification

Under Part 5.7 of the POEO Act, there is a duty to notify each relevant authority of a pollution incident, where material harm to the environment is caused or threatened.

There are specific definitions for the terms pollution incident and material harm to the environment:

- > **Pollution incident** - includes a leak, spill or escape of a substance, or circumstances in which this is likely to occur
- > **Material harm** - includes on-site harm, as well as harm to the environment beyond the premises where the pollution incident occurred. Material harm includes actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial or that results in actual or potential loss or property damage of an amount over \$10,000

When an incident occurs, these definitions will need to be reviewed to determine if the incident meets the required criteria. Legal Counsel should be consulted prior to reporting, to determine if specialist advice may also be required to confirm if the incident has caused pollution and/or material harm to the environment. While there is a requirement to notify immediately after becoming aware of pollution incidents causing or threatening material harm to the environment, it is appropriate to establish if the incident meets the definition in the POEO Act.

7.6 Clean Up and Disposal Following Spill

Immediate response to determine clean up requirements is essential, as subsequent events such as heavy rainfall can result in the release of oil previously trapped in containment structures or the gravel/earth of the substation surface.

In general:

- > Appropriate contractors shall be used for the collection, storage and transport of oil and oil contaminated soil or material. Unless PCB contamination is known, appropriate testing should be carried out to confirm the concentration;
- > Chemical dispersants shall not be used to break up oil spills without EPA approval;
- > Saturated soil/gravel shall be replaced with clean material and safely stored on site pending disposal;
- > Contaminated bunds shall be cleaned down with detergent. Detergent shall be contained away from any spill oil systems during the cleaning and removed from the bund sump before reconnection to the spill oil system. Where the spill oil system design does not allow effective sealing, detergents should not be used and other techniques (e.g. steam cleaning) should be used instead;
- > If wildlife has been oil-affected, assistance should be sought from Wildlife Rescue (WIRES), NSW National Parks and Wildlife Service (NPWS) or any local wildlife/environmental specialists;
- > Hazardous materials may require special handling and the advice of environmental staff should be obtained. Information on hazardous materials is also available on the NSW Environment Protection Authority (EPA) website: <http://www.epa.nsw.gov.au/> or 131 555.
- > Where fire suppressing foam has been used in conjunction with an oil spill, this should be removed from secondary treatment systems as soon as possible, as there may be adverse local effects on flora and fauna.

7.7 Pollution Incident Response Management Plans (PIRMP)

The Protection of the Environment Operations (POEO) Act 1997 requires the holder of an Environment Protection Licence (EPL) to prepare, keep, test and implement a Pollution Incident Response Management Plan (PIRMP).

TransGrid holds EPL 7119 for the storage of waste at the Sydney West 330kV Substation at Eastern Creek and EPL 7153 for the Transport of PCB material and PCB waste by TransGrid and consequently are required to prepare, keep, test and implement a PIRMP.

The purpose of the PIRMP is to:

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- > Outline how the risk of a pollution incident will be minimised and controlled through the identification of risks and the development of planned actions to minimise and manage those risks; and
- > Document the notification protocol to ensure comprehensive and timely communication about a pollution incident is provided to relevant stakeholders.

In the event of a PCB oil incident associated with either the Transport of PCB by a TransGrid vehicle or at the Sydney West 330kV Substation at Eastern Creek, the actions required and notification requirements are outlined in the Pollution Incident Response Management Plan held onsite or in the vehicle.

8. Training

All training requirements are outlined in the [Authorisation to Work Procedure](#).

Staff and contractors handling oil within TransGrid, including PCB material or PCB waste (this does not include staff only undertaking oil sampling), shall be provided with training which includes risk assessment, spill response and clean-up methods, incident notification requirements and use of personal protective equipment (PPE).

9. Records

Records of scheduled and non-scheduled PCB material (including in-service equipment) and scheduled and non-scheduled PCB waste shall be maintained in the corporate asset management database.

Records shall include as a minimum the following details:

- > Location (site, bay reference);
- > Serial number or other local identifier;
- > Item description;
- > PCB concentration (ppm).

