

EPCRA 312: HAZARDOUS CHEMICAL STORAGE REPORTING

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BACKGROUND:

REGULATORY
REPORTING AND
RIGHT-TO-KNOW

TRIGGERED BY THE BHOPAL, INDIA, DISASTER IN DECEMBER 1984, WHERE MORE THAN 2,000 PEOPLE DIED OR WERE CRITICALLY INJURED AS A RESULT OF AN ACCIDENTAL RELEASE OF METHYL ISOCYANATE, CONGRESS PASSED THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT (EPCRA). THE COMMUNITY RIGHT-TO-KNOW PROVISIONS HELP INCREASE THE PUBLIC'S KNOWLEDGE AND ACCESS TO INFORMATION ON CHEMICALS AT INDIVIDUAL FACILITIES, THEIR USES, HAZARDS, AND RELEASES INTO THE ENVIRONMENT. STATES AND COMMUNITIES, WORKING WITH FACILITIES, USE THE INFORMATION TO IMPROVE CHEMICAL SAFETY AND PROTECT PUBLIC HEALTH AND THE ENVIRONMENT.

TIER II REPORTING REQUIREMENTS

EPCRA Section 312, also known as “Tier II” reporting, is a requirement where facilities must annually report inventory of any hazardous chemicals used or stored in excess of established thresholds, at any one time, to their State Emergency Response Commission (SERC), Local Emergency Planning Committee (LEPC), and local fire department by March 1st for the prior calendar year. For Tier II, hazardous chemicals are defined as any substances for which a facility must maintain a Material Safety Data Sheet (MSDS) under the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200). This standard identifies the criteria used to classify a hazardous chemical. MSDSs are data sheets that provide detailed information on the health and physical hazards of chemicals along with protective measures.

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Facilities with hazardous chemicals (or products with hazardous chemical components) present at any one time in quantities that equal or exceed any of the following thresholds must submit a Tier II report:

- For Extremely Hazardous Substances (EHS) listed in 40 CFR Part 355: 500 pounds or the Threshold Planning Quantity (TPQ), whichever is lower.
- For any other hazardous chemical: 10,000 pounds. If certain chemicals such as oils are grouped together and their quantities exceed 10,000 pounds, they also need to be reported.
- For gasoline (all grades combined) at retail gas stations: 75,000 gallons (or approximately 283,900 liters) if the tank(s) was stored entirely underground and was in compliance at all times during the preceding calendar year with all applicable Underground Storage Tank (UST) requirements at 40 CFR Part 280 or requirements of the State UST program approved by the Agency under 40 CFR Part 281.
- For diesel fuel (all grades combined) at retail gas stations: 100,000 gallons (or approximately 378,500 liters) if the tank(s) was stored entirely underground and was in compliance at all times during the preceding calendar year with all applicable Underground Storage Tank (UST) requirements at 40 CFR Part 280 or requirements of the State UST program approved by the Agency under 40 CFR Part 281.

In addition to the above-listed Federal thresholds, some states have implemented lower reporting thresholds, including California, Louisiana, and New Jersey.

These Tier II reports are provided to firefighters and other first responders (many located in small, voluntary departments in rural areas) for use in the event of an emergency to ensure their safety and appropriate response procedures. For example, if a facility has onsite several large tanks of flammable oils/fuels or other hazardous chemicals (e.g., formaldehyde, nitric acid, hydrogen peroxide), first responders need to know these chemicals exist and will review Tier II reports filed for the facility prior to responding to an emergency. If this data is inaccurate or, worst case, not evaluated – the first responders cannot make informed decisions on how to respond, plan accordingly and keep everyone safe. There have been instances where first responders refuse to enter a building or fight a fire if a Tier II report has not been filed or the information is not complete.

