# SURVEY FORM

# FOR SAFE STORAGE

# OF

# CROP PROTECTION PRODUCTS

# (SACS Survey Form)

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February 18, 2010

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# PREFACE AND DISCLAIMER

The purposes of this document are to: (i) provide assistance in evaluating public warehouses' qualifications to receive, store, and ship crop protection products and (ii) identify any areas for improving safety at any such public warehouses. This document has been developed by the Distribution and Environment Committee of the Mid America CropLife Association (MACA) and has been approved by MACA's Board of Directors after notice to the membership and the consideration of comments from MACA's members and other interested parties.

This document reflects the views of MACA and should not be considered or relied upon as the sole basis or reference for evaluating any particular public crop protection product warehouse or areas for improving safety at any such public warehouses. This document can be used as a beginning point; but this document does not include every practice which could be beneficial to such public warehouses' operation and safety. Nor does this document reflect all of the laws and regulations which federal, state and local authorities may impose on such public warehouses. Persons utilizing this document are encouraged to consult federal, state, local and any other applicable laws and regulations on a case by case basis.

Although a high rating in each category under this document is encouraged, there are no minimum standards or guidelines which are established by this document. Rather, the assignment and weighting of numerical values are intended to serve as a reference by which to measure progress at each facility evaluated under this document.

MACA assumes no liability to any person or entity for any injury or damage, direct or consequential, which may be incurred from the use or application of this document or any portion of it. Nor does MACA assume any responsibility for the unsuitability of this document or any portion of it as a result of inconsistency with, or changes in, the law or other-wise. IN ADDITION TO THE FOREGOING, MACA DOES NOT MAKE ANY WARRANTY OR WARRANTIES WITH RESPECT TO THIS DOCUMENT'S (i) FITNESS FOR A PARTICULAR PURPOSE OR (ii) MERCHANTABILITY.

Any interested party may submit comments with respect to this document by complying with the procedures set forth in the Notice section of this document.

## NOTICE

The Mid America CropLife Association ("MACA") has promulgated the Survey Form for Safe Storage of Crop Protection Products ("SACS Survey Form"). Any interested party: (a) may receive from MACA a full copy of the current Survey Form at www.maca.org. To view, (i) click on education, (ii) then scroll down to brochures and information, (iii) then click on the document named February 2010 Survey Form; and (b) is welcome to submit written comments to MACA with respect to the current Survey Form (written comments should be mailed to the MACA address noted below). All written comments will be seriously considered by MACA, and all persons submitting comments will be notified as to MACA's acceptance/rejection, in whole or in part, of the written comments together with the reasons therefor. For more information, please contact MACA at the following address:

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The following references were used as guidelines.

NFPA 10: Portable Fire Extinguishers
NFPA 13: Installation of Sprinkler Systems
NFPA 30: Flammable and Combustible Liquid Code
NFPA 30B: Manufacture and Storage of Aerosol Products
NFPA 51B: Fire Prevention During Welding, Cutting, and other Hot Work
NFPA 58: LP-Gas Code
NFPA 70: National Electrical Code
NFPA 101: Life Safety Code
NFPA 434: Storage of Pesticides
NFPA 505: Powered Industrial Trucks, including type designations, Area of Use, Conversion, Maintenance, and Operations
NFPA 704: System for the Identification of the Hazards of Material For Emergency Response
NFPA 5000: Building Construction and Safety Code
Code of Federal Regulations Title 29 – Labor
Code of Federal Regulations Title 40 – Protection of the Environment
Code of Federal Regulations Title 49 – Transportation

## Instructions

The survey form is subdivided into eight categories. The categories are:

A. Location and Site Factors

B. Warehouse Construction

C. Fire Protection

D. Environmental Impact and Containment

E. Security

F. Storage and Handling Practices

G. Administration

H. Pre-Emergency Planning

Each survey category is weighted to indicate the number of points possible. Under each heading, there are several conditions/situations with a number listed next to each one.

1. Circle the number next to the condition/ situation under each heading which most represents the warehouse being surveyed.

2. After completing each category, add the number under each heading and write the total value in the category Score.

3. Fill in the Survey Tabulation Sheet with the appropriate category scores, and, then total for the overall [warehouse] score.

NOTE: If a category and/or heading is not applicable to the warehouse being surveyed, please explain the "N/A" in the space provided on the bottom of the Survey Tabulation Sheet.

The Survey Form is in a loose binder to facilitate duplication. Duplication of this Survey Form is encouraged as a means of increasing its distribution and use.

ASSESSMENT OF

PERFORMANCE CRITERIA
AT

_____
_____
_____

Date of Assessment:_____

Current Performance:_____

Last Performance:_____ Date:_____

WAREHOUSE PERSONNEL

| Name | Title |
|---|---|

ASSESSMENT PERSONNEL

| Name | Title |
|---|---|

KEY CONTACT:

Name:_____ Telephone Number:_____

OFFICE INFORMATION:

Telephone Number: (_____)_____
Fax Number: (_____)_____
Mailing Address: _____
_____
_____
E-mail Address: _____
Internet Address: _____

GENERAL INFORMATION ON FACILITY

EPA Establishment Number: _____
EPA I.D. Number:
(If applicable) _____
Standard Industrial Class Code: _____
Number of full time employees: _____
Number of seasonal employees: _____
DOT Hazardous Material
Certificate Registration Number: _____

FACILITY DESCRIPTION:

Buildings:

| Size | Year Built | Sprinkler Density | Use | Materials of Construction |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

Site History:

Year established: _____

Previous use of facility & land: _____

_____

Spill History:

Has there been a spill or release which was legally required to be reported to any governmental agency?

