Integrated Pest Management and Fumigation Safety Training

January 24 – 26, 2017

Kansas State University, Manhattan, Kansas

USAID FROM THE AMERICAN PEOPLE

TOPS Small Grant

PCI

Port Fumigations

Ed Hosoda
Cardinal Professional Products

USAID
FROM THE AMERICAN PEOPLE

Topics of Discussion

- Types of treatments at port locations in the US
- Regulatory requirements
- Basic information on fumigants
- Applications
- Documentation
- Safety

Types of Port Fumigations

- Import
  - Perishables
    - e.g., Asparagus, Grapes, Citrus, Apples, Tomatoes, Kiwi, Pomegranates, Chestnuts, Ginger, Pineapples, Broccoli, Fresh Berries, Fresh Herbs, Stone Fruit, Garlic, Yams, Squash, Bell Peppers
  - Dry Goods
    - Tile, Bamboo, Seeds, Grains, Nuts, others
- Export
  - Wood Packing Material (ISPM 15)
  - Pallets
  - Logs
  - Nuts
  - Grains
  - Furniture
  - Citrus
  - Stone Fruit

Quarantine Pests

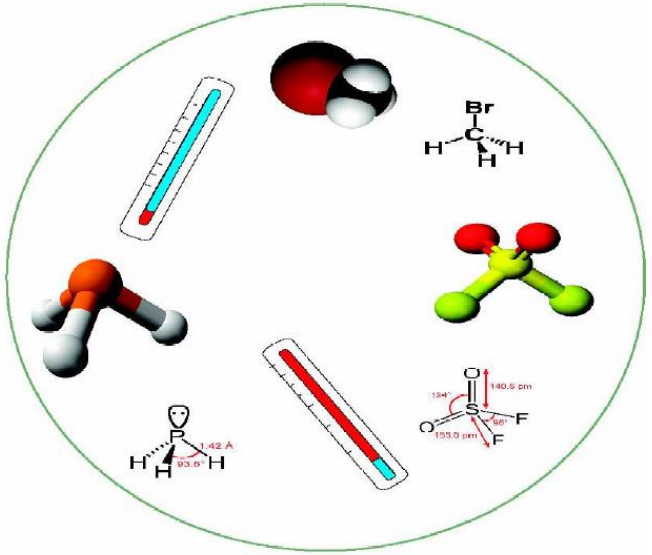
- A “Quarantine Pest” is a pest of potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled
- 239 insects in the USA
- Example, in the United States, the Mediterranean fruit fly, Ceratitis capital, one of the world’s most destructive fruit pests

APHIS Treatment Manual - Imports

- United States Department of Agriculture (USDA)
- Animal and Plant Health Inspection Service (APHIS)
- Plant Protection and Quarantine (PPQ)

USDA
United States Department of Agriculture

Treatment Manual



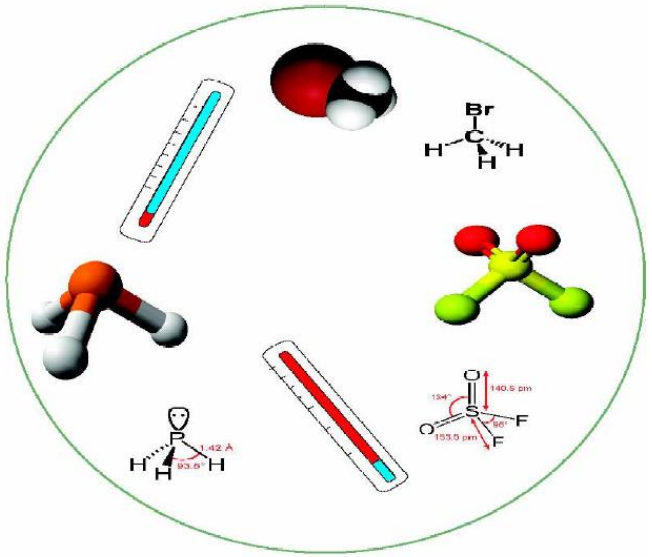
APHIS Treatment Manual - Imports

- Chemical Treatments
- Nonchemical treatments
- Residue monitoring
- Treatment schedules
- Certifying facilities
- Emergency aid and safety
- Equipment
- Imports of commodities

USDA

United States Department of Agriculture

Treatment Manual



APHIS Treatment Schedule

Broccoli raap (rapini) (*Brassica campestris*)

Pest: External feeders and leaf miners

Treatment: **T101-n-2** MB at NAP—tarpaulin or chamber

Temperature	Dosage Rate (lb/1,000 ft³)	Minimum Concentration Readings (ounces) At:	
		0.5 hr	2 hrs
70 °F or above	2 lbs	26	14
60-69 °F	2.5 lbs	32	24
50-59 °F	3 lbs	38	29
45-49 °F	3.5 lbs	43	34
40-44 °F	4 lbs	48	38

Miscellaneous cargo (nonfood, nonfeed commodities)

Three alternative treatments

Pest: Quarantine-significant snails of the families Geomitridae and Hygromiidae, including the following genera:

Candidula	*Monacha*	*Xeropicta*
Cernuella	*Platytheba*	*Xerosecta*
Cochlicella	*Pseudotrichia*	*Xerotricha*
Helicella	*Trochoidea*	
Helicopsis	*Xerolenta*	

Treatment: T403-a-2-1—MB ("Q" label only) at NAP

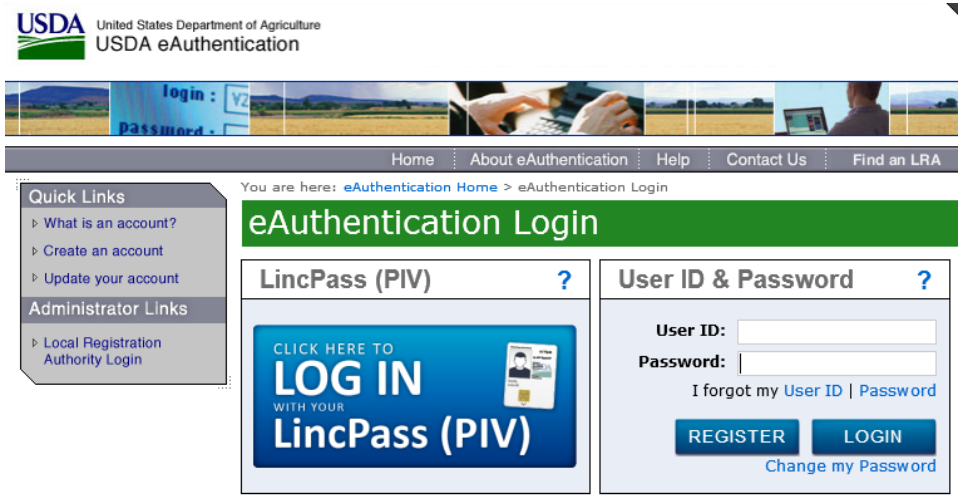
Temperature	Dosage Rate (lb/1,000 ft³)	Minimum Concentration Readings (ounces) At:				
		0.5 hr	2 hrs	24 hrs	48 hrs	72 hrs
55 °F or above	8 lbs	95	64	60	60	40

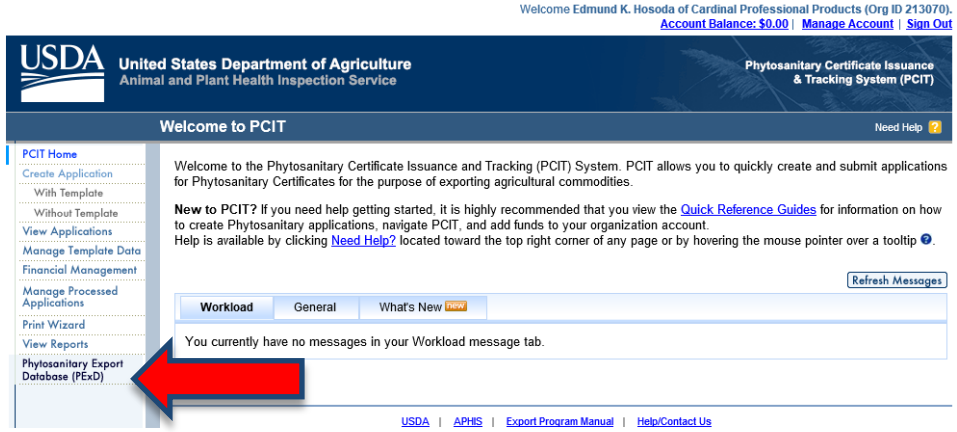
Export Treatments

- Pytosanitary Export Database (PExD)
- USDA Phytosanitary Certificate Issuance & Tracking System (PCIT)

