

LIQUID PESTICIDES BULK STORAGE AND REFILLING FACILITIES

A SELF EVALUATION RESOURCE GUIDE

Crop Protection Industry
Cooperative Effort
JANUARY 1996

FOREWORD

This document is intended to serve as an educational resource to operators of liquid pesticide bulk storage and refilling facilities. It was developed through a cooperative effort involving agricultural pesticide registrants, distributors and retailers, and demonstrates the Crop Protection Industry's commitment to the safe storage and handling of its products. The following associations within the industry participated in the development of this document.

NATIONAL ASSOCIATIONS

American Crop Protection Association
Agricultural Retailers Association
Chemical Producers and Distributors Association

REGIONAL ASSOCIATIONS

Mid America Crop Protection Association
New England Council for Plant Protection
Southern Crop Protection Association
Western Crop Protection Association

STATE ASSOCIATIONS

Agribusiness Association of Iowa
Agricultural Chemicals Association of Georgia
Alabama Crop Management Association
Arizona Agricultural Chemicals Association
Arkansas Agricultural Pesticide Association
DelMarVa Agricultural Chemicals Association
Far West Fertilizer & Agrichemical Association
Florida Fertilizer & Agrichemical Association
Idaho Fertilizer & Chemical Association
Illinois Fertilizer & Chemical Association
Indiana Plant Food and Ag Chemicals Association
Kansas Fertilizer & Chemical Association
Kentucky Fertilizer & Agricultural
Chemical Association
Louisiana Ag Industries Association
Michigan Agri-business Association
Minnesota Plant Food & Chemicals Association
Mississippi Agricultural Chemicals Council
Missouri Ag Industries Council
Montana Agricultural Business Association
Nebraska Fertilizer & Ag-Chemical Institute
New Jersey Agribusiness Association
New Mexico Ag Chem & Plant Food Association
New York State Agri-business Association
North Dakota Agricultural Association
Ohio Agribusiness Association
Oklahoma Fertilizer & Chemical Association
Oregon Agricultural Chemicals & Fertilizer
Association
Pennsylvania Agronomic Products Association
Pesticide Association of North Carolina
Rocky Mountain Plant Food & Agrichemicals
Association
South Carolina Fertilizer & Agrichemicals
Association
South Dakota Fertilizer & Ag Chemical Association
Tennessee Agricultural Chemical Association
Texas Agricultural Chemicals Association
Utah Ag Chemical & Fertilizer Dealers Association
Virginia Ag-Chemicals & Soil Fertility Association
Wisconsin Fertilizer & Chemical Association
Wyoming Agribusiness

PREFACE

Over the past 10 years, there has been a rapid increase in bulk storage and handling of pesticides used in agricultural production. Bulk storage and handling provides many benefits to distributors, retailers, applicators and growers. Some of these benefits are:

- The need to store, handle, rinse and dispose of large numbers of nonrefillable containers is eliminated.
- Operator exposures to pesticides are reduced.
- Labor and handling costs are reduced.
- Saves time.

Operating bulk pesticide facilities involves additional considerations beyond traditional storage and handling of pesticides in non-bulk, nonrefillable containers. These considerations include:

- Greater attention to product quality assurance.
- Proper equipment selection, installation and preventive maintenance.
- Additional actions in emergency response planning and spill control.
- Compliance with additional local, state and federal regulations.

This document is intended to assist operators of liquid pesticide bulk storage and refilling facilities in achieving environmental goals. The basic components of an overall program for evaluating practices for bulk storage and refilling of agricultural pesticides are outlined in 11 sections. Information is presented in a manner that operators can use for conducting self-evaluations of existing practices and facilities. This document also helps identify areas where further improvements can be made.

IT ALSO IS IMPORTANT TO UNDERSTAND WHAT THIS DOCUMENT DOES NOT DO.

This document merely reflects the thoughts and observations of the drafters. It does not establish minimum standards or guidelines, and it should not be used as the sole criteria for evaluating the safety or adequacy of a pesticide bulk storage facility. Each facility must comply with all applicable local, state and federal regulations, not all of which are referenced in this document. Furthermore, regulations change over time (including the references cited in this document), and it is the facility operator's responsibility to ensure that his or her facility complies with all current regulations. Any inspection, by necessity, is a spot check and may or may not accurately reflect the true condition of the facility.

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INSTRUCTIONS

The self-evaluation starts on page 4. There are 118 questions covering 11 different areas of consideration. Responses to the self-evaluation are to be indicated by marking a "Yes" or "No" to the question(s) appearing on the form that best reflect existing conditions or practices at the facility. "Yes" answers indicate a generally desirable condition or performance for a facility. "No" responses can be used to guide future facility or operational improvements.

Self-evaluation of a facility should be conducted on a routine periodic schedule. To support these multiple evaluations, copying of this document is encouraged. Results from each evaluation should be consolidated on the Self-Evaluation Tabulation Form (Appendix C). The Tabulation Form allows a closer review of the evaluation results and identification of areas where future upgrades or operational improvements can be planned and monitored.

DEFINITIONS

Available Tank Capacity - The volume that exists in a tank for which the loading of additional product should not exceed. The available tank capacity equals the storage capacity of the tank minus the volume of existing inventory in the tank and minus the allowance for 10% head space.

Bulk - The volume of a liquid pesticide that is shipped or stored in containers with capacities equal to or greater than 56 gallons.

Conservation Vent - Designed to protect a tank from excessive internal pressure or vacuum situations by opening when preset limits are exceeded. Also referred to as a pressure/vacuum vent.

Containment System - Includes primary containment as provided by the bulk storage tank and secondary containment provided through the use of concrete or some other type of structural barriers placed around the bulk storage tank.

Dedicated Pump and Piping - A pump and piping system used to transfer and/or recirculate only one product.

Distribution Chain - Includes facilities involved in the transportation, storage, repackaging, sale or application of pesticide products from their manufacture to final use.

Drain - An outlet designed to channel liquid runoff away and off-site from a property.

Loading Pad - A concrete structure designed to provide containment for operations involving unloading of bulk pesticide shipments and cleaning/refilling of refillable containers.

Manway - Secured opening that allows human access into the interior of a tank for the purpose of inspection, cleaning or maintenance.

