VII. DISPOSAL PROCEDURES AND SERVICES

A. Sources of Materials Requiring Special Handling and Disposal Procedures

Liquids containing PCB's and solids containing or contaminated with PCB's may be obtained from any of the following sources:- transport containers, transformer manufacturing processes, in test failures, liquids contaminated beyond reclamation, in-service transformer leaks and failures, askarel-filled transformers scrapped for any reason, etc.

B. Classification for Disposal of Materials Containing PCB's

In general, there are three types of materials for disposal; liquids, burnable solid materials containing PCB's, and non-burnable solid materials contaminated with PCB's.

I. Liquids
Liquids containing PCB's requiring disposal by high-temperature incineration may consist of the following:

1. PCB's contaminated with mineral oil.

2. Mineral oil contaminated with PCB's.

3. Non-reclaimable contaminated transformer askarels, arced askarels, from manufacturing spills, sump accumulation, etc. rich in PCB's, holding basins, drip and drain pans and containers, washings, sample jars and containers, etc.

II. Burnable Solid Waste Material Containing PCB's
These materials can be disposed of by high temperature incineration and consist of cellulosic materials, rags, pressboard, wood, sawdust, fullers earth in bulk or in cloth bags, blotter papers, nitrile or cork gaskets, etc.

III. Non-burnable Solid Waste Materials Containing or Contaminated with PCB's
These materials may consist of coil structures, steel, copper, aluminum, filter units of the steel mesh construction type, askarel drums, cans, etc.

Materials of this nature should be allowed to drain with the liquid collected in drip pans, etc. Further removal of adhering PCB's can be accomplished by washing or solvent extraction with kerosene or other approved washing liquids such as perchloroethylene or trichloroethylene. Accumulated liquids can be disposed of as indicated in "I" above. Solid materials may be handled as normal scrap.

C. Shipment of Scrap Liquids for Disposal

All liquid scrap material should be placed in appropriate metal transport drums, properly labeled, for shipment to a company offering an acceptable disposal service.

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VII. D. Shipment of Burnable Solid Waste Material Containing PCB's for Disposal

Materials of this type should be placed in open head drums with suitable closures and with the drum properly labeled for shipment to a company offering an acceptable disposal service.

E. Liquid and Solid Waste Disposal Service Organizations

I. General

Disposal of askarel-soaked materials must be accomplished by means in which there is no significant release of askarel to the environment. At present, disposal is accomplished by carefully-controlled incineration of liquids and soaked software, and by controlled land-fill burial of apparatus and other hardware from which askarel has been previously drained and washed.

II. Costs

In addition to the normal costs of collecting scrap liquids and solids for disposal, additional costs borne by the owner of such scrap include shipping container, cost of transport to the disposal service organization and a disposal fee usually based upon a per gallon or per pound charge. In general, lowest disposal costs are obtained by using the closest disposal service organization.

III. Known Liquid and Solid Disposal Service Organizations

Organizations offering disposal services are listed below, including location, facilities available, types of material handled, and disposal procedures used. Specific shipping directions and disposal costs should be obtained from the company.

a. Chem-Trol Pollution Services, Inc.

1. Shipping Address:

Chemtrol Pollution Services, Inc.
Balmer Road
Model City, New York 14107

2. Facilities Capable of Handling

1. Liquids - polychlorinated biphenyls (Aroclors) alone or mixed with other oils or solvents.

2. Solids (Software) - Aroclor-soaked compounds, rags, cartons, fullers earth, wire coatings, etc.

3. Solids (Hardware) - Transformer tanks, cores, capacitors, drums, etc.

3. Disposal Procedures

1. Thermal oxidation (incineration)

2. Controlled and scientific land-fill

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VII. E. (Cont'd)

3. Disposal Procedures (Cont'd)

3. Reclamation by distillation, filtration, and centrifuge as applicable.

b. Monsanto Company

1. Shipping Address:

Incinerator Department (831)
W. G. Krumrich Plant
Monsanto Company
Sauget, Illinois 62206

2. Facilities Capable of Handling

1. Liquids - Polychlorinated biphenyls (Aroclors) alone or mixed with other oils or solvents.

3. Disposal Procedures

1. Incineration at 2000-2500°F with auxiliary natural gas followed by scrubbing to remove HCL.

c. Rollins-Purle, Inc.

1. Shipping Addresses:

a. Rollins-Purle, Inc.
Route 322
Logan Township
Bridgeport, New Jersey 08014

b. Rollins-Purle, Inc.
Scenic Hwy. & W. Cheatham Lane
Scottandville,
East Baton Rouge Parish, La. 70807

c. Rollins-Purle, Inc.
Tidal Road & Hwy. 134
Deer Park, Texas 77536

2. Facilities Capable of Handling

a. Liquids - polychlorinated biphenyls (Aroclors) alone or mixed with other non- or low-chlorinated hydrocarbons.

b. Solids (Software) - Aroclor-soaked compounds, rags, cartons, fullers earth, wire coatings, etc., containing a minimum of metals.

3. Disposal Procedures

Incineration at combustion temperatures up to 2500°F. Incineration gases are scrubbed, washing out solids remaining from incineration. Steam and CO_2 are expelled from stacks.