Soft copies of NATA test certificates shall be retained by the Substations Manager to support the PCB results.

Refer to the [Waste Management Procedure](#) for record keeping requirements regarding disposal.

10. Accountability

Title	Responsibilities and Accountabilities
E2 Authorised Staff	Person undertaking physical work activities on behalf of TransGrid unless working under a Construction Environmental Management Plan (CEMP) or Site Management Plan (SMP).
E3 Authorised Staff	Person supervising physical work activities that are not consider negligible environmental risk or inducting others under a Construction Environmental Management Plan (CEMP) or Site Management Plan (SMP).
E4 Authorised Staff	Person preparing and approving Environment Checklists for work activities considered to have low or moderate environmental risk.
Corporate Environment Manager	<p>Application of this policy.</p> <p>Provide appropriate resources to assist with the preparation and approval of Environmental Checklists.</p> <p>Ensure all conditions of approval are met regarding legislative requirements.</p> <p>Approving annual Waste Movement Reports for submission to the EPA.</p> <p>Develop training package which includes handling of PCB material and spill response.</p>

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Title	Responsibilities and Accountabilities
	Investigating all environmental incidents involving oil and oil-filled equipment.
Substation Manager	<p>Responsible for ensuring that all sites have adequate processes and equipment to safely operate and maintain oil filled equipment, and respond to catastrophic release of oil as required.</p> <p>Reporting notifiable incidents to the Corporate Environmental Manager immediately.</p> <p>Labelling of all equipment and storage containers that are contaminated with PCB.</p> <p>Ensuring all PCB material is stored as per this procedure.</p> <p>Maintaining records of all equipment containing PCB material.</p>
Construction Manager	<p>Reporting notifiable incidents to the Corporate Environmental Manager immediately.</p> <p>Labelling of all equipment and storage containers that are contaminated with PCB.</p> <p>Ensuring all PCB material is stored as per this procedure.</p>
Field Resources Manager	Ensuring all staff and contractors are appropriately trained.
Service Delivery Manager	Establishing contracts for the disposal of PCB material.
Staff and Contractors	<p>Report all environmental incidents or near misses.</p> <p>Immediately reporting notifiable incidents including any spill containing PCB material to their associated Team Leader/Supervisor.</p> <p>Ensure a risk assessment and environmental checklists are completed prior to working with oil.</p> <p>Ensure all work is completed in a manner that prevents oil being discharged to the external environment.</p> <p>Complete appropriate training which includes the handling of PCB material and spill response.</p>

11. Implementation

This procedure will be implemented and verified by the following activities:

- > Notify all relevant staff via email following approval;
- > Notification to all staff via HSE alert.

12. Monitoring and review

This procedure is reviewed on a three year basis.

13. Change from previous version

Revision no	Approved by	Amendment
6	Michael Gatt, EM/Works Delivery	<p>Review of procedures revised to a new template to cover all business activities involving oil across TransGrid.</p> <p>Transportation, Storage and Disposal of PCB material and wastes have been incorporated into this procedure.</p> <p>Transportation, Storage and Disposal of Polychlorinated Biphenyls procedure has been withdrawn.</p> <p>Storage of Scheduled PCB waste at site revised to within four weeks of date of generation.</p> <p>The procedure has been renamed from “Oil Management in Substations’ to ‘Oil Management’.</p>
7	Krista-Lee Fogarty, Head of HSE	Inclusion of a Quick Guide

14. References

- > [Environmental Assessment Framework](#)
- > [Authorisations to Work Procedure](#)
- > [Hazardous Chemicals Storage and Transport Procedure](#)
- > [Waste Management Procedure](#)
- > [HSE Hazard and Incident Management Procedure](#)
- > [Environmental High Consequence Incidents Guideline](#)
- > [Pollution Incident Response Management Plan – Sydney West 330kV Substation](#)
- > [Pollution Incident Response Management Plan – Transportation of Waste](#)
- > [Oil Sampling Work Instruction](#)
- > [Contaminated Land Management Procedure](#)
- > Australian Code for the Transport of Dangerous Goods by Road & Rail Edition 7.5, 2017
- > AS1940-1993 The Storage and Handling of Flammable and Combustible Liquids
- > Protection of the Environmental Operations Act 1997
- > Environment Operations (Waste) Regulation 2014
- > Environmentally Hazardous Chemicals Act 1985 (EHC Act)
- > Polychlorinated Biphenyl (PCB) Chemical Control Order 1997

