

Application Instructions for Construction Approval - Fertilizer Bulk Storage Facility

The Application for Bulk Fertilizer Storage Facility form must be submitted by all applicants. Schedules that are applicable to the operations at each fertilizer facility must also be submitted. **The application is divided into different schedules, you need complete only the application schedule that applies to your specific type of facility or situation.** Schedule specific instructions are included. The schedules that may be required are:

- Schedule A: New Fertilizer Facility
- Schedule B: Load Pad and Operational Area
- Schedule C: Dry Fertilizer Storage, Handling & Blending
- Schedule D: Facility Modification
- Schedule E: Bladder Tank or Innovative Design

The application, data and information should be typed or legibly printed in ink. All pages should be numbered and organized in the following sequence:

1. Application for Bulk Fertilizer Storage Facility
2. Schedule A: New Fertilizer Facility
3. Location Area Map
4. Plot Plan of Facility
5. Flow Diagram - Water System Protection
6. Operational and Management Practices Plan
7. Construction Plans and Specifications
8. Schedule B: Load Pad and Operational Area
9. Flow Diagram - Collection and Recovery System
10. Construction Plans and Specifications
11. Schedule C: Dry Fertilizer Storage, Handling & Blending
12. Process Flow Diagram - Dry Fertilizer Operations
13. Construction Plans and Specifications
14. Schedule D: Facility Modification
15. Construction Plans and Storage
16. Schedule E: Bladder Tank or Innovative Design
17. Construction Plans and Storage
18. Other Information

Construction plans and drawings item 7, 10, 13, 15 and 17 may be more conveniently grouped as the last section. These drawings are often applicable to more than one schedule. In some cases one plan view may cover both operational and secondary containment systems. In this situation reference the drawing number on the schedules. **It is the responsibility of the applicant to clearly identify all confidential business information submitted with the application package.**

Application Delay for Specific Schedules: If you are not submitting plans for a specific schedule with your application, this should be clearly stated in your cover letter and noted in the comment section of the application form. Estimate the date that the plans will be submitted.

Each application must provide sufficient information to allow the Department to conduct an independent engineering review to determine if the containment systems, structures, and operational practices planned will result in compliance with the applicable statutes KAR 4-4-900 through KAR 4-4-986.

Detailed instructions are included for each section of the application. These instructions and those on each schedule should allow you to prepare this application. Contact the Department of Agriculture, telephone number is 785-564-6688, if you have questions. Submit the complete construction application package to:

Kansas Department of Agriculture
Pesticide & Fertilizer Program
1320 Research Park Drive
Manhattan, KS 66502

Kansas Department of Agriculture
Pesticide & Fertilizer Program
1320 Research Park Drive
Manhattan, KS 66502
785-564-6688

Application for Bulk Fertilizer Storage Facility

Facility Name _____

Mailing Address _____
Street Address City State Zip County

Facility Address _____
Street Address City State Zip County

Quarter Section Township Range

Application Contact: _____ Telephone _____

Please check the appropriate boxes to fully describe the nature of the project. This application for construction approval is to verify that proposed plans conform to the requirements of the State of Kansas KAR 4-4-900 through KAR 4-4-986.

_____ New Facility Construction _____ Expansion to Existing Facility

_____ Liquid only _____ Dry only _____ Liquid & Dry

_____ Bladder Tank _____ Innovative Design

Description of Project: Documents submitted as a part of this application cover the fertilizer items checked below: Complete Application for Construction Approval and all applicable Schedules along with the associated requirements for each as an attachment to the construction application.

- _____ Schedule A New Fertilizer Facility
- _____ Schedule B Load / Unload Pad Area and Recovery System Plan Schedule
- _____ Schedule C Dry Fertilizer Storage, Handling, and Blending Plan
- _____ Schedule D Modification or Expansion
- _____ Schedule E Bladder Tanks or Innovative Design

Comments: (If additional space is needed, attach a separate sheet.)

Description - Facility Storage Tanks & Load Pads (Check all applicable sections and complete relative questions in section.)

1. () Liquid Fertilizer Storage Tanks(s) Less than 100,000 Gallons

Receiving: Rail _____ Truck _____ Barge _____

Number of Tanks: _____ Capacity of each (gal): _____

Does facility have secondary containment for these liquid fertilizer storage tanks?