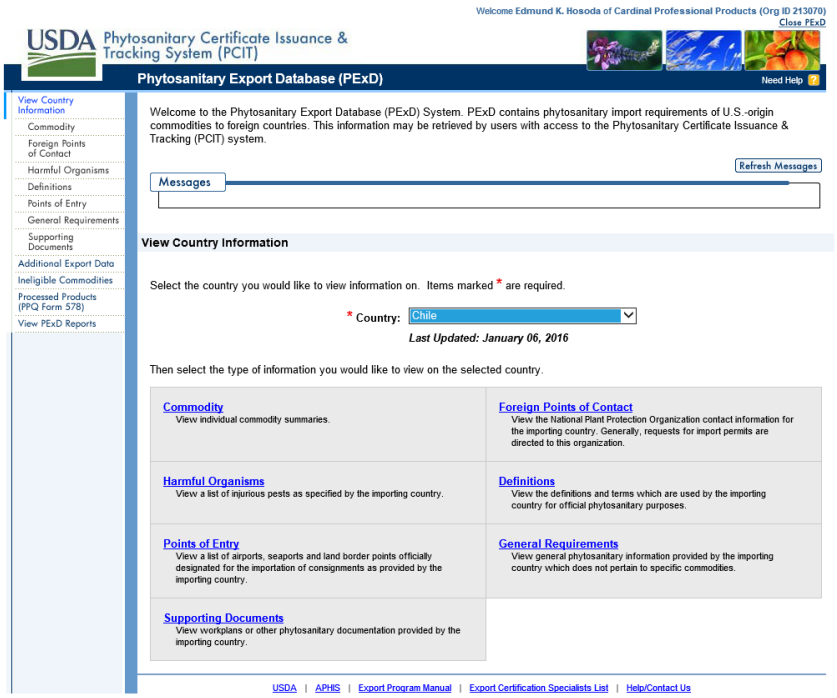
  www.pcit.aphis.usda.gov/pcit

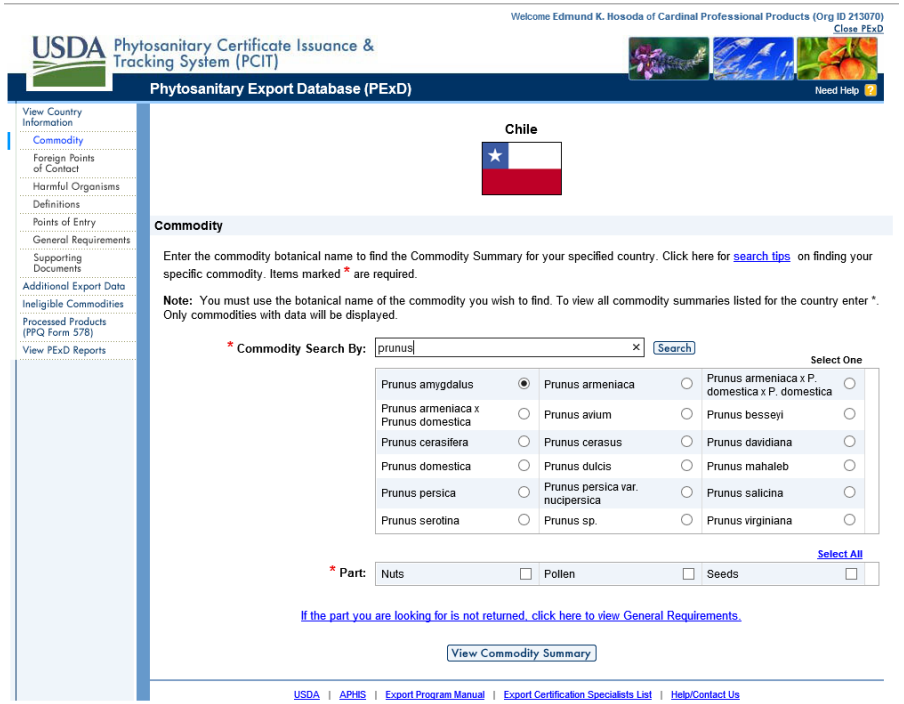
USDA-PCIT Database





USDA-PCIT Database





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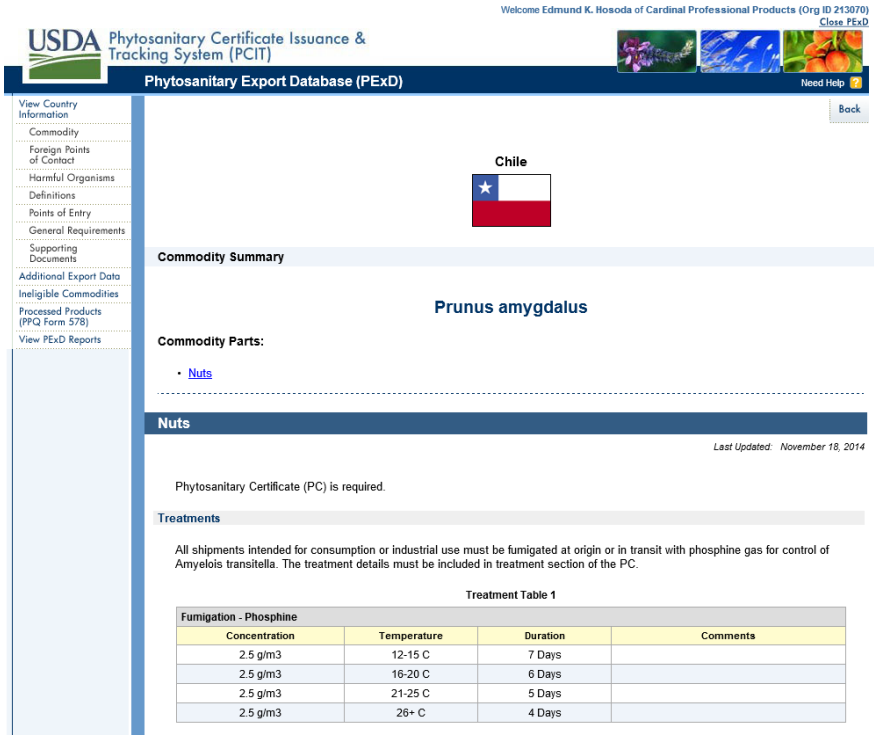


Welcome Edmund K. Hosoda of Cardinal Professional Products (Org ID 213070)
Close PExD

USDA Phytosanitary Certificate Issuance & Tracking System (PCIT)

Phytosanitary Export Database (PExD)

Need Help

View Country Information
Commodity
Foreign Points of Contact
Harmful Organisms
Definitions
Points of Entry
General Requirements
Supporting Documents
Additional Export Data
Ineligible Commodities
Processed Products (PPQ Form 578)
View PExD Reports

Back

Chile

Commodity Summary

Prunus amygdalus

Commodity Parts:

- Nuts

Nuts

Last Updated: November 18, 2014

Phytosanitary Certificate (PC) is required.

Treatments

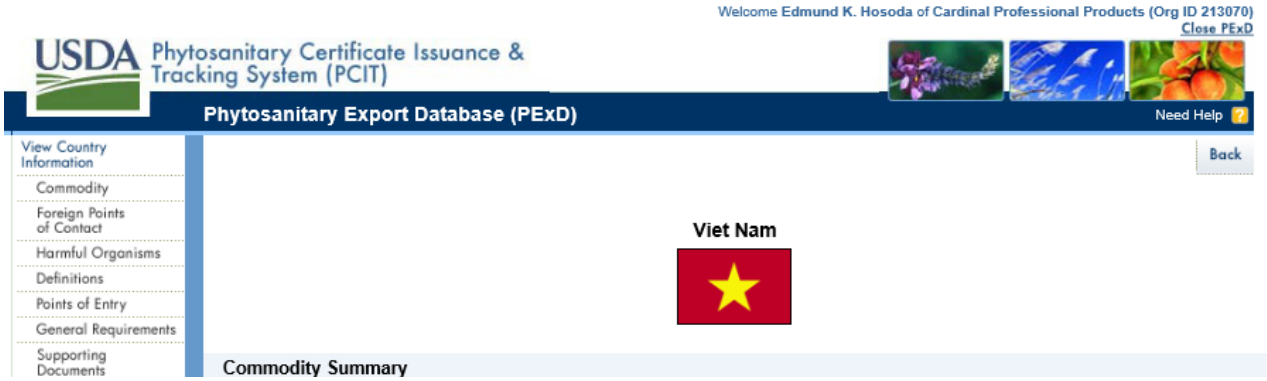
All shipments intended for consumption or industrial use must be fumigated at origin or in transit with phosphine gas for control of Amyelois transitella. The treatment details must be included in treatment section of the PC.

Treatment Table 1

Fumigation - Phosphine			
Concentration	Temperature	Duration	Comments
2.5 g/m3	12-15 C	7 Days	
2.5 g/m3	16-20 C	6 Days	
2.5 g/m3	21-25 C	5 Days	
2.5 g/m3	26+ C	4 Days	

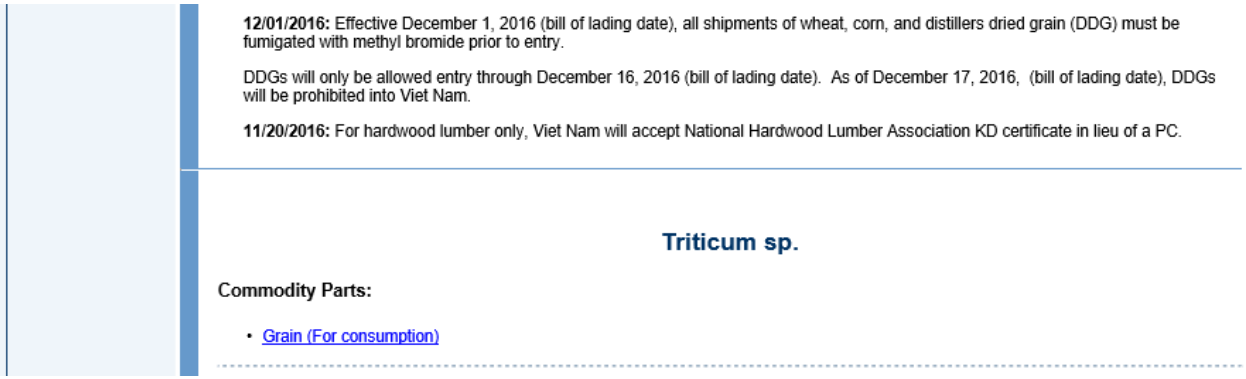
- Treatment is:
  - 2.5 g/m^3 for 7 days@12-15°C
  - Equivalent to 3 Fumi-Cels per 1,000 ft^3
  - Or 1,767 ppm of $ECO_2FUME^{®}$ (not a labeled dose)

Export Requirement Wheat to Viet Nam



Important Notes:

12/01/2016: Effective December 1, 2016 (bill of lading date), all shipments of wheat, corn, and distillers dried grain (DDG) must be fumigated with methyl bromide prior to entry.