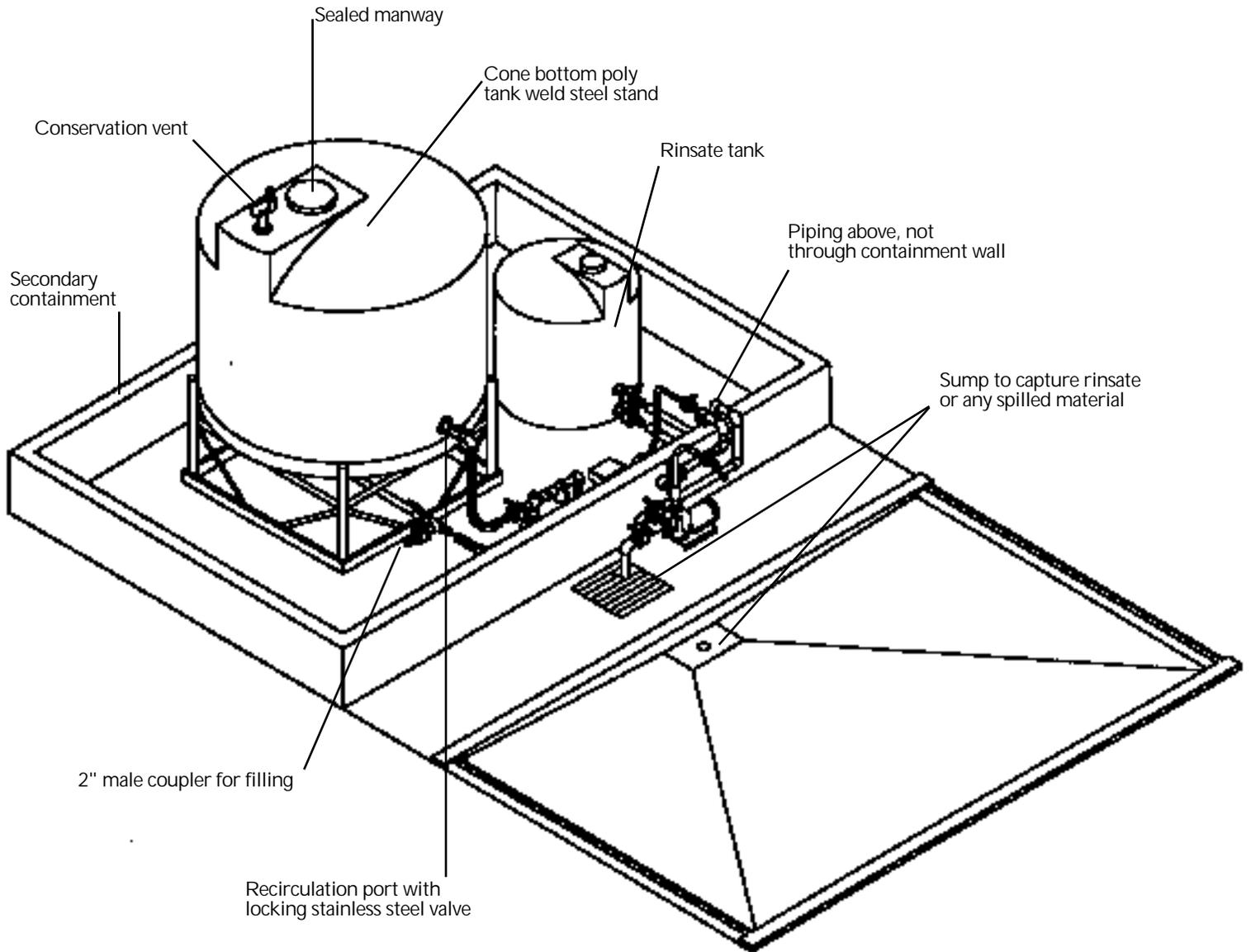
Rinsate - Dilute solution of a pesticide resulting from routine cleaning of application equipment, loading/unloading pads, secondary containment structures, bulk systems, mini-bulk containers or other pesticide containers.

Sump - A recessed reservoir in the floor of secondary containment structure or loading pad that is designed to be a receptacle for the collection of liquids.

Tank - As used in this document, refers to a stationary bulk tank only.

Note: See drawing on Page 2.

LIQUID PESTICIDE BULK STORAGE FACILITY



EQUIPMENT INFORMATION

TANK							PUMP	
No.	Capacity (gals.)	Product Stored	Dedicated To Single Product Yes/No	Material of Construction *	Type **	Date Installed	Material of Construction*	Horsepower

*Material of Construction

Aluminum = A; Carbon Steel = C; Cast Iron = CI; Stainless Steel = S; Cross-Linked Polyolefin = CL;
Glass or Poly Lined = G; High Density Polyethylene = P

**Type

Horizontal = H; Vertical, Coned Bottom = C; Vertical, Flat Bottom = V

SITE LOCATION

The following criteria are relevant to risk assessments of your existing facilities. These guidance criteria also can be used in selecting locations for new pesticide storage facilities.

1 SITE ACCESS

Accessibility to the facility site from more than one direction is important in the event of an emergency situation. The site should be such that all areas can be accessed easily by emergency teams — such as the fire department. There should be no restrictions that would prevent access — such as a single road which could be blocked by trains, drawbridges, etc. — that would significantly impede emergency response.

Is this facility: Accessible from more than one direction?

Yes No

2 PROXIMITY TO “HARD-TO-EVACUATE” INSTITUTIONS

It is preferable that “hard-to-evacuate” institutions — such as hospitals, nursing homes, day-care centers, schools, prisons, etc. — are not close (less than one mile) to a pesticide bulk storage facility.

Is this facility: Located over one mile from “hard-to-evacuate” facilities?

Yes No

3 ADJACENT OPERATIONAL HAZARDS

It is preferable that a pesticide bulk storage facility be located more than 100 feet from a “high-risk” operation — such as welding, flammable materials or compressed gas storage, etc. In the event of a fire or explosion at a neighboring operation, your facility may be at risk.

At this facility: Is bulk storage more than 100 feet from a high-risk neighboring operation?

Yes No

4 LOCATION OF WATER SOURCES

A bulk pesticide storage facility should be located where spills and runoff from fire fighting activities will have a minimal impact on the environment.

Is this facility: More than 300 feet from a river, lake, drainage way, pond or creek and not above a readily accessible aquifer from which water is extracted for drinking?

Yes No

Note: Porous soils (sandy) can allow rapid movement of spilled pesticides to the ground water while heavy soils (clays) prevent such movement and allow for easier cleanup.

5 NATURAL DISASTERS

It is preferable for a bulk pesticide storage facility to be located where the probability of flooding is low — for example, not located in a 100-year flood plain or less.

Is this facility: Located outside of a 100-year or greater flood plain?

Yes No

TANK STRUCTURE

6 TANK CONDITION AND DESIGN

Maintaining tanks in good condition is essential for spill prevention and protection of product quality. Tanks should be free of stress cracks, weakened welds, punctures, rusting, cross-checking from ultraviolet (UV) degradation or other signs of aging or structural defects as determined by visual inspection.

At this facility: From visual inspection, are tanks in good condition?

Yes No

If no, in what areas can improvements be made? Which tanks need replacing?

7 Filling of bulk tanks through fixed piping promotes greater safety to persons handling the product and reduces the potential for spills. During filling, no free-fall of liquid products should be allowed. Free-falling liquids can cause static electricity build-up and can also cause air to be trapped in the product. The first inlet/outlet valve from a storage tank should be a locking stainless steel valve. The valve should be locked when unattended. All outlets should be able to be capped.

At this facility: Are tanks loaded through fixed piping that does not permit liquids to free-fall?

Yes No

Are all first inlet/outlet valves from the storage tank lockable stainless steel valves?

Yes No

8 Tanks should be equipped with a "manway" or inspection port to allow inspection of their interiors. Each manway or inspection port should have a gasket to ensure a good seal and to prevent contamination, especially from rainwater. Manways should be open only when cleaning, inspecting or checking inventory. In unsecured areas, manways and inspection ports should be locked.

At this facility: Do tanks have properly sealed manways or inspection ports?

Yes No

If in unsecured areas, are manways or inspection ports capable of being locked?

Yes No

9 Tanks with cone- or dish-shaped bottoms allow for more complete emptying, are easier to clean and permit more thorough inspections of tanks' exteriors.

At this facility: Do tanks have cone- or dish-shaped bottoms?

Yes No

10 STORAGE TANK RATING

Storage tanks may fail because the pesticide stored in them have specific gravities that exceed the tanks designed capability. Some tanks have an identification plate giving their specific gravity rating. If a specific gravity rating is not identified on a tank, or otherwise known, the tank's manufacturer should be contacted for this information. To determine if a pesticide that is planned to be stored in a tank has a specific gravity less than the tank's rating, the pesticide's specific gravity must first be known. The specific gravity can be identified by contacting the pesticide's manufacturer or calculated by dividing the weight of the pesticide per gallon by 8.33. (Example: The pesticide weighs 10.2 lbs. per gallon. Therefore, $10.2 \div 8.33 = 1.22$ specific gravity. The tank's rating must be 1.22 or greater.)

At this facility: Are structural ratings identified for each bulk storage tank?

Yes No

Are pesticides only loaded into tanks if their specific gravities are less than the specific gravity rating of the tanks being loaded?