15. Attachments

- > Attachment 1 – Plan of Work Diagram
- > Attachment 2 – Oil Container Label (Example)
- > Attachment 3 – Oil Absorbing Materials
- > Attachment 4 – Flowcharts

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Appendix A Plan of Work Diagram (attach to Pre-work Risk Assessment)

Work Description:			
Volume of Oil (L):			
PCB Status of Oil:	<input type="checkbox"/> Scheduled PCB	<input type="checkbox"/> Non-scheduled PCB	<input type="checkbox"/> PCB Free
<p><u>Draw a plan of the work, identifying locations of:</u></p> <ul style="list-style-type: none"> • All connections in oil handling circuit, including all hoses and valves. • Permanent and temporary bunding. • Drains and discharge points • Drip trays and oil spill equipment • Emergency Response Manual 			
Where work is overnight, note management controls to ensure that oil connection and equipment is secure:			
Prepared/approved by: at least E4 authorisation required.		Supervisor and staff members:	

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Appendix B – Oil Container Label (Example)

Substation/Switchyard : (Where container was filled)	Classification: (Please Tick) <input type="checkbox"/> PCB Free (<2ppm) <input type="checkbox"/> Non –Scheduled (>2 - <50ppm) <input type="checkbox"/> Scheduled (≥50ppm)	PCB Content: ppm
Date Tested:	Date Drained:	
Container of	Describe Contents of Container:	
Approx. Volume in Container(s): Litres	Equipment PIC/Serial Number or Container Number:	
Print your name :		
Service Number:		
Signature:		



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Appendix C – Oil Absorbing Materials

This Attachment describes some types of Oil Absorbing Materials available to control and clean up oil spills.

1. Oil Absorbing Materials Suppliers

Stockcodes:

Item	UOI	Stockcode
Square Pads	Bale	35659
Pillows	Bale	35675
Booms	EA	35667
Sheeting Rolls	ROLL	35709
Star Stakes	EA	132423
Star stake safety caps (pkt 100)	EA	3593738
Long Handle Shovels	EA	1140391
Short Handle Shovels	EA	1140375
Rakes(Head)	EA	1135755
Rakes(Handle)	EA	1125426
Wheelie Bins (Grey)	EA	250233
Gloves Chemical (size 9)	PR	837971
Gloves Chemical (size 10)	PR	837989
Face Shields (Head Att.)	EA	840041
Face Shields (Visor)	EA	3364585
Rubber Boots (size 9)	PR	3581253
Rubber Boots (size 10)	PR	3581295
Rubber Boots (size 12)	PR	3581410
Waders	EA	266353
Gloves Disposable (MED)	BOX	3597622
Gloves Disposable (LGE)	BOX	3597630
Coveralls Disposable (90cm)	EA	841288
Coveralls Disposable (100cm)	EA	841296
Coveralls Disposable (110cm)	EA	841304
Coveralls Disposable (120cm)	EA	841312

Chemical Spill Kits and 50 metre non-floating booms are not carried by the store and must be purchased direct from suppliers.

- > There are a number of suppliers of oil-sorb materials, spill kits and sorbents specifically for chemicals (other than oil), such as: 3M, Chatoyer Holdings, Enretech Australasia Pty Ltd, Global Spill Control, etc. If required, check in the Yellow Pages for local suppliers.
- > Biodegradable oil-sorb, such as Enretech and Envirodrysorb products, are made from a waste by-product of the cotton seed de-linting process. They have good oil absorbency and, with time, will biodegrade the absorbed oil. They are available as loose powder that can be spread over the split oil and then swept up. The advantage of these products over other granular products is that they biodegrade the oil, and so can be eventually used as compost. They are also available in boom, socks and wipes.

