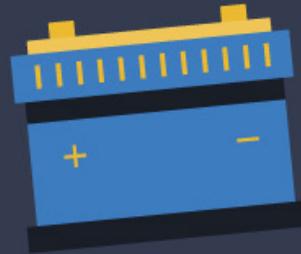


A RESOURCE FROM ENCAMP

# Tier II Guide

A  
PRACTICAL  
GUIDE FOR  
TIER II  
REPORTING



ENCAMP

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# Welcome to The Tier II Guide



The Emergency Planning and Community Right-to-Know Act (EPCRA) is a federal law passed by the United States Congress in October, 1986. The law was spurred by a series of international accidental chemical releases that resulted in deaths and serious illnesses in the immediate and surrounding areas.

The most infamous incident was the release of deadly methyl isocyanate gas at the Union Carbide plant in Bhopal, India, in December of 1984. This incident alone was estimated to have killed over 16,000 people. Roughly 7,000 chemical accidents occurred in the United States within a 5 year period surrounding the Bhopal disaster. In response to this growing threat, Congress passed EPCRA to help reduce the likelihood of disasters involving hazardous and toxic chemicals in the United States.

EPCRA contains four main responsibilities for local/state governments and facilities with chemical use and storage:

- 1 Section 301 to 303, Emergency Planning - these sections require local governments to prepare chemical emergency response plans, and to review those plans at least annually in order to be prepared for a chemical emergency in their jurisdiction. State governments are also required to oversee and coordinate local planning efforts. Facilities that maintain Extremely Hazardous Substances (EHSs) above the threshold planning quantities (TPQs) must cooperate in emergency plan preparation.

**2** Section 304, Emergency Notification - this section requires facilities to immediately report accidental releases of hazardous substances and EHS. Substances released in amounts above their Reportable Quantities (RQs) must be reported to local officials and the state. Further reporting may be required as well. These reporting requirements provide the government with the ability to ensure the protection of human health and the environment in the spill clean-up.

**3** Section 311 and 312, Community Right-to-Know Requirements - these sections require facilities that store or handle any hazardous chemicals to submit their corresponding safety data sheets (SDSs), formerly known as Material Safety Data Sheets (MSDSs), to the state, local officials, and their local fire department. If a facility's chemicals exceed defined thresholds, facilities are also required to submit an inventory report for those chemicals to the same officials. This information is used to give the government the information to prepare for the possibility of a chemical emergency at the facility.

**4** Section 313, Toxics Release Inventory (TRI) - this section requires facilities to complete and submit an inventory of toxic chemical releases to the environment. This report is due annually.

Tier II, also known as the Community Right-to-Know requirements, is housed under section 312.

This section requires a facility to submit an annual inventory of hazardous chemicals onsite that surpass the threshold (federally mandated but can be superseded by your state or local requirements) to the facility's State Emergency Response Commission (SERC), Local Emergency Planning Committee (LEPC), and the local fire department.



# The Details

## Who Must Report?

On the federal level, any facility that stores or handles hazardous chemicals over 10,000 pounds is required to submit the annual Tier II inventory. Hazardous chemicals are “substances for which a facility must maintain a SDS under the OSHA Hazard Communication Standard,” which lists the criteria used to identify a hazardous chemical. **OSHA** defines a hazardous chemical as any chemical which presents a physical or health hazard. Common chemicals that many facilities store on-site are subject to this reporting. Some examples are antifreeze, ethanol, diesel fuel, propane, and sodium chloride.

### Physical hazard

means a chemical for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive.

### Health hazard

means a chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees. The term "health hazard" includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic system, and agents which damage the lungs, skin, eyes, or mucous membranes.