Certificate of Fumigation

CERTIFICATE OF FUMIGATION

P.O. BOX 74, Little Britain, Ontario, Canada, K0M 2C0
1-877-786-3211
WWW.PROTECPEST.CA
MOE Operators License

RECEIPT NO._____ ORDER NO._____

EXPORT ☐ DOMESTIC ☐ QUARANTINE ☐ PRE-SHIPMENT ☐ OTHER ☐

CFIA INSPECTED ☐ DOCUMENTATION ATTACHED ☐

PRODUCT_____

COUNTRY OF ORIGIN_____

CARRIER_____

REMARKS_____

CONTAINER NUMBER CONCENTRATION READINGS

_____ 0:00_____G/M3_____G/M3

_____ 0:00_____G/M3_____G/M3

_____ 0:00_____G/M3_____G/M3

_____ 0:00_____G/M3_____G/M3

START DATE_____/_____/_____ TIME_____

FINISH DATE_____/_____/_____ TIME_____

CERTIFIED GAS FREE AT_____/_____/_____ TIME_____

SHIPPER_____ CONSIGNEE_____

_____ _____

_____ _____

APPLICATION RATE _____G/M3 OF_____

FOR A PERIOD OF _____HRS. TOTAL QUANTITY USED_____

MAXIMUM TEMP_____MINIMUM TEMP_____AVERAGE TEMP_____

FUMIGATOR_____LICENCE NUMBER_____

SIGNATURE_____DATE_____

- Name of Fumigators
- Type of Fumigation
- Commodity
- Country of Origin
- Carrier
- Ship/Container Number
- Date & Time of Application
- Finish Application Date & Time
- Fumigant Used
- Rate, Volume
- Signature/Certification

Fumigations Required By Customer

CERTIFICATE OF FUMIGATION

P.O. BOX 74, Little Britain, Ontario, Canada, K0M 2C0
1-877-768-3231
WWW.PROTECPEST.CA
MOE Operators License

RECEIPT NO._____ ORDER NO._____

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_____ 0:00_____G/M3_____G/M3

START DATE_____/_____/_____ TIME_____

FINISH DATE_____/_____/_____ TIME_____

CERTIFIED GAS FREE AT_____/_____/_____ TIME_____

SHIPPER_____ CONSIGNEE_____

_____ _____

_____ _____

APPLICATION RATE _____G/M3 OF_____

FOR A PERIOD OF _____HRS. TOTAL QUANTITY USED_____

MAXIMUM TEMP_____MINIMUM TEMP_____AVERAGE TEMP_____

FUMIGATOR_____LICENCE NUMBER_____

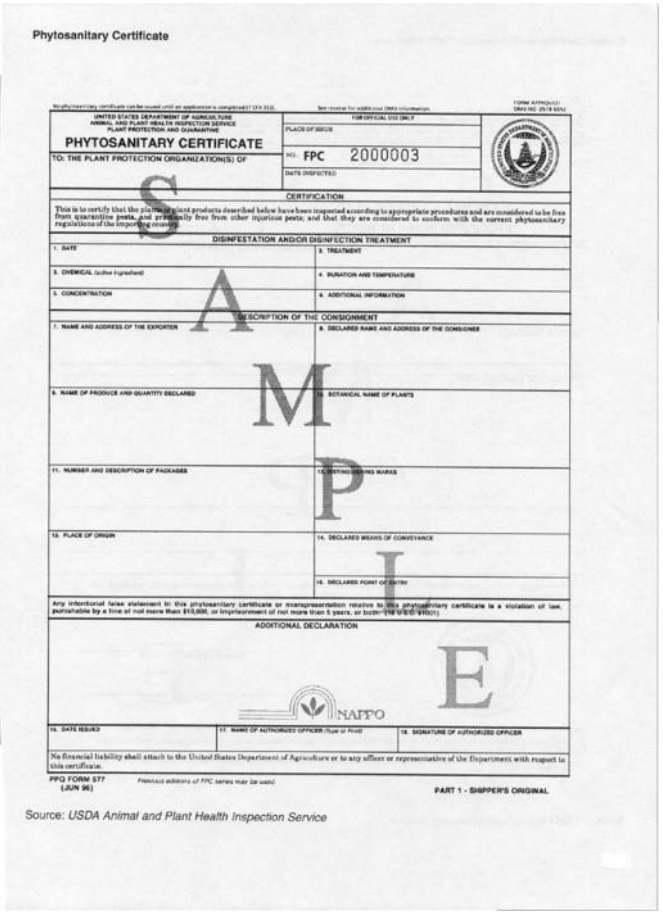
SIGNATURE_____DATE_____

SAMPLE

- If Methyl Bromide requested, cannot certify its use as QPS (Quarantine or Pre-Shipment Exemption)
- Fumigation company or provider fills out a fumigation certificate for documentation

Phytosanitary Certificate

- APHIS issues a phytosanitary certificate
- Fumigation was conducted in accordance with the plant health standards of importing coutries, and according to the APHIS Treatment Manual Treatment Schedules


Phytosanitary Certificate

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
PLANT PROTECTION AND QUARANTINE

PHYTOSANITARY CERTIFICATE

TO: THE PLANT PROTECTION ORGANIZATION(S) OF

FOR OFFICIAL USE ONLY

PLACE OF ISSUE

NO. FPC 2000003

DATE ISSUED

CERTIFICATION

This is to certify that the plants, plant products described below have been inspected according to appropriate procedures and are considered to be free from quarantine pests, and practically free from other injurious pests; and that they are considered to conform with the current phytosanitary regulations of the importing country.

DISINFESTATION AND/OR DISINFECTION TREATMENT

1. DATE
2. TREATMENT
3. CHEMICAL (active ingredient)
4. DURATION AND TEMPERATURE
5. CONCENTRATION
6. ADDITIONAL INFORMATION

DESCRIPTION OF THE CONSIGNMENT

7. NAME AND ADDRESS OF THE EXPORTER
8. DECLARED NAME AND ADDRESS OF THE CONSIGNEE
9. NAME OF PRODUCE AND QUANTITY DECLARED
10. BOTANICAL NAME OF PLANTS
11. NUMBER AND DESCRIPTION OF PACKAGES
12. DISTINGUISHING MARKS
13. PLACE OF ORIGIN
14. DECLARED MEANS OF CONVEYANCE
15. DECLARED POINT OF ENTRY

Any intentional false statement in this phytosanitary certificate or misrepresentation relative to this phytosanitary certificate is a violation of law, punishable by a fine of not more than $10,000, or imprisonment of not more than 5 years, or both. (18 U.S.C. 1001)

ADDITIONAL DECLARATION

NAPPO

16. DATE ISSUED
17. NAME OF AUTHORIZED OFFICER (Type or Print)
18. SIGNATURE OF AUTHORIZED OFFICER

No financial liability shall attach to the United States Department of Agriculture or to any officer or representative of the Department with respect to this certificate.

PPQ FORM 577 (JUN 96)

Previous editions of PPC series may be used

PART 1 - SHIPPER'S ORIGINAL

SAMPLE

Source: *USDA Animal and Plant Health Inspection Service*

Phosphine Fumigants

Methyl Bromide

Sulfuryl fluoride – Vikane® & ProFume®

Carbon dioxide – Organic

60%-70% Concentration, 4 days minimum

Choosing a Dose – Aluminum phosphide

Aluminum phosphide Pesticide Label

Product	Per 1,ooo ft^3
Pellets	100-725
Tablets	20-145

FGIS Fumigation Handbook Requirements

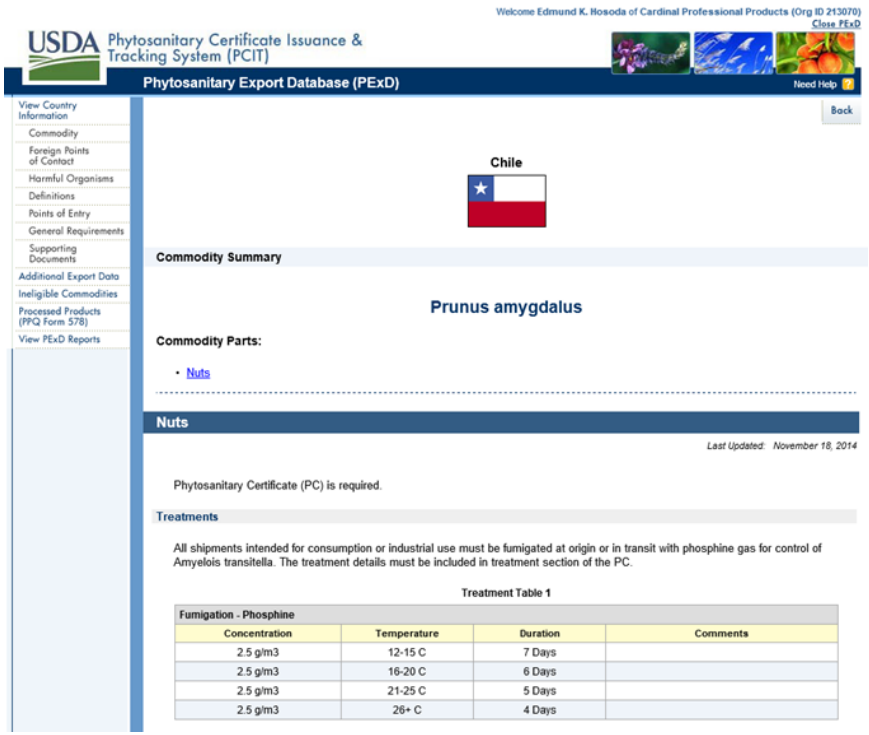
Application Method with Minimum Fumigant Dosage Rate and Exposure Time in Days by Cargo Hold Depth*				
Application Method and Minimum Dosage Rate Per 1,000 Cubic Feet of Storage Space	CARGO HOLD DEPTH IN METERS			
	< 6	6 – 12	>12 – 20	>20
	FUMIGANT EXPOSURE TIME IN DAYS			
Surface Application 45 grams of metal phosphide per 1,000 cu. ft	9	15	Not Acceptable	Not Acceptable
Subsurface / Trench-in Application 45 grams of metal phosphide per 1,000 cu. ft	8	15	18	Not Acceptable
Recirculation Application Method A 33 grams of metal phosphide per 1,000 cu. ft	4	7	9	9
Recirculation Application Method B 45 grams of aluminum phosphide pellets per 1,000 cu. ft or 30 grams of magnesium phosphide per 1,000 cu. ft	3.5	3.5	3.5	3.5
* Cargo Hold Depth is the length from the bottom of the hold to the top of the combing.				

