

Transportation of Hazardous Materials for Sea Lamprey Control Operations

Version 4/6/2015 srl

The U.S. Fish and Wildlife Service's Marquette and Ludington biological stations operate vehicles in excess of 26,000 lbs GVWR (Commercial Motor Vehicle; CMV) which require drivers to have a Commercial Driver's License (CDL). Further, employees at both stations transport certain hazardous materials in quantities that would require a commercial carrier (state or federal entities are exempt) to follow additional Hazmat regulations including periodic training for drivers specific to:

General awareness/familiarization: General awareness and familiarization training is intended to raise the hazmat employees' awareness of the regulations and the purpose and meaning of the hazard communication requirements.

Function-specific training: Function specific training is intended to teach the necessary knowledge, skills and abilities for an individual's job function.

Safety training: This training provides information concerning the hazards posed by materials in the workplace and personal protection measures.

Security Training: Each hazmat employee must receive security awareness training. This training must include an awareness of security risks associated with hazardous materials transportation and methods designed to enhance transportation security.

Although not required by DOT for government operated vehicles, the Program requires CDLs, HazMat license endorsements, and follow other requirements as commercial haulers must follow for hauling hazardous materials. A training program for staff that transport hazardous materials is outlined in Appendix (xxx) that is consistent with requirements for commercial HazMat drivers in order to assure safe, secure, and environmentally responsible transport of hazardous materials.

I. GENERAL AWARENESS TRAINING

All staff who have a CDL license or who will carry placardable quantities of hazardous substances will be required to annually review sections 1, 2, 3, 6, 9, and 11-1 through 11-8 of the Michigan Commercial Driver License Manual. These sections review general requirements for driving commercial vehicles and transport of hazardous materials. Specific details on how these requirements are met in the SLC program are provided in section II on *Function Specific Training*.

II. FUNCTION-SPECIFIC TRAINING

1. Placardable Quantities

These rules apply to sea lamprey control program vehicles carrying a **total combined weight** of over 1,000 lbs of hazardous materials, even if any one compound is less than 1,000 lbs, but the total exceeds 1,000 lbs. Vehicles that carry **less than 20** containers of TFM (with no other hazardous materials) are not subject to these rules.

2. Vehicle and Trailer Inspection

A Post Trip inspection of the vehicle and safety equipment must be conducted each time Hazardous Materials have been hauled with results documented on the Driver Vehicle Inspection Report (DVIR) form (Figure 1). Corrective actions for deficiencies must be identified on the form and a “carrier representative” must sign the form before the next trip if a defect or deficiency was noted once the corrective action has been completed. A carrier representative may be the station Maintenance Worker, Lead Physical Science Technician, full time Physical Science Technician, team leader or unit supervisor. Before embarking, a driver must review the previous DVIR, confirm that there is certification that the required repairs have occurred (if noted), and be satisfied that the vehicle is in good working order. The process for obtaining, filling out, and filing the DVIR are noted in Table 1.

Table 1. Procedure for Driver Vehicle Inspection Report

A Driver Vehicle Inspection Report (DVIR) is completed each time a driver hauls reportable quantities of hazardous materials