In addition to the federal threshold of 10,000 pounds for hazardous chemicals, there is also a subset of chemicals called Extremely Hazardous Substances or EHSs (mentioned previously), which have lower Tier II reporting thresholds. EHSs have a general threshold of 500 pounds, although thresholds can be lower for specific substances depending on the Threshold Planning Quantity (TPQ) published for the chemical; some TPQs can be as low as 1 pound. The EPA establishes TPQs using a Level of Concern (LOC) ranking system based on “acute toxicity and the potential for airborne dispersion.” TPQs represent the quantities of each substance that can cause significant harm should an accidental release occur. Any facility that uses or stores an EHSs at or above 500 pounds or the TPQ (whichever is lower) is required to submit a Tier II report. The list of EHS and their corresponding TPQs can be found in **Appendix A** of the EPA’s List of Lists. There are many common chemicals that are considered EHSs that might surprise you. Examples include anhydrous ammonia, sulfuric acid, formaldehyde, and hydrogen peroxide (if the concentration is over 52%).

A common exception to the above rules is for retail gas and diesel stations. There are certain **higher thresholds for retail gas and diesel stations** if their fuel storage tanks are located entirely underground, and the tanks are in compliance with all applicable underground storage tank (UST) requirements set by the federal, state, and local government. For a retail gas station, the reporting threshold for gasoline is 75,000 gallons and the threshold for diesel is 100,000 gallons. More on exemptions and relaxed thresholds later on...



## How To Comply

Based on the information, you've determined that your facility is required to report under EPCRA. So what's the next step?

Under section 311 of EPCRA, facilities must submit SDSs for hazardous chemicals present onsite at or above the reporting thresholds (referenced in the section above) to their SERC, LEPC, and local fire department. Facilities may choose to submit a list of the hazardous chemicals grouped into hazard categories instead. Unless your state or local government states otherwise, submitting SDSs is required only once. Thereafter you would just submit SDSs for new chemicals at your facility. New facilities have 3 months to submit their SDSs or list of hazardous chemicals once becoming subject to OSHA regulations.

On an annual basis, facilities are required to submit an inventory of the chemicals that meet the definition of a hazardous chemical and exceed the defined reporting threshold. EPA has published a generic Tier II form. It's viewable [here](#). However, most states have developed their own version of the form (some with state specific requirements) and require the information to be submitted online via a state specific portal or via email. Most states use reporting software like E-Plan, Tier2 Submit or Tier II Manager; make sure to check your state reporting requirements.

For the most part, the EPA and state agencies are asking for the same information on these reports. They need facility information (address, NAICS code, number of occupants, etc.) and contact information (emergency contact, owner/operator contact, and Tier II contact). In addition to the normal facility information, there are other facility specific questions. For example, if your facility is subject to the Risk Management Program (RMP) through EPA, you must indicate that and provide your facility's RMP ID#.

The chemical inventory section is much more detailed. You'll need to provide the following information on the hazardous chemicals you're reporting:

- Physical state (liquid, solid, gas)
- Is it pure or in a mixture?
- CAS#
- Whether the chemical is an EHS
- What's the maximum amount that could be on-site?
- What's the average amount on-site on a daily basis?
- What physical and health hazards are associated with this chemical?
- Where are these chemicals stored within your facility?