Yes_____ No_____

If yes, describe: _____

_____

_____

Describe the site's relationship to water sources.

What is the nearest body of water? _____
What is the distance to this water? _____
Where does the runoff go? _____
What is the depth of local groundwater? _____
Is groundwater sampling data available? _____
Does this site have a soil profile to determine soil types _____
P.S.I. and flow rating for sprinkler water supply: _____

## A LOCATION & SITE FACTORS (CATEGORY WEIGHT =.10.00)

### A 1. LOCATION

It is preferable that a warehouse is located in an area where the exposure and risk is minimal should a fire, release or other disaster occur. Generally, less populous areas are preferred. This warehouse is in:

| | |
|---|---|
| — Densely populated residential area. | 0.00 |
| — Industrial area, non-residential. | 1.50 |
| — A rural or sparsely populated area*. | 3.00 |

* Less than 10 houses within radius of 0.25 miles.

### A2. PROXIMITY TO INSTITUTIONS

It is generally preferable that institutions housing "difficult to evacuate" personnel, such as hospitals, retirement homes, daycare centers, schools, etc. are not close to a warehouse. This warehouse is:

| | |
|---|---|
| — Within 1/2 mile of such institutions. | 0.00 |
| — Within 1/2 to 1 mile of such institutions. | 2.00 |
| — Over 1 mile from such institutions. | 4.00 |

### A3. PROXIMITY TO MAJOR HIGHWAYS

The preferred location of a warehouse relative to major highways is one of balance. It should be easily accessible to emergency responders and truckers, but yet not pose a major threat (fire, smoke, fumes) to traffic. This warehouse is:

| | |
|---|---|
| — Less than 1 mile from a major thoroughfare, or normal traffic flow to the facility is heavily congested. | 0.00 |
| — More than 1 mile from a major thoroughfare and the road to the facility normally has smooth traffic flow. | 2.00 |

A4. PROXIMITY TO FLOOD PLAIN

It is preferable for a warehouse to be located in an area where the probability of a flood is relatively low. This warehouse is in a region in which a flood has:

| | |
|---|---|
| — Occurred and warehouse was damaged in the last 25 years and/or is located in a 100 year flood plain. | 0.00 |
| — Has occurred during the last 50 years. | 0.50 |
| — The warehouse is not in a 100 year flood plain. | 1.00 |

---

**CATEGORY SCORE:_____/10.0___**

## B. WAREHOUSE CONSTRUCTION (CATEGORY WEIGHT = 6.00)

### B 1. TYPE OF STRUCTURE

Single story warehouses are preferred. This warehouse is:

— Multi-story. 0.00

— Single-story. 0.50

### B2. CONSTRUCTION

For fire protection reasons, non-combustible or limited combustible construction is preferred. Non-combustible construction in conjunction with an adequate fire protection system is the most desirable because it can offer an additional level of protection. This warehouse is constructed of:

— Combustible materials (NFPA Type V Wood Frame Construction). 0.00

— Non-combustible or limited combustible materials (Type II non-combustible, Type III exterior protected combustible, Type IV heavy timber construction). 0.50

— Approved non-combustible or limited combustible materials (Type 1 fire resistive construction). 1.00

### B3. INSULATION

Insulation, when required, should not contribute to a fire, and in fact, should serve to contain such. This warehouse has:

— Asbestos or polyurethane insulation. 0.00

— No insulation required, or glass fiber insulation, or similar materials. 0.50

B4. FLOORS

Floors should be structurally sound and constructed of materials which are easy to clean. Floors should be sealed to prevent minor spills from seeping into cracks and porous surfaces. There should be no uncontrolled floor drains, or drains should be sealed.

The floor of this warehouse is:

| | |
|---|---|
| — Not structurally sound and/or porous without any physical barrier, or open drains. | 0.00 |
| — Structurally sound concrete with smooth sealed surface. All cracks caulked and sealed. No uncontrolled floor drains exist, or drains are sealed. | 1.00 |

---

B5. LIGHTING

A warehouse should be safely lit to prevent accidents and provide adequate lighting to perform normal warehouse functions. Lighting in this warehouse is:

| | |
|---|---|
| — Dim and cannot read instructions. | 0.00 |
| — Bright, via natural lighting, or by properly installed electrical lighting. Proper clearance between fixtures and storage must be maintained. | 0.50 |

NOTE: Level of lighting is based on the ability to read written instructions without an additional light source.

---

B6. VENTILATION

Under normal operations, ventilation is essential in an agricultural chemicals warehouse to eliminate odors and fumes. In the event of a fire or spill, it is particularly important to remove smoke and fumes. Ventilation in this warehouse is via:

| | |
|---|---|
| — Open doors and windows only. | 0.00 |
| — An above roof ventilator allowing for adequate volume of air exchange. | 0.25 |
| — Positive exhaust fans which are in normal use when needed. | 0.50 |

---

B7. WAREHOUSE OFFICES

For reasons of safety during a fire or other emergency, warehouse offices should be of proper construction, have at least one exit not through the warehouse, and be properly ventilated. At this site, the office is:

| | |
|---|---|
| — Within the warehouse, of wood construction and/or without an emergency exit to the outside. | 0.00 |
| — Within the warehouse, of metal construction and with an emergency exit to the outside. | 0.25 |
| — In a separate building or fire area separated from the warehouse with an emergency exit to the outside and according to local codes. | 0.50 |

---

B8. UTILITY SERVICE

All electric service should be in compliance with the National Electric Code. Heat, if any, should preferably have the ignition source outside or, if inside, installed in accord with AGA/NFPA regulations. At this warehouse:

| | |
|---|---|
| — Not in compliance with above. | 0.00 |
| — In compliance with above. | 1.00 |
| — Complies with above and documents annually preventive maintenance on all heating systems | 1.50 |

