

Ammonia fertilizer retail facilities and EPA's Accident and Preparedness Rule

This fact sheet discusses the requirements for anhydrous/aqueous ammonia retail facilities under EPA's accident prevention and preparedness rule^{1,2}. The fact sheet supplements a previous SBEAP pamphlet, *Preventing Accidental Releases under the Clean Air Act*. If you would like a copy of the pamphlet, call the SBEAP Resource Center at KU, 785/864-3968.

Retail fertilizer facilities that handle, process, or store 10,000 pounds or more of anhydrous ammonia or 20,000 pounds or more of ammonia hydroxide (at concentrations of 20 percent or greater) at any given time are subject to the U.S. Environmental Protection Agency (EPA) accident prevention and preparedness regulation under section 112(r) of the Clean Air Act.

If you meet either of these thresholds, you will need to develop a risk management program at your facility and

submit a risk management plan (RMP) to the EPA by June 21, 1999.³ The Kansas Fertilizer and Chemical Association, in cooperation with the Fertilizer Institute, is preparing retail guidance on how to complete the risk management plan paperwork, including worst-case and alternative release scenarios.

Note: Ammonia held by farmers for use as a fertilizer is exempt from formal risk management requirements. However, farmers — as well as retail facilities with less than the threshold quantities of anhydrous ammonia and ammonia solutions (at concentrations of 20 percent or greater) — are still subject to the general duty clause.

This clause requires owners using certain chemicals (including anhydrous ammonia and ammonia at concentrations of 20 percent or greater) to identify hazards that could result from an accidental release of their chemical; to maintain a safe facility; and to

¹ The full text of the rule can be found at 40 Code of Federal Regulations (CFR) Part 68. This rule is also referred to as 112(r), in reference to the section of the Clean Air Act requiring accident prevention and preparedness planning.

² Anhydrous ammonia, along with propane, is one of many chemicals regulated under the 112(r) rule. This publication has been written for anhydrous ammonia/aqueous ammonia retail facilities. Standard Industrial Classification (SIC) code 5191. Under Occupational Safety and Health Administration (OSHA) regulations, a retail facility is an establishment that normally would have to meet the process safety management (PSM) standard but is exempt because more than half of its sales are to end users. If you blend or manufacture ammonia fertilizer, you may have additional or different requirements.

³ As of June 21, 1999, you must be in compliance with the rule whenever you have more than a threshold quantity in a process at your facility.



Table 1: Which program applies to me?

Eligibility Criteria	Requirements
Program I <ul style="list-style-type: none"> • No significant accidents in last five years. • No impact on public receptors from worst-case release scenario. 	Register with EPA <i>and</i> <ul style="list-style-type: none"> • Submit a five-year accident history. • Perform a worst-case release scenario. • Certify that emergency response procedures are in
Program 2 <ul style="list-style-type: none"> • Unable to meet Program I criteria. • Not subject to OSHA PSM standard. • Not in a Program 3 SIC code. 	Same as Program I <i>and</i> <ul style="list-style-type: none"> • Develop a management system. • Perform alternative release scenario(s). • Implement a prevention program. • Implement an emergency response program.
Program 3 <ul style="list-style-type: none"> • Subject to OSHA PSM standard.^a • Have a listed SIC code 	Same as Program 2 <i>and</i> <ul style="list-style-type: none"> • Meet additional prevention program, documentation, and record-keeping requirements.

^a Retail facilities are exempt from OSHA's process safety management (PSM) standard. Under OSHA regulations, a retail facility is an establishment that normally would have to meet the PSM standard but is exempt because more than half of its sales are to end users.

^b The SIC codes are 2611, 2812, 2819, 2821, 2865, 2869, 2873, 2879, and 2911. These codes primarily represent manufacturers of inorganic chemicals. SIC code 2873 includes establishments that manufacture or blend nitrogenous fertilizers, including anhydrous ammonia.

minimize the consequences of accidental releases should they occur.

EPA has developed a three-program system to address the needs of a variety of facilities. To determine your facility's requirements, first identify which program applies. (A program applies if you meet its eligible criteria.)

The large majority of anhydrous/aqueous ammonia retail facilities will fall under Program 1 or 2.

Program I facilities must complete and submit a risk management plan that includes registration information, results of a worst-case release scenario demonstrating no impact on public receptors, a five-year accident history, and certification that emergency response procedures have been coordinated with local responders.

Along with Program I requirements. Program 2 retail facilities must meet the additional requirements listed in Table 1.

The details of these additional elements are provided in SBEAP's pamphlet titled *Preventing Accidental Releases under the Clean Air Act*.

Some of the following questions have been adapted from EPA's Chemical Emergency Preparedness and Prevention Office (CEPPO) Internet site. These and other questions can be accessed at <http://www.epa.gov/swercepp/acc-pre.html>.

The following answers are specific to the question asked. If your situation does not fit the question, call SBEAP Technical Assistance at KSU, 800/578-8898, to discuss your particular situation.

Are agricultural facilities potentially subject to 112(r)?