RECENT EVENTS AND TRAGEDIES RELATED TO EPCRA REPORTING

As noted in a July 8, 2013 Chicago Tribune article, Tier II reporting has been seriously neglected, both at the facility/owner and agency levels. Facilities are misidentifying chemicals, filing missing or inaccurate chemical locations, and failing to report chemicals altogether—all which put their staff and local emergency response personnel at great danger. Moreover, Federal, State and local authorities typically do not routinely audit these reports for accuracy or completeness; therefore, mistakes, errors, and omissions may be overlooked for years. As increased pressure has been put on these officials to keep our communities safe since the recent West, Texas Fertilizer plant explosion, many believe the Tier II regulatory climate is about to change.

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On April 17, 2013, the West Fertilizer Company storage and distribution facility in West, Texas, exploded, killing 15 people, including 10 firefighters and 2 local residents; injuring more than 160; and damaging or destroying more than 150 buildings. The cause of the explosion was confirmed as ammonium nitrate, and the West Fertilizer Company plant apparently failed to report a large amount (30 tons) of ammonium nitrate stored onsite pursuant to EPCRA Tier II. Coincidentally, the facility had filed a Risk Management Plan (RMP) for anhydrous ammonia in 2011, but did not also file a Tier II for anhydrous ammonia. Responding firefighters were unaware of the material stored onsite, the actual quantity stored, and the explosion hazard. They were caught in harm's way when they entered the facility prior to the explosion. Had emergency response officials been aware of the materials stored onsite and their associated hazards, they may have had the opportunity to make informed decisions on how best to respond to the incident while keeping response personnel and the community safe.

The West Fertilizer Company explosion is not the first, nor the only, incident of its kind. As additional incidents occur and with increased media attention, the EPA is very likely to increase inspection frequencies, close regulatory loopholes, and increase enforcement activity related to EPCRA Tier II reporting.

Other examples provided by the article include the following:

- In 2006, a clothing company failed to report that its plant in Morehead, Kentucky, was storing chlorine on the premises. Two firefighters were exposed and one suffered chemical burns when they shut a leaking valve at the plant without proper safety gear.
- In 2013, a water-treatment facility in Valley City, North Dakota, failed to submit a Tier II report. After Reuters notified State officials, the plant filed a Tier II showing the presence of a host of toxic or explosive materials, including ammonium hydroxide, chlorine, sulfuric acid, sodium hydroxide, sodium permanganate, hydrochloric acid, and phosphoric acid. Company officials said they aren't sure why reports were not filed and are looking into the issue.
- In June 2013, homes and businesses in Seward, Illinois were evacuated for a day after a fire and explosion at a chemical manufacturer injured one employee and released a plume of smoke containing caustic and toxic chemicals, including chlorine gas. The company, which makes compounds used in high-tech applications, did not report storing hazardous chemicals.

Facilities must provide accurate, thorough EPCRA Tier II reports not only to maintain environmental compliance, but also to protect their employees, response personnel, and the communities in which they and their families reside. According to the Chicago Tribune article, since 2005, the EPA has reported accidents at facilities storing 140 EPCRA Tier II chemicals (EHS) resulting in approximately 60 deaths, over 1,300 injuries and more than \$1.6 billion in onsite and offsite damages. This figure does not include the penalties, lawsuits, and costs incurred for potential criminal/negligence cases for failing to submit accurate information.

OUR SERVICES AND APPROACH:

SYSTEMATIC REPORTING PROCESS

EPCRA Tier II reporting is a systematic process. Utilizing our experienced team of engineers, with strong industrial backgrounds in a variety of industries, Sage helps our clients avoid common pitfalls and smoothly navigate through the nuances of the regulations.

EPCRA 312 REQUIREMENTS

The intent of the EPCRA 312 report is to provide accurate, thorough inventories of all hazardous chemicals and extremely hazardous substances (EHS) to communities and emergency response personnel to improve chemical safety and protect public health and the environment. Reports are due every March 1st for the prior calendar year and are submitted to the SERC, LEPC, and the local fire department. While EPCRA Tier II reporting is a federal regulation, states and local agencies administering the program may have more stringent requirements than simply filing Tier II reports, including, but not limited to, detailed site plans, MSDS submittals every few years (in lieu of an MSDS list), lower reporting thresholds, and fees. Most states accept Tier II reports electronically; however, paper submissions are often required to the LEPC and fire departments.