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**CATEGORY SCORE:_____/6.0___**

## C. FIRE PROTECTION (CATEGORY WEIGHT = 20.00)

### C 1. GENERAL PROTECTION

A warehouse should ideally have 100% sprinkler coverage, adequate fire extinguishers and a fire detection system that includes smoke and heat detectors. This warehouse has:

— No sprinklers or less than 100% sprinkler coverage. 0.00

— 100% sprinkler coverage (wet, dry, and/or foam) with approved installation and adequate in all of the following areas: Sprinkler density; number of fire extinguishers. 2.00

— 100% sprinkler coverage (wet, dry, and/or foam) with approved installation and adequate in all of the following areas: Sprinkler density; number of fire extinguishers; and beam smoke detectors, tied to sprinkler alarm system. 3.00

— 100% sprinkler coverage (wet, dry and/or foam) with approved installation and adequate in all of the following areas: Sprinkler density; number of fire extinguishers; and beam smoke detectors and heat detectors, or low heat sprinkler heads (165 degrees F or lower), tied to sprinkler alarm system. 4.00

C2. WATER SUPPLY FOR SPRINKLER SYSTEM

Ideally, the warehouse should have two independent water sources. This warehouse has:

— No water source or one water source not meeting the system design criteria. 0.00

— One water source meeting the system design criteria. 0.75

Two independent water sources meeting the system design criteria. 1.00

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C3. FIRE ALARM SYSTEM

A warehouse should ideally have an automatic alarm system installed with local authority approval, **which includes flow alarms and supervisory alarms** and connected to a supervised approved central station or fire department and is tested at least bi-monthly. This warehouse has:

— No alarm system, or one not connected to a central station or fire department, or one not tested. 0.00

— An alarm system which is connected to a supervised central station or fire department and is tested quarterly with test documentation. 1.00

— An alarm system which is connected to a supervised central station or fire department and is tested bi-monthly with test documentation. 2.00

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C4. OFF-SITE ACCESSIBILITY

Easy accessibility to the warehouse for the fire department is critical in the event of a fire. Access to this warehouse is:

— Via a single road which could be blocked by trains, drawbridges, or the like. 0.00

— Clear with no potential of blocked roads. 1.00

---

C5. ON-SITE ACCESSIBILITY

On site accessibility to an area of emergency is important. The site should be such that all areas can be easily accessed by the fire department. At this warehouse, accessibility is:

— Very limited and would significantly impede fire fighting. 0.00

— Somewhat limited, but would not significantly impede fire fighting. 0.50

— Without any restriction that would impede fire fighting. 1.00

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C6. WAREHOUSE FIRE RESPONSE TRAINING

Warehouse personnel should be properly trained in the use of all types of fire extinguishers available at their location. At this warehouse, personnel are:

— Not trained in the use of available fire extinguishers. 0.00

— Trained in the use of available fire extinguishers and documented. 1.00

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C7. HAZARD WARNING PLACARDS

Hazard warning placards should be posted visibly on building. **Hazard warning placards should not be placed on doors or on a wall where they can be obscured by an open door.** At this warehouse, placards are:

— Not placed at all. 0.00

— Placed properly. 1.00

---

C8. FLAMMABLE STORAGE

Preferably flammable storage should be in a separate building located at least 50 feet from other buildings. This warehouse has:

| | |
|---|---|
| — No separate flammable storage building, nor a flammable storage area separated by 4-hour liquid tight walls that are ramped at openings and extend 3 feet above the roof line; and have double 3-hour Class A doors. | 0.00 |
| — 4-hour wall but not parapet. | 0.50 |
| — No separate flammable storage building, but has a flammable storage area which is separated from general storage by 4-hour liquid tight walls that are ramped at the openings and have double 3-hour Class A doors. | 1.00 |
| — Flammable storage in a separate building of approved construction, or does not store flammables. | 2.00 |

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C9. FIRE PROTECTION INSPECTIONS

Routine inspections and tests should be conducted to ensure fire protection systems are operable. The inspection and tests should cover sprinkler systems, valves, fire pumps, extinguishers, fire doors, etc. Inspections are conducted at least monthly, documented, with service records, and/or inspection reports available . At this warehouse, inspections and tests are:

| | |
|---|---|
| — Non-existent. | 0.00 |
| — Inspections are conducted less frequently than monthly. | 0.50 |
| — Inspections conducted monthly. | 1.00 |

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C10. NO SMOKING

A "No Smoking" policy for the storage area is essential if offices are part of, or attached to the warehouse structure. The "NO SMOKING" policy applies to the office area, as well as the warehouse, if offices are attached to the warehouse. At this warehouse:

| | |
|---|---|
| — Smoking is permitted in the warehouse, or the "No Smoking" policy, if any, is not strictly enforced. | 0.00 |
| — The "No Smoking" policy is strictly enforced and adequate signs are displayed. | 2.00 |

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C11. MOTORIZED EQUIPMENT AND VEHICLES

Material handling equipment must be properly rated and maintained for the desired occupancy and the rating clearly marked on the side of each vehicle. The entrance to each area of the warehouse should be posted with the class of vehicle permitted in that area. The refueling or recharging area should be properly protected and well ventilated. Ideally, refueling should occur outside in a separate area away from the warehouse. No motor vehicles are allowed in the warehouse. At this warehouse, compliance with these points is:

| | |
|---|---|
| — Incomplete in one or more areas. | 0.00 |
| — Complete. | 1.00 |

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C 12. HOT WORK

Hot work (welding, etc.) constitutes a fire hazard. Procedures should be documented and enforced to protect storage at those times when hot work is required. At this warehouse, these procedures are:

— Non-existent, not documented, or not rigidly enforced. 0.00

— Documented, and rigidly enforced. 1.00

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C13. EXPOSURES FROM ADJACENT HAZARDOUS ACTIVITIES

Neighboring operations may be engaged in activities which pose potential risks to the warehouse. From this warehouse building, exposures to potential risks from neighboring operations are:

— <500 feet from a potential neighboring operation. 0.00

— >500 feet from a potential neighboring operation. 0.50

— No high-risk neighboring operation. 1.00

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C 14. SPRINKLER IMPAIRMENT PROCEDURE

Whenever the sprinkler system is not operational (e.g. maintenance, malfunction), fire protection is compromised. During this time frame, a sprinkler impairment procedure must be in place. The procedure should include notification to warehouse insurance carrier, local fire department and alarm service provider. The system must be visually tagged indicating that the system is out of service.

— A sprinkler impairment system does not exist. 0.00

— The sprinkler impairment system meets the above criteria. 1.00

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**CATEGORY SCORE:_____/20.0___**

## D. ENVIRONMENTAL IMPACT &, CONTAINMENT

(CATEGORY WEIGHT = 19.00)

### D 1. PREVAILING WINDS

In the event of a fire or atmospheric release of chemicals, it is important that the effect on sensitive areas downwind be assessed and planned for. At this warehouse there is a prevailing wind that blows:

— Toward a concentration of population or sensitive area within 0.5 miles. 0.00

— Such that concentrations of population and sensitive areas are in a crosswind position. 1.00

— Such that concentrations of population and sensitive areas are in an upwind position. 2.00

NOTE: Concentrations of population are defined as greater than 100 persons within 1/2 mile radius. **A wind direction indicator is recommended.**

### D2. PROXIMITY TO WATER

The location of the warehouse should be where spills and run-off from fire fighting activities do not threaten the environment. Simply stated, can runoff easily migrate to an aquifer or a water course? Soil type and depth to an aquifer must be considered. This warehouse site:

— Is sited above an aquifer where water is extracted for domestic use and/or alongside a river or other watercourse where containment of run-off water would not be possible. 0.00

— Is sited 300 feet or more from a river or other watercourse and does not pose a threat to a groundwater source of potable water. 6.00

## D3. CONTAINMENT CAPABILITY

A warehouse must have the capability to fully contain spills and firewater runoff inside the building or within a containment system (primary containment). The facility must also have the capability to fully contain spills/ firewater runoff outside the building but still on the property (secondary containment), in the event the primary containment fails or is exceeded.

Important elements of primary containment:

- Containment must be 100% with no gaps.
- Must be constructed of a permanent liquid tight barrier capable of holding a minimum of two hours of firewater capacity with all systems operating.
- Designed with containment within storage rooms to prevent spread of burning liquids and contamination.
- Will automatically channel firewater to a secondary containment system in the event of failure or breach of primary containment.

Important elements of secondary containment:

- Must be 100% with no gaps.
- It is preferable that secondary containment be lined with a liquid tight barrier to prevent soil contamination.
- Should be capable of holding a minimum of two hours firewater.
- Additional capacity should be provided to accommodate water generated from additional fire fighting equipment, bursting containers, and if uncovered a 25 year rainstorm during a 24 hour period.
- Designed to keep fire runoff on the property and away from any water source.

| | |
|---|---|
| — The facility has insufficient or no containment. | 0.00 |
| — The facility has a permanent liquid tight primary containment system. | 6.00 |
| — The facility has a permanent liquid tight primary containment system with a minimum two hour of secondary containment. | 8.00 |
| — The facility has a permanent liquid tight primary containment system (impervious surface) plus a two hour secondary containment with a liner. | 10.00 |

NOTE.: Firewater capacity calculation is determined in conjunction with the local fire department as part of the pre-emergency plan.

D4. STORM WATER/CONTAMINATION CONTROL

Control of storm water discharge is necessary to prevent potential contamination. Procedures must be in place and documented. At this warehouse:

— Procedures are not in place to control storm water. 0.00

— Procedures are in place and documented 1.00

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**CATEGORY SCORE:_____/19.0___**

## E. SECURITY (CATEGORY WEIGHT = 10.00)

### El. EXTERIOR LIGHTING

Exterior lighting is essential to good security. Exterior lighting at this warehouse is best described as:

— Non-existent or dim. 0.00

— Providing coverage on all doors and windows **and maintained in good operating order.** 0.25

— Providing total coverage around the perimeter of the building **and maintained in good operating order** 0.50

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### E2. FENCING/GATES

Fencing and/or gates are effective deterrents to security breaches. At this warehouse, fencing and/or gates:

— Appear to be necessary, but are non-existent or easily breached. 0.00

— Do not appear to be absolutely necessary, or existing fencing/gates will deter intrusion to some extent. 0.25

— All fences and gates are locked or guarded during off-hours. 0.50

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### E3. INTERNAL AND EXTERNAL SECURITY

Security procedures, (which address preventive practices as well as reaction plans) are important and should be addressed in the "Security Plan" that is required by 49CFR§802. At a minimum, the "Security Plan" must include (1) A method or methods for confirming information provided by applicants for jobs that involve access to and handling of the hazardous materials covered by the plan. This includes a criminal background check (2) Methods to address the possibility that unauthorized persons may attempt to gain access to hazardous materials or transport vehicles being prepared for transportation; (3) A method or methods to address en route security risks. At this warehouse, such procedures:

— Are non-existent. 0.00

| | |
|---|---|
| — A plan is in place, but no employee training on the plan's contents has been conducted. | 1.00 |
| — exist with a plan in place; training has been conducted, and documented. | 2.50 |

