

Compliance Assurance and Enforcement Focus: Improving Safety at Facilities within the Pacific Northwest with Smaller Ammonia Refrigeration Systems

Ammonia: An Efficient Refrigerant That Must Be Safely Managed

While anhydrous ammonia has many environmental and operational benefits, it is also an extremely hazardous substance that, if accidentally released, presents a significant health hazard because it is corrosive to the skin, eyes, and lungs. Ammonia is also flammable at certain concentrations in air.



EPA inspection photo reveals dangerous ice buildup on ammonia piping and valves.

How Safe Is Your Refrigeration System?

Accidental releases of ammonia from refrigeration facilities have injured or killed people. See <https://www.epa.gov/sites/production/files/2015-02/documents/112renforcementalert.pdf>

Some of the most dangerous facilities that EPA inspected were not aware of the hazards that their refrigeration systems posed to the public, emergency responders, and employees.

Does Your Facility Use Ammonia Refrigeration?

The Environmental Protection Agency (EPA) would like to work with facilities that have ammonia refrigeration systems to improve their safety, protect workers and the public from exposure to toxic gas, and avoid product losses.

Notice of Compliance Assurance and Enforcement Initiative

EPA is providing advance notice of an upcoming enforcement initiative so that you can take steps now to avoid a penalty before the initiative begins.

The Initiative will focus on ammonia refrigeration facilities using fewer than 10,000 pounds of anhydrous ammonia to enhance their compliance with the General Duty Clause of Section 112(r) of the Clean Air Act ("CAA"), 42 U.S.C. §(r)(1), and with Section 312 of the Emergency Planning and Community Right-to-Know Act (EPCRA), 42 U.S.C. § 11022. Failure to comply with these requirements puts the public at risk of exposure to anhydrous ammonia.

Compliance Help

Go to <https://www.epa.gov/enforcement/compliance-assistance-tools-and-resources-ammonia-refrigeration-sector> for a list of compliance resources, including guidance documents and links to refrigeration-related trade associations.

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How Can I Comply With The General Duty Clause (GDC)?

The goal of Section 112(r) of the Clean Air Act, 42 U.S.C. § 7412(r), is to reduce the risk of chemical accidents. Owners and operators of stationary sources producing, processing, handling, or storing extremely hazardous substances, including anhydrous ammonia, must:

1. identify hazards which may result from accidental releases using appropriate hazard assessment techniques;
2. design and maintain a safe facility taking steps to prevent releases; and
3. minimize the consequences of accidental releases that do occur.

For more information on the General Duty Clause: <https://www.epa.gov/sites/production/files/documents/gendutyclause-rpt.pdf>.

This Initiative focuses on the first duty listed above. Conduct a comprehensive hazard review of your refrigeration system to comply with the duty to identify hazards. Appropriate hazard identification techniques include standard industry checklists and What-if analyses. See above link for more information. Trade associations may be able to help you find experienced consultants and hazard identification materials.

How will EPA's Initiative Work?

Information Request: EPA has begun preliminary investigations into compliance with the General Duty Clause by facilities that it believes has fewer than 10,000 pounds of ammonia. The primary focus of this Initiative is facilities with more than 1,000 pounds of ammonia. EPA will send brief, targeted Information Requests to selected facilities that it has reason to believe may be out of compliance. Facilities will be required to respond to EPA answering four questions about their ammonia refrigeration systems, including whether a process hazard review has been performed. If a facility has not performed the required hazard review, EPA will inform the facility that it has violated the first duty of the General Duty Clause.

Settlement: Unless a significant release has occurred at the facility, EPA will offer to resolve this violation for a discounted penalty, provided the company agrees to perform a hazard review of its system with the help of an expert. The company will also be required to meet with emergency responders and submit any missing Tier II forms.

Follow-up: EPA will inspect a small subset of facilities to determine if the Initiative has improved compliance with the General Duty Clause.

How Can I Comply With EPCRA?

Section 312 of EPCRA requires facilities to report the presence of certain chemicals, including anhydrous ammonia, to emergency planning and response agencies. The goal is to ensure that emergency responders and planners know what chemicals are on site should they need to respond to an incident and that people in the community can get information about chemicals in their neighborhood.

What Can I Do Now To Avoid a Penalty?

If you haven't already, conduct a process hazard review. Companies that respond to the Information Request indicating that a hazard review has already been performed will not need to take further action under this Initiative. To avoid EPCRA penalties, see if you qualify for penalty relief under EPA's Audit Policy. Go to https://www.epa.gov/compliance/epas-audit-policy#_bookmark3 for more information and to <https://www.epa.gov/compliance/epas-edisclosure> for EPA's web-based "e-Disclosure" portal.

EPCRA Inventory Forms (Tier II forms) are due annually by March 1.

For more information about EPCRA reporting, go to: <https://www.epa.gov/epcra>.