

U.S. Department of Agriculture
Grain Inspection, Packers and Stockyards
Administration
Federal Grain Inspection Service
Stop 3630
Washington, DC 20250-3630

FUMIGATION HANDBOOK
CHAPTER 4
9/4/06

CHAPTER 4

RIVER BARGE FUMIGATION

Section Number	Section	Page Number
4.1	POLICY	4-1
4.2	SCOPE	4-1
4.3	PROCEDURES	4-2
4.4	CERTIFICATION	4-4

4.1 POLICY

The fumigation of bulk grain in a river barge(s) is authorized by section 800.84(b),(3) of the regulations under the United States Grain Standards Act as amended. Additionally, the fumigation of bulk rice in river barges is approved under the provisions of the Agricultural Marketing Act of 1946, as amended.

To facilitate the marketing and certification of bulk grain and rice transported via river barge, FGIS will permit stationary (static) fumigation as part of the original inspection service when live insects are found in sufficient quantity to affect the grade. The fumigation procedure will *not* automatically remove the special grade "Infested" for grain and Rough rice or the U.S. Sample grade designation for Brown rice for processing from the inspection certificate because sufficient information is not available to confirm efficacy. Therefore, official personnel must resample the barge after fumigation to determine if the fumigation was effective.

When fumigation is requested as part of the original inspection service, the inspection certificate will reflect the quality factor results obtained from the original sample and infestation based on the condition examination conducted after fumigation. If fumigation does not resolve the infestation situation, subsequent fumigation is considered a change to the lot's identity, and a new original inspection is provided, if requested.

This policy does not affect the review inspection procedures permitted by the regulations.

4.2 SCOPE

Stationary fumigation of grain in river barges is approved for use only within the following parameters.

a. Acceptable Bulk Commodities.

Bulk grains/rice that are acceptable include: barley, canola, corn, oats, rye, sorghum, soybeans, sunflower, triticale, wheat, mixed grain, Rough rice, and Brown rice for Processing.

Note: Stationary fumigation is allowed on Milled rice. However, the U.S. Sample Grade designation will not be removed even if the fumigation is effective because the U.S. Sample Grade designation is applicable to live or dead insects.

b. Acceptable Fumigants.

Acceptable fumigants include only those fumigants which have an EPA-approved label for barge fumigation.

c. Acceptable Fumigant Application Methods.

The application method and dose must comply with the EPA-registered product label and labeling, as well as Department of Transportation (DOT) and State regulations. EPA labeling for does not permit fumigation with a phosphide when the ambient temperature is below 40 degrees Fahrenheit.

d. Acceptable Retention Period.

Fumigated river barges must remain stationary for the minimum retention period on the label.

4.3 PROCEDURES

a. Applicant's Responsibilities.

The applicant for inspection must:

- (1) Notify official personnel of the intent to fumigate infested grain/rice.
- (2) Arrange for a certified applicator to fumigate the infested grain/rice.
- (3) After completion of the acceptable retention period (see 4.2, d), arrange for a person trained in the properties of fumigants to remove the placards prior to re-sampling. This trained person must know and understand fumigants, aeration, disposal of spent fumigants, use of respiratory protection equipment, and removal of placards.
- (4) Notify official personnel when the barge will be ready for re-sampling, and what kind of fumigant was used.
- (5) Arrange for a marine chemist or certified fumigator to issue a gas-free certificate of the cargo compartment within 2 hours prior to the re-sampling of the barge.

b. Certified Applicator's Responsibilities.

A certified applicator must:

- (1) Inspect the carrier and apply the fumigant in accordance with the EPA label or labeling requirements, DOT, and State regulations.
- (2) Install warning placards in accordance with EPA, DOT, and State regulations.
- (3) Arrange, in conjunction with the applicant, for a trained person to aerate the barge to a permissible exposure limit as specified by EPA before removing the placards.

Exposure Limits

<u>Chemical</u>	<u>Safe Level</u>
Metal Phosphide	0.3 ppm
Methyl Bromide	5.0 ppm
Carbon Dioxide	10,000 ppm

c. Official Personnel Responsibilities.

Official personnel must:

- (1) Withhold certification pending subsequent fumigation and verification sampling if the applicant requests fumigation.
- (2) Receive a gas-free certificate from a marine chemist or certified fumigator prior to re-sampling the barge. Gas-free certificates are valid for only two hours from the time of issuance. Delegated/designated agencies may select and use alternative measures to assure safe entry into the barge.
- (3) Check the fumigated barge for the presence of live insects using the official barge probe sampling pattern. While sampling, also check for visible insects on the surface of the grain/rice or on the interior bulkheads. FGIS personnel must not enter the barge unless an observer is stationed outside of the stowage space who can get assistance, if needed, from trained rescuers capable of rendering assistance.

- (4) Record the number of live insects injurious to grain (live weevils/other live insects) found in the barge. This count includes those insects found in the probe samples or in, on, or about the lot.
- (5) Issue the inspection certificate after fumigation.

4.4 CERTIFICATION

a. Certificate Date.

The certificate date is the date the barge is re-sampled to verify fumigation effectiveness.

b. Sampling Date.

The date sampled is the date the original sample was obtained for grading purposes. This does not include the date the barge is re-sampled.

c. Sampling Method.

Indicate the sampling method used to obtain the original sample for grading purposes.

d. Quality Results.

Certificate the grade factors (test weight, moisture, etc.) based on the original sampling service. Certificate the “infested” designation based on the results of the re-sampling activity used to verify fumigation effectiveness.

e. Certificate Statement.

In addition to the normal certification statements used on the certificate, place the following statement in the remarks section of the certificate:

“This grain/commodity was fumigated according to official procedures.”