Yes No

11 RECIRCULATION

Some pesticides in bulk storage require periodic recirculation or recirculation prior to use. To obtain homogenous materials, recirculation systems must be capable of recirculating the volume of product in a tank at a frequency and duration that meets the pesticide manufacturers' recommendations.

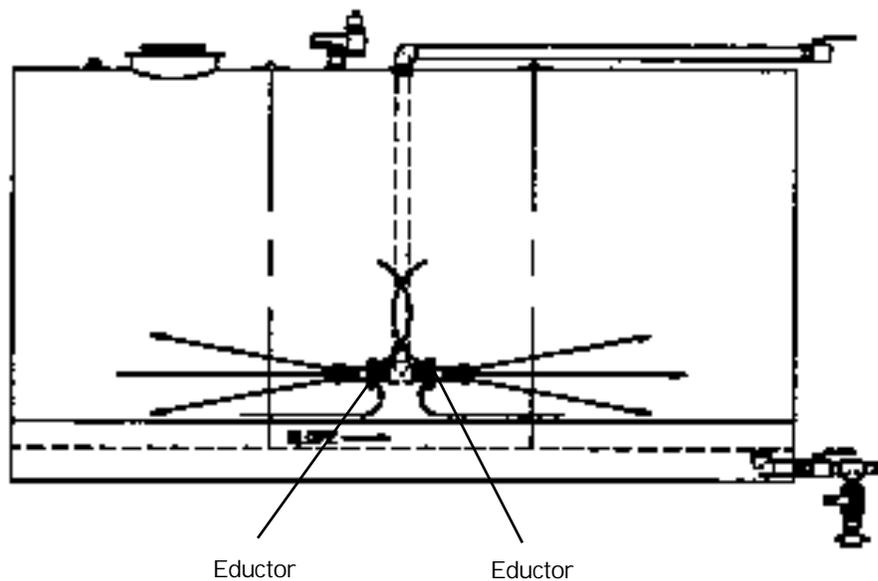
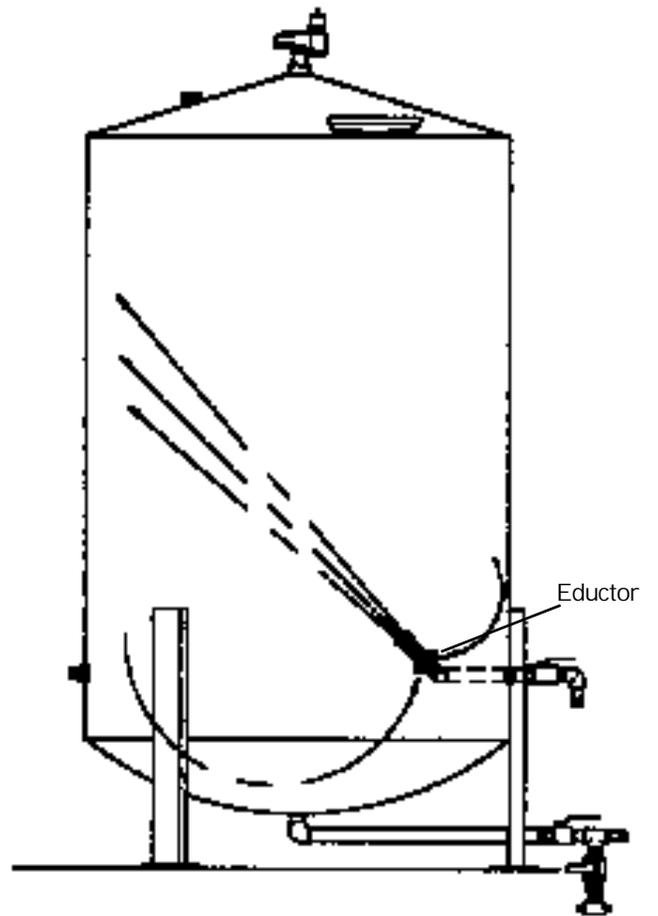
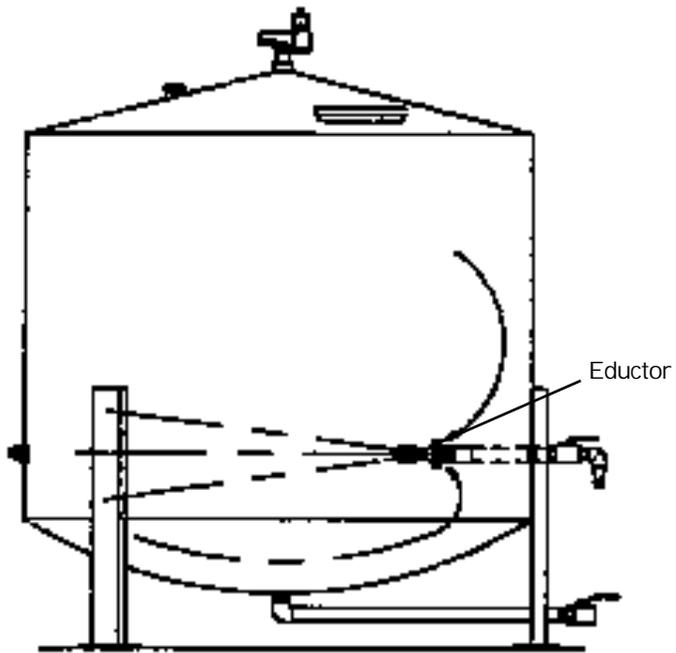
At this facility: Do recirculation capabilities exist for those pesticides that require recirculation?

Yes No

Note: See page 7 for suggested flow diagrams and recirculation systems (educator drawing).

EDUCTOR PLACEMENT EXAMPLES

Note: Use eductor placement, orientation and recirculation timing as recommended by product registrant.



CONTAINMENT

12 SECONDARY CONTAINMENT

Secondary containment structures around bulk storage tanks are effective means for minimizing economic and environmental impacts of accidental discharge of pesticides. Secondary containment should be designed to totally contain spilled pesticides until they can be recovered. The walls and floor of secondary containment must be resistant to the pesticides being stored. All joints and cracks should be sealed with a material that is compatible with the pesticide(s) being stored. In addition, all containment walls made of concrete block should be completely coated with a sealant to make them impervious.

The construction material of the secondary containment walls should be either reinforced concrete, filled reinforced concrete block, or steel. Earthen, lined earthen or wooden walls are not recommended.

Note: Polyethylene dikes provide adequate spill containment. However, because of fire or UV degradation concerns, they are not recommended.

At this facility: Do bulk pesticide storage tanks have secondary containment structures in place?

Yes No

Are the walls and floor of the containment structures constructed of reinforced concrete, filled reinforced concrete block, or steel?

Yes No

If not, what is the material of construction?

From visual inspection, is the secondary containment structure in good condition (i.e. no major unsealed cracks, signs of leakage, gaps in joints, sealant in good condition, etc.)?

Yes No

13

Piping should not penetrate the secondary containment walls. Piping to outside of the containment structure should be designed to go over the walls. Piping should also not run underground since leaks cannot be easily detected. No outlets, drains or openings in the secondary containment walls or floor should exist. All pumps, piping, meters, hoses and vents should be positioned inside secondary containment. Storage tanks, if susceptible to floatation, should be securely fastened to the floor of the secondary containment structure.

At this facility: Does all existing piping run over secondary containment walls and not penetrate them?

Yes No

Are all piping systems above ground?

Yes No

Are the containment walls constructed with no openings or outlets?

Yes No

Is the containment floor constructed with no open drain(s)?

Yes No

14 Secondary containment structures should have a minimum capacity of 110% of the largest tank volume plus displacement for all other storage tanks if under roof. If the storage tanks are not under roof, the secondary containment volume should have a minimum capacity of 125% of the largest tank volume plus displacement for all other tanks.

