

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

MAY - 9 1996

Morris Warren
Aberco, Inc.
9430 Lanham-Severn Road
Seabrook, MD 20706

Subject: Propylene Oxide
EPA Registration No. 47870-1
Pesticide Petition No. 6E4647
Your Amendment of December 5, 1995 and Resubmission of
April 3, 1996

Dear Mr. Warren:

The amendment referred to above, submitted in connection with registration under section 3(c)(7)(B) of the Federal Insecticide, Fungicide, and Rodenticide Act, (FIFRA), will be acceptable, provided that you agree in writing that:

1. You will submit the data listed below no later than May 9, 1997:

a. Residue data to determine the off-gassing kinetics for each type of nut listed on the label at the various temperatures which may be present after the completion of the fumigation to the point of consumer purchase.

b. Data with which the Agency can independently verify the percent of the crop treated and the time intervals between the completion of the fumigation and each intermediate transfer up to the point of consumer purchase.

c. Residue data for propylene chlorohydrin (PCH) and propylene bromohydrin (PBH) in or on the treated nuts must be developed concurrently with the data already required for propylene oxide (PPO) through the reregistration program.

2. A revised analytical method must be developed to address the PCH known to form during fumigation of foods with propylene oxide. Revised enforcement or confirmatory methods for PCH, as well as for PPO per se must also be developed and submitted for review and comment no later than December 9, 1996.

CONCURRENCES

SYMBOL	7505C						
SURNAME	Warren						
DATE	MAY - 9 1996						

3. In addition to the above requirements, a monitoring program must be developed to determine residues of PPO, PCH, and PBH in nuts at the fumigation site and at the point of consumer purchase. A protocol for analysis of a statistically defensible number of samples must be submitted to the Agency for review and comment no later than July 9, 1996.

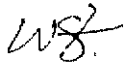
For a detailed consideration of these requirements, refer to the attached reviews of the residue and toxicological data evaluated in support of PP No. 6E4647. Please note that insufficient data were submitted to evaluate the proposed uses for pine nuts and pet foods. Consequently, these uses cannot be approved at this time and must not be included on product labels.

4. Submit five (5) copies of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA Section 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Sincerely,



Walter C. Francis
Acting Product Manager (32)
Antimicrobial Program Branch
Registration Division (7505C)

3 9 5

CAS 75-56-9

Panel A, Center
for revised label 4/29/96

UN1280

PROPYLENE OXIDE

ACCEPTED
with COMMENTS
in EPA Letter Dated:

MAY -- 9 1996

Under the Federal Insecticide,
Fungicide, and Rodenticide Act as
amended, for the pesticide
registered under EPA Reg. No.
41870-1

ACTIVE INGREDIENT

Propylene Oxide.....100%

This product contains 8.92 lbs of active ingredient per gallon

**KEEP OUT OF REACH OF CHILDREN
DANGER**

STATEMENT OF PRACTICAL TREATMENT

- IF SWALLOWED:** Call a physician or Poison Control Center. Induce Vomiting. Never give anything by mouth to an unconscious person. **NOTE TO PHYSICIAN:** Possible mucosal damage may contraindicate the use of gastric lavage.
- IF IN EYES:** Immediately flush with plenty of water for at least 15 minutes. Get medical attention.
- IF INHALED:** Remove to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. If breathing is difficult, give oxygen. **CALL A PHYSICIAN.**
- IF ON SKIN:** Wash off with soap and water while removing contaminated clothing and shoes. **CALL A PHYSICIAN.**

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

Manufactured by ABERCO, Inc.
Seabrook MD

Establishment No.

EPA Registration No. 47870-1
CA Registration No. 47870-00001A

Net Contents 366 lbs.

4/30/96

PRECAUTIONARY STATEMENTS

HAZARDOUS TO HUMANS & DOMESTIC ANIMALS

DANGER

CORROSIVE: Causes eye damage and skin burns. *Harmful if inhaled or swallowed.*

DO NOT GET IN EYES: Wear full face shield and vapor proof goggles when opening drums or handling product. Avoid touching gloves or hands to eyes after handling until possible residues are washed off of hands. If Liquid does get in eyes flush immediately with water for 15 minutes, seek immediate medical attention.

