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and

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and

Fisheries and Oceans Canada
Sea Lamprey Control Centre
1219 Queen Street East
Sault Ste. Marie, Ontario P6A 2E5
Canada

ADMINISTRATIVE OPERATING PROCEDURE

PROCEDURE TITLE:

Storage, Transportation, Decontamination, and Spill Containment of Lampricides and Lampricide Application Equipment

APPLICABILITY:

Procedures apply to all activities related to the storage, transportation, and use of lampricides

PURPOSE:

The purpose of this procedure is to provide instruction for the safe handling and storage of lampricides

PROCEDURE:

I. Storage

A. General

1. Lampricide stockpiles are secured in locked buildings. Lampricides are stored in locked, covered vehicles in the field.
2. Local fire departments are advised of the presence of TFM and of special firefighting procedures recommended for this chemical (see MSDS; Appendix F). The placarding of buildings follows state guidelines.
3. Inventory Logs are maintained to monitor the inventory of lampricides.

B. Specific

1. TFM

- a. Liquid formulations: TFM 33% liquid formulations are packaged in plastic containers which hold about five gallons of pesticide. Containers are stacked on pallets. Pallets of TFM are routinely moved with a forklift. The top row of containers is stabilized while being moved.
- b. Bar Formulation: TFM Bars are stored on pallets in a ventilated room in a general use warehouse. TFM bars are wrapped in a water resistant container.

2. Bayluscide

All formulations of Bayluscide are stored in cool, dry locations

- a. Granular formulation: Bayluscide 3.2% Granular Sea Lamprey Larvicide is shipped and stored in cylindrical, heavy duty plastic buckets which contain 50 lbs of pesticide. Containers are stored on wood pallets which may be stacked two-high on a plastic sheet.
- b. Wettable powder: Bayluscide 70% WP is packaged in ½ and 3 pound plastic containers. The containers are shipped and stored in plastic lined cardboard boxes. Containers are not removed from the shipping boxes until time of use.
- c. Liquid formulation: Bayluscide 20% EC is packaged in 1 or 5L plastic containers. The containers are shipped and stored in cardboard boxes. Bottles are not removed from storage boxes until time of use.

II. Transportation

Lampricides are transported from the storage facility to the treatment site in a variety of vehicles ranging from pick-ups to 2 ½ ton enclosed trucks. TFM liquid and Bayluscide 70% Wettable Powder are classified as hazardous materials and transport of both lampricides is regulated under Canadian and U.S. Departments of Transportation regulations (www.TC.GC.CA/TDG/menu.htm and www.fmcsa.dot.gov/safety-security/hazmat/complyhmregs.htm). Applicable details are summarized for personnel in Appendix R). Passengers and foodstuffs are not allowed in compartments used to transport lampricides. All vehicles are supplied with a list of emergency telephone numbers and a contingency plan (Appendix D) that outlines emergency procedures used in case of an accidental spill. Also, each vehicle is supplied with chemically absorbent materials (spill kit) and is equipped with a two-way radio to allow rapid communication if problems arise.

Weight capacities for trucks are not exceeded. Proper precautions are taken to evenly distribute and secure loads. Containers are secured to prevent shifting or tipping. TFM bars and Bayluscide containers are protected from the weather.

If travel to an application site by watercraft is required, the containers are secured in the watercraft. After applications, empty containers are returned to the storage facility for

disposal.

III. Decontamination

Empty lampricide containers are triple-rinsed or equivalent at treatment sites, rendered useless by crushing or puncturing, and disposed of in an approved municipal landfill or offered for recycling. Containers that are not rinsed immediately are labeled "not rinsed," capped, and stored until decontamination at another appropriate site. All lampricide dispensing equipment is thoroughly rinsed at the application site before it is returned to the transport vehicle or storage.

IV. Spill Reporting

Accidental spills of one or more containers of any lampricide formulation will be reported to the appropriate state or provincial agencies as listed in Appendix D.

In Michigan, an accidental spill of one or more containers must be reported to the Pollution Emergency Alerting System (PEAS) and Michigan Department of Environmental Quality. The State Police are called if no PEAS or equivalent system phone number is listed for the state in which the spill occurs. Spills of the following magnitude must be reported: TFM, one container (approx.5 gals); Bayluscide 3.2% Sea Lamprey Larvicide, one container (50 lbs); Bayluscide WP, one plastic container (0.5 lb); and Bayluscide 20% EC, 1 bottle (5L).

Spills in Ontario must be reported to the Ministry of Environmental Spills Action Centre (See emergency telephone numbers; Appendix D).

V. Spill Response

A. Spills on land: In the event of a major lampricide spill during storage or transport or at an application site it is of greatest importance that the spill is stopped at its source, the spilled material is contained, and the proper authorities are notified. Shovels and other hand tools are used for immediate containment or channelization of the spilled lampricide into a containment area. Spills of dry Bayluscide on land are readily controlled by sweeping and shoveling by personnel protected from dust inhalation. The following actions are taken, as necessary, to contain and clean up a major spill on the ground:

1. Stop the spill at its source
2. Dike TFM, Bayluscide 20% EC, or water solution of Bayluscide in pools
3. Shovel or sweep dry Bayluscide formulations or dried TFM into piles
4. If dry TFM residual remains scrub area with water and/or soap solution
5. Absorb TFM, Bayluscide EC, or water solution of Bayluscide with clay, soil, or noncombustible, absorbent material
6. Transport materials resulting from a lampricide spill via licensed hauler to a permitted hazardous waste treatment, storage, or disposal facility.

B. Spills into water: If lampricide is spilled near or into a waterway, containment is initiated to prevent or minimize movement into the waterway. If a major lampricide spill occurs into a stream not scheduled for immediate lampricide treatment, the following emergency actions are initiated:

1. Immediate notification and consultation with State/County Public Health Office (see emergency telephone numbers; Appendix D).
2. Issuance of an emergency advisory on water use restrictions at and downstream of the spill location through local radio and door-to-door contacts. The emergency advisory prohibits water use for drinking, cooking, other household uses, swimming and fishing until further notification.
3. Lampricide monitoring is initiated to follow the chemical block and to determine its concentration.

Accidental spills of TFM into a stream during treatment operations may occur during a period when chemical monitoring is already underway. In such an instance, monitoring is extended to ensure that the area of impact of the plume does not exceed previous projections. Automatic water samplers are set at the intake(s) of any municipal water supply system that might be impacted as the result of the spill.

An accidental spill of Bayluscide into waters not designated for immediate treatment triggers the initiation of emergency actions (see preceding on TFM).

This procedure has been reviewed and approved by the undersigned representatives of the U.S. Fish and Wildlife Service and Fisheries and Oceans Canada.

REVIEWED/APPROVED _____ DATE _____
Field Supervisor (U.S.)

REVIEWED/APPROVED Julie Shivers DATE 05 MAR 2020
Program Manager (Canada)