1. Before trip, driver reviews previous trip DVIR.
 - a. DVIR from most recent trip is located in vehicle on clipboard.
 - b. The driver will confirm certification that required repairs noted in last trip have occurred.
 - c. Return former DVIR to clipboard in vehicle.
 2. Driver conducts pre-trip inspection
 - a. Initiate new DVIR. Blank forms located on clipboard in vehicle.
 - b. Driver inspects vehicle and is satisfied it is in good working order.
 - c. Return pre-trip inspection report to clipboard in vehicle.
 3. Driver conducts post-trip inspection upon arrival at the destination.
 - a. Driver completes post-trip section of DVIR and notes any deficiencies.
 - b. If deficiencies are observed, they are noted and a plan for corrective action is specified.
 - c. A “carrier representative “must sign the form before the next trip if a defect or deficiency was noted once the corrective action has been completed. A carrier representative may be the station Maintenance Worker, Lead Physical Science Technician, full time Physical Science Technician, team leader or unit supervisor
 - d. The completed DVIR is returned to the clipboard for review before the next trip.
 4. The DVIR from the last trip will always remain in the vehicle. Older forms will be removed periodically (e.g, during end of month reports) and filed in the control unit office. Records will be kept for one year.
 - a. Marquette - forms are kept in the top drawer of the file cabinet in the control office located next to first cubicle on left.
 - b. Ludington – forms are kept in the Maintenance office file cabinet
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MARQUETTE BIOLOGICAL STATION			
<u>DRIVER VEHICLE INSPECTION REPORT</u>			
Vehicle ID _____		Date _____	
<u>Pre – Trip</u>		<u>Post – Trip</u>	
Inspect		Inspect	
Parking (Hand) Brake	_____	Parking (Hand) Brake	_____
Steering Mechanism	_____	Steering Mechanism	_____
Lighting Devices/Reflectors	_____	Lighting Devices/Reflectors	_____
Tires	_____	Tires	_____
Horn	_____	Horn	_____
Windshield Wipers	_____	Windshield Wipers	_____
Rear Vision Mirrors	_____	Rear Vision Mirrors	_____
Wheels and Rims	_____	Wheels and Rims	_____
Coupling Devices	_____	Coupling Devices	_____
Emergency Equipment	_____	Emergency Equipment	_____
Defects/Deficiencies:	Yes No	Defects/Deficiencies:	Yes No
Corrective action:	_____	Corrective action:	_____
	_____		_____
Driver:	_____	Driver:	_____
_____		_____	
Certification of Corrective Action		Certification of Corrective Action	
_____		_____	
Carrier Representative		Carrier Representative	

Figure 1. Driver Vehicle Inspection Report.

All placarded vehicles must receive an annual inspection as noted in 49 CFR part 396. Key elements are:

- Inspector must be capable of performing inspection by reason of experience, training, or both. Additional requirements in part 396.19.

- Documentation of the inspection must be on the vehicle, including date, name of the carrier (FWS station), vehicle ID (plate #), and certification vehicle passed. See part 396.21.

3. Hazardous Materials Communication

Hazardous materials communication has four elements; *Shipping Papers, Marking, Labeling, and Placards.*

Shipping papers - are documents whose purpose is to describe the hazardous materials. The forms used in SLC are pre-printed with all lampricides and propane products listed with their proper shipping name, hazard class, identification number, and packaging group (Figure 2). The driver must enter the number of packages and the total weight of each (include package weight). An emergency response telephone number must be on the shipping paper. Shipping papers are signed prior to transport by an individual most knowledgeable of the shipment, which is usually the driver or person loading the vehicle. The form is available in the Control Office. Drivers must keep hazardous materials shipping papers in a pouch on the driver's door, in clear view within immediate reach while the seat belt is fastened while driving, or on the driver's seat when out of the vehicle.

Marking - Markings identify a material or hazard using proper shipping names, UN numbers, or other descriptors required in the regulations. Unlike labels and placards, markings are not specific to a certain style. However, they must have a sharply contrasting background and they may not be covered by labels or anything else that would reduce their effectiveness. The basic marking requirement consists of the proper shipping name and identification number of the hazardous materials contained in the package. Markings should be durable, in English, and not obscured by other markings or labels. TFM, Bayluscide and Propane cylinders should already be marked as noted in Table 1. The driver must check before embarking to assure these markings are present. Missing or obscured markings need to be restored before shipping.

Labels - labels relate information about the hazards of a chemical inside a package internationally, regardless of language. There are 9 different classes of hazardous materials. The labels for each class are a different color. These labels must be a specific size, shape and color. Required labels for SLC transported hazardous materials are depicted in Appendix 1. Hazardous materials transported in the SLC program should already contain appropriate labels. Missing or obscured labels need to be restored before shipping.

