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 4-4-984.

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	5					
-	Street Address	City	State		Zip	County
Facility Address						
	Street Address	City	State		Zip	County
	Quarter	Section	Township	Range		
Application Con	tact:			_Telephon	e	
	proval is to ver	ify that proposed				his application for Its of the State of Kansas
New Fa	cility Construc	tion	Ехра	nsion to E	xisting	Facility
Liquid o	only	Dry or	nly		Liquid	& Dry
Bladder	Tank	Innova	ative 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 I	Fertilizer Facility				
Schedule	B Load	/ Unload Pad Are	ea and Recover	y System I	Plan Sc	hedule
Schedule	C Dry F	ertilizer Storage,	Handling, and E	Blending P	lan	
Schedule	D Modif	ication or Expans	sion			
Schedule	E Bladd	er Tanks or Inno	ovative Design			
Comments: (If a	additional spac	e is needed, atta	ch a separate s	heet.)		

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					

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 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.				

Kansas Department of Agriculture

- 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 4-4-984., 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 4-4-984. I/We agree and understand that conditions of construction approval are the 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 4-4-984.

Authorized Applicant:	
Name	Title
Signature	Date
Company Name	

Schedule A - New Fertilizer Facility

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 4-4-984. 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.

- 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.
- 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

Fa	cility Name				
1.	Location Area Map included in application:	Yes	No	<u> </u>	
	Community Well(s)within 1,320 feet?	No	_ Yes _		Feet
	Private Well(s) within 1320 feet?	No	Yes		Feet
	Approximate Groundwater Depth		Feet	Soil Typ	De
	Abandoned Well(s) within 300 feet?	No	_ Yes _		Feet
		Oil	_ Gas _		Water
	Nearest Down Gradient Surface Water - Na	me of lake,	stream and	approxim	ate distance:
	Distance in feet to nearest: Residence	M	unicipality		
	Hospital Institution	Commerci	al Business		
2.	Plot Plan is included in application: Yes	No	o		
	Approximate size of facility property:	x _		feet	
3.	Water System Protection Flow Diagram atta	ached: Ye	es	No	
	Facility well at location? No Ye	s,	Depth	feet	
	Connection to public water system? Yes _	No	o		
	Indicate Backflow Protection type, E = existi	ing or P = pl	anned, and i	nstallatio	n date(s):
	Break Tank (//)				
	Fixed Air Gap (/)				
	Reduced Pressure Principle Backflov	w 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 faci	lity? Yes _		No	
	Is a storm water by-pass arrangement used	or planned	for your ope	rational a	rea?
	No Yes, explain				

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 4-4-984. Construction plans, engineering drawings, flow diagrams, and descriptions must be adequate to illustrate your plans.

- 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.

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: 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 4-4-984.. 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.
- 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
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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				
	WeighingBlendingLoadingConveyor				
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:				
On	erational Date: (/)				
υp	······································				

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Schedule D - Facility Modification Schedule

Facility Name			
Project Location			
	Street Address	City	County

KAR 4-4-900 through KAR 4-4-984 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: Compete 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 4-4-984 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 4-4-984. 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

- Certified Engineering Plans and specifications: Provide plan and elevation drawings with overall and component dimensions and elevations referenced to single facility bench mark. Include crosssections 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 4-4-984 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.

-ac	lity Name			
Sec	ondary Containment for			
۱.	Engineering Plans & Specifications: Material(s) of construction			
	Storage Tank Schedule: Complete table below. If additional space is needed, attach a separate sheet.			
	TankProductCapacityDimensionsMaterial ofNo.Gal.Dia. x Ht.Construction	'n		
	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			
	Construction Time Table Dates:			
	Start Date: (//)			
	Completion Date: (//)			
	Operational Date: (//)			