

TOWN OF LUNENBURG POLICY # 63.

(ELECTRIC)

OIL SPILL CONTINGENCY AND WASTE OIL DISPOSAL POLICY

PURPOSE

To provide direction regarding the proper response to oil releases.

SCOPE

The procedures outlined herein apply to oil releases to the environment from Electric Utility facilities. This plan applies, but is not limited, to:

- mobile petroleum storage containers;
- above-ground fuel storage tanks and above-ground used oil tanks;
- insulating oil in electrical equipment; and
- hydraulic/petroleum fluid in vehicles.

In all cases, safety of Electric Utility personnel and others is of primary importance. This emergency response is in place to prevent harm to employees and the environment.

RESPONSIBILITY

The Electric Utility Superintendent of the affected Department is responsible to maintain and revise this document. The following positions are also assigned responsibility: Linesman; and Electric Utility Foreman.

PROCEDURES

Protocols and requirements outlined herein include: notification procedures, role of response team leader, containment and cleanup procedures, field screen tests, restoration and disposal of soil, public relations, reporting and training.

DEFINITIONS

"Boiler Grade Oil" means any electrical insulating (mineral) oil containing less than 50 ppm of PCB. This oil is burned at an approved Generating Station under approval by the Nova Scotia Department of Environment and Labour in accordance with Used Oil Regulations.

“Environment” means any area not inside of a building.

“Non-reportable Releases” include:

- a release of petroleum product (hydraulic fluid, diesel oil, fuel oil, etc.) in a quantity less than 100 litres; or
- a release of mineral oil in a quantity less than 100 litres;
 - from electrical equipment (e.g., transformers) known to be manufactured after 1982 (no PCB screen test required); or
 - with a negative screen test.

“Release” means an unanticipated, uncontrolled release of oil (both PCB and non-PCB) due, but not limited, to one of the following:

- sudden rupture or explosion;
- releases due to corrosion or cracks;
- fallen or damaged equipment;
- minor spillage during equipment handling and/or maintenance operations; or
- acts of vandalism.

“Reportable Occurrence” applies to an unexplained loss or gain of 1.0% or more of the inventory in an above-ground petroleum storage tank (determined from reconciliations) in any month or inventory reconciliation of 4 or more consecutive weeks showing losses or gains of 1.0% or more for each weekly reconciliation.

“Reportable Release” means a release to the environment as follows:

- any spill of oil into a water course frequented by fish or flowing into waters frequented by fish;
- a release of petroleum product in excess of 100 litres (report as an oil release);
- a release of any material known to contain PCB's in excess of 50 ppm (report as an oil release containing PCB contamination); and
- a release of insulating oil which has a positive screen test, or cannot be screen tested within four hours, or has insufficient oil remaining to conduct screen test (report as an oil release potentially containing PCB's).

NOTIFICATION PROCEDURES

In general, any person discovering an oil spill shall do the following as soon as possible:

- identify the type of spill and the probable cause of leakage;
- stop discharge, if possible, and contain spill using materials on site;
- estimate the quantity of oil released; and
- notify appropriate personnel.

A crew will be dispatched to the spill scene to begin containment and clean-up as per procedures outlined in Section 8; as directed, a screen test will be conducted immediately for PCB's on all insulating oils with potential for PCB containment; and an oil sample of any insulating oil with a positive screen test will be sent to a commercial laboratory as soon as possible for PCB analysis; if the insulating oil has a positive screen test, it may also be necessary to send a composite sample of oily soil for PCB analysis.

Reportable spills are to be reported to the Department of Environment within 4 hours of the time the spill first becomes known to the Town of Lunenburg.

In addition, relevant municipal authorities (e.g., police, fire department) must be informed, if deemed necessary. Phone numbers for these local authorities should be readily accessible in the event of an emergency situation.

Reporting Procedure

If the release is determined to be reportable it will be reported to the Nova Scotia Department of Environment and Labour.