TO CALCULATE THE MINIMUM CAPACITY OF SECONDARY CONTAINMENT:

- (a) Capacity (gallons) of the largest storage tank _____
- (b) Displacement (gallons) of other storage tanks (only volume of tanks below containment walls) _____
- (c) Minimum capacity of secondary containment under roof, 110% of capacity in (a) plus displacement in (b) equals _____ (gallons)
- (d) Minimum capacity of secondary containment not under roof, 125% of capacity in (a) plus displacement in (b) equals _____ (gallons)

At this facility: Does the secondary containment capacity meet the recommended volumes for bulk tanks stored under roof or outdoors?

Yes No

Additional References: [Designing Facilities for Pesticide and Fertilizer Containment](#), (MWPS-37). First Edition. 1991. [Midwest Plan Service](#): 122 Davidson Hall, Iowa State University, Ames, IA 50011-3080.

15 The area around the secondary containment structure should be graded to allow inspection of the containment system and to assure that no surface water collects against the exterior surface of the secondary containment walls.

At this facility: Is the area around the containment area properly graded to allow for inspection?

Yes No

16 OPERATIONAL/RINSE LOAD PADS

Containment pads are necessary in areas where:

- Tank trucks are loaded /unloaded.
- Refillable containers are cleaned /filled.
- Pesticide application equipment is cleaned/loaded.

The design and construction of containment pads should allow for spilled product or rinsate to be easily collected. Containment pads should be free of unsealed cracks, show no signs of leakage, and sealants should be in good condition.

Note: Adequate ventilation should be considered in the design of containment pads whether indoors or outdoors.

At this facility: Do adequate containment pads exist for unloading/ loading activities?

Yes No

Does adequate containment exist for filling/cleaning refillable containers?

Yes No

Does a containment area exist for related activities, e.g. cleaning/loading equipment?

Yes No

Is the containment pad in good condition from visual inspection (i.e. no major unsealed cracks, signs of leakage, gaps in joints, sealant in good condition, etc.)?

Yes No

Valves _____

Seals _____

Meters _____

BULK SYSTEM COMPONENTS

17 COMPATIBILITY

The components of bulk systems — such as pumps, piping, hoses, gaskets, valves, seals and meters — should be constructed of materials compatible with the pesticides being stored. Materials that are not compatible can impact the quality of the pesticides stored, as well as create a potential for spills. Data on materials compatibility of bulk system components should be requested from the pesticide manufacturers.

At this facility: Have the manufacturers' material compatibility data been reviewed for the pesticides being stored? (Record in the comments section the bulk tank number from page 3 and note deficiencies.)

	Yes	No	Comments
Pumps	<input type="checkbox"/>	<input type="checkbox"/>	_____
Piping	<input type="checkbox"/>	<input type="checkbox"/>	_____
Hoses	<input type="checkbox"/>	<input type="checkbox"/>	_____
Gaskets	<input type="checkbox"/>	<input type="checkbox"/>	_____

18 INTEGRITY

All equipment must be free of stress cracks, UV degradation, "cross-checking" of polyethylene tanks, weakened welds, punctures, signs of corrosion, chemical attack, product leakage, rusting or other signs of aging or structural defects.

At this facility: Are the following bulk system components in good condition from visual inspection? (Record in the comments section the tank number from page 3 and note deficiencies.)

	Yes	No	Comments
Tanks	<input type="checkbox"/>	<input type="checkbox"/>	_____
Pumps	<input type="checkbox"/>	<input type="checkbox"/>	_____
Piping	<input type="checkbox"/>	<input type="checkbox"/>	_____
Hoses	<input type="checkbox"/>	<input type="checkbox"/>	_____
Valves	<input type="checkbox"/>	<input type="checkbox"/>	_____
Meters	<input type="checkbox"/>	<input type="checkbox"/>	_____

19 EMERGENCY RELIEF VALVES/ RUPTURE DISCS

Emergency relief valves and rupture discs are designed to operate when situations occur that require the rapid release of tank pressure. The need for emergency relief valves and rupture discs are determined by the specific properties of the pesticides being stored and also the recommendations of the pesticide manufacturers.

At this facility: If required, do bulk storage tanks have properly sized emergency relief valves and/or rupture discs?

Yes No

20 CONSERVATION PRESSURE/VACUUM VENTS (CONSERVATION VENTS)

Bulk storage tanks should be equipped with conservation vents to protect against tank failure from over-pressurization or excessive vacuum. Conservation vents must be properly sized — for example, the tank discharge hose is always smaller than the conservation vent opening — to accommodate all loading/unloading operations involved with the storage tank. Vents should be hooded to prevent contaminated materials from entering the storage tank. The vent designs should also consider environmental and industrial hygiene concerns by preventing excess volatilization of solvents or condensation from incoming air.

At this facility: Are properly designed and sized conservation vents installed on bulk storage tanks and do they meet or exceed all loading/unloading venting requirements?

Yes No

21 PUMPS

Pumps in the bulk storage system should be designed to meet the dispensing requirements, and recirculating requirements should they exist, of the pesticides being stored as determined by the properties — such as viscosity, suspended solids content, etc.

At this facility: Are pumps designed to the dispensing and/or recirculation requirements of the pesticides being stored?

Yes No

22 GASKETS/SEALS

Worn or incorrect gaskets and seals can result in contaminated product or failure of equipment resulting in lost product or spills.

At this facility: From visual inspection, are the gaskets/seals performing properly with no evidence of leaking?

Yes No

Are inspections of gaskets/seals a requirement of a regularly scheduled preventative maintenance program?

Yes No

23 ELECTRICAL CLASSIFICATION

Some pesticides have flash points under 100 degrees (F). Potential sources of ignition around bulk operations include any equipment that operates on electricity. It is important, therefore, that all electrical equipment be rated for the type of area in which it is used.

At this facility: Do the electrical ratings of equipment used in the bulk storage area meet or exceed the electrical code requirements based upon the pesticides being stored?

Yes No

24 ELECTRICAL GROUNDING

Equipment should be properly grounded to dissipate static electricity build-up that may occur during the loading/unloading of pesticides. This is especially important for pesticides with flash points under 100 degrees (F).

At this facility: Are tanks properly grounded to dissipate static electricity build-up?

Yes No

Are tank truck/tank car grounding wires and clamps in good condition and regularly tested?

Yes No

25 ELECTRICAL SYSTEMS LOCATIONS

Electrical equipment and wiring inside secondary containment structures should be elevated so that they do not become submerged in the event of spills or, if outdoors, precipitation. Ideally, all components of electrical systems should be positioned above the top of the secondary containment wall.

At this facility: Are electrical equipment and wiring elevated so as not to become submerged?

Yes No

26 SIGHT GAUGES

External sight gauges should not exist on pesticide bulk storage tanks. In the event of breakage, they are significant sources for accidental releases. Any existing sight gauges should be removed and permanently plugged. There are alternative means of level measurement that eliminate the potential for accidental spills that should be used.

At this facility: Are levels in pesticide storage tank measured by means other than external sight gauges?

Yes No

Have all existing sight gauges been removed and plugged?

Yes No

PRE-EMERGENCY PLANNING

27 PRE-EMERGENCY PLAN

A bulk facility should have a written Pre-Emergency Plan that is reviewed at least annually and updated if changes are necessary. Any major changes in pesticides being stored or facility improvements should be evaluated for their impacts on pre-emergency planning and reflected in the Plan, accordingly. The purpose for the Pre-Emergency Plan is to help the facility to be thoroughly prepared in the event of emergency situations — such as fires — through planning, employee training and preparedness, and coordination with local emergency responders. At a minimum, the plan should include:

- Emergency phone numbers
- Evacuation of on-site personnel

- Neighborhood evacuation plan
- Site layout
- Emergency containment
- Fire fighting equipment
- Fire fighting strategy

At this facility: Is a written Pre-Emergency Plan available, complete, updated regularly and reviewed by all employees?