DO NOT GET ON SKIN OR CLOTHING: Wear protective clothing, rubber gloves, and wash before re-use. Discard contaminated leather shoes. In event of a splash, spill or other event which contaminates the skin or clothing, remove contaminated clothing and promptly wash contaminated skin with soap and water. Seek prompt medical attention.

DO NOT BREATHE VAPORS OR FUMES: If the concentration of propylene oxide in the workroom or area exceeds 20 ppm by volume, respiratory protection is mandatory. For respiratory wear a self contained breathing apparatus of a type jointly approved by the Mining Enforcement and Safety Administration and the National Institute for Occupational Safety and Health or ambient breathing apparatus.

DRUMS MAY BE UNDER PRESSURE WHEN OPENED
Relieve pressure by slowly opening the small bung in a safe, well ventilated area, standing up-wind if outdoors and with the barrel between you and the nearest point of air exhaust if indoors. If a hissing sound is heard, do not further open small bung until the hissing sound stops. Continue opening small bung and waiting until any hissing stops. Only when small bung has been completely opened is the pressure to be considered as relieved. See **CLOTHING AND EYE PROTECTION** section for protective gear that must be worn.

EMPTYING DRUMS: Electrically ground drum. The best procedure is to displace the contents with an inert gas. Care must be taken to see that no appreciable pressure is exerted on the drum. A pressure relief device set to several inches of water should be installed on the inert gas line. For details, read AHERCO brochure, "Propylene Oxide".

DO NOT CONTAMINATE CONTENTS
Hazardous polymerization may occur. Do not allow foreign material to get into drums particularly acidic and alkaline materials.

Do not contaminate water, food, or feed by storage or disposal.

STORAGE Store in well ventilated, cool, secure area away from heat, flame, sparks, electrical equipment or other ignition sources.

DRUM DISPOSAL Used drum is filled with an inert gas, the best procedure is to replace bungs immediately after disconnecting drum and give drum to recycler. Otherwise empty drum may contain explosive vapor and should be filled with water immediately after use. Triple rinse or equivalent then offer for recycling or puncture and dispose in a sanitary landfill or by other procedures approved by state and local authorities.

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray, mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed by label instructions, contact your State Pesticide Environmental Control Agency or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

ENVIRONMENTAL HAZARDS

Do not discharge effluent containing this product into lakes, stream ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

PHYSICAL OR CHEMICAL HAZARDS

EXTREMELY FLAMMABLE

This product is an extreme fire hazard. The flash point is -35 F Tag open Cup and the flammable limits of vapor in air, in percent by volume are 2.1 lower and 38.5 upper. Keep away from heat, sparks, open flame and heated surfaces.

IN CASE OF FIRE, SPILL OR LEAK

FIRE: Use carbon dioxide or dry chemical on small fires and "alcohol" foams on large fires. Water spray may be ineffective, but use water to keep exposed drums cool. In advanced or massive fires, firefighting should be done from a safe distance or a protected location. Wear self-contained breathing apparatus and full protective clothing.

SPILL OR LEAK: Evacuate immediate area of spill or leak. Use SCBA or combination air-supplied respirator / SCBA for entry into affected area to correct problem. Move leaking or damaged cylinders outdoors or to an isolated location away from sources of ignition, observing strict safety precautions. Work upwind if possible. Wash fumigant into soil or cover with soil or other absorbent material. Do not permit entry into spill area by unprotected persons until concentration of propylene oxide is determined to be less than 20 ppm.

4 9 5

**PROPOSED AMENDED LABEL FOR PROPYLENE OXIDE
INCLUDING USE ON RAW NUTMEATS**

595

DIRECTIONS FOR USE

Panel C, Right Side
for revised label 4/29/96

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

This fumigant is a highly hazardous material and should only be used by individuals trained in its proper use. Before using, read and follow all label precautions.