ROLES OF THE ELECTRIC UTILITY SUPERINTENDENT

The Electric Utility Superintendent or designate, in all aspects of the clean-up phase must have the appropriate responsibility and authority to:

- make decisions;
- commit resources;
- communicate with government agencies as required;
- direct use of needed resources;
- ensure that accurate information is provided;
- keep a log of actions taken;
- maintain contact with customers;
- take appropriate oil and/or soil samples.

The Electric Utility Superintendent will have the overall responsibility and authority to clean up any oil release and subsequent migration resulting in contamination.

CONTAINMENT AND CLEAN UP PROCEDURES

Spill clean up will take place as soon as the oil release is discovered (possible exceptions are situations where power restoration and safety considerations may cause a delay). Short term containment may have to be instituted once safety hazards have been eliminated in cases involving public places, schools, playgrounds, water supply areas surface water, food growing and processing locations, or similarly sensitive locations.

Materials

A Spill Response Kit and Dexsil Screening Test Kits is kept at the Electric Utility warehouse to enable the person discovering the release to initiate clean-up and containment. Oil sorbent material and oil response equipment are also located in and on some line vehicles.

The Dexsil Screening Kits measure the presence of chlorine in the oil sampled. It is designed to show a positive result if the chlorine content is >50 ppm. It is not possible to get a false negative result. It is possible to get a false positive result because there are several sources of chlorine contamination that the oil may come in contact with.

The Dexsil Screening Kits must be used prior to the expiry date identified on the side of the container. The Kits should be stored at 20 degrees Celsius (preferably in a dark area) to assume results in a one year lifespan. Storage at >36 degrees Celsius will shorten the shelf life as the indicator will decay. Temperatures below freezing may freeze reagents. Kits should be warmed prior to use by bringing into a warmer environment (e.g., cab of a truck with heat on, office, etc.).

Each Spill Response Kit shall include:

- 1 open head drum and gasket
- 2 pair coveralls or rain wear
- 2 pair PVC gloves
- 2 pair safety glasses and/or plastic visors
- 2 bags Speedy-Dri
- 5 litres Varsol
- 2 D-handle shovels
- 1 pail (No. 12)
- 2 oil sample bottles
- 2 soil sample bottles
- rags
- caution tape

Industrial Hygiene

The area of the release must be closed to unauthorized personnel and members of the clean-up crew must have training with respect to the hazards present (e.g., review of MSDS). The following Industrial Hygiene advice will be adhered to if contact with the oil occurs.

- wipe off skin and wash skin with soap and water;
- if oil gets into the eyes, the eyes should be flushed with water for at least 15 minutes. When exposure has been severe or irritation persists, a physician should be contacted immediately;
- if swallowed, **do not** induce vomiting. Transport person (at rest) immediately to a hospital. If vomiting occurs spontaneously, keep the victim's head lower than hips to prevent aspiration;
- care should be taken to avoid breathing vapors in confined areas where adequate ventilation cannot be provided. If necessary, self-contained breathing apparatuses shall be worn by all members of the clean-up crew;
- if overcome by vapors, then remove person from spill location into fresh air. Transport person (at rest) immediately to hospital.

Regular coveralls and standard issue leather boots may be used when responding to spills where large volumes of liquid are not present. When working in areas having large pools of oil, personnel protective clothing will consist of rubber safety footwear and disposable coveralls impervious to oil penetration. If there is a possibility of oil being splashed about, then eye protection (goggles) should be worn.

Clean up of Petroleum Products or Insulation Oils Containing <50 ppm PCB

All releases of insulating oils, hydraulic fluids from vehicles or any other release of petroleum products will be cleaned up to meet the soil criteria specified by Nova Scotia Department of Environment and Labour. Where a release of insulating oil with unknown PCB content has occurred, a screen test will be conducted as quickly as possible. If the screen test is positive, then the release shall be cleaned up as per Section 8.4.