Remember, the requirements to report under EPCRA 312 to the SERC, LEPC, and local fire department are for this specific regulation! Be aware that chemicals stored and/or processed could be subject to multiple regulations under different environmental statutes with different agencies and agency divisions:

- One chemical or one process can be covered under many agencies and regulated under multiple different regulations:
 - EPA – EPCRA, RMP, CAA, RCRA, TSCA, FIFRA
 - OSHA – Hazard Communication, Industrial Hygiene, Process Safety Management
 - Dept. of Homeland Security (DHS) – CFATS and Chemicals of Interest (COI)
 - Alcohol, Tobacco, Firearms (ATF) – Explosives
- Agencies do not necessarily communicate well internally or externally – just because ammonium nitrate is reported to EPA does not mean OSHA and DHS would know it exists at the site (i.e., West, Texas Fertilizer).
- Reported data is used in various ways between agencies – DHS and OSHA may use EPA data to gather information about a facility, and DHS may look at Tier II reports to see if a facility missed reporting pursuant to the DHS Chemical Facility Anti-Terrorism Standards CFATS (e.g., flammable gases, toxic gases, explosives, fuels).

HAZARDOUS CHEMICAL EVALUATION

Sage encourages a comprehensive and thorough chemical inventory review for all commercial, industrial, and distribution facilities using and storing hazardous materials. Having the most accurate and up-to-date records is critical in keeping staff and first responders safe in the event of an accident. In order to prepare Tier II reports, Sage works with the facility to learn and understand their processes and operations, evaluate all of the chemicals/products used and stored at the facility that meet OSHA hazard communication

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standards, and evaluate the amount of hazardous chemicals/products used and stored onsite at any one time to determine whether reporting thresholds have been exceeded.

While certain determinations may be straight forward, such as the amount of oil stored onsite, there are other hazardous chemicals that require a more thorough working knowledge of the rules and regulations and their application to various industrial settings. For instance, a common omission from Tier II reports are lead acid batteries, which contain both lead (10,000 lbs threshold) and sulfuric acid (500 lbs EHS threshold). Therefore, a facility operating 2-3 battery-powered forklifts may trigger reporting for sulfuric acid, but not for lead.

Another common omission involves hazardous chemicals present onsite that are above a reporting threshold for only a short period of time. For example, a contractor may bring onsite a tank of diesel fuel to use for a short-term project that, when combined with the facility's existing diesel storage, brings the amount of diesel over the 10,000 lb threshold thus triggering reporting of diesel. EPA has not defined a timeframe whereby a hazardous chemical may exceed a threshold without being reportable. Therefore, the presence of a hazardous chemical above a threshold for any length of time will trigger reporting for that chemical.

For existing facilities who already file Tier II reports, Sage strongly recommends an independent third-party audit of a facility's EPCRA reporting system as the best strategy to evaluate compliance. The audit typically consists of a site visit to review facility operations and ancillary activities, inventory the hazardous chemicals in the facility, review regulatory applicability of the Tier II program, and gain an understanding of Tier II report data gathering systems and methodologies. Independent audits effectively allow a facility to evaluate for "errors and omissions" as related in the Chicago Tribune article, verifying accuracy of data and ensuring up-to-date methods for accurate calculation of chemical thresholds are used.

For new facilities, Sage can develop initial EPCRA compliance tools for assessing new hazardous chemicals that meet EPCRA notification, reporting and recordkeeping regulatory requirements.

