California Accidental Release Prevention Program - Mixtures

The following information is provided to assist with understanding the California Accidental Release Prevention (CalARP) program (California Health and Safety Code, Chapter 6.95, Article 2, § 25531 to § 25543.3). This information is not to be relied upon as legal advice or interpretation by the California Governor's Office of Emergency Services or the State of California. It does not create any rights, obligations, or establish any new standards. Local governments often have requirements that are more stringent than state and should be contacted for advice about this program in their area.

MIXTURES OR SOLUTIONS OF REGULATED SUBSTANCES

For the purposes of the CalARP program, the threshold quantity of a regulated substance in a process which triggers compliance with program requirements is the quantity listed in Title 19 CCR, § 2770.5:

- Table 1 – the "Federal" table of toxic substances;
- Table 2 – the "Federal" table of flammable substances; or
- Table 3 – the California-specific table of toxic substances.

What about mixtures or solutions of these chemicals? How is a threshold value of a regulated substance calculated if it is not pure substance?

The answer to this question depends, to an extent, on the nature of the mixture.

TOXIC SUBSTANCES (Title 19, CCR, § 2770.5, Table 1 or Table 3)

For a **toxic** substance regulated under the CalARP program, only that portion of the mixture or solution that is actually the regulated substance counts toward the threshold quantity. Do not count the entire mixture.

EXAMPLE:

A stationary source has 4000 pounds of an aqueous solution containing 10% ammonia. The listed CalARP threshold value for ammonia is 500 pounds. Since 10% of 4000 pounds is only 400 pounds, this represents a sub-threshold quantity of ammonia, and this process would not be regulated under CalARP.

Two other tests must be applied to a toxic mixture to determine if it is regulated under CalARP.

- **First, the mixture must contain at least 1% of the regulated substance. Below 1%, it does not count toward a threshold quantity.**
- Second, this 1% or greater mixture must be shown, under handling or storage conditions, to have a vapor pressure greater than 10 millimeters of mercury (mm Hg).

Please note that there are a few specific exceptions to the 10 mm Hg rule, which are outlined in Title 19, CCR, § 2770.2(b)(1)(C)

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FLAMMABLE SUBSTANCES (Title 19, CCR, § 2770.5, Table 2)

For a **flammable** substance regulated under the CalARP program, if

- The mixture contains at least 1% of the regulated substance, and
- The mixture has an National Fire Protection Association flammability rating of 4 (NFPA 4),

then the entire mixture must be counted toward the threshold quantity.

Exceptions are:

- The constituents of gasoline, and
- Naturally occurring hydrocarbon mixtures.

EXAMPLES:

- A stationary source has a mixture containing 9,000 pounds of butane and 1,001 pounds of water in a process. The listed CalARP threshold value for all flammable substances is 10,000 pounds. The mixture meets the criteria for NFPA 4. This stationary source would be regulated under CalARP even though it only has 9,000 pounds of butane, because the total amount of the mixture is over the threshold.

- A stationary source has a mixture containing 6,000 pounds of butane and 6,000 pounds of propane. The listed CalARP threshold for each of these regulated substances is 10,000 pounds. The mixture meets the criteria for NFPA 4, and the stationary source is regulated under CalARP even though it only has 6,000 pounds of each substance, since the two substances together total 12,000 pounds.

- A stationary source has 6,000 pounds of butane and 6,000 pounds of propane in interconnected vessels, but the gases are not in a mixture. Each has a listed CalARP threshold of 10,000 pounds. Even though there is a total of 12,000 pounds of regulated substances at this stationary source, no one regulated substance exceeds the 10,000 pounds, and no mixture exceeds 10,000 pounds, so this stationary source is not regulated under CalARP.

Who do I contact if I have further questions?

Contact your local CUPA

If you have any questions regarding the CalARP Program, please call the Cal OES Hazardous Materials Section @ (916) 845-8798

Additional Resources can be found on the Internet at the following locations:

www.caloes.ca.gov	(California Governor's Office of Emergency Services)
www.calcupa.net	(California Certified Unified Program Agencies)
www.epa.gov	(Environmental Protection Agency)
www.leginfo.ca.gov	(Official California Legislative Information)