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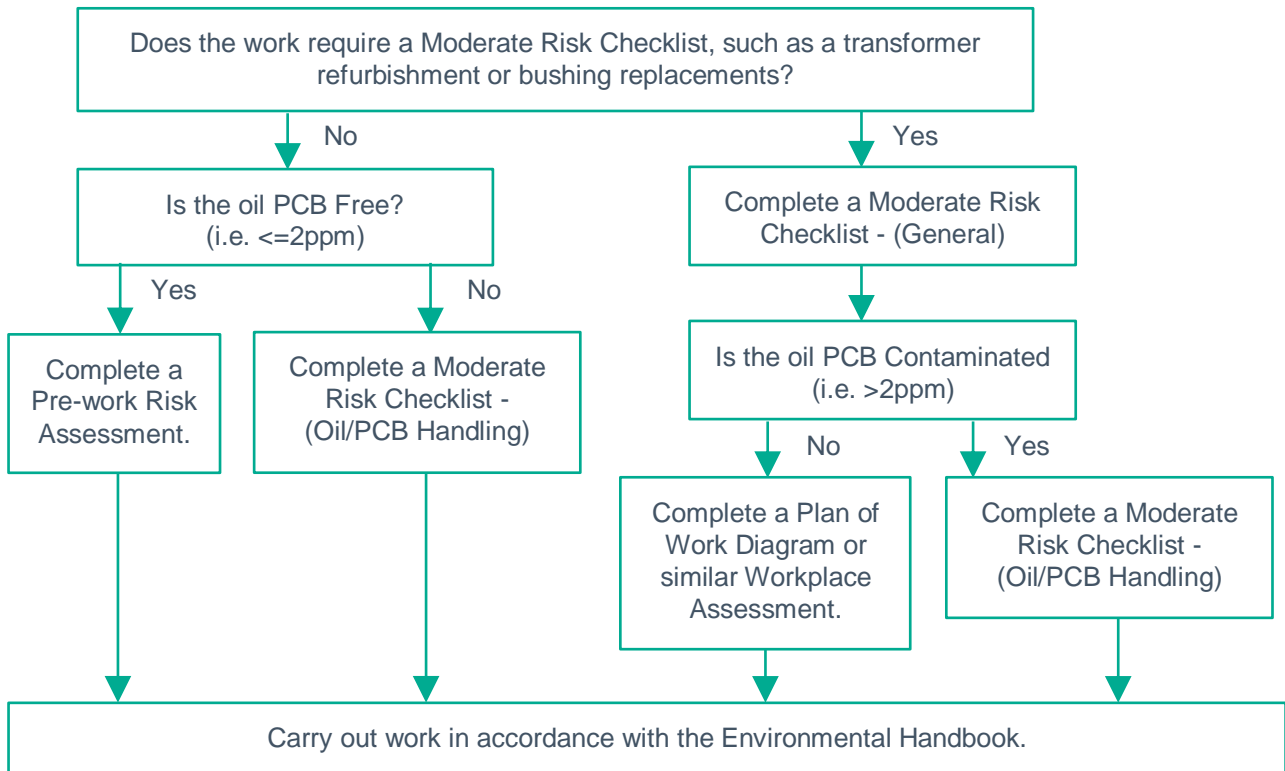
2. Types of Absorbing Material