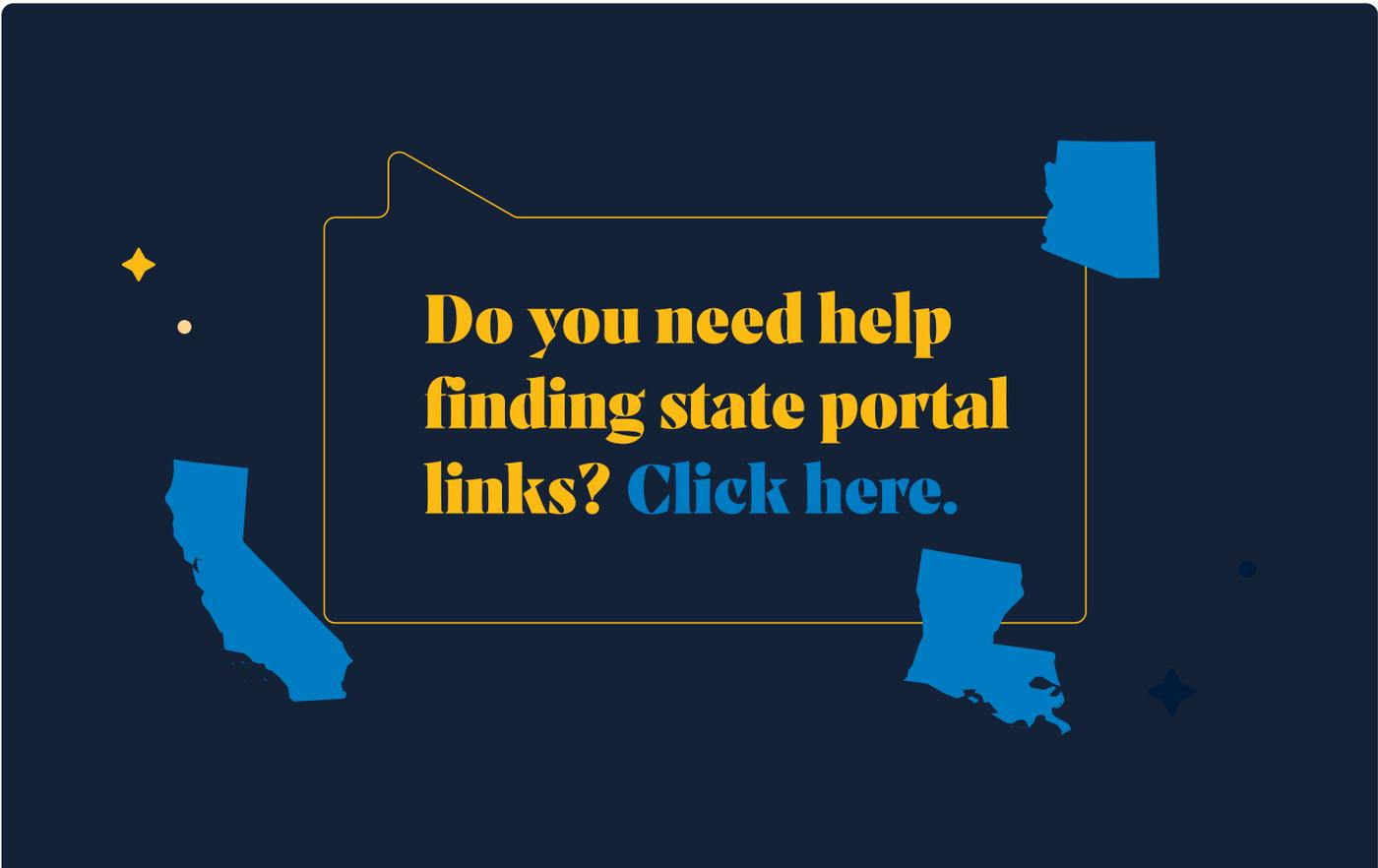
Several states require more information in addition to the above requirements. For example, Maine requires the mode of shipment, frequency of shipment, maximum capacity per single vessel, average shipment quantity, etc. Oregon requires additional information regarding chemical storage like building, inside/outside, etc.

In addition to the chemical inventory information, some states require facility plans to be submitted that show important information like where the chemicals are stored, emergency exits, fire extinguishers, and nearest water source. Check with your state to see if a facility plan is required, what needs to be on it, and what file format it should be in.

After the required information and documents are uploaded and/or completed, several states require facilities to pay fees with Tier II reporting. Some states will bill your facility per chemical reported, like

Louisiana, Minnesota, and Delaware. Other states, such as New Jersey, will bill the facility by the number of employees. Some of the state portals are set up to accept payment of the fees directly while other states will send your facility a bill later and require you to mail a check or pay via credit card.

