

UH, OH... HERE COMES MORE REGULATIONS THAT WE NEED TO WORRY ABOUT.

PART 1

By: Bill Lape and Jeff Marshall, SCS Engineers

As much as I love to speak and write about codes and standards, there have been several changes on the regulatory front that ammonia refrigeration facility owners and operators need to know about. Many of you have probably heard of the changes to the EPA's Chemical Accident Prevention Provisions, of which the Risk Management Plan, is a part. These changes became effective on May 10, 2024. I will be giving a presentation at the National Conference in October about these changes and strategies for compliance. I will likely turn that into an article in the next edition of the Breeze.

In this issue, I want to raise awareness about some changes to the Clean Water Act that will impact some of the larger facilities in our industry to some extent. Now, some of you may be familiar with the Clean Water Act as it pertains to Stormwater runoff from your facility or wastewater treatment of your process

water. In a nutshell, legislation to reduce/eliminate water pollution was originally passed as the Federal Water Pollution Control Act in 1948. After amendments to this law were passed in 1972, it became known as the Clean Water Act (CWA). This act established the basic structure for regulating pollutant discharges into the waters of the United States and gave the EPA the authority to implement pollution control programs such as setting wastewater standards for industry. Additional amendments to this Act were passed in 1981 and 1987. Here is an excerpt from the Act:

“(j)(1) Consistent with the National Contingency Plan required by subsection (c) (2) of this section, as soon as practicable after the effective date of this section, and from time to time thereafter, the President shall issue regulations consistent with maritime safety and with marine and navigation laws (A) establishing



methods and procedures for removal of discharged **oil and hazardous substances**, (B) establishing criteria for the development and implementation of local and regional **oil and hazardous substance** removal contingency plans, (C) establishing procedures, methods, and equipment and other requirements for equipment to prevent discharges of **oil and hazardous substances** from vessels and from onshore facilities and offshore facilities, and to contain such discharges..."

Regulations addressing the oil pollution portion of the CWA were promulgated in 1976. They are found in 40 CFR Part 112, Oil Pollution Prevention, which are the source regulations for, amongst other things, Spill Prevention, Control, and Countermeasures (SPCC) plans, and Facility Response Plans (FRP) for larger quantities of oil on site. However, the requirements to regulate the discharge of hazardous substances remained

unfulfilled. Over the years, regulations to address this requirement of the CWA were proposed, but never finalized. In 2015, the Natural Resources Defense Council (NRDC), along with other plaintiffs sued EPA. Despite this lawsuit, the EPA published the following in the Federal Register on 09/03/2019: "...based on an analysis of the frequency and impacts of reported CWA Hazardous Substances discharges, as well as the existing framework of EPA regulatory requirements, the Agency is not establishing at this time new discharge prevention and containment regulatory requirements under CWA section 311." With the change in administration, EPA reversed course and on March 28, 2022, the EPA published a proposed rule in the Federal Register to address such discharges. The final rule was published earlier this year on March 28, with an effective date of May 28 of this year.

So what do these new rules require? There are three to four distinct steps for compliance with this new regulation.

- 1 Determine if your facility has a chemical covered under these new regulations.
- 2 Determine if your facility does or can have more than the threshold quantity on site.
- 3 Determine if there is a risk of substantial harm due to water release of this chemical. This evaluation must be submitted to the EPA for each chemical listed in Table 116.4 in 40 CFR 116.4 that is over the threshold quantity on site at the facility.
- 4 If it is determined that there is a risk of substantial harm due to the release of a listed chemical into water, then a Facility Response Plan must be prepared and implemented AND submitted to the EPA.

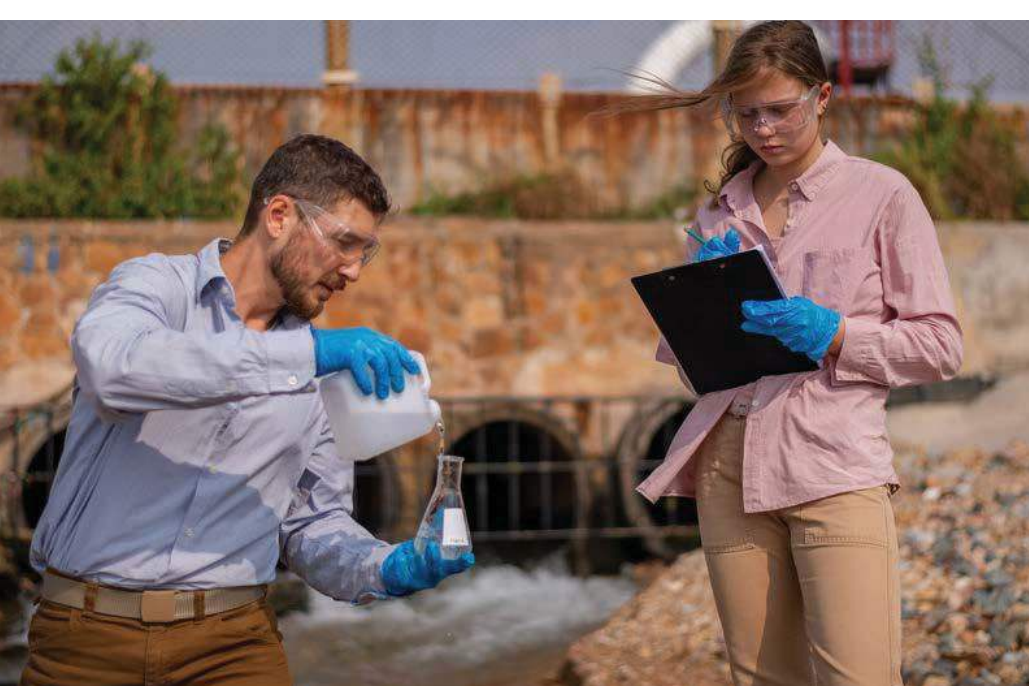
Ammonia is found in Table 116.4, so step #1 is satisfied for this chemical. It should be noted that there may be others at your facility that could be covered, particularly those found in sanitation chemicals, such as phosphoric acid, nitric acid, sodium hydroxide, and sodium hypochlorite, depending upon whether or not the threshold quantity is exceeded.