Yes No

28 EMERGENCY TELEPHONE NUMBERS

A complete list of emergency contacts and their telephone numbers is essential. The first page of the Pre-Emergency Plan should contain this list of contacts. Copies should be distributed to the local police and fire departments. The emergency contact list should include:

- Facility emergency coordinators and alternates
- Fire department
- Police/sheriff department
- Manufacturers' spill and medical telephone numbers
- CHEMTREC
- Hospital /ambulance
- Government agencies (as appropriate)
- List of local contractors for spill cleanup and containment

Note: A sign displaying the emergency contacts should be posted at the facility in a location and size so that arriving emergency personnel can easily read it from a distance.

At this facility: Is an emergency contact list available, posted and has it been distributed to local emergency responders?

Yes No

29 EMERGENCY EVACUATION OF EMPLOYEES AND INJURED

Injuries resulting from a fire or other emergency situations must be dealt with first. At no time should injured personnel be allowed to drive themselves to a hospital or home. If the emergency involves a pesticide-related injury, a copy of the pesticide's Material Safety Data Sheet (MSDS) should be promptly provided to the hospital. An emergency meeting location(s) should be designated close to the facility for personnel assembly and accounting. Periodic drills should be used to train all employees to meet at the designated location(s), and remain there until the facility coordinator has conducted a head count. All exit and evacuation routes must be clearly marked.

At this facility: Does an evacuation plan exist and are all employees trained in its content?

Yes No

30 OFF-SITE EVACUATION

Facility planners and local emergency responders should jointly prepare a strategy for evacuation of the immediate surrounding area. This strategy should identify emergency situations where off-site evacuation would be most appropriate. Releases to the atmosphere, prevailing winds, residential and institutional factors should be considered in the strategy.

At this facility: Does an off-site evacuation plan exist for the immediate surrounding area?

Yes No

Has the off-site evacuation plan been coordinated with local emergency responders?

Yes No

31 FIRE FIGHTING STRATEGY

The fire department and other first responders should be involved in identifying the circumstances under which they would continue to fight a fire with water. During a fire, water used to fight the fire will accumulate and could become contaminated with pesticides. Accumulation of water from fighting fires should be prevented from leaving the facility property. The authority having jurisdiction should identify those situations where stopping or minimizing the flow of water used in fighting the fire is warranted to prevent the further accumulation of contaminated water. The decision to implement this strategy during fire fighting must be controlled by the local authority having jurisdiction. This strategy should be thoroughly reviewed with local authorities as part of pre-emergency planning.

At this facility: Does a fire fighting strategy exist and has it been coordinated with local authorities?

Yes No

32 EMERGENCY CONTAINMENT

A strategy to contain spills and water from fighting fires must be included in the Pre-Emergency Plan. If possible, the volume capacity of dikes should also be included. A procedure to protect sanitary and storm sewers must also be defined. Contractors of earth moving equipment should be identified, available and trained in the emergency containment strategies. Locations for temporary containment should be clearly identified on the site plan.

At this facility: Does an emergency containment strategy exist as part of the Pre-Emergency Plan?

Yes No

33 SITE LAYOUT

A detailed map of the storage area, as well as a map of the surrounding area should be included in the Pre-Emergency Plan. The storage area map should identify the location(s), general classification and approximate quantities of hazardous materials routinely stored at the facility. The map should clearly indicate locations of fire extinguishers, emergency exits, utility controls and safety equipment.

The surrounding area map should include locations of rivers, streams, unprotected wells, residential areas, "hard-to-evacuate" institutions and areas where emergency containment should be constructed. The general direction of runoff should be noted, as well as all perimeter fences, rail spurs, fire hydrants, and sanitary and storm sewer drains. Both maps should be reviewed by local emergency responders and facility personnel on a regular basis.

At this facility: Does a site layout map of storage and surrounding areas exist?

Yes No

Additional Reference: [Pre-Fire Plan for Handling Agricultural Chemical Fires](#), National Agricultural Chemicals Association. Revised 1985.

34 FIRE EXTINGUISHERS

Adequate fire extinguishers should be available at the facility. Fire extinguishers should be accessible and of a proper rating.

At this facility: Are properly rated fire extinguishers available and regularly inspected?

Yes No

35 DISTRIBUTION OF PRE-EMERGENCY PLAN

An up-to-date copy of the Pre-Emergency Plan should be distributed to the fire department and local emergency planning coordinator (LEPC).

At this facility: Has the current Pre-Emergency Plan been distributed?

Yes No

36 LOCATION OF PLAN

All Pre-Emergency Plans should be stored in an area easily accessible during the first few minutes of an emergency. MSDSs, site plans and emergency procedures and contacts should be positioned outside of, and away from, the storage area. This will preclude the need for re-entering the storage area during an emergency.

At this facility: Is the Pre-Emergency Plan easily and safely accessible?

Yes No

FIFRA REQUIREMENTS (Federal Insecticide, Fungicide and Rodenticide Act)

37 A tank in which a pesticide is being stored must have affixed to it the appropriate product label and booklet with the registrant's EPA Establishment Number on it. In addition, the net content section on the label should be filled in with the quantity (gallons) equal to existing inventory in tank, plus the shipment received.

Note: EPA does not require the net contents to be revised each time product is withdrawn, only when shipments are received.

At this facility: Is an approved registrant's product label and booklet with the registrant's EPA Establishment Number on it affixed to each bulk pesticide storage tank, and does the tank label display the net contents?

Yes No

38 If a facility is repackaging pesticides into refillable containers (other than for custom application by the facility), EPA defines the facility to be a registered pesticide producing establishment and requires that it have a valid facility EPA Establishment Number.

At this facility: Does a valid facility EPA Establishment Number exist?

Yes No

39 EPA requires certain recordkeeping and reporting requirements for pesticide refilling facilities.

At this facility: Are the required EPA recordkeeping and reporting requirements being met?

Yes No

40 A refillable container filled by a refilling facility must have affixed to it the FIFRA product label and booklets for the pesticide it contains, along with the refilling facility's EPA Establishment Number. In addition, the correct net contents must be identified on the container's label.

At this facility: Are FIFRA required labels and booklets affixed to all filled containers with the facility's EPA Establishment Number and correct net container contents noted?

Yes No

41 A signed copy of the authorization agreement between the repackager and the registrant must be current and on file at the refilling facility. The signed agreement must include the following information:

- The name and physical address of the repackaging facility.
- The repackaging facility's EPA Establishment Number.
- Authorization from the registrant to repackage a product. The product must be specifically identified by name with its corresponding product EPA Registration Number.
- Container size. (Repackaging into containers of less than 56 gallons is not allowed.)
- Authorization from the registrant to use the specific product labels for the product being repackaged.
- Cleaning instructions for both tanks and refillable containers (if containers are not dedicated).
- Additional requirements that the registrant may require for handling its product.

At this facility: Does a signed copy of the Authorization Agreement exist and is it on file?

Yes No

Note: Filing the repackaging Authorization Agreement at a central location, e.g. corporate offices, does not meet EPA's regulations. A copy of the written agreement must be on file at the facility doing the repackaging.

Additional References: 40 CFR Parts 167 and 169.

[EPA Bulk Pesticide Repackaging Questions and Answers Document](#). U.S. Environmental Protection Agency. February 3, 1994.

[Guidelines and Procedures for Cleaning, Refilling and Rededicating Pesticide Containers](#). American Crop Protection Association. Revised April 1995.