E4. SECURITY ALARMS

A security alarm system is an effective method to deter unauthorized entry. At this warehouse, alarms are:

— Non-existent. 0.00

— Audible on site, but not tied into monitoring stations. 1.00

— Automatic alarm systems with approved installation and connected to a supervised central station. **Documentation to show that the alarm system is tested bi-monthly to insure alerts are sent to and received by the central station.** 2.00

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E5. PATROLS

Patrolling of a facility affords additional security during non-operational hours. At this warehouse, there is:

— No patrol at all. 0.00

— A security person on site or a patrol person during these times. 1.00

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E6. ACCESS CONTROL

Access must be controlled at a warehouse. At this warehouse, there is:

— No access control. 0.00

— Signs posted, specific door entry, and sign in/out. 1.00

— Specific door entry, sign in/out with receptionist or guard, pass procedures with visitor identification badges, restricted areas, and a separate drivers' waiting room. 2.00

---

E7. SUBSTANCE ABUSE POLICY

Security problems are often related to substance abuse. Testing for substance abuse serves to protect against product loss (i.e. pre-employment, random testing based on current law). The policy at this warehouse is:

| | |
|---|---|
| — Not performed at all. | 0.00 |
| — Performed as part of the pre-employment procedure. | 0.25 |
| — A thorough substance abuse policy and testing Program is in place and currently conducted in accordance to law. | 0.50 |

---

E8. PHYSICAL INVENTORIES

Routine physical inventories reduce discrepancies and help identify problems early. Physical inventories must be thorough with special attention given to visual inspection of each unit. At this warehouse, physical inventories and/or cycle counts are conducted:

| | |
|---|---|
| — Only when requested by the customer. | 0.00 |
| — At unspecified intervals. | 0.50 |
| — At specified intervals, are documented and include visual inspection of each unit. | 1.00 |

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**CATEGORY SCORE:_____/10.0___**

## F. STORAGE &. HANDLING PRACTICES (CATEGORY WEIGHT = 10.00)

### F1. HOUSEKEEPING

A warehouse should implement housekeeping practices on a routine basis. Implementation of housekeeping practices i.e. clean floors, bathrooms, etc. at this warehouse appears to be:

— Needs improvement. 0.00

— Fair. 0.35

— Good/excellent. 0.70

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### F2. PEST CONTROL

Pests such as rodents, bugs, and birds should be controlled. At this warehouse it appears that control is:

— Non-existent. 0.00

— In existence, but with a few indications of problems. 0.15

— Complete and with documented program. 0.30

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### F3. AISLE SPACE

NFPA standards should be adhered to relative to aisle space.
Aisles at this warehouse:

— Do not meet NFPA standards. 0.00

— Meet NFPA standards. 0.50

---

F4. PILE SIZE PER NFPA

NFPA standards should be adhered to relative to pile size. This requires the warehouseman to know the class of each product stored. Pile sizes at this warehouse:

— Do not meet NFPA standards. 0.00

— Meet NFPA standards. 0.50

---

F5. PILE HEIGHT PER NFPA

NFPA standards should be adhered to relative to pile heights. This requires the warehouseman to know the class of each product stored. Pile heights at this warehouse:

— Do not meet NFPA standards. 0.00

— Meet NFPA standards. 0.70

---

F6. EXCESSIVE PILE HEIGHT

Product should not be stacked - even if acceptable per NFPA - to stack heights which appear to be exceeding the structural strength of the packaging. At this warehouse, there are:

— Significant indications, such as crushed boxes, etc, that stack heights are too high. 0.00

— No indications of excessive stack heights. 0.70

---

F7. PESTICIDE SEGREGATION

Pesticide storage must be separated from non-compatible products. At this warehouse, pesticide storage is:

| | |
|---|---|
| — Intermingled with foodstuffs, consumer goods, animal feed and/or non-compatible products. | 0.00 |
| — Segregated by a wall from foodstuffs, consumer goods, animal feed and non-compatible products. | 0.35 |
| — Completely segregated in a separate building from foodstuffs, consumer goods, animal feed and non compatible products. | 0.70 |

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F8. **PRODUCT COMPATIBILITY**

Substances stored together must be compatible in accordance with the attached storage segregation guide. At this warehouse, products are:

| | |
|---|---|
| — Not stored according to the guide. | 0.00 |
| — Stored according to the guide. | 0.70 |

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F9. DAMAGED PRODUCT SERVICES

The warehouse has written plans and trained personnel to deal with damaged product found at the location. This includes various types of salvage containers to store and/or ship damaged product; appropriate personnel and equipment to immediately over-pack if necessary, label and store damaged product in a safe place, and the ability to recoup damaged product into new outer packaging and/or perform re-unitization at the direction of the product's owner.

— Does not have the written plans, trained personnel and equipment/ supplies to fully perform this work and this work is not being done properly. 0.00

— Has some of the written plans, trained personnel and equipment/ supplies to fully perform this work and/or the work may or may not be done properly. 0.35

— Has the written plans, trained personnel and equipment/ supplies to fully perform this work and the work is being done property. 1.00

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F10. FLAMMABLE AEROSOLS

Flammable aerosols constitute a major fire threat. If present, flammable aerosol products should be caged, and stored in a flammable storage room. At this warehouse, flammable aerosol storage:

— Exists and is not caged. 0.00

— Exists and is caged, or is not allowed. 0.50

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F11. ROUTINE WALK-THROUGHS

The manager/ supervisor of the warehouse should make routine walk-throughs for the distinct and separate purpose of inspecting for housekeeping maintenance, safe and compatible product storage, and overall facility safety operations consistency. These tours should be supported via documentation. At this warehouse, tours are:

— Not conducted or are not documented. 0.00

— Conducted monthly and documented. 0.25

— Conducted weekly and documented. 0.50

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F12. DEDICATED EQUIPMENT

Equipment in a pesticide storage area must be dedicated to the area. At this warehouse, equipment used for pesticides is:

— Not dedicated and also used for food stuffs. 0.00

— Dedicated and never used elsewhere. 0.50

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F13. VEHICLE RESTRAINTS

Wheel chocks are required by OSHA and provide a vital safety function. Jack stands or similar equipment should be used when loading drop trailers. Observations indicated that wheel chocks or other types of restraints at this warehouse are:

— Not being used, or inconsistently used. 0.00

— Being used consistently. 1.00

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F14. FORKLIFTS

Forklifts should have headlights, fire extinguishers, seat belts and horn. Proper attachments should be utilized when handling individual drums. All forklifts at this warehouse are:

— Not equipped. 0.00

— Equipped. 0.30

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F15. EMPTY PALLET STORAGE

Empty pallet storage inside a warehouse should be kept to a minimum. At this warehouse, pallets are:

— Stored inside or outside but not according to NFPA standards relative to pile size, stack height, or location. 0.00

— Stored neatly in accordance with NFPA standards. 0.70

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F16. FLOOR MARKINGS

A warehouse should have floor markings indicating storage spaces, aisles, staging areas, routes, etc. This warehouse is:

— Not marked. 0.00

— Partially marked. 0.10

— Completely marked. 0.20

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F 17. WAREHOUSE TEMPERATURES

Warehouse temperatures should be in compliance with any guidelines noted on the MSDS. Indirect heating such as steam, warm air, etc. is recommended. Heating systems should be safe and permanent. Air flow should not be directly on storage, and storage should be a safe distance from the heat source. Temperature regulation devices should be visible and accessible. At this warehouse:

— MSDS temperature specifications are not being followed and/or are followed but could be improved. 0.00

— MSDS temperature specifications are being followed fully. 0.50

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**CATEGORY SCORE:_____/10.0___**

## G. ADMINISTRATION (CATEGORY WEIGHT = 12.00)

### G1. OWNER INVOLVEMENT

A public warehouse doing business with the crop protection industries is an important member of that industry. As members, they are subject to many rules and regulations issued by federal, state and local government agencies. Warehouse ownership/ management MUST be effective, concerned, and knowledgeable in all areas affecting their business and the business of their clients. At this warehouse:

— Ownership management is not actively engaged in the operations and the management does not appear to have sufficient authority and/or responsibility to effectively manage the operations. 0.00

— Warehouse ownership management is actively engaged in warehouse operations, and/or the warehouse management does have sufficient authority/responsibility to effectively manage the operations. 2.00

### G2. SARA

Public warehouses must comply with the Superfund Amendments and Reauthorization Act, Title III, (SARA) and local community Right-to-Know laws. This warehouse:

— Does not comply with the above. 0.00

— Does comply with the above by filing the proper reports. 1.00

— Has thorough knowledge and understanding of requirements, has filed all necessary reports, such as SARA 311 and 312, and is active with local authority with jurisdiction. 2.00

G3. REGULATIONS

Warehouse management must comply with all applicable OSHA/ DOT/EPA regulations. This includes copies of regulations on hand, necessary training documented, and possession of appropriate authorization (DOT Haz Mat registration, EPA establishment number, etc.) Management at this warehouse:

— Does not comply with the regulations. 0.00

— Complies with most of the requirements, but some items missing. 2.00

— Complies with above requirements. 4.00

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G4. EMPLOYEE OPERATIONAL TRAINING

Employee Orientation (New Hire) Training Program must document company policy, job-specific operations and information, safety procedures, code of conduct, chemical-specific training and emergency response.

Right-To-Know Training must document training on the written program, container labeling, MSDS, plus general and chemical-specific training and annual refresher training.

Health and Safety Training must document training on the written program, personal hygiene practices, precautionary measures, safe work practices, housekeeping, accident prevention, safety attitude and awareness, and annual refresher training.

Spill response training must document and provide training to the level the facility is willing to respond to. Training must be "relevant" to the types of emergency situations likely to occur in the responders normal work area and the responder should be provided with the types of control and personal protective equipment normally required to stabilize the types of situations anticipated. Important elements should include evacuation procedures and drills, spill and cleanup (decontamination) procedures, and annual refresher training.

Respiratory protection program training must include personal protective equipment, use of equipment, documentation ensuring users are medically fit to use equipment, and annual refresher training.

Fire extinguisher training must include use of portable fire extinguishers, types of fires, checklist for monthly extinguisher inspections and servicing guidelines, and annual refresher training.

Powered industrial truck training, should include safe equipment use,- hazard awareness, daily inspection and maintenance, vehicle training and operation, safe loading and stacking, proper certification, and annual refresher training.

DOT Hazmat Training Program must include training on general awareness and familiarity, function- specific, safety, security and emergency response. Recurrent training is required at least once every three years, however, any change in the regulations affecting an employee's function specific responsibilities must be performed immediately. Annual refresher training is strongly recommended.

Training must demonstrate correct lock-out/ tag-out procedures from shutdown to startup. The training should identify energy sources and life-threatening situations in workplace environments and use of tag and multiple locks, and include annual refresher training.