When is all of this information and documentation due? The annual report is due March 1, which is a deadline set federally. There are exceptions to this, however. California is divided into Certified Unified Program Agencies, or CUPAs for short. Some of the CUPAs require this information to be submitted at different times during the year. In New Jersey, public and private entities have different due dates. For the most part, states require the information on or before March 1 every year. If your information is submitted late or not submitted at all, you could be subject to enforcement actions or fines.



**Do you need help  
finding state portal  
links? [Click here.](#)**

# Common Problems



Reporting your facility's chemicals can be a confusing task. Depending on your inventory, you may have difficulty with mixtures, lead acid batteries, or understanding your state requirements and using their portal. We'll tackle each one of those in this section.

## Mixtures

There's a lot of confusion surrounding mixtures and how to report them. Do you report each chemical separately within the mixture? Or should you report the mixture as its own chemical? EPA guidance recommends two methods:

1. Report each constituent individually. With this option, the percent weight of each component will need to be converted to pounds by using the mass of the mixture. After each component has been converted, aggregate the amount with any other instances of the same component. Source, [here](#).

2. The other option is reporting the mixture as a whole. If the components are unknown (such as trade secrets), the chemical must be reported as a mixture.

See below for examples from the Texas Commission of Environmental Quality (TCEQ):

*In the example below, the mixture X-Chem weighs 20,000 lbs. and contains 20% of the hazardous chemical "Chemical A", which is listed as an EHS, and 80% water:*

1. Hazardous component example:
  - a. Weight of Chemical A= 20,000 x 20% = 4000 lbs.
  - b. Weight of Water = 20,000 x 80% = 16,000 lbs  
Report 4,000 lbs of Chemical A in the Tier II Report.
2. Whole Mixture Example:
  - a. Weight of X-Chem = 20,000 lbs.  
Report 20,000 lbs of the mixture in the Tier II Report.

You would also list the 4,000 lbs of Chemical A under the Mixture Components because it is an EHS.

Mixture X-chem		
Ingredient names	Product Identifier (CAS No.)	Percent (%)
Chemical A (EHS)	XXXX-XX-X	20
Water	XXXX-XX-X	80

You do not have to count a hazardous chemical present in a mixture if the concentration is less than or equal to 1%, or less than or equal to 0.1% for a carcinogenic, or potentially cancer-causing chemical. **Source**

## Lead-Acid Batteries

The batteries in powered industrial trucks, like forklifts and man lifts, contain lead and sulfuric acid. And according to OSHA, they are a hazardous chemical because of the “potential to emit hydrogen gas which, upon ignition, may result in a fire or explosion.” The batteries do not fall under the article exemption either, since they “have the potential to leak, spill, or break during normal conditions of use, including foreseeable emergencies,” according to EPA’s **memorandum** on reporting these batteries. Because of this, it’s important to review how many batteries your facility stores and uses to determine if they exceed the threshold.

In the eyes of the EPA, lead-acid batteries are considered a mixture of sulfuric acid and lead. If you look at the

safety data sheet for a lead-acid battery, it generally contains between 40-75% lead (or lead compounds) and 20-45% sulfuric acid. Sulfuric acid is listed as an EHS chemical, therefore the threshold is 500 pounds. Lead-acid batteries can weigh anywhere from 39 pounds to upwards of 4,000 pounds or more. Because of the lower threshold, facilities with even just one battery may be required to report. If your facility has several smaller batteries onsite, the amount of sulfuric acid in each battery needs to be aggregated to determine if that threshold has been met or exceeded.