Exposure Period – Follow Import/Export Requirements

Temperature	Pellets	Tablets
<40° F	Do not fumigate	Do not fumigate
40-53° F	8 days	10 days
54-59° F	4 days	5 days
60-68° F	3 days	4 days
>68° F	2 days	3 days

Aluminum phosphide Pesticide Label

Exposure Period – Follow Import/Export Requirements



Welcome Edmund K. Hosoda of Cardinal Professional Products (Org ID 213070)
Close PExD

USDA Phytosanitary Certificate Issuance & Tracking System (PCIT)

Phytosanitary Export Database (PExD)

Need Help

View Country Information
Commodity
Foreign Points of Contact
Harmful Organisms
Definitions
Points of Entry
General Requirements
Supporting Documents
Additional Export Data
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Chile

Commodity Summary

Prunus amygdalus

Commodity Parts:

- Nuts

Nuts

Last Updated: November 18, 2014

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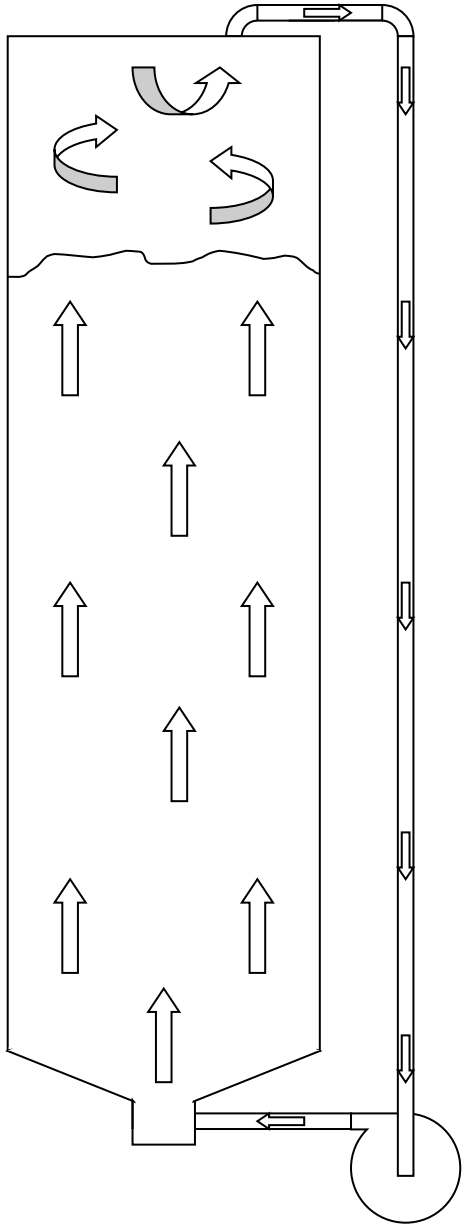
2.5 g/m3	21-25 C	5 Days	
2.5 g/m3	26+ C	4 Days	

- Export of almonds to Chile requires 2.5 g/m^3
- Other non-regulated fumigations, follow the label suggestions

Stored Grain Application Methods

Recirculation Method

- Recirculation Method
- Insures even distribution of fumigant
- Workers do not have to enter bin/tank to apply fumigant
- Used for grains already in storage
- System installation can be either permanent or temporary
- Dosage rates can often be reduced



Recirculation Method

Temporary installation using flexible plastic drainage pipe

Recirculation Method

Fumigation of Railcars, Containers, Trucks, Vans and Other Transport Vehicles

Container & Railcar Fumigation

- "Ready-made" fumigation chamber
- Railcars may be fumigated in-transit
- Containers may not be fumigated in-transit (except when transported on a railcar or ship)
- Careful inspection required to insure gas-tightness

Visual Inspection Prior to Loading or Fumigating

- Check gaskets for excessive wear
- Determine all areas that require sealing
- If possible, inspect containers prior to loading
- Check container floors and walls for holes or damage

Sealing

Seal any vents or other areas noted during inspection

Dosage

- Based on cubic footage
- Normally found on side or door
- Consult manual for rate
- Dustless application -vs.- Direct addition

Dustless Application Methods

Use for processed foods or other commodities where contact with fumigant or fumigant dust is undesirable

Fumi-Kap & Fumi-Bonnet

Fumi-Disc

Fumi-Cel Pouch

Application Methods

Phostoxin® Prepacs can be taped to the interior of the container clear from obstructions

Application Methods

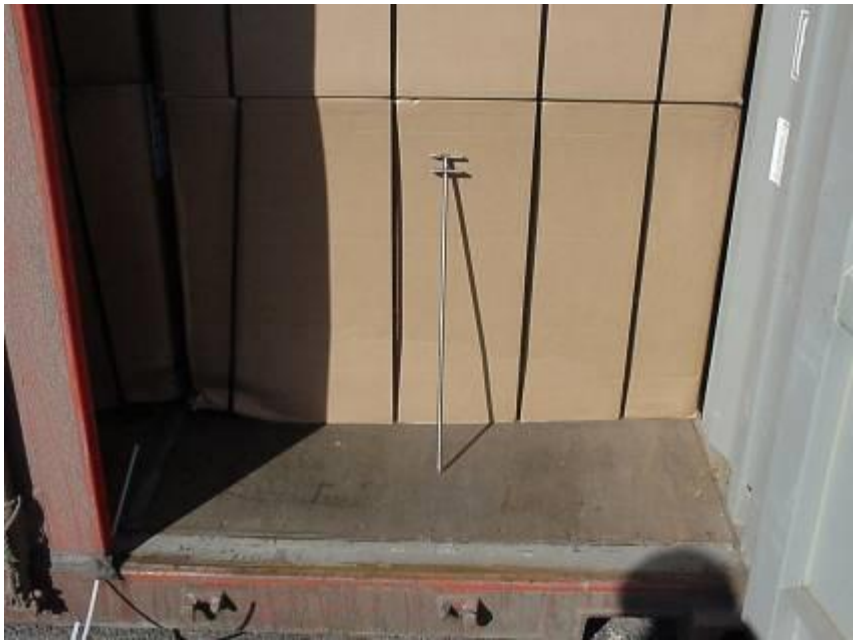
Fumi-Cels can be placed on the floor or held in a rack

Application Methods

Placed on a cardboard applicator

(Fumi-disc)

Monitoring



Sampling lines should be clearly marked

Close & Secure the Doors

Placards

Placard containers front & rear

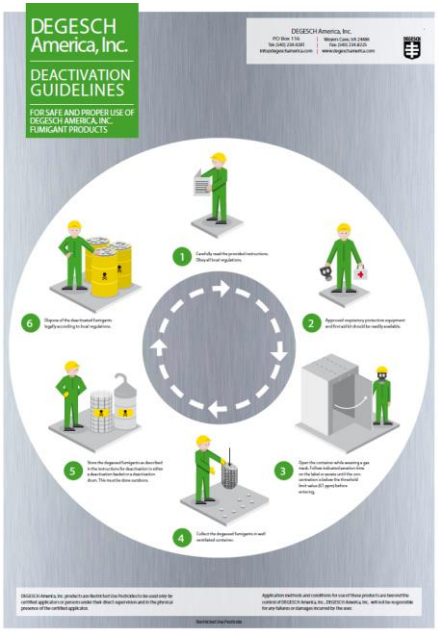
CAI
CAXU 424 496 6
US 4310
MAX GROSS 30 480 KGS 67 200 LBS
TARE 3 740 KGS 8 245 LBS
PAYLOAD 26 740 KGS 58 955 LBS
CU CAP 67 8 CUM 2 394 CUFT

Efficacy Monitoring

Readings should be taken and documented

Opening Instructions

Opening instructions should be placed on each vehicle in an area most likely to be noticed



Industrial Hygiene Monitoring

Do not exceed the TLV of 0.3 ppm in any occupied areas

Opening Procedures

- Workers **must** wear respiratory protection if gas concentrations exceed 0.3ppm
- Remove all seals and open doors to allow for aeration

Sea Containers

United States Department of Agriculture
Animal and Plant Health Inspection Service
Plant Protection and Quarantine

USDA APHIS

Standard Containerized Fumigation

Preparing Containerized Logs for Fumigation

Log Fumigation in Containers

Fumigant Recapture/Scrubbing

Grain Storage at Ports

Bunker & Tarpaulin Fumigations

- Inexpensive fumigation chamber
- Minimizes amount of fumigant required
- Care must be taken to insure a good seal
- Corners and floor
- Easily subject to damage
- Corner boxes, pallets, etc
- Requires careful monitoring to insure against exposure to nearby workers, especially during aeration