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PART II - SPECIFIC GUIDELINES

A. Guidelines for Askarel Transformer Manufacturing, Repair Plant Areas and for Filling Equipment with Askarel

1. Plant Area for Filling Equipment with Askarel

It is necessary to assume that in filling equipment with askarel and further handling of this equipment that an askarel spill will occur. Therefore, it is necessary to provide facilities and a procedure for clean-up to prevent contamination.

a. Askarel Filling Area

1) It is desirable that the location of the askarel filling area should be adjacent to the test area and final shipping area to minimize the danger of damage of units during handling.

2) It is desirable that the main manufacturing area provided for filling of equipment with askarel should be cement floors with adequate cement curb around the entire area to act as a basin for containing the volume of askarel from the largest production unit. All askarel handling equipment such as pumps, hoses, etc., shall be of the askarel-resistant type.

3) Floor drains must not connect to a sanitary or storm sewer but to a sump provided with a manually activated pump capable of pumping spilled askarel or other liquids to "Scrap askarel" drums.

4) Drip pans shall be provided for hose connections and filling valves.

b. Special Containers for Scrap Materials

1) Drums labeled "Scrap askarel" must be available for handling all spilled and waste askarel from sumps, failed units, drip pans, sample jars, etc.

2) Open-head drums with suitable closures and labeled "Scrap Burnable askarel Waste" must be available for handling contaminated cellulose insulation, rags, paper pressboard, wood, gaskets, sawdust, etc.

3) Separate containers for handling steel, copper, and aluminum, each adequately marked, shall provide for the components of contaminated core and coil assemblies. These containers are required for the various materials when repairing or scrapping assemblies.

4) Containers for supplies of sawdust for absorbing small askarel spills or clean-up of larger spills must be provided.

c. Conditioning of Askarels

1) Askarel Conditioning Equipment

a. The conditioning unit should be located either in the storage tank area which has a curb to contain an askarel spill or the main transformer manufacturing area for filling with askarel.

2) Fullers Earth

a. Conditioning of new askarel or recycled askarel requires fullers earth treatment. The spent fullers earth in cartridges or bags when replaced should be allowed to thoroughly drain over drip pans to remove as much liquid askarel as possible. The cartridge units of steel mesh construction should be placed in the "Steel Contaminated with askarel" container for disposition. Cloth bags filled with fullers earth shall be placed in the "Scrap Burnable askarel Waste" container for disposition.

d. Tear-down of Units for Repair or Scrap

1) Tear-down Procedure

a. Drain all askarel from the unit either into a holding tank for reuse or into the drum labeled "Scrap askarel" for disposition, then allow sufficient time for all the askarel to drain from the core and coils.

b. Remove the core and coil assembly from the unit and place it on a steel tear-down table having a raised edge to contain any run-off askarel from the soaked material. A center drain with a collection container should be provided under the table to collect the fluid askarel.

c. The personnel that dismantled the unit must wear approved gloves, apron and eye protection.

d. Place all materials in the appropriate salvage containers during the dismantling for later disposition.

e. The tear-down table can be cleaned with kerosene or other approved fluids after the dismantling operation. The used cleaning fluids should be placed in the "Scrap askarel" drums for disposition.

f. All used materials, including rags, sawdust, tape, etc., regardless of quantity, shall be put into the appropriate containers for disposition.

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B. Transformer Labeling

1. New Transformers

All new transformers that contain PCB's shall have a label of adequate durability permanently and prominently attached to the tank by the manufacturer, giving the following warning and instructions. Label instructions should include the following:

CAUTION

The insulating fluid in this transformer contains polychlorinated biphenyls, which some studies have shown may be an environmental contaminant. Extreme care should be taken to prevent any entry into the environment. In case of malfunction or leaks, consult the instruction manual or the manufacturer.

2. In-Service Transformers

The transformer manufacturer should make suitable labels available with a similar warning as in B-1 above for use on existing transformers.

C. Guidelines for Askarel Transformer Users

1. General

Askarel-filled transformers are delivered to customers as sealed units from which there is no escape of askarel under normal operation. While certain types of equipment failures can permit loss of some askarel to the environment, such cases are extremely rare.

2. Receiving

Immediately upon receipt of the equipment, examine the tank and fittings for any leakage or spillage that may have occurred in shipping. If leakage is evident, correct cause of leakage and clean up askarel with rags soaked with kerosene or other approved solvent.

3. Installation and Periodic Inspection

Following installation, the unit should again be inspected for any damage or leakage. It is recommended that periodic in-service inspections be made for any leaks.

4. Filling, Filtering, or Drying Askarel

Most askarel units are shipped with the proper amount of askarel but if it becomes necessary to top off a unit, follow manufacturer's instructions.

If necessary to dry or fuller's earth treat an askarel unit, follow manufacturer's instructions. When filtering or conditioning askarel, all of the same precautions previously described apply as to drip pans, proper disposal of filter media, etc.

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C. Guidelines for Askarel Transformer Users - (Cont'd)

5. Sampling

It is common practice to sample askarel from a transformer for periodic maintenance testing. As previously described, such samples should be taken in a manner to avoid any contamination of the environment. Washings should be collected for proper disposal. Field and laboratory test samples, washings, etc., should also be collected for proper disposal.

6. Transformer Disposal

The ultimate disposal of an askarel-filled transformer may be accomplished in either of two ways.

a) Complete drainage and dismantling with the proper disposal of the askarel and askarel-soaked components as described earlier in Part VII.

b) Disposition of the complete unit to a scrap or junk dealer. In this event, the scrap or junk dealer should be suitably warned concerning the proper handling procedures for disposing of liquid askarel and the askarel-soaked components.

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