So what is the threshold quantity? It is 1000 times the reportable quantity listed in Section 311(b)(2)(A) of the CWA. In layman's terms, take the reportable quantity threshold for calling that National Response Center and multiple it by 1,000. So, the threshold quantity for ammonia that triggers proceeding to steps 3 and possibly 4 is 100,000 pounds.

A lot of you are probably going, "Whew, we don't have that." Remember, you need to look at all of the chemicals that you have on site and that are listed on Table 116.4.

On to step 3, the Risk of Substantial Harm Criteria. Appendix A of 40 CFR 118.5 provides a form for submitting the certification to EPA. It lists several criteria that constitute substantial harm:

- 1 Is the facility within one-half mile of navigable waters or a conveyance to navigable waters?
- 2 Is the facility located at a distance such that a worst-case discharge from the facility could cause injury to fish, wildlife, and sensitive environments?
- 3 Is the facility located at a distance such that a worst-case discharge from the facility could cause injury to public receptors?
- 4 Would a worst-case discharge from the facility cause substantial harm to a public water system by causing any one, or any combination of more than one, of the adverse impacts listed below?
 - a Violates any National Primary Drinking Water Standard or State Drinking Water Regulation, such as exceedance of a Maximum Contaminant Level;
 - b Compromises the ability of the public water system to produce water that complies with any National Primary Drinking Water Standard or State Drinking Water Regulation;
 - c Results in adverse health impacts in people exposed to the maximum concentration that could enter a drinking water distribution system;
 - d Contaminates public water system



- Reportable discharge history
- Notification requirements and discharge info
- Personnel roles and responsibilities
- Evacuation plans
- Discharge detection systems
- Response actions
- Disposal plans
- Containment measures
- Training procedures
- Exercise procedures
- Self-inspection
- Emergency response action plan

In addition to submitting this FRP to the EPA, it must be coordinated with the Local Emergency Planning Committee (LEPC) in a manner similar to the Emergency Response Coordination requirements found in the RMP requirements.

Much of the information that is required in the FRP is based upon the plans, procedures, training, and coordination that is required for Emergency Action (EAP) and/or Emergency Response Plans (ERP) for toxic releases to air. It is critically important to make sure that the information presented in the FRP do not conflict with the information presented in your EAP or ERP.

The deadline to submit both the Risk of Substantial Harm Certification and the Facility Response Plan is June 1, 2027, shortly after the deadline for several of the new RMP provisions. It is important to evaluate the facility and determine the Risk of Substantial Harm soon so that you give yourself enough time to develop the FRP prior to the deadline.

Please feel free to email me with questions at NH3isB2L@gmail.com.

Bill Lape is Project Director for SCS Engineers. Bill is a Certified Industrial Refrigeration Operator, a Certified Refrigeration Service Technician, and is the current Treasurer of the Refrigerating Engineers and Technicians Association.

Jeff Marshall, PE is a chemical engineer with over 42 years of experience in hazardous materials management and compliance, including scores of SPCC Plans and FRP plans.

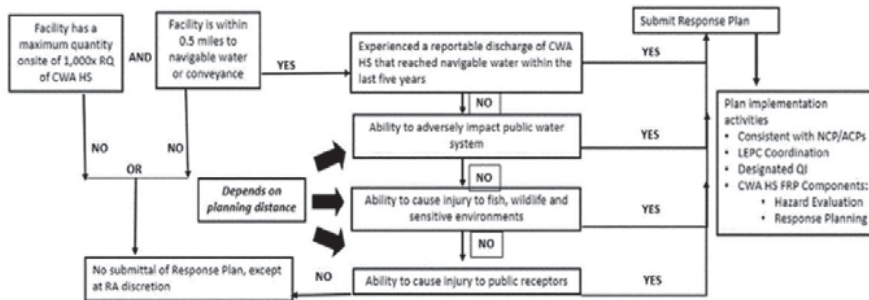


Figure 1: Flowchart of CWA FRP Applicability

infrastructure, including but not limited to intake structures, treatment facilities, and distribution systems, or premise plumbing systems to a degree that requires remediation to restore system components to acceptable performance; or

- e Impairs the taste, odor, or other aesthetic characteristic of the water entering a drinking water distribution system to a degree that could make the water unacceptable to consumers and that could prompt the public water system to issue use restrictions.

- 5 Has the facility experienced a reportable CWA hazardous substance discharge to navigable waters within the last five years?

Answering these questions may require chemical specific toxicity information, along with surface water calculations and modeling. The requirements for modeling the worst-case release scenario have some similarities to the worst-case release

scenario in the RMP requirements. Details on the modeling requirements may be found in 40 CFR 118.10 and in Appendix B of that section. It is important to note that there are no provisions for active or passive mitigation or secondary containment when modeling the worst-case scenario.

If the analysis of the facility determines that there is a risk of substantial harm, then it must proceed with the development and implementation of a Facility Response Plan (FRP). The requirements for such plans are listed in 40 CFR 118.11. They are similar to the requirements of an SPCC for oil but are considerably more complex. They must include:

- Identification qualified individual with authority to implement
- Response resources, personnel and equipment, contractors
- Training, testing and drills
- Facility details
- Owner/operator
- Hazard Evaluation, chemical info, risk ID, risk characterization, risk control, risk communication,