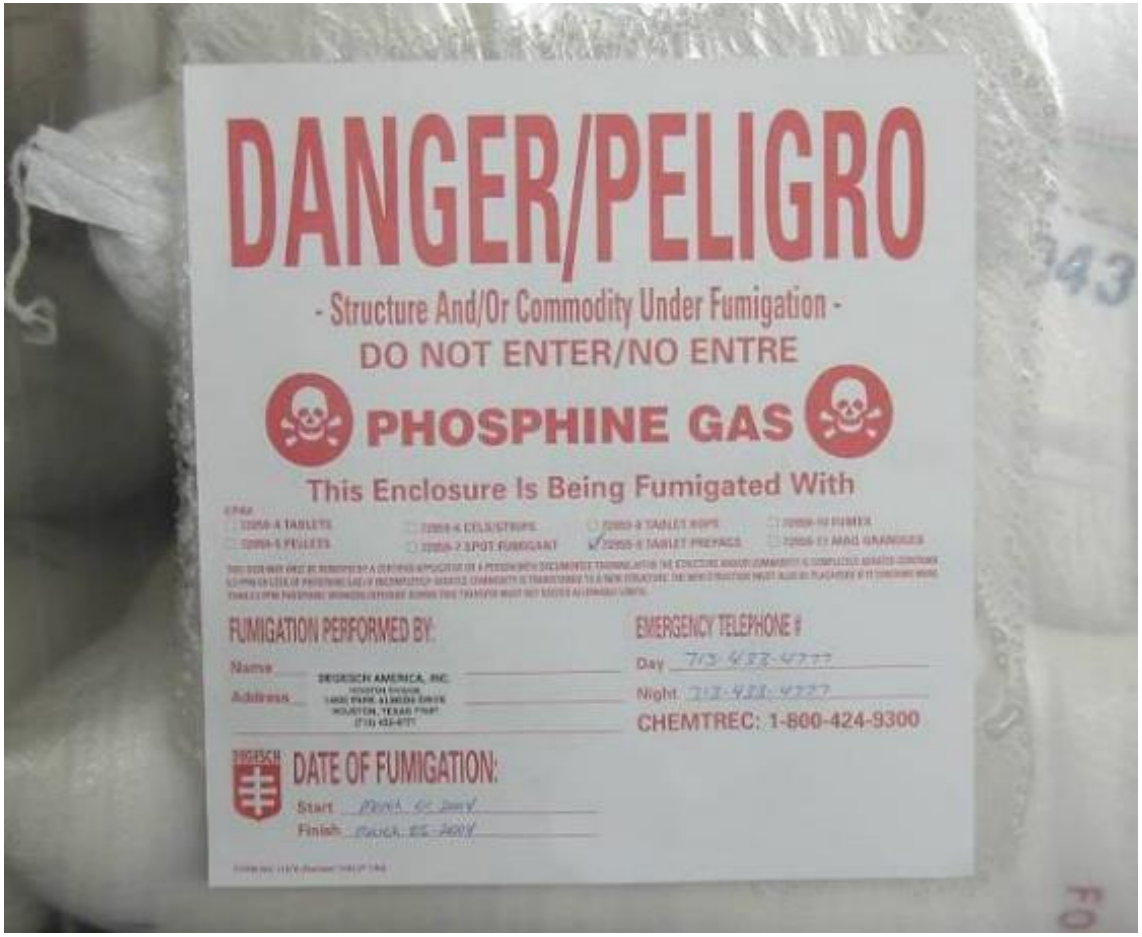
Sealing Procedures

Sealing Procedures

Sealing Procedures

Sealing Procedures

Placard

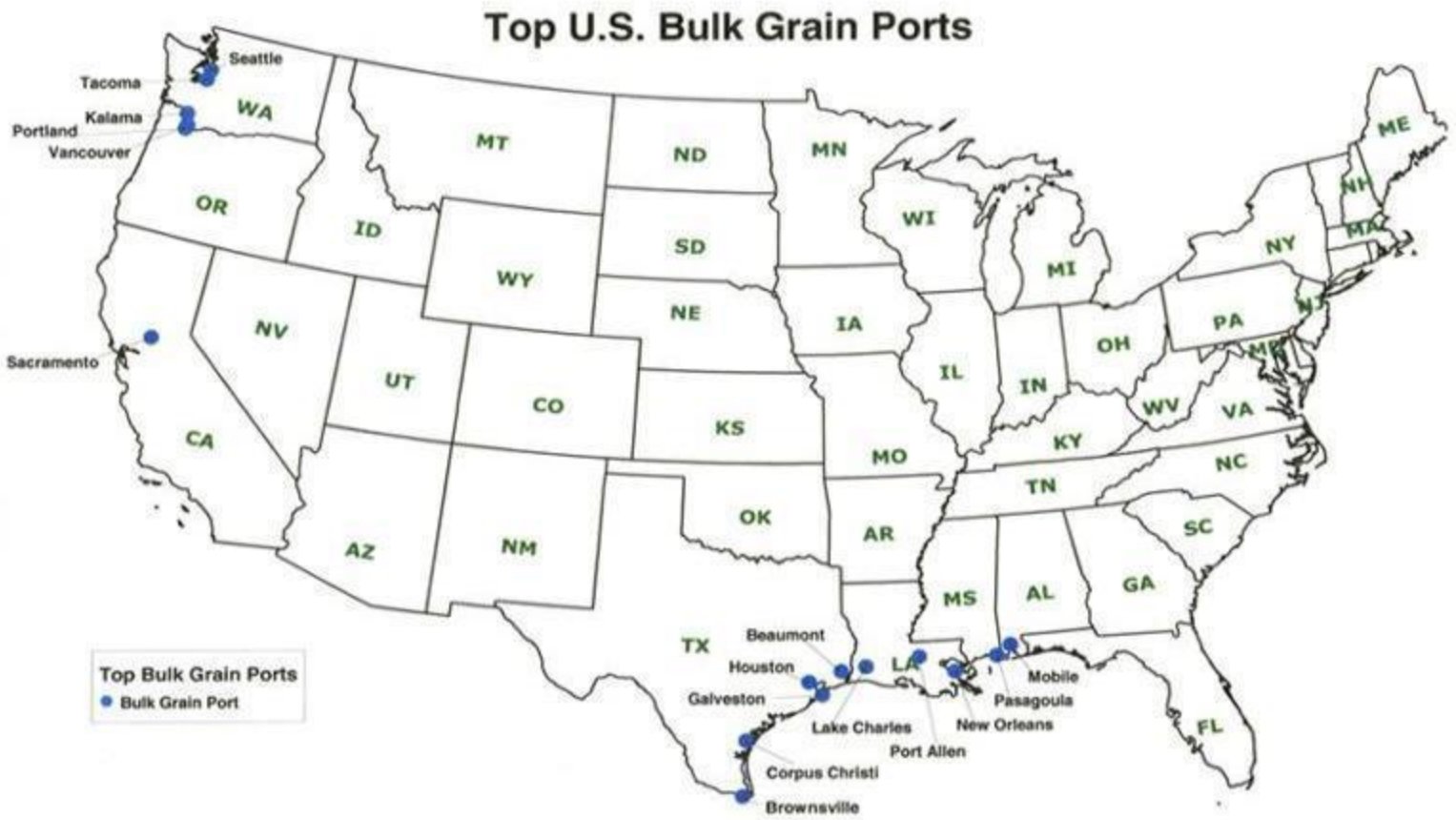

DANGER/PELIGRO
- Structure And/Or Commodity Under Fumigation -
DO NOT ENTER/NO ENTRE
PHOSPHINE GAS
This Enclosure Is Being Fumigated With
FUMIGATION PERFORMED BY:
Name
Address
EMERGENCY TELEPHONE #
Day
Night
CHEMTREC: 1-800-424-9300
DATE OF FUMIGATION:
Start
Finish

Under Tarpaulins

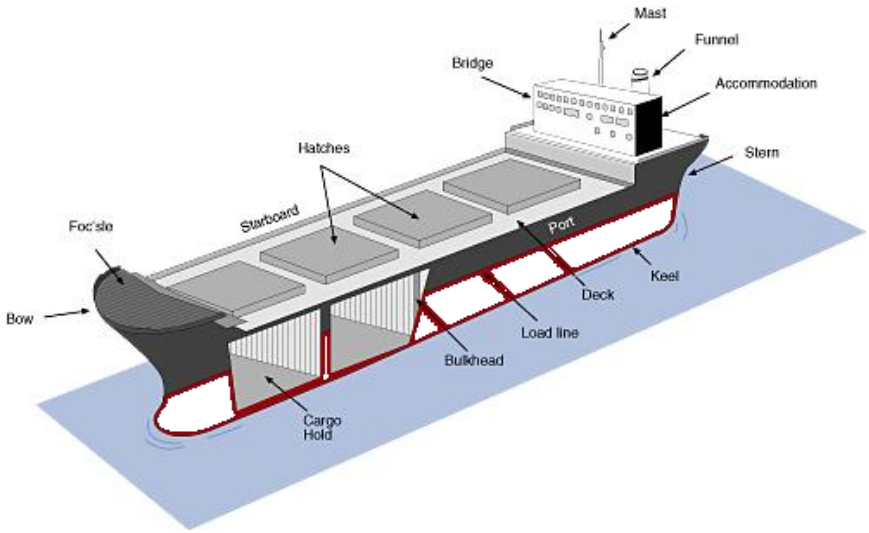
Log Fumigations Under Tarpaulin

Fresh Commodities Under Tarpaulin

Top U.S. Grain Ports



Why Fumigate Ships?



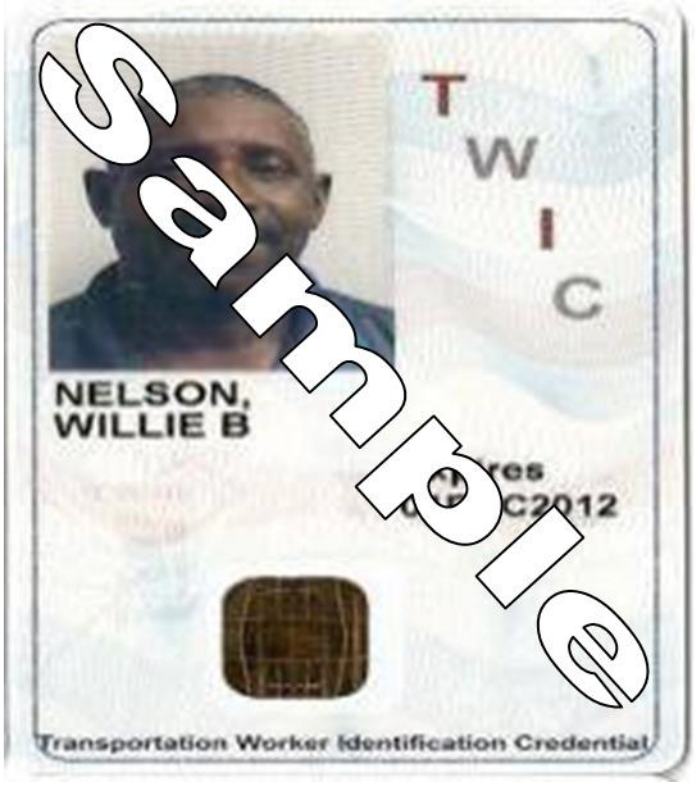
- Contract requirement of the buyer
- Letter of Credit requirement
- Stipulation in Tender Offer
- Insect Infestation

Government Agencies

- EPA – Label / Applicator's Manual / Registration / FMP
- Federal Grain Inspection Service (FGIS) Fumigation Handbook
  - http://www.usda.gov/gipsa/reference-library/handbooks/hb.htm
- US Coast Guard 46 CFR 147A
  - http://www.access.gpo.gov/nara/cfr/waisidx_99/46cfr147A_99.html
- Department of Transportation (FMCSA) 49 CFR 1.73g
- DOT Rule HM-232
- State & Local Agencies – Department of Agriculture
- Transportation Worker Identification Credential (TWIC)
  - http://twicinformation.tsa.dhs.gov

TWIC

- Transportation Worker Identification Credential (TWIC) is a vital security measure that will ensure individuals who pose a threat do not gain unescorted access to secure areas of the nation's maritime transportation system
- The TSA will issue a tamper-resistant "Smart Card" containing the worker's biometric (fingerprint template) to allow for a positive link between the card itself and the individual.