Yes _____ No _____

Describe type of secondary containment structure(s):

Secondary containment volume: _____ Gallons

2. () Liquid Fertilizer Storage Tank(s) 100,000 Gallons or Larger:

Number of Tanks _____ Capacity of each _____

Leak Detection Method: _____

3. () Load/Unload Pad:

Does facility have a load / unload pad that provides for containment and recovery of spillage from blending and loading of fertilizers and equipment washing?

Yes _____ No _____

Load Pad containment volume: _____ Gallons

4. () Dry Fertilizer Storage and Handling:

Receiving: Rail _____ Truck _____ Barge _____

_____ Incline conveyor to roof openings

_____ Conveyor/Elevator Leg Inside Distribution Conveyer

_____ Other: _____

Blender: Under Roof _____ Outside _____

Open Top Blender _____ Closed Top Blender _____

What type of material is used for the dry load pad?

5. () Fertilizer Blending Operations:

Liquid Blending _____ Dry Blending _____ Both _____

Is the process of impregnating dry fertilizer materials with pesticides conducted in facility blending operation?

Yes _____ No _____ Considering Process _____

Does facility have on-board impregnation on application equipment? Yes _____ No _____

6. () Water Supply - Proximity to Wells & Waters of the State:

_____ Facility Well on Site: Depth _____ feet;

_____ Connection to community / public water system

_____ Other water source: _____

Does facility have a back-flow protection? Yes _____ No _____

Describe: _____

Distance to community wells:

Number of off-site private wells within 1320 feet of your property? _____

Use of these wells: _____

Soil type: _____

Nearest Surface Water: Name of stream, river, lake: _____

7. () Does your facility have a bio-security plan? Yes _____ No _____
If yes, please include a copy of your bio-security plan with your application.

8. () Did your facility submit any confidential business information? Yes _____ No _____
Confidential business information will be maintained in a segregated file. You must specifically identify individual documents as confidential business information when you submit them to assure segregation.

1. Certification of Construction Plans and Specifications:

a) Certificate by Applicant

I hereby certify that I am familiar with the information contained in this application, the attached schedules, and that to the best of my knowledge and belief such information is true, complete, and accurate, and the construction plans and specifications were prepared by me or a permanent employee under my direction.

Name _____ Title _____

Signature _____ Date _____

b) Certificate by Design Engineer

I hereby certify that I am familiar with the contents of this application and that the design of the facility containment systems conforms to the requirements of KAR 4-4-900 through KAR 4-4-986, and the construction plans and specifications were prepared by me or under my direction.

Engineer _____
Name Registration No. Seal

Firm _____

Address _____ Telephone No. _____

Signature _____ Date _____

2. Certification of Application

I/We hereby certify the I/we are familiar with the contents of this application, the attached schedules, and am/are authorized to sign this application in accordance with KAR 4-4-900 through KAR 4-4-986. I/We agree and understand that conditions of construction approval are that I/we construct and operate the containment system(s) as submitted in this application and conform to all requirements of KAR 4-4-900 through KAR 4-4-986.

Authorized Applicant:

Name _____ Title _____

Signature _____ Date _____

Company Name _____

Schedule A - New Fertilizer Facility

Facility Name _____

Project Location _____
Address City County

This information is required for all fertilizer facility construction applications. Documents and information required by this schedule are to verify that the operational area containment, collection and recovery system(s) conform to the requirements of KAR 4-4-900 through KAR 4-4-986. Construction plans, engineering drawings, flow diagrams, and descriptions must be adequate to illustrate your plans. The summary of specific parts of this information is requested on the back of this form.