STRAIGHT BILL OF LADING
 ORIGINAL
 NON-NEGOTIABLE

Vehicle License I - XXXXXX	Trailer License I -XXXXX	FROM: Shipper / Carrier U.S. Fish and Wildlife Service Marquette Biological Station 3090 Wright Street Marquette, Michigan 49855 (906) 226-6571	
Name of Driver John Doe		Origin City (if different from above)	
Destination: Escanaba, MI			

H.M.	Description and Classification of Goods	No. of units	Total Weight (lbs)
X	SUBSTITUTED NITROPHENOL PESTICIDES, LIQUID, TOXIC, FLAMMABLE, N.O.S., (TRIFLUOROMETHYLPHENOL, ISOPROPANOL), CLASS 6.1, UN 3013, PACKING GROUP II, FLASHPOINT NOT LESS THAN 23 DEG C.	140	7,280 <small>weight of container included</small>
	SUBSTITUTED NITROPHENOL PESTICIDES, SOLID, TOXIC, N.O.S., (TRIFLUOROMETHYLPHENOL), CLASS 6.1, UN 3013, PACKING GROUP III		
	BAYLUSCIDE 3.2% GRANULAR SEA LAMPREY LARVICIDE, PESTICIDES, SOLID, TOXIC, N.O.S., (NICLOSAMIDE ETHANOLAMINE SALT), CLASS 6.1, UN 2588, PACKING GROUP III		
X	BAYLUSCIDE 20% EMULSIFIABLE LIQUID, PESTICIDES, LIQUID, TOXIC, N.O.S., (NICLOSAMIDE ETHANOLAMINE SALT), CLASS 6.1, UN 2588, PACKING GROUP III	4	50
	BAYLUSCIDE 70% WETTABLE POWDER, PESTICIDES, SOLID, TOXIC, N.O.S., (NICLOSAMIDE ETHANOLAMINE SALT), CLASS 6.1, UN 2588, PACKING GROUP III		
	PETROLEUM GASES, LIQUEFIED, CLASS 2.1, UN 1075		

SHIPPER U.S. Fish & Wildlife Service 3090 Wright Street Marquette, MI 49855 (906) 226-6571	Name of Signatory John Doe Title of Signatory Physical Science Technician Date 4/25/13	Origin Marquette, MI Signature
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IN CASE OF TRANSPORTATION EMERGENCY CALL: CHEMTREC- 1 800 424 9300

Figure 2. Example Shipping Paper (Bill of Lading)

Placards – are larger, more durable versions of hazard labels that are placed on transport vehicles to communicate the hazards of chemicals inside. The types of compounds transported in the SLC program, their description and UN classification are noted on the shipping paper in Figure 1. Appropriate placards are depicted in Appendix 1. Placards must be printed in the square-on-point configuration Placards need to be displayed on all four sides of a transport vehicle or truck or trailer. They must always be displayed in the square-on-point configuration and be located at least 3 inches away from any other marking that

may reduce its effectiveness. When placards are present, a rear sign indicating that this vehicle stops at RR crossings should be present.

SLC trailers are equipped with placard panels that can be flipped over to display blank or active messages, depending on load. Placards must not be displayed when there is less than 1000 lbs of hazardous materials on board (in aggregate including packaging). Placards must appear on both sides and both ends of the vehicle. You may use DANGEROUS placards instead of separate placards for each DOT Table 2 hazard class when you have 1,001 pounds or more of two or more DOT Table 2 hazard classes (this includes all lampricides and propane), requiring different placards. The dangerous placard is an option, not a requirement. You can always placard for the materials.

4. Cargo Loading/ Securement

Provisions of 243 FW 5 *Towing, Carrying Cargo, and Securing Loads* will be reviewed with drivers annually. Specific techniques for loading and securing loads, equipment used and where it is kept, weight distribution (10-15 percent of the total weight should rest on the trailer hitch; e.g, excessive weight to the rear of the axles will cause large amounts of swaying), how to maintain low center of gravity and stability, and other important concepts will be demonstrated by senior staff. Lead technicians and Shop foremen will assist in providing proper securement materials.