Clean up of Soils

- prevent oil from entering the environment by implementing all practical precautions;
- stop or contain leakage using some form of catchment;
- plug all drains that lead to water systems or to areas outside the spill site;
- contain flowing oils with dykes and/or trenches to prevent contamination to other areas;
- absorb small pools of oil using peat moss, Speedy-Dri, sawdust or other suitable absorbent materials prior to removal;

- immediately pump out all large pools of oil and collect in an available storage container (e.g., drums, tanks). Wet vacuums, mud suckers, and gear pumps may be suitable for the pumping operation. Perform further clean up as required for small pools;
- remove all oil saturated by the release. The ground should be dug to a minimum depth of 300 mm (12") below visible oil. All impacted soil should be removed to meet the provincial soil clean up criteria;
- if this is a reportable oil release, confirmatory soil samples must be collected from the base and walls of the excavation to confirm remediation is complete.

If the affected area is to be left for any length of time, cover it with plastic sheeting to prevent the spreading of oil due to rainfall. Appropriate dyking or ditching should be provided where required.

Clean up of Asphalt and Concrete

- immediately report oil spilled on highways or streets to the concerned provincial or municipal authority;
- fence off the area to prevent traffic from traveling through spilled oil;
- plug all drains leading to water systems;
- dyke the area around the release with soil, sawdust, Speedy-Dri, or other suitable solid absorbent, if the area has no containment system;
- recover any oils that have collected in pools using suction apparatus or pails. Place in an available storage container;
- spread a solid absorbent (25 mm deep (1")) over the area, allow it to stand for about one half hour and collect; and
- wash the area with a suitable solvent (e.g., Varsol or other degreasers) and collect using a solid absorbent.

Clean up of Electrical Equipment

- identify the cause of leakage and take corrective measures to prevent further leakage; and
- clean equipment by wiping it down with rags and approved degreasers.

Clean up Involving Insulating Oils Containing >50 ppm PCB

Releases of any size or nature shall be dealt with immediately. Samples will be collected for laboratory analysis of PCB content.

The clean up of soils, asphalt, concrete and electrical equipment will follow the same procedures outlined in Section 8.3. The following additional precautions are required:

- free product collected from large pools of oil must not be mixed with boiler grade oil;

- confirmatory soil samples must be collected at the limits of the excavation and sent to a commercial laboratory for PCB analysis. Impacted soil will be cleaned up to meet provincial soil criteria;
- tools, rubber safety footwear, equipment must be washed using a solvent such as Varsol or turpentine. Following use, solvents and clean up debris will be placed in a drum with other PCB contaminated soil/debris for disposal; and
- for a major spill in an enclosed area where adequate ventilation cannot be provided, self contained breathing apparatus must be worn by the clean up crews. Measures must also be taken to prevent ignition of the mineral oil.

In the event of a fire involving PCB contaminated oil, the products of combustion include polychlorinated dibenzofuran (PCDF), polychlorinated-p-dioxin (PCDD) and tetrachlorinated dibenzo-p-dioxin (TCDD). These compounds are toxic and can be present in the air and soot. Workers should minimize their exposure to these chemicals to the lowest feasible limit.

Only trained firefighters will respond to large fires. Town of Lunenburg personnel will only respond to fires that they feel they can extinguish safely. The following fire fighting measures below will be followed:

- make sure that you are safe by wearing personal protective equipment;
- ensure that your co-workers are safe and are also wearing the appropriate personal protective equipment;
- keep all spectators at a safe distance upwind of the fire where they are less likely to be exposed to smoke and fumes from the blaze;
- fight the fire from a safe distance and from the upwind side;
- if possible, extinguish the fire with foam or carbon dioxide rather than water;
- if necessary, to prevent contaminating the surrounding area, sewers, irrigation waters or streams, with excess runoff from water applied to the fire construct dykes; and
- **if you are unable to extinguish the fire**, notify the nearest fire department and make sure they know that PCB's are involved in the fire. Trained firefighters will fight the fire and provide direction if additional emergency response procedures are required.