1. Location Area Map - Provide a location map of the area surrounding the facility. Identify the relative locations of the following on the map, or by notations, the distance and direction: a) All water wells within 1,320 feet and all abandoned wells within 300 feet of the facility boundary; b) Surface water flow path to area lakes, streams or storm water drains; c) Notation of soil type and approximate ground water depth at the facility location. Preferably, this location map should be done on a copy from the U.S. Geological Survey Quadrangle Map, or the County Plat Book with adequate scale to show required details.
2. Plot Plan - Provide a plot plan showing all facility structures, storage tanks, facility well, connections to public water systems, storm sewers and drainage tile within property boundaries and use of adjacent property. Identify all containment structures and operational areas, including unloading, loading, blending and equipment washing pads. Topography of property can be shown by contour lines or notation and arrows depicting surface water flow across and from facility. The plot plan should be drawn to a reasonable scale or adequately dimensioned.
3. Water Supply/Well Protection Plan - Provide a schematic flow diagram of the facility water distribution system between facility well and/or public water system connection and all process or operational use points. Identify backflow protection (break-tank, fixed air gap, reduced pressure principle backflow valves) on diagram.
4. Operational and Management Practices Plan - This requires a narrative description of the practices that will be employed at the facility for handling recovered materials, accumulated precipitation, and to minimize the volume of recovered materials generated. The following should be included:
 - a) List types of fertilizer handled or stored and total storage capacity available at the facility.
 - b) Methods of storage, reuse, or disposal and estimated quantity of solutions and solids recovered in the operational area containment and recovery system(s).
 - c) Methods for handling storm water collected in operational area and secondary containment systems. This may include practices to keep containment systems clean to prevent storm water contamination and special precaution taken to ensure contaminated storm water is not discharged. Define differences in practices employed off-season such as by-pass or operational area collection systems.
 - d) Methods utilized to minimize the collection or contamination of collected storm water, quantity of rinsates, solutions, and solids. These practices include use of pressure washers, rinsing and washing application equipment in the field, reducing operational spillage, containers to catch predictable spillage, diversion of roof and surface water flow, buildings or covers over containment systems, and management practices to minimize contamination of collected storm water.

Schedule A - New Fertilizer Facility Summary

Facility Name _____

1. Location Area Map included in application: Yes _____ No _____
- Community Well(s) within 1,320 feet? No _____ Yes _____ Feet _____
- Private Well(s) within 1320 feet? No _____ Yes _____ Feet _____
- Approximate Groundwater Depth _____ Feet Soil Type _____
- Abandoned Well(s) within 300 feet? No _____ Yes _____ Feet _____
- Oil _____ Gas _____ Water _____

Nearest Down Gradient Surface Water - Name of lake, stream and approximate distance:

Distance in feet to nearest: Residence _____ Municipality _____
Hospital _____ Institution _____ Commercial Business _____

2. Plot Plan is included in application: Yes _____ No _____
- Approximate size of facility property: _____ x _____ feet

3. Water System Protection Flow Diagram attached: Yes _____ No _____
- Facility well at location? No _____ Yes _____, Depth _____ feet
- Connection to public water system? Yes _____ No _____

Indicate Backflow Protection type, E = existing or P = planned, and installation date(s):

_____ Break Tank (____/____/____)

_____ Fixed Air Gap (____/____/____)

_____ Reduced Pressure Principle Backflow Valves (____/____/____)

4. Operational & Management Practices Plan attached: Yes _____ No _____
- List fertilizers handled and stored and the total storage capacity at facility: _____

Do you wash application vehicles at the facility? Yes _____ No _____

Is a storm water by-pass arrangement used or planned for your operational area?
No _____ Yes, explain _____

Schedule B - Load Pad and Operational Area

Facility Name _____

Project Location _____

Documents and information required by this schedule are to verify that the operational area containment, collection and recovery system(s) conform to the requirements of KAR 4-4-900 through KAR 4-4-986. Construction plans, engineering drawings, flow diagrams, and descriptions must be adequate to illustrate your plans.

1. Construction plans and specifications: Provide plans and elevation drawings of all operational area containment structures and the collection and recovery system with overall and component dimensions and elevations referenced to a single facility bench mark. Cross-sections must show construction details, elevations, and dimensions of loading pad floor, curbs, sumps, catchment basins, and all transfer structures and piping. Identify all construction materials and specifications.
2. Loading Area Containment: On the containment structure drawing show capacity and layout of collection and recovery system, including storage tanks, pumps and piping system. Provide detailed drawing notes indicating a) capacity in gallons of the largest vehicle tank normally loaded; b) Total gallon capacity of containment structure; c) Gravity or automatic transfer system tank capacity in gallons used for containment; d) Capacity of largest blending or makeup tank over pad.
3. Collection and Recovery System Flow Diagram: Provide a schematic flow diagram of the collection and recovery system from the containment collection sump to recovery storage tanks and to reuse loading or mixing operation, and any provisions for storm water by-pass. Show and label all components showing pertinent features, sizes, capacities, and flow rates.
4. Unloading Area Containment: Describe methods or systems used to catch and recover spillage from unloading operation. Provide drawings of permanent structures.
5. Washing Area Containment: Provide drawing of wash pad and recovery system if a separate structure is used for this purpose.
6. Blending Area Containment: Describe methods or systems used to catch and recover spillage from these operations. Provide sketches or drawings if necessary to explain.
7. Transfer Structures: Describe preventative maintenance practices to ensure below grade transfer structures (sumps, collections tanks, wet wells, scale pits, etc.) are sealed to prevent leakage.
8. Construction Time Table: Provide approximate dates on summary.