- > **Sheet Absorbing Material:** The sheet absorbing material has excellent absorbing properties and may be squeezed dry or cleaned for continual re-use. It has an indefinite life if cleaned after use and stored in a dark area.
- > The material will deteriorate quickly from the effects of UV light. It has the unique advantage in that the recovered oil (after squeezing) may be easily disposed of as normal waste oil. Note however, that PCB contaminated oil must be disposed appropriately.
- > **Absorbent Booms:** These booms come in 3 metre lengths and have provision for joining them end to end. The booms can be laid across the water ways to trap the oil and allow the passage of water underneath. If the flow of water is much greater than walking pace, then it may be necessary to place the booms at an angle to the flow, allowing the oil to be diverted into slower moving waters where it can be trapped. In this case, booms may need restraining and/or staking.
- > Doubling of booms may also be necessary when first line booms become oil saturated. Therefore, skim pumping of excessive oil should be started as soon as possible. The booms are also useful for smaller spills and, if necessary, can be laid out around items of equipment that are losing oil. Use for short period only since they deteriorate and become water-logged with time.
- > **Absorbent Pillows:** The pillows are useful in more confined areas than the booms, such as in drainage pits and the like. In pits, the pillows can be placed in the outlet, where they will allow water to pass, while trapping the oil. Likewise, in creeks, the pillows can be wedged between rocks, "filtering" the water that passes through them.
- > If dams have to be built to trap the oil, then the pillows can be placed under the outlet pipes where the water strikes the ground. This will help stop the erosion under the outlets, as well as removing the trace of oil left in the outlet water.
- > **Absorbent Sheets:** Sheets have good absorbent properties and are very useful for soaking up the oil from both land and water. The most effective way to use them is to scatter them across the surface and leave them to absorb the oil. When saturated with oil, they can be wrung out and re-used a number of times before disintegrating. This enables the easy collection of oil for proper disposal.
- > **Absorbent Sheets (Rolls):** Rolls are made from similar materials to the absorbent sheets. As such, their uses are similar.
- > However, it must be remembered that the sheeting can absorb approximately 15 times its weight in oil. Therefore, if a sheet is laid out, it can be very heavy and hard to handle when it is saturated. The most effective way of using these sheets is to lay them across the path of very fine layers of oil to "sweep" up the remaining oil. Again, it can be re-used and can be wrung out to reclaim the oil.
- > **Bags of Oil Sorb Material:** Bio-degradable absorbers such as Enretech, Envirodryorb or other approved material is preferred to granular type absorber. It is supplied as a loose powder that can be spread over the spilt oil. It absorbs and encapsulates the oil. With time, naturally occurring microbes in the fibres biodegrade the oil. The final product can then be used as compost or disposed to landfill. Other types of granular products can be difficult to dispose once used.
- > **Sandbags:** Sandbags will not make an impervious wall, but are useful for blocking or redirecting flows. They are also useful as supports for plastic temporary bunds.
- > **Hay Bales:** Hay bales have proved useful in filtering small water streams from oil, but problems have been experience with anchoring, handling when saturated or broken up, and hungry livestock. Available from Produce Stores.
- > **Non-Absorbent Floating Booms:** These booms can be used as a backup to standard booms which float on top of water, whereas non-absorbent booms form a barrier below water level.
- > **Wheeled Bins (120 litres):** These mobile bins can be used to carry absorbent material to the site and carry saturated material and oil away from the site of the spill.
- > **Chemical Dispersants and Detergents:** Dispersants and detergents are not to be used. If there is any suspicion that such chemicals have been inadvertently directed into drains or to oil spill tanks, this must be reported to Supervisory Staff immediately.
- > **Chemical Coagulants:** Chemical coagulants, such as Elastol, convert the oil to the consistency of heavy gum for collection. Coagulants are not to be used.