Intransit Shiphold Fumigation

Conditions At Sea

Conditions At Sea

Conditions At Sea

Application Methods

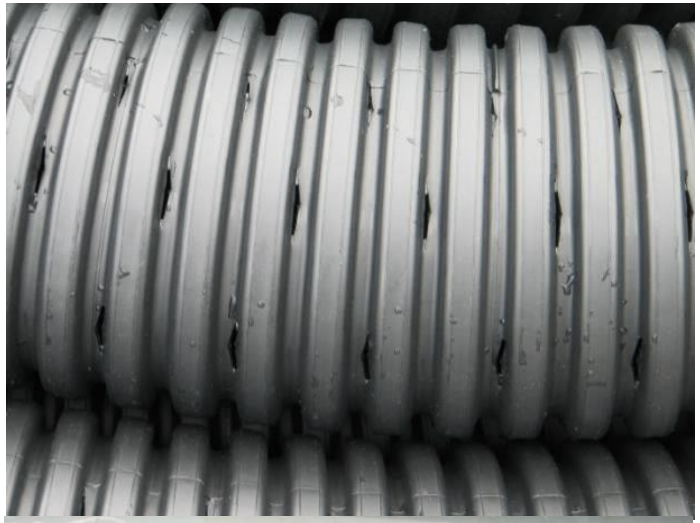
Direct Addition

THE FUMIGANT SHOULD BE APPLIED UNIFORMLY ACROSS THE COMMODITY OR BE PROBED BENEATH THE SURFACE

Application Methods

Dustless

Recirculation in Shipholds



Ship Fumigation Concentrations

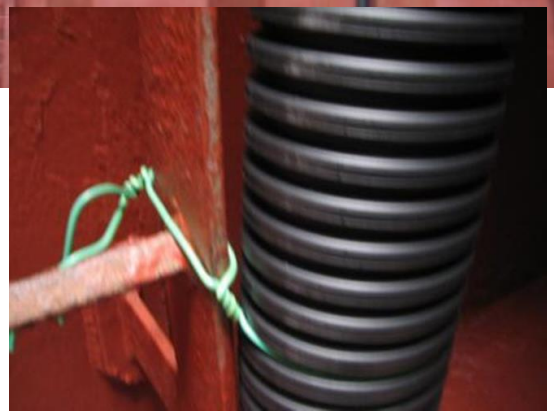
Table 1. The in-transit concentrations of phosphine in holds 1 and 6 after treatment (1.6 g PH_3/m^3) with a passive distribution using a probed Fumisleeve system

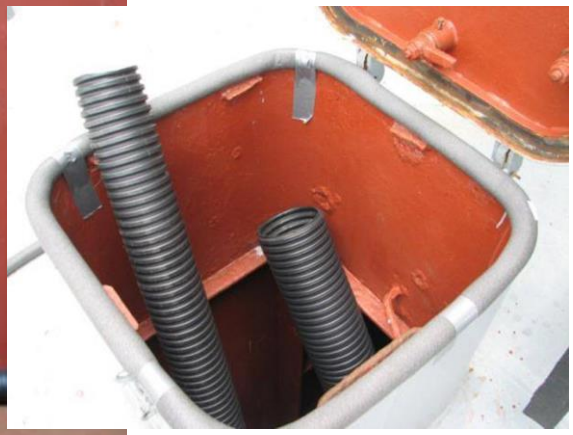
Position	Highest concentration, ppm		Minimum days >30 ppm		Minimum days >100 ppm	
	Hold 1	Hold 6	Hold 1	Hold 6	Hold 1	Hold 6
1	660	1,200	16	21	6	20
2	425	530	20	18	17	17
3	195	75	12	16	8	0
4	430	95	18	10	14	0
5	>6,000	6,900	21	20	21	21
6	≥4,100	840	20	19	20	18
7	200	37	17	4	[illegible]	0
8	630	905	11	21	6	21
9	380	50	11	2	1	0
10	1,890	45	18	2	13	0
11	64	7	[illegible]	0	[illegible]	0
12	2,700	500	20	18	19	17

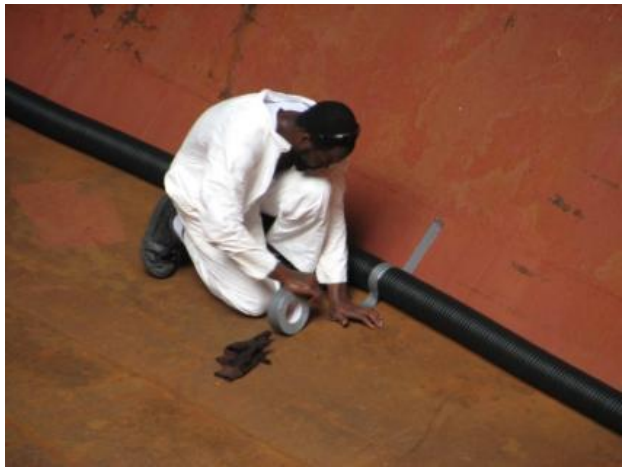
Table 3. The in-transit concentrations of phosphine in holds 4 and 7 using a positive recirculation-Degesch Tablet Rope system at doses of 1.0 g PH_3/m^3 in hold 4 and 0.8 g PH_3/m^3 in hold 7

Position	Highest concentration, ppm		Minimum days >30 ppm		Minimum days >100 ppm	
	Hold 4	Hold 7	Hold 4	Hold 7	Hold 4	Hold 7
1	850	610	10	9	7	7
2	600	495	21	15	10	6
3	700	520	21	21	13	12
4	615	540	19	19	13	13
5	595	530	15	16	11	9
6	480	375	21	17	11	8
7	540	450	19	21	11	11
8	495	540	7	9	7	9
9	695	550	19	21	13	13
10	670	550	16	17	11	9
11	630	580	21	20	11	9
12	690	560	21	21	11	13

Three Methods of Aluminum Phosphide Application for the In-Transit Fumigation of Grain Aboard Deep-Draft Bulk Cargo Ships, Leesch, Arthur, Davis, Journal of Economic Entomology, August 1990

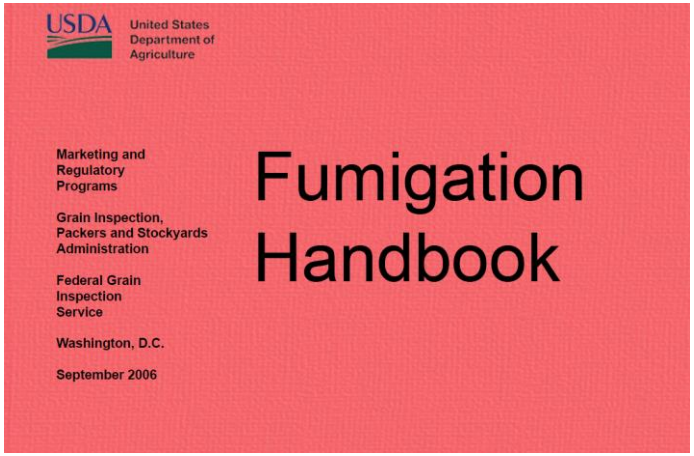






Fumigation Safety Meeting

Documentation



Example Of
Vessel Suitability Statement

Captain or Officer In Charge of __(vessel name)__ .

I hereby certify that I have personally inspected the holds or tanks aboard the above named vessel on (date) and found the following to be true regarding the suitability of the holds or tanks for in-transit fumigation:

Hold/Tank Number	Suitable	Not Suitable	Reason Not Suitable

Signed: _____
(Certified Applicator)

Acknowledged: _____
(Vessel captain or Person in Charge of Vessel)

Example Of
Statement of Fumigant Application Compliance

Captain or Officer In Charge of __(vessel name)__ .

I hereby certify that metal phosphide fumigant formulation was applied to the grain on the above referenced vessel on (date). I further certify that the fumigant formulation application was made in accordance with U.S. Environmental Protection Agency, U.S. Coast Guard, and applicable State and local laws and regulations and applicable Federal Grain Inspection Service instructions.

The grain in the following holds or tanks was treated:

Hold/Tank Number	Hold/Tank Depth	Type and Quantity of Fumigation Formulation Used	Cubic Capacity of Hold/Tank	Method of Application

It is my understanding that the above named vessel is destined for (country) with an estimated voyage time of (days).

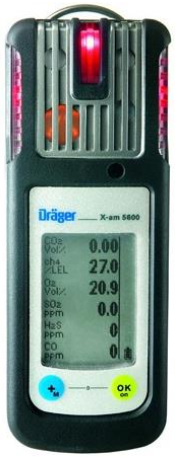
I certify that immediately following application of the fumigant formulation all openings to the fumigated space were closed and placarded with appropriate warning signs. I further certify that all openings to the fumigated space have been checked and no fumigant gas was leaking at the time of the vessel's departure.

Signed: _____
(Certified Applicator)

Acknowledged: _____
(Vessel captain or Person in Charge of Vessel)