Training policy and records should include a written policy and manual. The manual should include the company policy, training programs as listed, training calendar, content of each program and training records. At this facility:

— There is no documented training or employee training conducted 0.00

— There is partial training or incomplete documentation of training 1.00

— There is complete training program covering all topics listed, and training is well documented and includes certified training and annual refresher training as required, 3.00

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## G5. TRADE COUNCILS

Participation in outside trade councils, etc. are indicative of interest and training of warehouse owners/ management. Ownership/ Management at this warehouse is:

— Not involved with any such organizations. 0.00

— Members of at least one trade council. 0.50

— Active in at least one trade council. 1.00

Active Associations:

_____

_____

_____

_____

_____

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**CATEGORY SCORE:_____/12.0___**

## H. PRE-EMERGENCY PLANNING (CATEGORY WEIGHT = 13.00)

### H1. PRE-EMERGENCY PLAN CONTENT

A Pre-Emergency Plan should be a written document to address all elements of Pre-Fire Planning, as well as product spills, medical emergencies and other type disasters which are of potential to the warehouse. The Pre-Emergency Plan at this warehouse is:

— Non-existent or incompletely documented. 0.00

— Documented and thoroughly addresses all elements included but not tested. 1.00

— Documented and addresses spills, medical emergencies, and other type disasters of potential to the warehouse and is tested. 2.00

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### H2. PLAN UPDATES

The Pre-Emergency Plan should be thoroughly reviewed and updated at least annually so as to reflect changes in the influencing factors. The update should be documented. The Pre-Emergency Plan at this warehouse is updated:

— At unspecified intervals. 0.00

— Annually or more often. 0.75

— Annually or more often but also whenever a major influencing factor is changed, i.e. warehouse construction, new product, etc., and all updates documented on the Pre-Emergency Plan. 1.50

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H3. EMERGENCY CONTACTS

In the event of an emergency, a complete list of emergency contacts and phone numbers is necessary. This list is to include the emergency coordinator, fire department, police, CHEMTREC, chemical suppliers, LEPC, (local, state and federal) hospital, contractors, organizations that can assist, etc. An emergency contact list at this warehouse is:

— Either not available, incomplete, or not current. 0.00

— Available, complete and current. 0.30

— Available, complete, current and posted in prominent locations throughout the warehouse. 0.75

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H4. OUTSIDE PARTICIPATION

The effectiveness of a Pre-Emergency Plan is increased if off site responders participate in its preparation. The Pre-Emergency Plan at this warehouse was jointly prepared with:

— No outside agencies. 0.00

— Local fire department. 0.30

— Local fire department and other key first responders. 0.60

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H5. EVACUATION

Personnel should be familiar with emergency evacuation procedures, particularly evacuation routes. At this warehouse:

— No formal evacuation plans exist. 0.00

— Emergency escape routes are clearly posted throughout the facility, and an assembly area is designated. 0.30

— Above, plus a sufficient number of employees are trained to direct a safe and orderly evacuation, and such training is documented. 0.75

---

H6. EMERGENCY COORDINATORS

Coordinators should be designated to facilitate decision making in the event of an emergency. At this warehouse:

— No coordinator has been designated. 0.00

— A primary and alternate coordinator has been designated. 0.30

— Sufficient personnel have been trained to ensure that a coordinator will always be available. 0.60

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H7. FIRE FIGHTING/ DISASTER/ EMERGENCY RESPONSE STRATEGY

As part of pre-emergency planning, the incident command system should be discussed in meetings with local fire department and other involved agencies (emergency responders). There should be a clear understanding that management will provide expertise and assistance to the incident commander. It should be established in advance that any strategies regarding fire fighting, disasters and/or emergency response to the specific facility, will be made by the incident commander, based on current conditions.. Meetings with fire department or other agencies should be documented. At this warehouse, this issue:

— Has not been addressed. 0.00

— Has been addressed and included in the plan. 1.20

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H8. MITIGATION PLANNING

Fire or emergencies may exceed the capabilities of local emergency responders. For this reason, it is recommended a primary and possibly an alternate hazardous materials emergency response contractor be identified. The selection of this contractor should not be based solely on cost but also on ability to respond in a timely manner with properly trained personnel and sufficient equipment to handle the emergency. It is recommended that a contract be negotiated in advance of an emergency. At this warehouse, this issue:

— Has not been established. 0.00

— Has been addressed, and an agreement is in place. 0.60

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H9. DISTRIBUTION OF MSDSs AND SITE PLAN

MSDSs should be readily available to the fire department and other interested parties, such as the local medical facility, insurance carrier, etc. At this warehouse, MSDSs have been made available to:

— No one outside of the warehouse. 0.00

— Local fire department. 0.30

— Local fire department and other interested parties such as the local medical facility, insurance carrier, etc. 0.60

NOTE: OSHA considers MSDS's to be medical records and therefore requires them to be kept for 30 years if they indicate "the material may pose a hazard to human health" and the replacement MSDS contains a substantive change.

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H10. SITE STORAGE PLAN

The location, general classification, and approximate quantity of products within the warehouse on a written site plan is:

— Not available. 0.00

— Available and updated monthly or more often. 0.60

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## H11. PROTECTIVE EQUIPMENT

Personal protective equipment may reduce the frequency and severity of work related illness and injury. To be EFFECTIVE, personal protective equipment must be:

- Readily available to qualified employees.
- Appropriate for the hazards associated with the work.
- Used by knowledgeable, trained employees.
- Periodically inspected and well maintained.
- Written personal protective equipment policy.