TIER II ONLINE REPORTING

In assisting facilities with Tier II report preparation, Sage prepares a comprehensive list of reportable chemicals based on a facility-specific hazardous chemical review. The information is used to meet Federal, State, and local-specific EPCRA Chemical Inventory requirements. Sage prepares Tier II report submission packages to ensure they are submitted in a timely manner to State, local agencies, and fire department(s), including adequate backup documentation maintained at the facility. All usage quantities, storage conditions and locations, applicable exemptions, and process/release related assumptions are clearly documented on the spreadsheets for Tier II reports and background documentation.

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Most states require electronic submittal of Tier II reports to the SERC, usually through EPA's Tier 2 Submit program. While some states have actually linked their LEPCs to the electronic submittal system, most LEPCs and fire departments require hard copy filing of the Tier II reports. Sage assists clients in setting up a Tier 2 Submit account, populating the database with the Tier II data, and preparing hard copy reports for submittal.

There are additional areas of the Tier II report that may need to be completed for certain states, such as site maps, transportation routes, and methods of transportation. Sage prepares maps and other items as required by the State and local agencies, and assembles all relevant information to be included with the client's backup documentation supporting the Tier II report.

Note: In certain states, retroactive reporting is required if a facility becomes aware they did not submit Tier II reports when previously required. For instance, in Arkansas, if an existing facility has learned they are subject to Tier II and submits reports for the first time in 2011, but does not file retroactive reports for the prior reporting years (and should have), the facility is automatically in violation of Tier II reporting regulations. Sage can also team with legal partners to self/voluntarily disclose EPCRA issues to minimize enforcement actions and fines.

RECORDKEEPING

Facilities are required to maintain at least 5 years of data and reports onsite for agency or fire department inspections. It is crucial that accurate, up-to-date information is readily available to these agencies for adequate chemical response planning. Most inspections are done annually by fire departments. State agencies may or may not perform inspections; however, the liability for accurate reporting is not on these agencies – it is on the facilities. Sage can review facility files to provide recommendations, updates and tools for maintaining records of compliance.

It is important to note, this data becomes public knowledge. EPA and State agencies may post information on their respective websites. Sources need to make sure ALL information is complete and accurate, updated as necessary as it will be seen in the public eye. For those companies concerned with keeping proprietary information secure, some agencies have filing mechanisms that take individual confidentiality concerns into consideration.

TIMING/PROCESS

EPCRA Tier II is a "living report" and requires facilities to notify agencies when new hazardous chemicals are brought onsite in quantities meeting or exceeding thresholds, within a specified timeframe:

- If a facility brings onsite a new hazardous chemical, including an EHS, which exceeds the threshold limit, increases the amount of an existing hazardous chemical to a level above an applicable threshold limit, or obtains significant new information about an existing hazardous chemical (e.g., through an updated

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MSDS), the facility has 3 months to submit the revised list of chemicals (for the facility) or new MSDS pursuant to 40 CFR Part 370.33.

- If the new hazardous chemical is an EHS, and the EHS is the first EHS to be reported, the facility is subject to additional emergency planning/notification requirements within 60 days under 40 CFR 355.20.

The time required for Sage to complete a Tier II report for a facility can fluctuate based on the size of the facility, nature of operations, the availability of data, and state-specific reporting requirements. For an existing source who has previously submitted Tier II reports, Sage suggests a minimum 1-month notice prior to the reporting deadline to complete a Tier II review and assemble a reporting package from start to finish. In addition to preparing Tier II reports, Sage can review historical reports for accuracy and completeness at any time.

SUMMARY:

SAGE ENVIRONMENTAL CONSULTING SERVICES

Tier II reporting is not only important to avoid potentially significant Federal and State fines, but to keep facility staff and emergency responders safe in the event of an accident and to protect company assets. Sage helps clients navigate through the rules, regulations, exemptions, and definitions to ensure the facility complies with the law. Sage offers full-service Tier II assistance that includes preparation of Tier II reports, auditing of historical Tier II reports, and assessment of chemical management programs.