



CaLARP 101

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Session Code M-A1

Monday February 26th



**26th California Unified Program
Annual Training Conference
February 26-29, 2024**

Agenda

1. Introduction & Objectives
2. Process Safety History
3. Applicability
4. Risk Management Plan
5. Prevention Program Requirements
6. RAGAGEP
7. Emergency Response Program
8. Exemptions
9. Resources & Further Reading

California Accidental Release Prevention (CalARP) Program

California State Law: [California Health and Safety Code \(HSC\), Division 20, Chapter 6.95, Article 2](#)

California State Regulations: [California Code of Regulations Title 19 \(19 CCR\), Division 2, Chapter 4.5](#)

California Accidental Release Prevention (CalARP) Program



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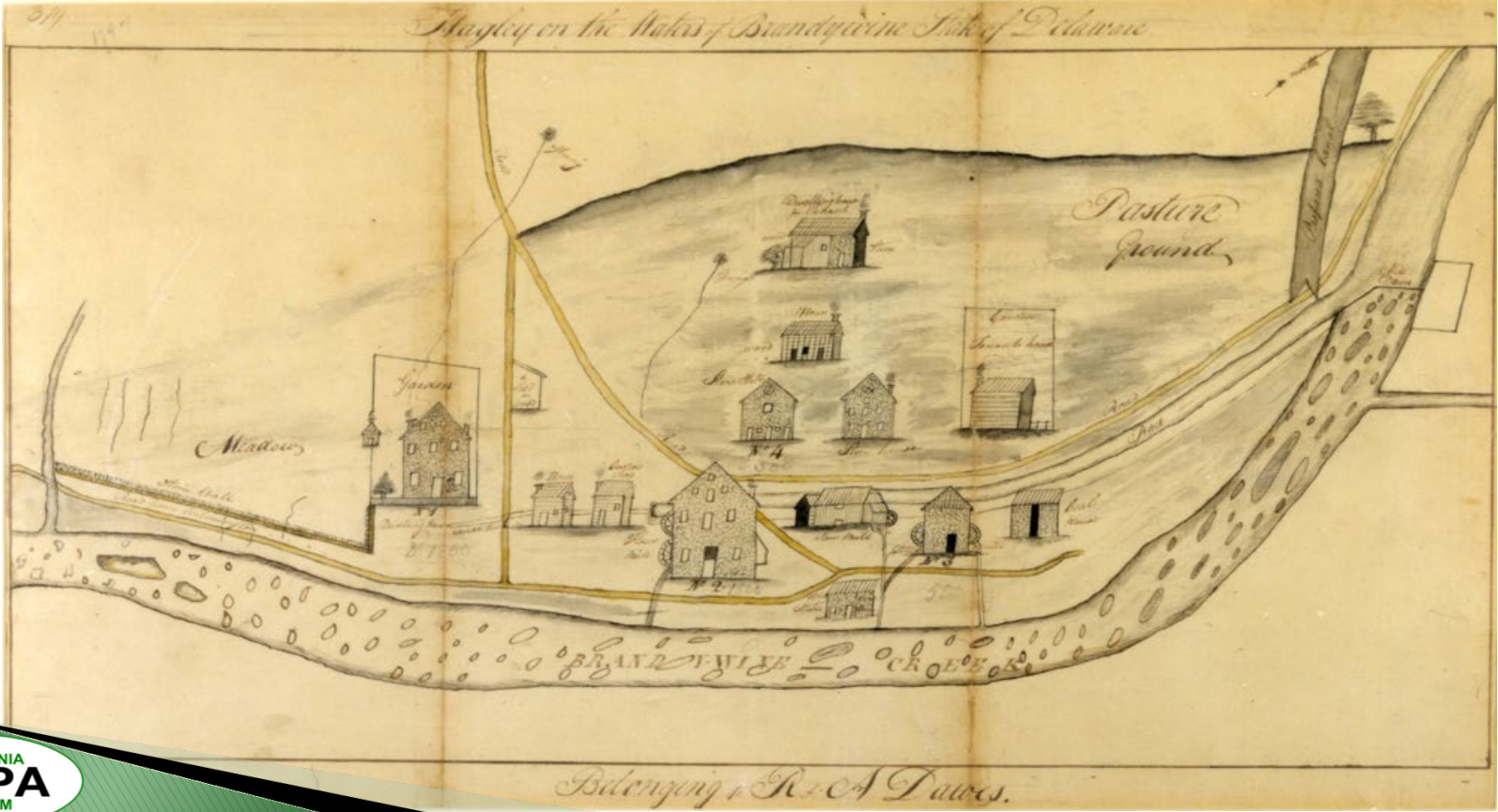
Learning Objectives

- Evaluate chemical inventories for regulated substances
- Determine CalARP Program Level Applicability
- Understand:
 - RMP Requirements
 - Hazard Analysis Requirements
 - Prevention Program Requirements
 - Emergency Response Program Requirements