All persons working with this fumigant should be knowledgeable of the hazards of this chemical and be trained in the proper use of required respirator equipment and detector devices, emergency procedures and uses of this fumigant.

For non food use as an insecticidal fumigant for the control of stored product insects in bird seed, cosmetic articles and ingredients, gums, ores, packaging, pigments, pharmaceutical materials, soil.

To aid in the control of microbiological spoilage by reducing bacterial and mold contamination in processed spices. Also the following nutmeats which are to be processed into a final food form: almonds, brazil nuts, filberts (hazel nuts), pecans, pistachios and walnuts. Treated nutmeats must be allowed to offgas at least 12 days unless it has been determined that propylene oxide residues are less than 150 ppm.

WHEN USED ALONE

Add product to vacuum fumigation retort at not more than 2.4 ounces propylene oxide in vapor form per cubic foot of space in the retort. *Temperature of product* should not be in excess of 125 deg F. Exhaust retort and air wash with at least four chamber volumes of air. If residues exceed tolerance after 4 air washes, contact ABERCO for additional offgasing procedures.

WHEN USED IN COMBINATION WITH AN INERT GAS SUCH AS CARBON DIOXIDE OR NITROGEN

Propylene oxide may be used in combination with carbon dioxide or nitrogen, which is added to the retort along with propylene oxide. This reduces the flammability of the gases in the retort and increases the efficiency of heat transfer to the items being treated. The approved mixture is 8% propylene oxide and 92% inert gas. This can be obtained by adding propylene oxide in a vacuum to the retort at not more than 0.2 ounces per cubic foot of space in the retort. Carbon dioxide or nitrogen may then be added to restore ambient pressure, taking care not to vent propylene oxide during addition of the inert gas. When this mixture is used, the treatment time may be extended to up to 48 hours. The temperature should not be in excess of 125 deg F. After treatment, exhaust the retort and air wash with at least 4 chamber volumes of air. *If residues exceed tolerance after 4 air washes, contact ABERCO for additional offgasing procedures that may be used.*

**PROTECTIVE CLOTHING AND RESPIRATOR USE,
AND STORAGE OF TREATED COMMODITIES**

CLOTHING AND EYE PROTECTION

When contact with liquid propylene oxide can occur, such as when opening drums or handling leaks or spills, the following protection must be worn: full body protection including solvent proof gloves, clothing, hat, apron, boots, and vaporproof goggles and full face mask if SCBA is not required. Don't re-use contaminated clothing until washed. Discard contaminated leather shoes.

RESPIRATORY PROTECTION

If the concentration of propylene oxide in the working area, as measured by a Dreger Multi Gas Detector Pump with Dreger tube #67 28 971-1A (or equivalent) or a Miran 101 Specific Vapor Analyzer (or equivalent - for additional information contact ABERCO), exceeds 20 ppm (4mg/cubic meter), use of a full face self contained breathing apparatus (SCBA) jointly approved by MSHA and NIOSH or an ambient air breathing apparatus is mandatory.

The use of an approved SCBA or ambient air breathing device is also required when the air level of propylene oxide is not known and/or may be elevated such as in emergency entrance, spills, and leaks.

AERATION AND RE-ENTRY

After fumigation, treated areas must be aerated until the level of propylene oxide is below 20 ppm. Do not allow entry into the treated area by any person before this time unless provided with an MSHA/NIOSH approved SCBA.

PLACARDING

The applicator must placard or post all entrances to the fumigated area with signs bearing:

1. The signal word "DANGER" and the skull and crossbones symbol.
2. The statement "Area under fumigation. DO NOT ENTER".
3. Date of fumigation.
4. Name of fumigant used.
5. Name, address, and telephone number of the applicator.

Do not remove a placard until the treated space is completely aerated. To determine whether aeration is complete, each fumigated site must be monitored and shown to contain less than 20 ppm propylene oxide inside. If less than 20 ppm propylene oxide is detected, the placard may be removed.