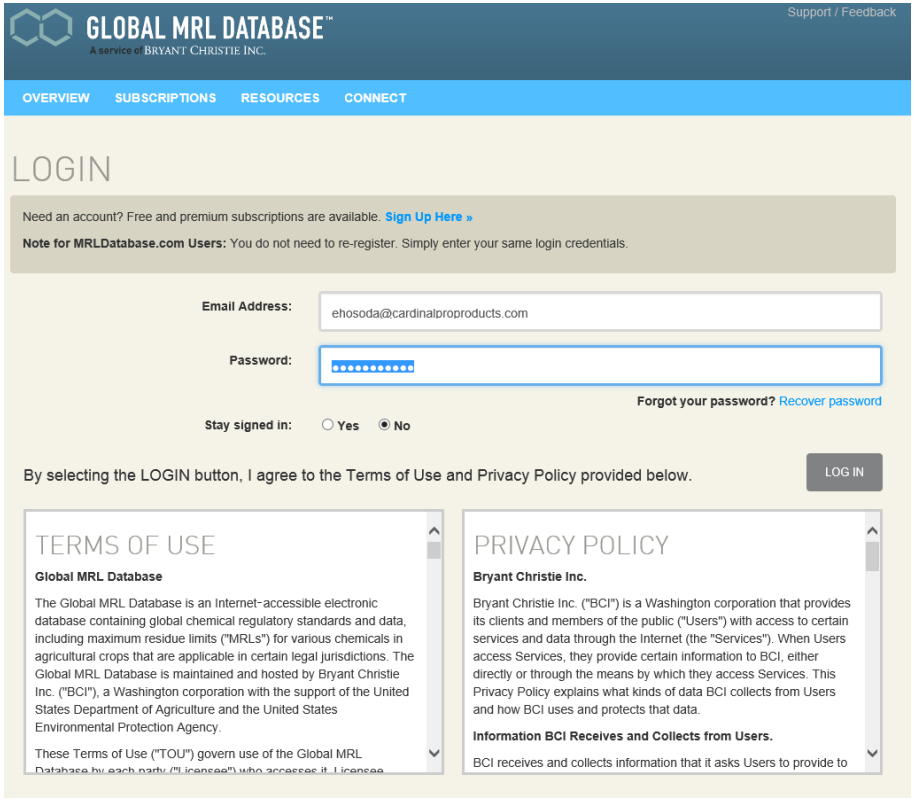
Fumigant Monitoring Equipment

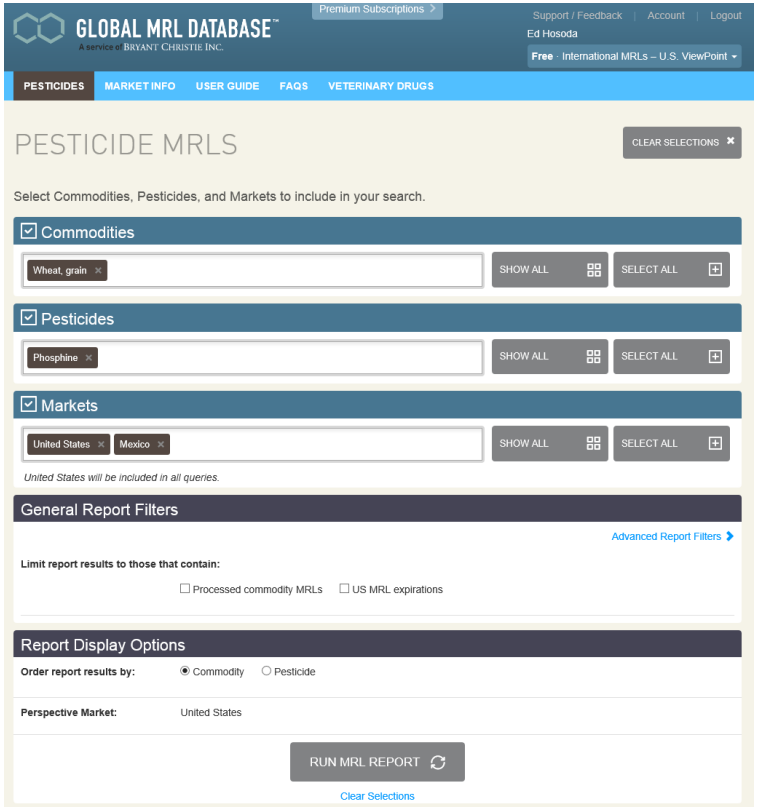
Fumigant Monitoring Equipment



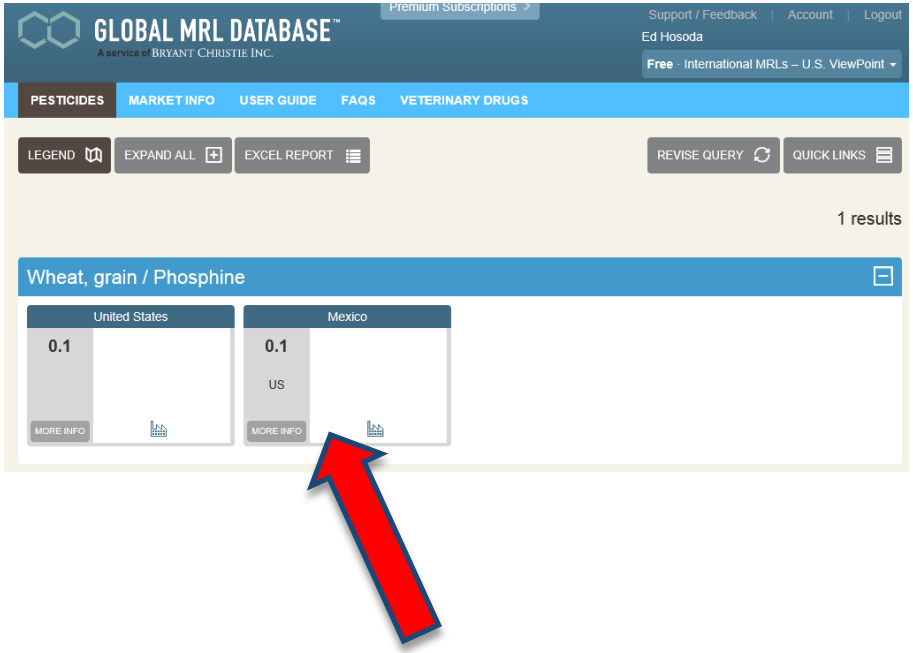
Fumigant Monitoring Equipment

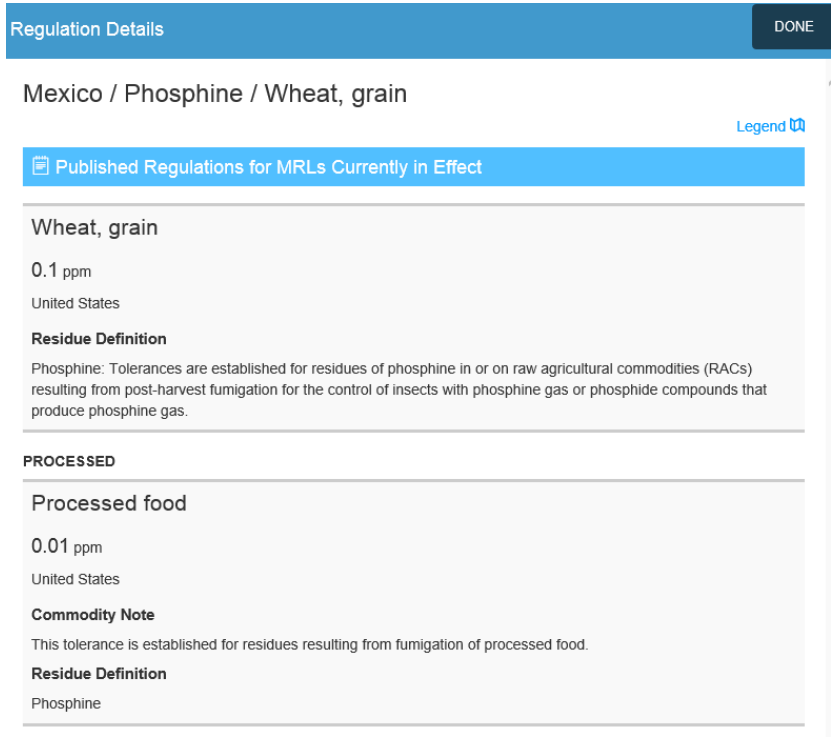
MRL's, CODEX and Country Requirements





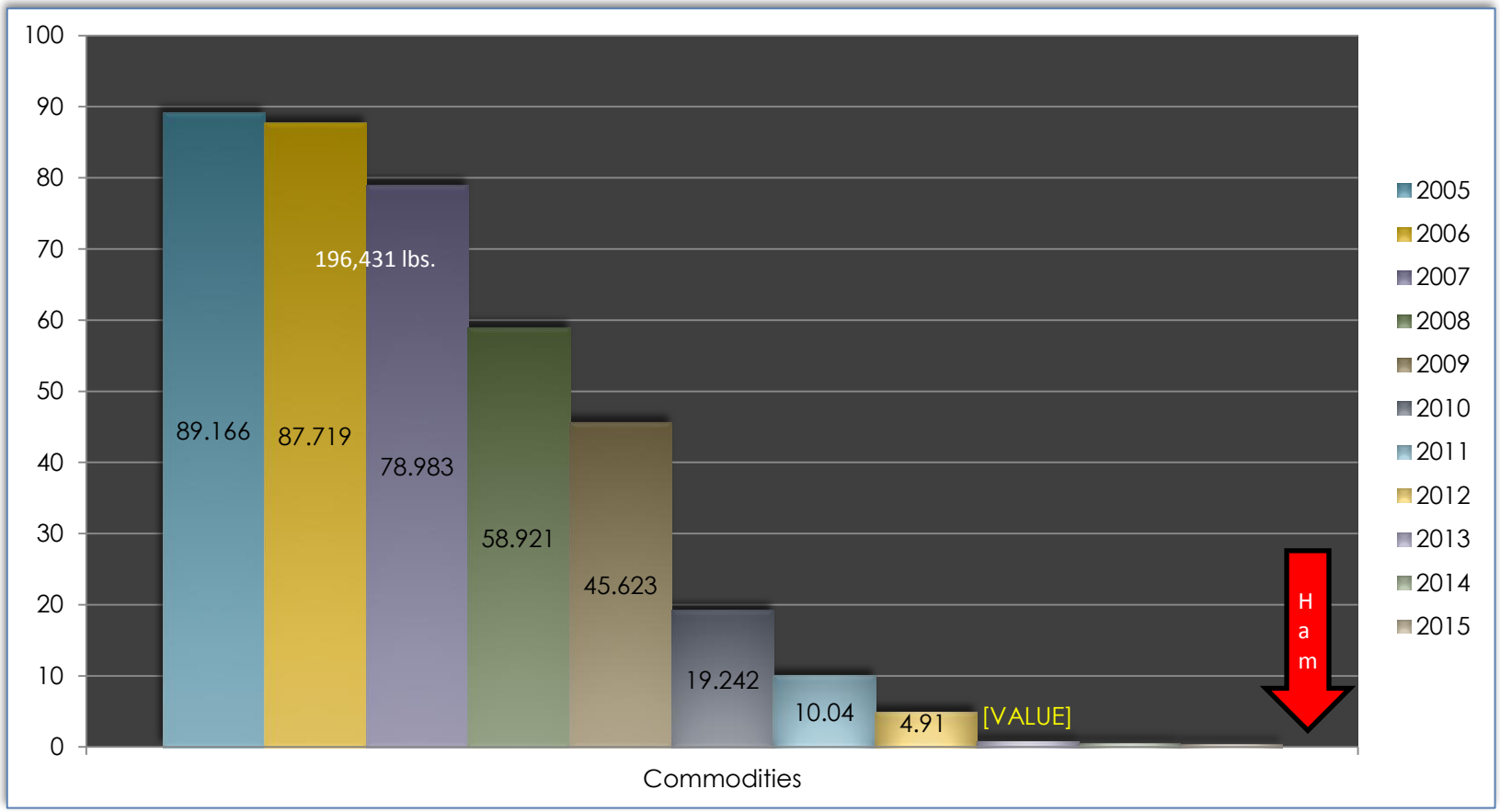
www.GlobalMRL.com





Phaseout of Methyl Bromide

CUE Post-Harvest Commodities, Metric Tons



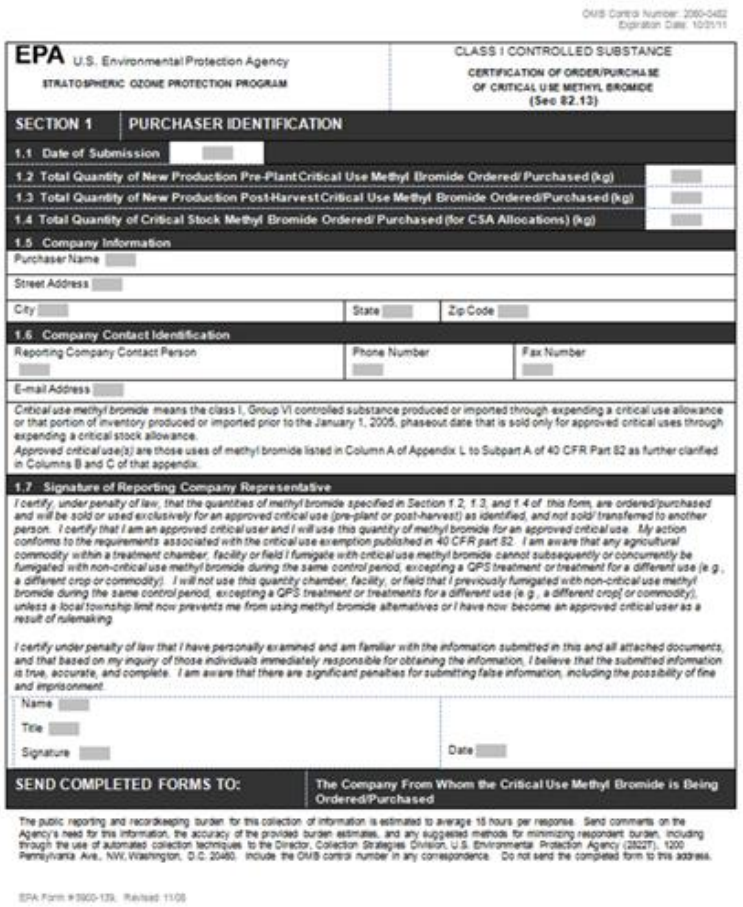
Methyl Bromide QPS, CUE & Pre-phaseout

- Quarantine
  - Treatments to prevent the introduction, establishment and/or spread of quarantine pests
- Pre-Shipment
  - Those non-quarantine applications [applied] within 21 days prior to export to meet the official requirements of the importing country or existing official requirements of the exporting country

- CUE uses…only Ham

- Pre-phaseout, no restrictions…follow the label

Certificates…Official Documents



EPA U.S. Environmental Protection Agency
STRATOSPHERIC OZONE PROTECTION PROGRAM

CLASS I CONTROLLED SUBSTANCE
CERTIFICATION OF ORDER/PURCHASE OF CRITICAL USE METHYL BROMIDE
(Sec 82.13)

SECTION 1 PURCHASER IDENTIFICATION

1.1 Date of Submission
1.2 Total Quantity of New Production Pre-Plant Critical Use Methyl Bromide Ordered/ Purchased (kg)
1.3 Total Quantity of New Production Post-Harvest Critical Use Methyl Bromide Ordered/Purchased (kg)
1.4 Total Quantity of Critical Stock Methyl Bromide Ordered/ Purchased (for CSA Allocations) (kg)
1.5 Company Information
Purchaser Name
Street Address
City | State | Zip Code
1.6 Company Contact Identification
Reporting Company Contact Person | Phone Number | Fax Number
E-mail Address

Critical use methyl bromide means the class I, Group VI controlled substance produced or imported through expending a critical use allowance or that portion of inventory produced or imported prior to the January 1, 2005, phaseout date that is sold only for approved critical uses through expending a critical stock allowance.
Approved critical use(s) are those uses of methyl bromide listed in Column A of Appendix L to Subpart A of 40 CFR Part 82 as further clarified in Columns B and C of that appendix.

1.7 Signature of Reporting Company Representative

I certify, under penalty of law, that the quantities of methyl bromide specified in Section 1.2, 1.3, and 1.4 of this form, are ordered/purchased and will be sold or used exclusively for an approved critical use (pre-plant or post-harvest) as identified, and not sold/ transferred to another person. I certify that I am an approved critical user and I will use this quantity of methyl bromide for an approved critical use. My action conforms to the requirements associated with the critical use exemption published in 40 CFR part 82. I am aware that any agricultural commodity within a treatment chamber, facility or field I fumigate with critical use methyl bromide cannot subsequently or concurrently be fumigated with non-critical use methyl bromide during the same control period, excepting a QPS treatment or treatment for a different use (e.g., a different crop or commodity). I will not use this quantity chamber, facility, or field that I previously fumigated with non-critical use methyl bromide during the same control period, excepting a QPS treatment or treatments for a different use (e.g., a different crop[or commodity), unless a local township limit now prevents me from using methyl bromide alternatives or I have now become an approved critical user as a result of rulemaking.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name
Title
Signature | Date

SEND COMPLETED FORMS TO: The Company From Whom the Critical Use Methyl Bromide is Being Ordered/Purchased

The public reporting and recordkeeping burden for this collection of information is estimated to average 15 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

EPA Form # 5900-139, Revised 11/08

CUE

OMB Control Number: 2060-0170
Expiration Date: 4/30/12

EPA U.S. Environmental Protection Agency
STRATOSPHERIC OZONE PROTECTION PROGRAM

CLASS I CONTROLLED SUBSTANCE
CERTIFICATION OF ORDER/PURCHASE OF QPS METHYL BROMIDE
(Sec 82.13)

SECTION 1 PURCHASER IDENTIFICATION AND METHYL BROMIDE USE

1.1 Date of Submission
1.2 Quantity of Methyl Bromide Ordered/ Purchased (kg)
1.3 Company Information
Purchaser Name
Street Address
City | State | Zip Code
1.4 Company Contact Identification
Reporting Company Contact Person | Phone Number | Fax Number
E-mail Address