*Do you have questions or want to learn more about Lead-Acid Batteries?*  
**We can help!**

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## Lead-Acid Batteries

A Detailed and Interactive Guide

**READ THE EBOOK →**



Once you’ve determined whether the threshold for sulfuric acid has been reached, you may report the battery as a mixture or you can report the sulfuric acid separately as an EHS. However, the **regulations state** that “reporting a mixture, such as the batteries, under both sections 311 and 312 must occur in the same manner, where practicable.” Because the SDSs for lead acid batteries are normally published as the whole unit, facilities should report in the same method, by listing the batteries on the Tier II form, rather than reporting each component. Some states have released guidance on reporting lead acid batteries, so double check with your facility’s state program prior to reporting these.

Click on the state to check the program:



## State Requirements & Submission Portals

Another common issue with Tier II reporting is determining what your state requires for reporting and how the state wants to receive that information. States like California and New Jersey have thresholds that differ from the federal thresholds. Many states require additional information on the chemicals and the facilities that report, like Arizona. Arizona requires additional information on the facility, like whether or not it's located on a tribal land. Contact your State Emergency Response Commission (SERC) or visit their website to find out their specific requirements.

Many states require you to complete the report through Tier2 Submit. Tier2 Submit is software the EPA developed to help eliminate the paper reporting burden. The software must be downloaded each year onto your computer in order to use it. The software is normally updated in November of the year prior. The software doesn't actually submit the information to your facility's SERC, LEPC, or fire department though, contrary to its name. Most SERCs require you to download the inventory from Tier2 Submit and submit the file through email, their own portal, or even on a CD/SD and mail it to the SERC.

Do you need help with your state's specific requirements?

**We can help!**

### EPCRA Applicability 311 & 312 Flowchart

[VIEW NOW →](#)



Other states have opted to use a full reporting and submittal platform such as Tier II Manager. Indiana, Delaware, Kentucky, Illinois, Minnesota to name some have all adopted Tier II Manager as their portal for Tier II reporting. Another portal that some states have adopted is E-Plan. E-plan was developed by the University of Texas-Dallas. Other than Tier2 submit, Tier II Manager, and E-Plan, some states have created their own portal for completing the reporting, including California and Louisiana. Each portal has its pros and cons, but digitizing this information has proven to be very beneficial to the regulated community, emergency responders, and state and local officials.

On top of the varying thresholds and specific state requirements, there are several ways that the chemical inventory can be submitted to your state. Check out the following [map](#) to see what ways your state(s) require this information to be submitted.



# Common Reporting Errors

## Other Tier II problems causing confusion?

Let us know so we can help! E-mail us at [regulatory@encamp.com](mailto:regulatory@encamp.com) and your answer might be in the next blog!

In addition to some of the ambiguities surrounding Tier II mentioned above, here are some common reporting errors that SERCs have identified:

- 1 One of the most common mistakes is incorrectly designating EHSs or failing to designate a chemical as an EHS. Double check that all of your reported chemicals are not on the EHS list. The list is located [here](#).
- 2 Another common reporting mistake is listing a contact who is not familiar with Tier II reporting. The person listed should be knowledgeable about the report and the chemicals onsite. If the SERC, LEPC, or local fire department needs to ask the facility a question, they'll contact the person listed on the report.
- 3 As mentioned above, some states require additional information about the chemicals or the facility itself. Another common mistake is not answering those questions or answering them incorrectly. Many states require more information regarding the EHSs that are onsite, like mode of shipment, container type, and container size.
- 4 Based on ECHO data, EPA settled 28 cases related to EPCRA violations in EPA's fiscal year 2018. The penalties assessed from those cases amounted to \$473,867. Several of those penalties stemmed from not completing the report at all. Others were for not reporting specific chemicals correctly or at all. **Source**
- 5 Some SERCs and LEPCs require a site plan to be submitted with your chemical inventory. This plan helps navigate chemical emergencies by identifying where hazardous chemicals are stored, where the nearest emergency exits are, where the emergency equipment like fire extinguishers and PPE are located, and other pertinent information. Check with your SERC, LEPC, and fire department to see if they have specific requirements for site plans to ensure your facility is in compliance.
- 6 "Over Reporting" - While over reporting won't get you in trouble, you could potentially pay more fees and it could confuse emergency personnel in an emergency.
- 7 Some facilities forget to factor in short term or seasonal chemicals they use for projects, specialty blends, or R&D. Section 312 states that you must account for any chemical present at the facility. EPA further describes present as being onsite at any given time during the year above the threshold. So although those chemicals may be onsite for a short amount of time, if they exceed the threshold while at your facility, you're required to report it. **Source**