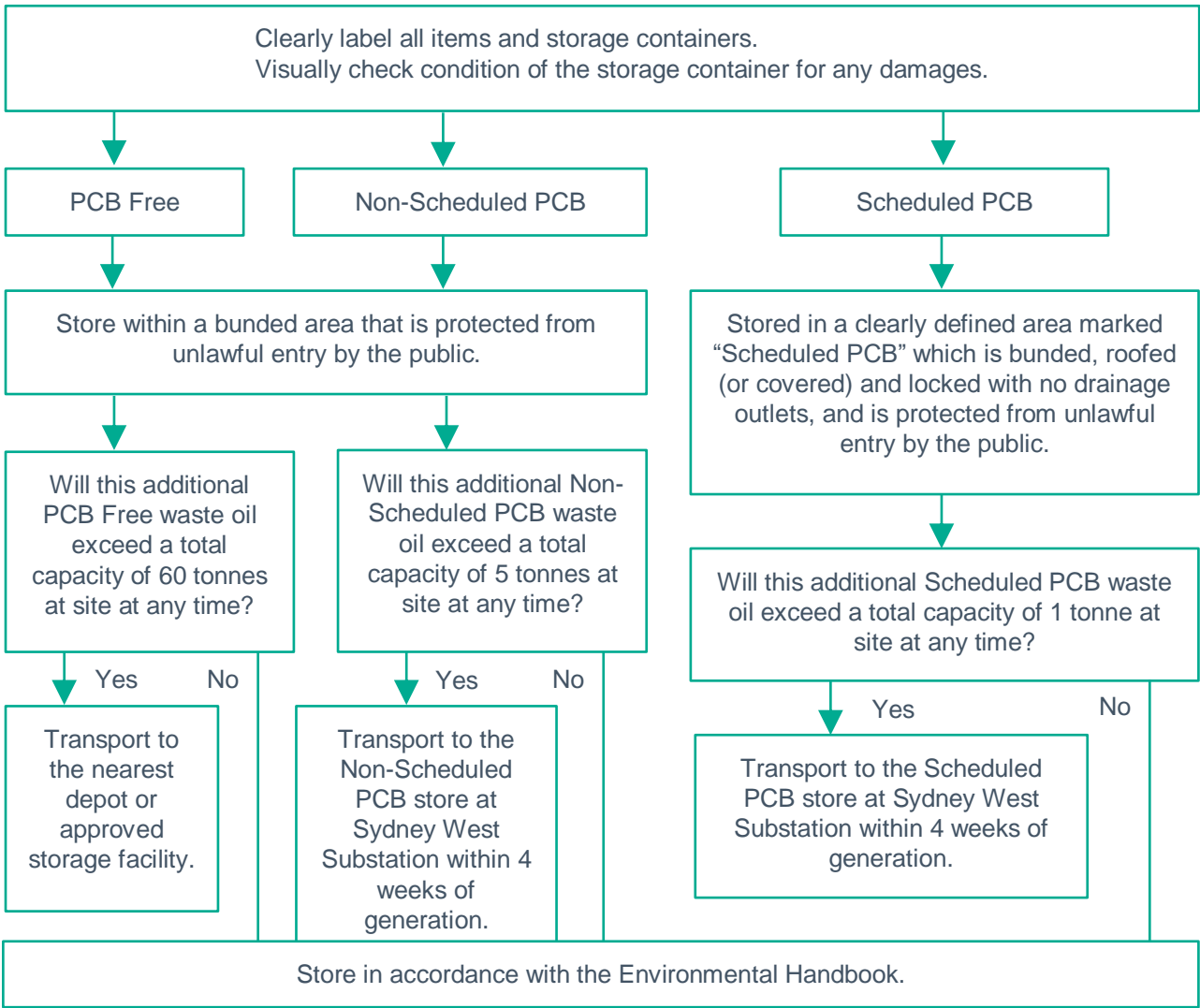
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Appendix D – Flowcharts

Oil Handling:



Storage of Oil:



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Transport of Oil: for loads >200L of oil or movement interstate.

The transporter must be an EPA licenced vehicle that specifically permits the “Transport of Trackable Waste”. All TransGrid vehicles are licenced under EPL 7153 for the transport of Category 1 and Category 2 trackable wastes.

- Category 1: Within NSW;
- Category 2: Outside NSW.

Ensure the following equipment is carried as per section 6.6:

- Radio or mobile phone.
- A sufficient supply of oil absorbing material.
- 1 x shovel & 1 x rake.
- 1 x dry chemical fire extinguisher.
- Double sided road reflectors.
- Emergency procedures documentation.
- Electric torch.
- 1 x 204 litre wheeled garbage bin or equivalent.
- Protective clothing.
- 2 x AFFF fire extinguishers (or equivalent).
- Safety Data Sheet (SDS).