It is the drivers responsibility to make sure that load bars and other securments are properly functioning and are securing the cargo in such a way to prevent shifting or toppling during transportation. Load bars and other securements should be inspected periodically during travel to make sure they are still secure and the load has not shifted or leaking. Watch for signs of leaking or damaged containers when loading and during the trip. LEAKS SPELL TROUBLE! Do not transport leaking packages. It is illegal to move a vehicle with leaking hazardous materials

Emergencies/accidents

In an emergency:

- Check to see that your driving partner and others are OK.
- Keep shipping papers with you.
- Keep people far away and upwind, Warn others of the danger.
- Call for help (911) and, National Response Center (800) 424-8802 or CHEMTREC – 1-800-424-9300. If a reportable quantity of hazardous substance was involved, the caller should give the quantity and details of the hazardous substance discharged.
- Keep people away from the scene.
- Limit the spread of material, only if you can safely do so.
- Communicate the danger of the hazardous materials to emergency response personnel.
- Provide emergency responders with the shipping papers and emergency response information. **Routes**
- All placarded loads are required to stop at railroad crossings. The driver must turn on their hazard light and come to a complete stop. The vehicle should have a sign on rear that states it stops a RR crossings (only when placarded).

- Drivers hauling a placarded load should to stop at all open weigh stations. While federal HazMat vehicles are not so required, it may be easier to check in rather than get chased down and have to explain.
- Bridge escorts are required on the Mackinac Bridge for all placarded loads. It is the responsibility of the driver to call **906-643-7600** for an escort. **Flamables (TFM) are prohibited on the Ambassador Bridge and the Windsor Tunnel.** Other bridges may have different regulations. It is the drivers responsibility to determine route restrictions before embarking.

Table 2. Michigan Bridge/Tunnel Restrictions

Ambassador Bridge Detroit 313-496-1111	PROHIBITED Corrosives, explosives, radioactive materials, flammables
Windsor Tunnel Detroit 313-567-4422	PROHIBITED Corrosives, explosives, radioactive materials, flammables
Mackinac Bridge St. Ignace 906-643-7600	PLACARDED LOADS Escort vehicle required
International Bridge Sault Ste. Marie 906-635-5255	ESCORTED LOADS Explosives, flammables and radioactive materials
Blue Water Bridge Port Huron 810-984-3131	RESTRICTIONS Explosives, radioactive materials, organic peroxides PROHIBITED Pyrophoric liquids
Restrictions may change. Confirm before traveling.	
Information for other states available at each state website.	

5. Responsible driving

Electronic Devices - Operation of electronic devices while driving is prohibited. This includes reading from or entering data into any handheld or other electronic device for the purpose of SMS texting, e-mailing, instant messaging, obtaining navigational information, or engaging in any other form of electronic data retrieval or electronic data communication.

Driving Hours - Drivers of Commercial Vehicles and HazMat are subject to driving hours restrictions noted in [49 CFR 395](#). Key provisions are noted here:

- (1) *Start of work shift.* A driver may not drive without first taking 10 consecutive hours off duty;

(2) *14-hour period.* A driver may drive only during a period of 14 consecutive hours after coming on duty following 10 consecutive hours off duty. The driver may not drive after the end of the 14-consecutive-hour period without first taking 10 consecutive hours off duty.

(3) *Driving time and rest breaks.* (i) *Driving time.* A driver may drive a total of 11 hours during the 14-hour period specified in paragraph [\(a\)\(2\)](#) of this section.

Alcohol and tobacco – No driver shall use alcohol, be under the influence of alcohol, or have any measured alcohol concentration or detected presence of alcohol, while on duty, or operating, or in physical control of a commercial motor vehicle. Nor shall a driver possess certain quantities of alcohol (see 49 CFR 392.5 - *Alcohol prohibition* for full listing and description of prohibitions). Fish and Wildlife Service Policy prohibits use of tobacco (smoking, chewing) or vaping in government vehicles.