Containment of Water-Borne or Large Scale Releases

The Town of Lunenburg does not have the trained personnel or equipment to deal with water-borne or large scale releases.

As such, contractors who specialize in large scale clean ups and have equipment to deal with water-borne releases will be hired to respond to the release. The Town should contact one or several of these contractors so that adequate response is available in the event of an emergency. The Town should develop a list of contractors available in their immediate area.

RESTORATION OF PROPERTY FOLLOWING A RELEASE TO THE ENVIRONMENT

Releases may occur on company, private or public property. All release sites must be safely restored. On private and public property, oil saturated soil/debris will be removed from the site and soil, earth, gravel, sods, etc. may have to be replaced. Property owners should be advised as soon as possible of the steps the company proposes to take. The Electric Utility Superintendent or designate should check personally with property owners a few days after an event to discuss clean up activities.

DISPOSAL OF OILY SOIL

Materials Containing < 50 ppm PCB

All oil-stained soil and debris must be collected in appropriate containers (e.g., drums) and transported to a secure location; or transported in bulk to a secure location. If transported in bulk, the carrier will secure load and cover it with plastic or tarp. If bulk soil is to be stored before disposal, then the soil must be covered with plastic or tarp and weighted down. If the oily soil/debris has been tested for PCB content, it should be labeled as such and additional oil should not be added to it unless additional PCB testing is planned.

The NSDOE oily soil disposal guideline allow this soil/debris to be disposed at local landfills. However, many landfills will not accept oily soil and the soil may have to be transferred to a company involved in oily soil disposal. The material shall be emptied from the drums and/or disposed of in bulk. Where used, the drums shall be returned for further use.

Materials with Known or Potential PCB Contamination

Soil which has received insulating oil containing > 50 ppm PCB, or insulating oil with a positive screen test (e.g., unknown PCB content) will be treated as PCB contaminated soil until lab analysis determines that it is not PCB contaminated. Analysis will be conducted on the soil/debris to determine the PCB level.

Soil containing known or potentially PCB contaminated oil shall be collected immediately (either bulk or in drums) from the spill site and transported to a secure location for temporary storage until laboratory analytical results are received and the PCB content of the soil is known. Transportation of Dangerous Goods Regulations shall be followed. A Dangerous Goods Shipping Document will be completed and signed by the person trained to do so. The shipping document shall list the product as polychlorinated Biphenyls, soil potentially containing greater than 50 ppm PCB. The transport vehicle shall be placarded on all four sides. The placard shall be class 9.1 (subsidiary 9.2) and will indicate the Product Identification Number (PIN) UN2315.

Any drums shall be labeled "SOIL WITH OIL CONTAINING >50 PPM PCB". Drums must also be labeled with Environment Canada's non-serialized black and white "ATTENTION PCB" labels and a Class 9 Miscellaneous label. The shipping name (e.g., polychlorinated biphenyls) and the PIN number must also be marked on the drum.¹

Drums containing known or potentially PCB contaminated soil shall be numbered and stored in a secure location. The drums shall remain labeled until the PCB level of the soil is determined.

Temporary storage of bulk oil containing known or potentially PCB contaminated oil must be stored in a secure area in a manner that isolates it from the environment (e.g., by placing it on and covered by 6 mil plastic tarp, etc. The covering must be weighted down.) The soil will be clearly marked "SOIL WITH OIL CONTAINING > 50 PPM PCB" or "POTENTIAL PCB".

A laboratory analysis shall be conducted on the soil contained in each drum, or on a composite sample(s) of bulk soil, to determine the PCB level. Once samples have been collected, no additional soil is to be added to the drum/bulk pile.