# Latest Updates



SERCs and LEPCs change or update their Tier II reporting requirements usually on an annual basis. The federal EPCRA program moves at a much slower pace. There have been some updates in the past few years that are worth highlighting.

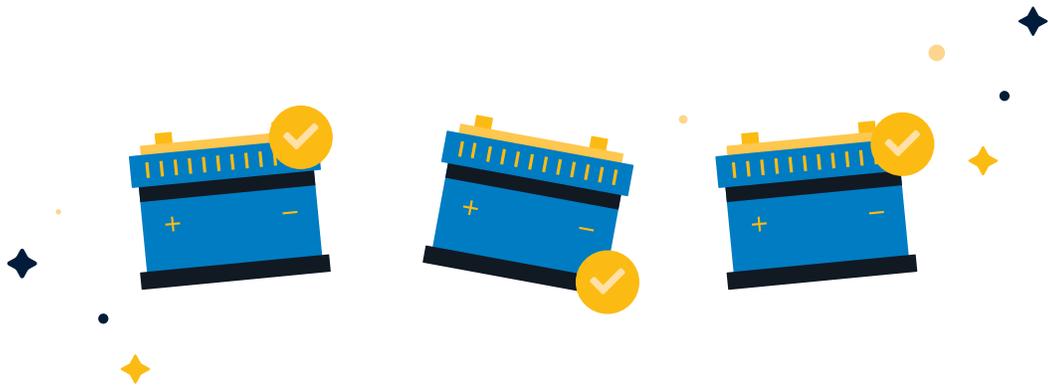
Tier2 Submit 2020 - As mentioned above, this software is developed by the EPA and published each year. Tier2 Submit went through major updates for the 2019 reporting year. NOAA will be releasing an updated version for RY2020 soon. Here are some highlights from last year's update:

- Redesigned the navigation structure by adding a toolbar to edit records in list view.
- Redesigned the detail page to show all details on a single page, similar to a web form.
- Added real-time validation that catches validation errors as users type them, and reports the validation status of a record at any moment.
- Added a map view of latitude and longitude coordinates.
- Added the ability to export and import sets of .csv files.

EPA updated the hazards associated with chemicals to synchronize them with the Global Harmonization System for reporting years 2017 and the future.

- Here's a **link** to the crosswalk of the hazards from the old system to the new. This was published by the EPA.
- This update also required facilities to update their Material Safety Data Sheet (MSDS) library to their SDS Library. Safety Data Sheets went through a revamp and are now required to follow the published GHS format. Check out this link for more information: **<https://www.osha.gov/Publications/OSHA3514.html>**.

# Tips to Get Prepared for Next Year's Report



- 1 Download our helpful **Tier II Checklist**. It's free!
- 2 Find out if your state has changed any of their reporting requirements, like thresholds, reporting portal, LEPC contact, etc.
- 3 If your state requires files to be in Tier2 Submit format, be sure to download the newest version of Tier2 Submit on your computer when it's released.
- 4 Start gathering your purchasing records and other inventory information to compile your data.
- 5 Check to make sure there are no new products to add to your inventory from last year. If there are, your state may require the SDS to be submitted as well.
- 6 You should also check to see if you have stopped storing any chemicals so you can remove them from your reporting.
- 7 If your state requires a site plan, be sure to update that if needed with any changes in chemical storage location or other requirements.
- 8 Compare your report to last year's and see if they're similar in amounts and chemicals. If there are large differences, be sure to review those and make any necessary changes.



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