Yes. Although there is an exemption from the 112(r) rule for farmers holding ammonia for use as an agricultural nutrient (40 CFR 68.125), there is no general

farm exemption from the risk management program regulations. If fertilizers, pesticides, or any other materials present at a farm are regulated substances in excess of the applicable threshold quantity, or contain such substances, the facility must comply with 112(r). See SBEAP's pamphlet titled *Preventing Accidental Releases under the Clean Air Act* for a listing of other 112(r) chemicals and their thresholds. Ammonia held for distribution at a farm would not be exempt. In addition, even if a farmer is exempt from the risk management rule, he or she is subject to the general duty clause.

I have a 10,000-pound anhydrous ammonia tank, which is refilled by a railcar holding 150,000 pounds of anhydrous ammonia. I sell the ammonia directly to farmers. Do I have to file an RMP and participate in a risk management program?

A transportation container such as the railcar filling your tank is considered exempt from risk management requirements under 112(r) as *long as it remains attached to the truck or locomotive delivering it to your site* (640 Federal Register, Vol. 63, No. 3, Jan. 6, 1998).

If the container remains attached, you may count the quantity of ammonia transferred to your tank rather than the entire quantity in the railcar. If the railcar is removed from the locomotive and left at your facility, the railcar is no longer considered a "transportation container." In this situation, you would have to count the quantity of ammonia in the railcar to the 10,000-pound threshold. In both situations, if your 10,000-pound tank were filled to its capacity, you would meet the 112(r) threshold and have to comply with the rule.

Ammonia, as listed in the rule, has a qualifier of

"concentration 20 percent or greater." What does this mean? When determining whether I have a threshold quantity in a process, should I consider the weight of the entire solution or simply the amount of ammonia in the solution?

You only need to consider ammonia solutions or mixtures that are at or above this concentration cutoff. Therefore, you need not consider a 15 percent ammonia solution, but you would need to account for a 25 percent ammonia solution.

Once you have determined that the solution or mixture must be accounted for, you need to determine whether you exceed the threshold quantity. Consider toward the threshold quantity only the weight of the regulated substance in your solution or mixture. The threshold quantity for ammonia solutions is 20,000 pounds.

If, for example, you have more than 100,000 total pounds of a 20 percent ammonia solution, then you have more than 20,000 pounds of ammonia in the solution and have more than a threshold quantity. Similarly, if you have more than 50,000 total pounds of a 40 percent solution, you also have more than a threshold quantity.

I have a 10,000-pound anhydrous ammonia tank next to an auxiliary 5,000-pound tank. I keep both tanks filled to 80-85 percent volume capacity. Must I conduct risk management planning for these tanks?

Assuming that you fill both tanks to 80 percent capacity, you have 12,000 pounds of ammonia on site. Separate vessels containing the same regulated substance are considered a process if they are interconnected or if they both could be involved in the same accidental release. If they are interconnected or could both be involved in an accidental release, and their combined

contents meet the threshold quantity, then you need to comply with 112(r).

How do you determine whether both tanks would be involved in the same accident? This is a more difficult question to answer. EPA states that you "must use your best judgment, backed up by a sound technical and scientific basis." EPA has not yet developed its enforcement policy on this issue. Be sure to document your decision as to whether you consider your tanks a process.

Remember, you should still identify hazards associated with potential releases, take steps to prevent releases, and determine appropriate responses in the event of a release to help satisfy the general duty clause.

Under the hazard assessment requirements for 112 (r), an owner or operator must analyze worst-case release scenarios and more likely alternative release scenarios, and must document a five-year accident history. I have been told that anhydrous ammonia exhibits characteristics of toxicity and flammability. Must I consider both characteristics when performing the hazard assessment?

No. You are only required to analyze a regulated substance for its listed hazard. Although ammonia

exhibits flammability under certain circumstances, it is listed as a regulated toxic substance. Thus, the worst-case release scenario must be modeled as a toxic release. However, you may want to consider the impact of an explosion or fire and share this with your first responders.

If I have propane tanks on site in addition to a regulation quantity of anhydrous/aqueous ammonia, do I fall under 112(r)?

If you have more than the threshold quantity of propane in a process at your facility, you need to include it in your risk management program and plan. The plan you send to EPA would cover both chemicals. You will need to prepare at least one worst-case release scenario for the anhydrous ammonia and one for the propane because ammonia is treated as a toxic under the regulation and propane is a flammable. Your management system, prevention program, and emergency response programs need to address both chemicals.

If the propane is used as fuel only, it is removed from coverage under the RMP program. However, flammables used as a feedstock or held by certain wholesalers are still reportable.



The Small Business Environmental Assistance Program's (SBEAP) mission is to help Kansas small businesses comply with clean air regulations, SBEAP operates through a consortium of the University of Kansas, Kansas State University and Wichita State University. This fact sheet was published by Kansas State University's Pollution Prevention Institute. For more information, call 800-578-8898 or send e-mail to SBEAP@ksu.edu. The University of Kansas, Kansas State University and Wichita State University are EEO/AA providers.