EMPLOYEE SAFETY AND HEALTH

42 PERSONAL PROTECTIVE EQUIPMENT

For accessibility, personal protective equipment (chemical resistant boots, chemical resistant gloves, respirators, safety goggles, chemical resistant suits) and spill cleanup materials (salvage drums, sand bags, absorbent materials) should be kept in a central area. An inventory of necessary equipment should be included in the Pre-Emergency Plan and its location should be identified on the site layout map. Personal protective equipment should be periodically inspected for fitness of use. All personnel should be routinely trained as to the proper use of such equipment.

At this facility: Is personal protective equipment available and periodically inspected?

Yes No

Are all employees routinely trained in the proper use of personal protective equipment?

Yes No

43 SAFETY EQUIPMENT

Minor medical emergencies can best be handled by having proper and readily accessible first-aid kits, eye-wash stations and safety showers. The location of this equipment should be identified on the site layout map. All items should be periodically inspected for fitness of use, and personnel should be trained in their use.

ADMINISTRATION/ SECURITY

46 No Smoking Policy

A policy prohibiting smoking in the bulk storage and handling area(s) is essential. "No Smoking" signs should be adequately displayed so as to be visible to personnel entering the area(s). The "No Smoking" Policy must be enforced.

At this facility: Does a "No Smoking" policy exist and is it strictly enforced?

Yes No

47 Access Control Procedures

Procedures should be in effect to limit access to bulk storage and handling area(s) to authorized personnel only. "Restricted Area - Authorized Personnel Only" signs should be strategically posted and visible to anyone prior to entering the area(s). During non-business hours, gates or buildings should be locked.

At this facility: Are "Authorized Personnel Only" procedures in place and strictly enforced?

Yes No

48 Food Consumption

A policy prohibiting eating or drinking in bulk pesticide storage and handling area(s) is essential. Written hygiene practices should be posted and enforced.

At this facility: Is safety equipment available?

Yes No

Are all employees routinely trained in the proper use of safety equipment?

Yes No

44 TRAINING

There should be an emergency response training program in place that incorporates all aspects of the Pre-Emergency Plan, including evacuations, notifications, response actions/procedures and possible types of potential emergencies. Employees should be trained as to the limits of their fire fighting abilities. New employees should be trained upon entry, while all employees should be trained and/or retrained annually, at a minimum.

At this facility: Have all employees been trained or retrained at least annually?

Yes No

Is the training program documented?

Yes No

45 MATERIAL SAFETY DATA SHEETS

A bulk facility must have current "hard copies" of an MSDS for each product stored at that location. They should be accessible to all employees. Personnel handling the product should be trained in how to use and read the information on MSDSs.

At this facility: Are MSDSs available and are employees trained to use them?

Yes No

At this facility: Does a policy prohibiting eating or drinking in the bulk pesticide storage and handling area(s) exist and are written hygiene practices supporting the policy posted and enforced?

Yes No

49 SUBSTANCE ABUSE POLICY

A Substance Abuse Policy should be in place.

At this facility: Is there a Substance Abuse Policy in place?

Yes No

50 REGULATIONS

Bulk pesticide storage facility operators should be knowledgeable and be able to demonstrate a working understanding of all federal, state and local regulations and standards that apply to pesticide bulk storage and handling. Copies of all pertinent regulations and necessary permits should be on hand.

At this facility: Are the applicable federal/state/local regulations available?

Yes No

Additional Reference: [Environmental Handbook for Fertilizer and Agrichemical Dealers](#). National Fertilizer and Environmental Research Center, Tennessee Valley Authority.

51 LIGHTING

Bright exterior lighting of bulk pesticide storage area(s) discourages unauthorized access that can lead to possible theft or destruction of property.

At this facility: Does the bulk pesticide storage area(s) have sufficient exterior lighting to deter unauthorized access?

Yes No

52 "HOT WORK"

"Hot work" — such as welding, etc. — constitutes a fire hazard. Procedures should be documented and enforced to ensure that safe practices are followed when hot work is required.

At this facility: Do hot work procedures exist and are they documented and enforced?

Yes No

53 RECORDKEEPING

It is important that proper recordkeeping exists for all aspects of the operation. Examples would include: employee training, product inventory, inspections, equipment maintenance, etc.

At this facility: Does a proper recordkeeping program exist and is it maintained and properly stored?

Yes No

OPERATIONAL PROCEDURES

54 PREVENTIVE MAINTENANCE

It is important that all components of the bulk system be properly maintained, not only to prevent down

time, but also to prevent accidental spills and loss of product. Preventive maintenance can take many forms — such as checklist walk-throughs, physical testing of alarms or valves, periodic replacement of hoses, gaskets and seals, etc. Written preventive maintenance procedures should exist and personnel should be trained to implement them. All maintenance and training activities should be documented when conducted.

At this facility: Do routine preventive maintenance schedules exist for bulk system components and are they documented?

Yes No

Do written preventive maintenance procedures exist for:

Hoses Yes No

Tanks Yes No

Pumps Yes No

Piping/Fittings Yes No

Filters Yes No

Gaskets Yes No

Seals Yes No

Meters Yes No

Conservation Vents Yes No

Screens Yes No

Containment Systems Yes No

Are preventive maintenance training sessions conducted and documented?

Yes No

55 RAINWATER

At a bulk pesticide storage facility, it is important for rainwater, or snow melt, that accumulates inside the secondary containment structure be controlled to prevent its contamination and release, if contaminated. A sump pump with a locked switch is recommended for the removal of uncontaminated rainwater. (Note: automatic sump pumps are not recommended.) Rainwater should be handled properly by trained employees. Storage under roof reduces the problems associated with contaminated rainwater, snow melt and stormwater handling.

At this facility: Are procedures for controlling rainwater in place and have employees been trained?

Yes No

56 EQUIPMENT LABELING

In order to properly identify the location of different pesticides in the bulk storage system and prevent cross-contamination, all bulk handling equipment should be labeled. For ease of identification, piping and pumps should be clearly designated by product name. Tanks should have a current and correct product label attached to them. Additional labels required by the manufacturers should be affixed to the tank. Tanks may also be required to be labeled with National Fire Protection Association (NFPA-704) fire hazard placards. The information on NFPA placards should correspond to MSDSs. All labels should be legible and unobstructed.

At this facility: Are all tanks, associated fill couplings, piping, pumps and pump switches labeled and identified for the pesticides being handled?

Yes No

57 HOUSEKEEPING

A facility should have a housekeeping policy in place and it should be implemented on a routine basis. Examples are:

- All spills, including small ones, are promptly cleaned up.
- Areas are kept clean and free of debris.
- Empty containers and hoses are properly stored.
- Drip pans are used to catch potential small leaks.

At this facility: Is there evidence that a housekeeping program exists?

Yes No

58 TANK ENTRY PROCEDURES

Bulk storage tank entry, for any purpose, constitutes a confined space entry under OSHA (Occupational Safety and Health Administration) regulations. Confined spaces may pose serious safety or health hazards such as:

- Low oxygen levels.
- Pesticide exposure by skin or by inhalation.
- Power equipment associated with the bulk storage tank that is not locked-out (i.e. agitator, pumps, etc.).

The facility should have a written permit program for entry into confined spaces. A written procedure for lock-out /tag-out of all power equipment must also be in place.

At this facility: Is there a confined space permit program in place?

Yes No

Do written lock-out /tag-out procedures exist and are they used?

Yes No

59 RINSATE MANAGEMENT

Rinsate recovered from the clean-out/rededication of refillable containers, bulk storage systems, and application equipment should be managed in one of the following manners:

- Used as a diluent for spray applications, if allowed by law, and sprayed on a labeled use site. Applications must stay within the maximum use rate/year and conform to site and crop use recommendations as documented on appropriate product label or labeling.
- Processed through an appropriate rinsate system or commercial filtration/processing equipment designed to remove or deactivate chemical residues. Federal, state and/or local waste treatment or effluent regulations may apply.
- Disposed of in accordance with federal and state waste and/or hazardous waste requirements.