If the laboratory results show the soil to contain <50 ppm PCB then, all PCB labels shall be removed from the drum and the soil shall be disposed of.

If the PCB content is determined to be >50 ppm PCB the oil-saturated soil and debris will be collected in appropriate containers and transported, following Transportation of Dangerous Goods Regulations, to the Onslow PCB storage facility. Transportation of contaminated soil is regulated by the Transportation of Dangerous Goods Act. The requirements are specified in report ENV 3.07, Transportation of Materials with Known or Potential Contamination.

Soil shall be appropriately stored/disposed as soon as practicable after receipt of the laboratory analysis.

PUBLIC RELATIONS

Official media communication shall be conducted through the Mayor or Town Manager/Clerk.

Communication with customers during and after clean up will be conducted by the appropriate field personnel.

REPORTING

In the event of a major release, a report will be prepared by the Electric Utility. The report will include the following:

- date and time of release
- weather conditions at the time of release and during response phase
- cause of the release
- product or products involved
- quantities involved
- area and/or properties impacted
- containment used
- clean up techniques employed
- site remediation completed and planned
- short and long term impacts
- status of the response
- a log of action taken
- measures to be implemented to prevent recurrence

WASTE TRANSFORMER OIL DISPOSAL

- used transformer oil to be contained in good quality steel or plastic, 45 gallon drums and stored at the Electric Utility transformer storage facility;
- when it is determined by the Electric Utility Superintendent to discard used oil, it be analyzed by Philips Analytical Laboratory in Halifax, or other qualified facilities; and
- contact such oil disposal companies such as Inland Oil, etc., to dispose of as to PCB content.



CUSTOMER OPERATIONS OIL RELEASE REPORT

Location (Region and Address)

Date of Spill:

Time of Spill:

Time Town of Lunenburg personnel informed of spill:

REPORTABLE RELEASE

(Four Hour Time Limit) Complete entire form

- Any spill of oil in a watercourse frequented by fish or flowing waters frequented by fish - Report as an oil release to water.
- Oil in a quantity greater than **100 litres** - Report as an oil release.
- Oil with a positive screen test or which cannot be screen tested within 4 hours or insufficient mineral oil remaining for screen test from < 1982 equipment - Report as oil release with possible PCB contamination.
- Oil labeled as **greater than 50 ppm PCB** - Report as an oil release with PCB contamination.

NON-REPORTABLE RELEASE

(Not required to be reported to NSDOEL emergencies. Internal reporting only.) Complete sections 1 - 8 and keep on file.

- A release of petroleum product in a quantity less than 100 litres.
- A release of electrical oil in a quantity less than 100 litres from a transformer known to be manufactured after 1982 (no screen test required).
- A release of electrical oil in a quantity less than 100 litres with a negative screen test.

AS SOON AS SPILL IS DETERMINED REPORTABLE, IT MUST BE CALLED IN TO THE NSDOEL. IF TOWN OF LUNENBURG PERSONNEL CANNOT GO TO THE SPILL SITE (ELECTRICAL OIL RELEASE) WITHIN 4 HOURS, OR PERFORM A SCREEN TEST ON ELECTRICAL OIL WITHIN 4 HOURS OF THE TIME THAT THE COMPANY LEARNS OF A SPILL, THEN THE RELEASE MUST BE PHONED IN AS AN OIL RELEASE WITH POTENTIAL PCB CONTAMINATION.

FIELD RESPONSE

1. Amount of oil released: Type of Equipment:
2. Cause of release:
3. Areas affected and extent of contamination:
4. Time of initiation of clean-up:
5. Measures taken:
6. Present status including hazards:
7. General comments/planned follow up:
8. Name of Town of Lunenburg employee on site: Telephone:

CONTROL CENTRE

9. Name of ECC Person taking call: Telephone:
10. Date and time of call:
11. Environmental Emergency notification time:
12. Environmental Emergency contact person:
13. ECC personnel signature (Print and sign).