III. SAFETY TRAINING

- All station staff who drive vehicles must take DDC training once every 3 years.
- Additionally, any staff who drive vehicles requiring a CDL license (vehicles over 26,000 GVWR) or transport hazardous materials in placardable quantities must review annually sections of the Michigan Commercial Driver License Manual (noted in General Awareness Training section), this plan, and training sessions noted in this plan.
- Function Specific Training detailed in the previous section provides techniques used in the program for safe and secure transport.
- The SLC program has a comprehensive safety training program detailed in the Station Safety Plan.
- All trucks and trailers used to haul placarded loads must have a minimum 5lb ABC fire extinguisher which must be inspected annually per procedures listed in Station Safety Plan.
- HazMat drivers receive general Haz-com training annually, with emphasis on lampricides, and propane.
- Staff are trained on accident and spill procedures as noted in Section II, 4. Emergencies/Accidents.

IV. SECURITY TRAINING

Security of the load is the responsibility of the driver during transportation. The driver must:

- Follow general requirements for attending a placarded vehicle as noted in section 9 of the Michigan Commercial Driver License Manual. In particular, a placarded vehicle must be attended when parked.
- Lock the trailer and tongue when the load reaches its destination.

APPENDIX 1. Markings, Placards and Labels for TFM, Bayer, and Propane

TFM markings

[LEFT PANEL]

RESTRICTED USE PESTICIDE

DUE TO ACUTE HAZARDS TO THE EYE AND SKIN AND TO NON-TARGET ORGANISMS, NEED FOR HIGHLY SPECIALIZED APPLICATOR TRAINING, AND NEED FOR SPECIALIZED EQUIPMENT.

ONLY FOR SALE TO AND APPLICATION BY CERTIFIED APPLICATORS OF THE U.S. FISH AND WILDLIFE SERVICE, FISHERIES AND OCEANS CANADA AND PROVINCIAL AND STATE FISH AND GAME EMPLOYEES


**LAMPRECID®
Sea Lamprey Larvicide**

Active Ingredient:
 TFM, 3-Trifluoromethyl-4-nitrophenol, sodium salt 36.5%
 Inert Ingredients: 63.5%
 TOTAL: 100.0%
 *Equivalent to (33.0%) 3-Trifluoromethyl-4-nitrophenol

This product contains ___ lbs. of TFM per gallon

Batch No. _____ Net Contents _____ lbs.

KEEP OUT OF REACH OF CHILDREN
DANGER-POISON



FIRST AID

Have label with you when obtaining treatment advice.

If swallowed	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice • Have person sip a glass of water, if able to swallow • Do not induce vomiting unless told to do so by poison control center or doctor
If on skin or clothing	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately, with plenty of water, for 15-20 minutes. • Call a poison control center or doctor immediately for treatment advice.

TFM placards / labels



Bayluscide markings

FRONT PANEL
RESTRICTED USE PESTICIDE

Due to Eye Corrosiveness to Humans; Aquatic Organism Toxicity, Need for Specialized Equipment and Highly Specialized Applicator Training.

For retail sale to, and use only by, USDI FWS, State Fish and Game, Fisheries and Oceans Canada, and Provincial Certified Applicators trained in sea lamprey control.

BAYLUSCIDE 20% EMULSIFIABLE CONCENTRATE

Active Ingredient:
 Niclosamide, Aminoethanol Salt¹.....20.3%
 Inert Ingredients:..... 79.7%
 Total.....100.0%

¹Niclosamide, Active Equivalent (a.e.) = 17.1%

KEEP OUT OF REACH OF CHILDREN
DANGER
 Corrosive to the Eye and Skin Sensitizer

FIRST AID

Have label with you when obtaining treatment advice.

If swallowed	<ul style="list-style-type: none"> •Call a poison control center or doctor immediately for treatment advice. •Have person sip a glass of water if able to swallow. •Do not induce vomiting unless told to do so by the poison control center or doctor.
If on skin or clothing	<ul style="list-style-type: none"> •Take off contaminated clothing. •Rinse skin immediately with plenty of water for 15-20 minutes. •Call a poison control center or doctor immediately for treatment advice.
If inhaled	<ul style="list-style-type: none"> •Move person to fresh air. •If person is not breathing, call an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. •Call a poison control center or doctor immediately for treatment advice.

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Bayluscide placards / labels



Propane markings



Propane placards / labels