Employees should be trained in the rinsate management program and the use of personal protective equipment.

At this facility: Is rinsate being properly managed and documented?

Yes No

QUALITY CONTROL

60 CROSS CONTAMINATION

The potential for product cross contamination and the ability to minimize wastes are two critical areas that need constant attention. One way to address both is to dedicate the use of all equipment that comes in direct contact with the product. Such equipment would include not only the storage tanks, but also all piping, hoses, filters, pumps and meters. If it becomes necessary to introduce a different product into a storage system, the entire system needs to be rededicated. This requires that registrant-prescribed clean-out procedures for the product be in place and used.

At this facility: Is all equipment dedicated or do registrant-prescribed cleaning procedures exist and are they used?

Yes No

Additional Reference: [Guidelines and Procedures for Cleaning, Refilling and Rededicating Pesticide Containers](#). American Crop Protection Association. Revised April 1995.

61 TANK REDEDICATION

If it becomes necessary to introduce a product into a storage system not dedicated for its use, specific guidelines need to be followed to ensure the system is compatible with the product. Clean-out procedures for the tank and associated equipment need to exist and be used to prevent cross-contamination. The manufacturer of the original product should be contacted to provide procedures on how to clean the product from the equipment. The manufacturer of the product to be introduced into the tank should be

consulted for compatibility issues as well as the definition of "clean" prior to introducing its product into the equipment.

At this facility: Do formal written procedures exist that address material of construction/compatibility, and clean-out?

Yes No

62 TEMPERATURE CONTROL

The quality of many pesticides can be adversely affected by extreme temperatures. Products in storage should be maintained within temperature ranges indicated on product labels or MSDSs.

At this facility: Are products requiring temperature control being stored within recommended ranges?

Yes No

63 SAMPLING

If products need to be sampled, recirculate for the required time per manufacturer's directions, dispense the product through the hose until the recirculated material is available, then take a sample.

At this facility: Is there a written procedure for sampling?

Yes No

64 CONTAINER INSPECTION

Before any refillable container is filled, it should be inspected to insure it meets certain requirements. The method of inspection and the criteria of the container should be available in written procedures from the registrant and should address such items as cross contamination, proper tank identification, tank integrity, etc.

At this facility: Do written procedures exist for container inspection?

Yes No

Additional Reference: [Guidelines and Procedures for Cleaning, Refilling and Rededicating Pesticide Containers](#). American Crop Protection Association. Revised April 1995.

65 SCREENS/FILTERING

Filter screens should be installed on the inlet side of the meter to protect it from sludge or foreign material.

At this facility: Are filter screens installed on the inlet side of all meters?

Yes No

66 SHUTDOWN PROCEDURES (End of Product Season)

Proper maintenance can extend the useful life of equipment in bulk systems and prevent unscheduled downtime. In certain locations, at the end of the pesticide use season, pumps, meters, piping and dispensing hoses should be rinsed and then refilled with at least a 50:50 antifreeze/water mixture. (Contacting the manufacturer is recommended to ensure that the requirements of the pesticide are properly considered.)

At this facility: Do "end-of-product-season" maintenance procedures exist for all appropriate equipment and are they implemented?

Yes No

LOADING/UNLOADING

67 BULK DELIVERY SAFETY CHECKLIST

In order to ensure incident-free bulk delivery of liquid pesticides, a bulk delivery safety checklist should be used for unloading. These checklists can be customized to fit specific characteristics of a facility. They should include such items as: verification of paperwork and product received, storage tank number, starting and ending levels of storage tank, weight or volume received, etc. The main purpose of a bulk delivery safety checklist is to verify what pesticide is being received and ensure that the critical steps for unloading are followed.

At this facility: Does a bulk delivery safety checklist exist for unloading pesticides and is it used?

Yes No

Note: See Appendix A: Tank Truck Bulk Delivery Safety Checklist and Appendix B: Tank Car Bulk Delivery Safety Checklist.

68 VERIFICATION OF PRODUCT

In order to prevent accidental loading of a pesticide into a wrong tank resulting in cross contamination and potentially unsafe conditions, material receipts should be verified before accepting delivery of a bulk shipment. The shipping documents and/or receiving report should be closely checked to verify the correct identity of the pesticide being delivered.

At this facility: Does a procedure exist for verifying the identity of pesticides being delivered prior to receipt and is it documented?

Yes No

69 RECEIVING LOCATION'S RESPONSIBILITY

A facility receiving bulk liquid pesticides should have a properly trained employee present throughout the entire unloading procedure. The duties of the facility employee should be as follows:

- Complete a "Bulk Delivery Safety Checklist" for the product being unloaded.
- Check that the storage tank and fixed intake pipe is labeled with the product being received.
- Determine that the product quantity being delivered is not greater than the available storage tank capacity. (See Definitions on Page 1 or Appendix A or B for explanation.)
- Determine that the conservation vent is properly working.
- Clearly designate to the driver which storage tank and which inlet pipe will be used.
- Verify that any sampling ports or other valves are closed before the truck driver makes the hose connection.
- Open the storage tank intake valve and verbally instruct the driver when to begin unloading.
- Close storage tank inlet valve when delivery is complete.

At this facility: Are facility employees properly trained on bulk delivery procedures?

Yes No

Are all inlets/outlets capped when unattended?

Yes No

70 TRUCK DRIVER RESPONSIBILITIES

A truck driver delivering bulk liquid pesticides should be present throughout the entire unloading procedure. The duties of the truck driver should be as follows:

- Assist the facility employee on completing a "Bulk Delivery Safety Checklist" for the product being unloaded.
- Receive facility employee's authority to unload with designation of storage tank and inlet pipe to be used.
- Ensure the unloading pipe connection is located within a safe, reasonable access to the truck, preferably 40 feet or less.
- Unloading should be to a diked storage tank only. Direct fill of portable containers is not recommended due to higher flow rate from tank truck pump and high potential for spills.
- Check that internal and external tank truck valves are closed prior to making hose connections.
- Assure that wheel chocks are available and used.

At this facility: Are truck drivers instructed on the facility's bulk delivery procedures?

Yes No

71 FACILITY EMPLOYEE AND TRUCK DRIVER JOINT RESPONSIBILITIES

Both the facility employee and the truck driver should have joint responsibility for ensuring that proper bulk delivery procedures are followed when unloading a bulk tank truck. The following responsibilities should be jointly shared by the facility employee and the truck driver:

- Both the facility employee and the truck driver are present throughout the entire unloading procedure.

- Tank labeling matches the bill of lading information.
- The inlet pipe to the storage tank is fixed and dedicated to one product with a stainless steel locking valve between the coupler and the storage tank. No manual filling of storage tank with hoses through open manways should be allowed.
- The bulk storage tank is within a secondary containment structure.
- There are no obvious safety hazards that could cause an incident.

At this facility: Do both the facility employee and truck driver understand and follow the facility's bulk delivery procedures?

Yes No

72 MAINTAINING MINIMUM HEAD SPACE

It is important that in filling tanks, a minimum of 10% excess capacity (head space) be provided. This amount of head space allows for surging or foaming during filling and temperature expansion of contents during storage.

At this facility: Do operating procedures specify that when filling tanks that a minimum of 10% excess capacity (head space) be maintained?