Schedule B - Load Pad and Operational Area Summary

Facility Name _____

1. Construction plans and specifications are provided for systems checked:

_____ Loading area containment

_____ Unloading area containment

_____ List Other Systems _____

2. Loading Area Containment Capacity - Provide gallons for each:

Capacity of largest vehicle tank loaded..... _____

Total capacity of containment structure and sumps..... _____

Available collection tank capacity with automatic transfer..... _____

Capacity of largest mixing tank or make-up tank over pad _____

3. Collection and Recovery System Flow Diagram

Number or recovery storage tanks _____ Capacity of each _____

Are provisions provided for storm water by-pass? Yes _____ No _____

4. Unloading Area Containment - Describe system used and note drawing number: _____

5. Blending Area Containment - Describe system used and note drawing number: _____

6. Washing Area Containment - Describe methods and note drawing number: _____

7. Transfer Structures - Are any below grade structures used for spill collection in the containment systems? No _____ Yes _____ If yes, check type below and provide details including capacity and material of construction.

_____ Scale Pit _____

_____ Below Pad Tank _____

_____ Gravity Fill Tank _____

_____ Other: _____

8. Construction Time Schedule Dates:

Start Date: (____/____/____)

Completion Date: (____/____/____)

Operational Date: (____/____/____)

Schedule C - Dry Fertilizer Storage, Handling and Blending

Facility Name _____

Project Location _____
Street Address City County

Documents and information required by this schedule are to verify that dry fertilizer storage, handling, and blending operations conform with the requirements of KAR 4-4-900 through KAR 4-4-986. Narrative, drawings, or schematic flow diagrams may be used to describe the facility storage methods and operational processes and to illustrate your plans for containment and recovery of spillage and to minimize emissions.

1. Plot Plan: On the facility plat plan (Schedule A) or a separate drawing, show the storage building, blending area, unloading and loading locations, and the distance and location of the nearest residence and commercial building.
2. Process Flow Diagram: Provide a schematic flow diagram of all processes including: Truck/Rail Unloading, Storage, Weighing, Blending, Impregnation, applicator/Truck Loading, and all associated conveyor and front-end loader transfer operations. Identify each function or process, show flow rates and type of conveyors, blender and other equipment. Show by graphics or notations the processes that are enclosed or under roof.
3. Storage Facilities: Describe storage buildings and, if necessary, provisions to prevent ground or surface water pollution. If additional space is needed, attach a separate sheet.
4. Containment and Recovery of Spillage: Describe the containment or collection of spillage and the clean-up practices or recovery methods planned for all exposed outdoor operational processes. These may include unloading, loading, conveying, front-end loader handling, weighing, and blending. Describe the provisions for the diversion of surface water flow around the operations. If additional space is needed, attach a separate sheet.

Describe or provide drawings of operational containment and recovery systems for pesticide impregnation operations including provisions for blender/equipment wash water collection. If additional space is needed, attach a separate sheet.

5. Particulate Emission Control: Describe methods, equipment or techniques used to minimize particulate matter/dust emissions. If additional space is needed, attach a separate sheet.
6. Blending Operations, Herbicide Impregnation, and Compliance Time Schedule: Provide information requested in summary.

Schedule C - Dry Fertilizer Storage, Handling and Blending Summary

Facility Name _____

1. Dry fertilizer facilities, distance and location of nearest residence(s) and/or commercial building(s) shown on: (check)

Plot Plan _____ Separate Drawing _____

2. Process Flow Diagram is attached: Yes _____ No _____
On each process below, place an "E" to designate enclosed, "R" to designate under-roof only, or an "O" for any exposed outdoor operation.