Personal protective equipment provisions at this warehouse:

— Does not comply with the above. 0.00

— Does comply with the above. 1.20

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## H12.MEDICAL EMERGENCIES

Medical emergencies can be best handled by ensuring that proper equipment is available, personnel are trained, and medical facilities are proximate. A warehouse should have first-aid kits, safety showers and eye-wash stations. Provisions for controlling and containing safety shower water must be in place. This warehouse does:

— Not have all of the above listed items. 0.00

— Have all of the above listed items. 1.20

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H13. SPILL AND CLEANUP PROCEDURES AND EQUIPMENT

A written spill response procedure including decontamination and disposal plans, as well as sufficient personal protective equipment and cleanup material to handle various spill and containment scenarios must be maintained on site at this warehouse:

— A formal spill and cleanup procedure and equipment with documented training does not exist or is incomplete. 0.00

— A formal spill and cleanup procedure and equipment with documentation on training for new employees and at least annually thereafter. 0.30

— All the above and each time thereafter when procedures, equipment, processes, or new products are introduced. 0.60

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H14. CONTAINMENT PLANS

Firewater containment plans are more effective if they are coordinated with the fire department or first responders. At this warehouse, the containment part of the plan was shared in conjunction with:

— No outside agencies. 0.00

— Local fire department or first responders. 0.80

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**CATEGORY SCORE:_____/13.0____**

SURVEY TABULATION SHEET

I. SCORES: CATEGORY AND OVERALL

| CATEGORY | MAXIMUM SCORE | ACTUAL SCORE |
|---|---|---|
| A. LOCATION AND SITE FACTORS | 10 | |
| B. WAREHOUSE CONSTRUCTION | 6 | |
| C. FIRE PROTECTION | 20 | |
| D. ENVIRONMENTAL IMPACT AND CONTAINMENT | 19 | |
| E. SECURITY | 10 | |
| F. STORAGE & HANDLING PRACTICES | 10 | |
| G. ADMINISTRATION | 12 | |
| H PRE-EMERGENCY PLANNING | 13 | |
| OVERALL SCORE | 100 | |

II. ITEMS RECEIVING "0" RATING

| CATEGORY | CATEGORY HEADING |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |

REMARKS (Use the area below to explain those categories receiving "O" rating because of a not applicable situation).

**Segregation Table for Hazardous Materials**

| Class or division | | Notes | 1.1 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 2.1 | 2.2 | 2.3 gas zone A | 2.3 gas Zone B | 3 | 4.1 | 4.2 | 4.3 | 5.1 | 5.2 | 6.1 liquids PG I zone A | 7 | 8 liquids only |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Explosives | 1.1 and 1.2 | A | * | * | * | * | * | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Explosives | 1.3 | | * | * | * | * | * | X | | X | X | X | | X | X | X | X | X | | X |
| Explosives | 1.4 | | * | * | * | * | * | O | | O | O | O | | O | | | | O | | O |
| Very insensitive explosives | 1.5 | A | * | * | * | * | * | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Extremely insensitive explosives | 1.6 | | * | * | * | * | * | | | | | | | | | | | | | |
| Flammable gases | 2.1 | | X | X | O | X | | | | X | O | | | | | | | O | O | |
| Non-toxic, non-flammable gases | 2.2 | | X | | | X | | | | | | | | | | | | | | |
| Poisonous gas Zone A | 2.3 | | X | X | O | X | | X | | | | X | X | X | X | X | X | | | X |
| Poisonous gas Zone B | 2.3 | | X | X | O | X | | O | | | | O | O | O | O | O | O | | | O |
| Flammable liquids | 3 | | X | X | O | X | | | | X | O | | | | | O | | X | | |
| Flammable solids | 4.1 | | X | | | X | | | | X | O | | | | | | | X | | O |
| Spontaneously combustible materials | 4.2 | | X | X | O | X | | | | X | O | | | | | | | X | | X |
| Dangerous when wet materials | 4.3 | | X | X | | X | | | | X | O | | | | | | | X | | O |
| Oxidizers | 5.1 | A | X | X | | X | | | | X | O | O | | | | | | X | | O |
| Organic peroxides | 5.2 | | X | X | | X | | | | X | O | | | | | | | X | | O |
| Poisonous liquids PG I Zone A | 6.1 | | X | X | O | X | | O | | | | X | X | X | X | X | X | | | X |
| Radioactive materials | 7 | | X | | | X | | O | | | | | | | | | | | | |
| Corrosive liquids | 8 | | X | X | O | X | | | | X | O | | O | X | O | O | O | X | | |

(e) Instructions for using the segregation table for hazardous materials are as follows:

(1) The absence of any hazard class or division or a blank space in the table indicates that no restrictions apply.

(2) The letter “X” in the table indicates that these materials may not be loaded, transported, or stored together in the same transport vehicle or storage facility during the course of transportation.

(3) The letter “O” in the table indicates that these materials may not be loaded, transported, or stored together in the same transport vehicle or storage facility during the course of transportation unless separated in a manner that, in the event of leakage from packages under conditions normally incident to transportation, commingling of hazardous materials would not occur. Notwithstanding the methods of separation employed, Class 8 (corrosive) liquids may not be loaded above or adjacent to Class 4 (flammable) or Class 5 (oxidizing) materials; except that shippers may load truckload shipments of such materials together when it is known that the mixture of contents would not cause a fire or a dangerous evolution of heat or gas.

(4) The “*” in the table indicates that segregation among different Class 1 (explosive) materials is governed by the compatibility table in paragraph (f) of this section.

(5) The note “A” in the second column of the table means that, notwithstanding the requirements of the letter “X”, ammonium nitrate (UN 1942) and ammonium nitrate fertilizer may be loaded or stored with Division 1.1 (explosive) or Division 1.5 materials.

(6) When the §172.101 table or §172.402 of this subchapter requires a package to bear a subsidiary hazard label, segregation appropriate to the subsidiary hazard must be applied when that segregation is more restrictive than that required by the primary hazard. However, hazardous materials of the same class may be stowed together without regard to segregation required for any secondary hazard if the materials are not capable of reacting dangerously with each other and causing combustion or dangerous evolution of heat, evolution of flammable, poisonous, or asphyxiant gases, or formation of corrosive or unstable materials.

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