Yes No

73 DISCONNECTING HOSES WHEN BULK DELIVERY IS COMPLETE

It is important that spills of pesticides are eliminated or minimized when disconnecting hoses after a bulk delivery. Three recommended procedures that can be used are as follows:

- Evacuate inlet pipe and hoses with air or nitrogen according to the pesticide manufacturer's instructions. Close unloading valve,

close tank truck internal and external valves and disconnect hoses. Cap all hose ends, inlet pipe coupler and tank truck external valve.

or

- Close unloading valve, close tank truck internal and external valves. Disconnect hose but keep hose elevated to prevent spills. With assistance from both the facility employee and truck driver, manually drain hose into a container. Cap all hose ends, inlet pipe coupler and tank truck external valve.

or

- Use dry-disconnect fittings at all connection couplings for hoses. After bulk delivery, the dry-disconnect fittings will prevent spills when disconnecting hoses.

At this facility: Does one of the above procedures exist and is it used for disconnecting hoses to prevent spills?

Yes No

Note: Tank truck carrier and product registrant determine which procedure is used based upon product characteristics and equipment availability.

74 REMOTE SHUTDOWN OF PUMPS

In order to prevent spills, it is necessary to quickly detect and respond to the situation. The ability to shut down a pumping operation remotely is beneficial. Remote shutdown can be manual or automatic, but manual shutdown must be located in an accessible location.

At this facility: Does the capability for remote shut down of pumps exist?

Yes No

75 HAZARDOUS MATERIALS PLACARDING (IF REQUIRED)

No person may transport DOT (Department of Transportation) Hazardous Materials in a tank truck or tank car unless the required placards are affixed IN THE PROPER MANNER. The shipper of the hazardous material is responsible for providing placards.

At a minimum, placarding responsibility should ensure the following:

- At least one of each of the required placards is affixed to each END and SIDE of the tank truck or tank car (total of four placards required).
- The placards are readily visible.
- The placards are secured so that the words are displayed horizontally reading from left to right.

When a tank car is empty, all four placards should be reversed to the RESIDUE side of the placards. When tank trucks are empty, do not reverse their placards.

Are empty tank trucks and tank cars properly placarded (if required) after unloading at this facility?

Yes No

Additional References: [U.S. Department of Transportation Hazardous Materials Transportation Regulations](#). (49 CFR 172.500 - 172.560.)

[Environmental Handbook for Fertilizer and Agrichemical Dealers](#). National Fertilizer and Environmental Research Center, Tennessee Valley Authority.

APPENDIX A

TANK TRUCK BULK DELIVERY SAFETY CHECKLIST

Date: _____

Carrier: _____

Trailer Number: _____

Product to be Unloaded: _____

BOTH A FACILITY EMPLOYEE AND TRUCK DRIVER MUST BE PRESENT DURING ENTIRE UNLOADING OPERATION.

Verify that the available storage capacity of the tank to be loaded is equal to or greater than the quantity of product in tank truck to be unloaded.

- A. Quantity of product to be unloaded — (gals.)
- B. Available capacity of storage tank — (gals.)

Note: Available tank capacity equals storage tank capacity minus existing inventory in tank minus 10% head space.

Is quantity in B equal to or greater than A?

Yes No

IF YES, PROCEED WITH FURTHER PROCESS VERIFICATIONS.

Is the tank truck's motor off and emergency brake set?
Are wheels chocked?

Yes No

Have the correct unloading pipe and storage tank been determined and hoses connected?

Yes No

IF YES, UNLOAD TANK TRUCK.

After unloading, have all hoses been disconnected, drained and secured?

Yes No

Are all hose ends and pipe connections capped?

Yes No

REMOVE WHEEL CHOCKS.

AVAILABLE CAPACITY OF STORAGE TANK:

Equals total storage tank capacity
Minus existing inventory quantity in tank
Minus 10% head space (tank capacity X 0.10)

EXAMPLE

A 2,000-gallon storage tank has 400 gallons of existing inventory.

Total storage tank capacity	2,000 gallons
Minus existing inventory quantity in tank	- 400 gallons
Minus 10% head space (2,000 X 0.10)	- 200 gallons

Available Capacity = 1,400 gallons

APPENDIX B

TANK CAR BULK DELIVERY SAFETY CHECKLIST

Date: _____

Tank Car Number: _____

Product to be Unloaded: _____

BOTH A FACILITY EMPLOYEE AND TRUCK DRIVER MUST BE PRESENT DURING ENTIRE UNLOADING OPERATION.

Verify that the available storage capacity of the tank to be loaded is equal to or greater than the quantity of product in tank car to be unloaded.

- A. Quantity of product to be unloaded — (gals.)
- B. Available capacity of storage tank — (gals.)

Note: Available tank capacity equals storage tank capacity minus existing inventory in tank minus 10% head space.

Is quantity in B equal to or greater than A?

Yes No

IF YES, PROCEED WITH FURTHER PROCESS VERIFICATIONS.

Is tank car spotted and wheels chocked?

Yes No

Has the blue flag been installed and derail set?

Yes No

Have the correct unloading pipe and storage tank been determined, and hoses connected?

Yes No

IF YES, UNLOAD TANK CAR.

After unloading, have all hoses been disconnected, drained and secured?

Yes No

Are all hose ends and pipe connections capped?

Yes No

REMOVE WHEEL CHOCKS, BLUE FLAG AND DERAIL.

AVAILABLE CAPACITY OF STORAGE TANK:

Equals total storage tank capacity
Minus existing inventory quantity in tank
Minus 10% head space (tank capacity X 0.10)

EXAMPLE

A 2,000-gallon storage tank has 400 gallons of existing inventory.

Total storage tank capacity	2,000 gallons
Minus existing inventory quantity in tank	- 400 gallons
Minus 10% head space (2,000 X 0.10)	- 200 gallons

Available Capacity = 1,400 gallons

APPENDIX C

SELF-EVALUATION TABULATION FORM

Facility name _____

Facility location _____

Date completed _____

Name of person(s) completing form

SITE LOCATION (page 4)

Out of a total of five questions in this Section:

Number answered Yes _____

Number answered No _____

What areas of improvement are planned as a result of this evaluation?

TANK STRUCTURE (pages 5-7)

Out of a total of nine questions in this Section:

Number answered Yes _____

Number answered No _____

What areas of improvement are planned as a result of this evaluation?

CONTAINMENT (pages 8-10)

Out of a total of 13 questions in this Section:

Number answered Yes _____

Number answered No _____

What areas of improvement are planned as a result of this evaluation?

BULK SYSTEM COMPONENTS (pages 10-12)

Out of a total of 24 questions in this Section:

Number answered Yes _____

Number answered No _____

What areas of improvement are planned as a result of this evaluation?

Appendix C. Self-Evaluation Tabulation

PRE-EMERGENCY PLANNING (pages 12-15)

Out of a total of 11 questions in this Section:

Number answered Yes _____

Number answered No _____

What areas of improvement are planned as a result of this evaluation?

FIFRA REQUIREMENTS (pages 15-16)

Out of a total of five questions in this Section:

Number answered Yes _____

Number answered No _____

What areas of improvement are planned as a result of this evaluation?

EMPLOYEE SAFETY AND HEALTH

(pages 16-17)

Out of a total of seven questions in this Section:

Number answered Yes _____

Number answered No _____

What areas of improvement are planned as a result of this evaluation?

ADMINISTRATION/SECURITY (pages 17-18)

Out of a total of eight questions in this Section:

Number answered Yes _____

Number answered No _____

What areas of improvement are planned as a result of this evaluation?

OPERATIONAL PROCEDURES (pages 18-20)

Out of a total of 19 questions in this Section:

Number answered Yes _____

Number answered No _____

What areas of improvement are planned as a result of this evaluation?

QUALITY CONTROL (pages 21-22)

Out of a total of seven questions in this Section:

Number answered Yes _____

Number answered No _____

What areas of improvement are planned as a result of this evaluation?

LOADING/UNLOADING (pages 22-25)

Out of a total of 10 questions in this Section:

Number answered Yes _____

Number answered No _____

What areas of improvement are planned as a result of this evaluation?