Quarantine Applications, with respect to Class I, Group VI controlled substances (methyl bromide), are treatments to prevent the introduction, establishment and/or spread of quarantine pests (including diseases), or to ensure their official control, where: (1) Official control is that performed by, or authorized by, a national (including state, tribal or local) plant, animal or environmental protection or health authority; (2) quarantine pests are pests of potential importance to the areas endangered thereby and not yet present there, or present but not widely distributed and being officially controlled. This definition excludes treatments of commodities not entering or leaving the United States or any State (or political subdivision thereof).
Preshipment Applications, with respect to Class I, Group VI controlled substances (methyl bromide), are those non-quarantine applications applied within 21 days prior to export to meet the official requirements of the importing country or existing official requirements of the exporting country. Official requirements are those which are performed by, or authorized by, a national plant, animal, environmental, health or stored product authority.

1.5 Signature of Reporting Company Representative

I certify that the quantities of methyl bromide specified in Section 1.2 of this form are ordered/purchased and will be used exclusively for quarantine & preshipment applications as defined above, and not sold/ transferred to another person. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Name
Title
Signature | Date

SEND COMPLETED FORMS TO: The Company from Whom the Methyl Bromide is Being Ordered/Purchased

The public reporting and recordkeeping burden for this collection of information is estimated to average 2.4 hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

EPA Form # 5900-154, Revised 04/09

QPS

The Future…Reducing QPS lbs.

ISPM 15, Oak Logs, etc.

The Future…Methyl Bromide???

- Treatment schedules of alternative fumigants
- Need countries to accept alternative control methods
- Sulfuryl fluoride use will increase
  - Expanding sales world-wide

The Future…Phosphine???

- Will phosphine resistance become an issue in the future?
- Will see more fumigation schedules with cylinderized phosphine, $ECO_2FUME^{®}$ in the future

Current Regulatory Issues

Current Regulatory Issues

Man who died after ingesting fumigation pellets identified

By By Calvin Men

Santa Cruz Sentinel

POSTED: 07/23/13, 12:01 AM PDT | UPDATED: ON 07/23/2013 0 COMMENTS

WATSONVILLE -- A man who died at Watsonville Community Hospital after ingesting fumigation pellets was identified by the Santa Cruz County Coroner's office as 25-year-old Edward Lundberg.

Lundberg, whom authorities said was a transient, was treated Sunday evening near a homeless encampment on Corralitos Creek by the Safeway on Freedom Boulevard after ingesting fumigation pellets containing aluminum phosphide, said Chris Johnson, Watsonville Fire Division Chief.

The man was quarantined after he was taken to the hospital because there was a fear firefighters, medics and hospital staff could be exposed to the toxin.

Once the pellets become moist, they release a gas that's used to kill rodents, Johnson said.

Because there was uncertainty about whether the poison could be sweated out or it would seep through his pores, the man was quarantined after he was taken to the hospital.

But officials determined it was safe so long as the man didn't vomit on anyone and no one was exposed to the toxin, Johnson said.

It is still unclear why Lundberg ate the pellets.

"It's just hard to say why somebody would pick something up like that and decide to eat it," Johnson said.

Lundberg told officers at the scene that he found the pellets in an orchard across the street from the Safeway, Watsonville Sgt. Eric Taylor said.

Authorities are investigating why the pellets were discarded there.

amarillo.com

AMARILLO GLOBE-NEWS

Posted January 2, 2017 09:10 am - Updated January 3, 2017 11:35 am

Updated: Four minors dead, five Amarillo family members stable, one transported to Lubbock after pest control chemical in home creates lethal gas

AFD says children were residents of home, call came in from somebody who stopped by and saw everyone sick

Comments 2K Share

The Future (Globally)

- Increase training requirements
- Manufacturers requiring product stewardship
- Using proper safety equipment
- Fumigant detection equipment calibration
- Regulatory inspections
- More cost

Questions?

Thank You!!!

This presentation was made possible by a grant from The Technical and Operational Performance Support (TOPS) Program. The TOPS Micro Grants Program is made possible by the generous support and contribution of the American people through the U.S. Agency for International Development (USAID). The contents of the materials produced through the Micro Grants do not necessarily reflect the views of TOPS, USAID, or the U.S. Government.

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