_____ Unloading _____ Storage _____ Front End Loader Handling
_____ Weighing _____ Blending _____ Loading _____ Conveyor

3. Storage Facilities: Describe _____

4. Containment and Recovery of Spillage: Describe for each process exposed outdoors and note drawing number(s) _____

5. Particulate Emission Control: Describe for each process exposed outdoors: _____

6. Blending Operations, Herbicide Impregnation, and Compliance Time Schedule. Herbicide Impregnation process in blender? No _____ Yes _____, then provide

Herbicides Used	Annual Amounts
_____	_____
_____	_____
_____	_____
_____	_____

Odor Emission Control Methods: _____

Operational Date: (____/____/____)

Schedule D - Facility Modification Schedule

Facility Name _____

Project Location _____
Street Address City County

KAR 4-4-900 through KAR 4-4-986 requires that a facility be approved prior to any modification. By definition "Modification" means changes in structures, processes, or activities at a fertilizer facility which alters the efficiency of containment structures or systems. Construction plans, engineering drawings, flow diagrams, and descriptions must be adequate to illustrate your plans.

This includes any change that modifies the approved facility design capability of secondary or operational area containment structures. An obvious example is a change or addition to storage tanks within the containment area resulting in increased tank base displacement volume or increased volume for largest tank.

1. Application for Facility Modification: Complete the Application for Construction Approval form with the appropriate approval signatures and submit along with this schedule. Configuration changes in containment structures may require amendment to previous drawings and/or the related schedule. In many cases the facility modification can be adequately covered on this schedule.

2. Reference to Existing Application: Schedule _____ Drawing Number _____
Description of containment structure or system involved: _____

3. Storage Tank Changes: Describe Tank Change _____

Containment Capacity: Existing _____ gal. Modified _____ gal.

Minimum capacity required by KAR 4-4-900 through KAR 4-4-986 _____ gal.

4. Other Modification: Describe the planned changes: (If additional space is needed, attach a separate sheet.)

Describe the change in structure or system efficiency: (If additional space is needed, attach a separate sheet.)

Schedule E - Bladder Tank or Innovative Design

Facility Name _____

Project Location _____

Documents and information required by this schedule are to verify that the secondary containment structure and capacity conforms to the requirements of KAR 4-4-900 through KAR 4-4-986. Construction plans, engineering drawings, flow diagrams, and descriptions must be adequate to illustrate your plans. Indicate the secondary containment plans submitted in this schedule by checking the fertilizer storage system(s) below:

_____ Bladder Tank Application

_____ Innovative Design Application

Number of Liquid Fertilizer Tanks:

_____ Less than 100,000 gallons

_____ 100,000 gallons or larger

1. Certified Engineering Plans and specifications: Provide plan and elevation drawings with overall and component dimensions and elevations referenced to single facility bench mark. Include cross-sections to indicate construction details, elevations, and dimensions of walls, floor, sumps and all other piping and components. Identify all materials and applicable construction specifications. Note manufacturer, trade name of all synthetic liners or prefabricated materials and provide written confirmation of compatibility and estimate of life expectancy from the manufacturer. When necessary, to prevent tank flotation, show details of anchoring method. Bladder tank or innovative design plans must be certified and stamped by a professional engineer.
2. Storage Tank Schedule: Show location and assigned tank number of each storage tank within the secondary containment on the plan view. Provide tank capacity, dimensions, and the product contained in each tank on the plan view or by tank schedule referencing tank numbers. Illustrate provisions for placement of future tank(s) by broken lines.
3. Secondary Containment Capacity: Note the following on the drawing: a) The minimum required containment capacity to satisfy KAR 4-4-900 through KAR 4-4-986 for current storage tanks. b) The actual containment volume in gallons provided. c) Specific provisions for future tank(s) within the containment.
4. Construction Time Schedule: Provide approximate dates (on the summary form) that construction will begin, be completed and put in operation.

Schedule E - Bladder Tank or Innovative Design Summary

Facility Name _____

Secondary Containment for _____

1. Engineering Plans & Specifications: Material(s) of construction _____

2. Storage Tank Schedule: Complete table below. If additional space is needed, attach a separate sheet.

Tank No.	Product	Capacity Gal.	Dimensions Dia. x Ht.	Material of Construction
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_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

3. Secondary Containment Capacity:

Minimum required capacity _____ gallons

Facility design capacity _____ gallons

Containment dimensions: Length _____ ft.; Width _____ ft.; Height _____ ft.

Provisions for future tanks? No _____ Yes _____ Number and Size _____

4. Construction Time Table Dates:

Start Date: (____/____/____)

Completion Date: (____/____/____)

Operational Date: (____/____/____)