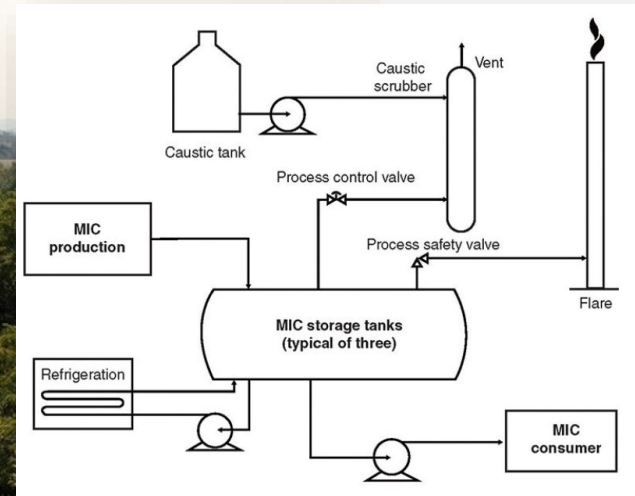
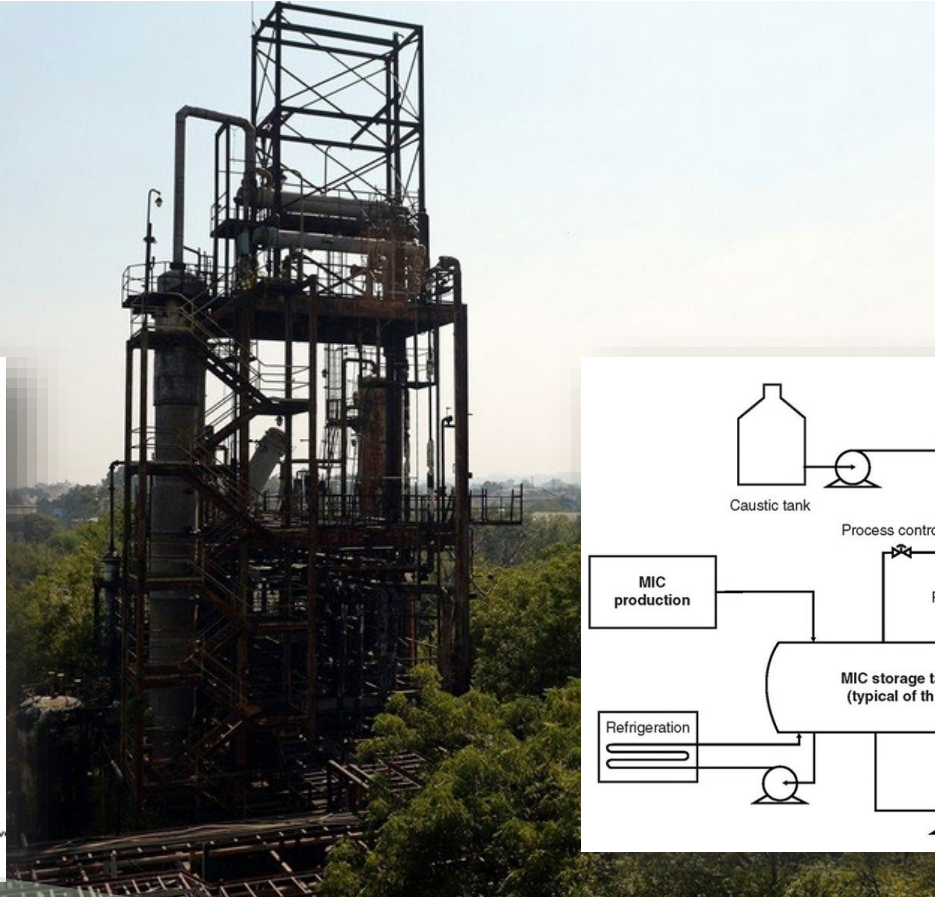
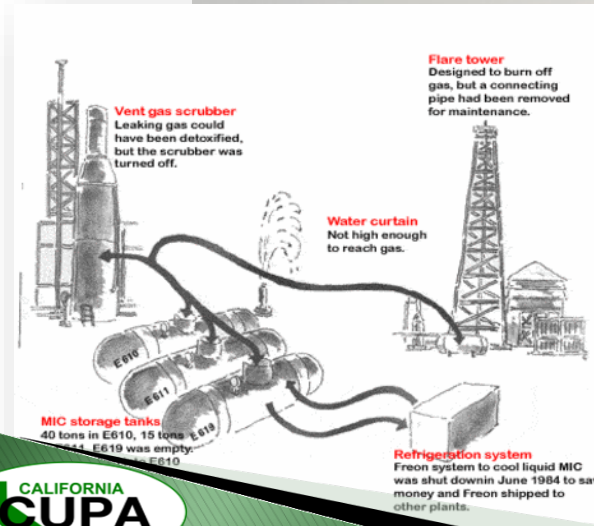
Process Safety Beginnings



Process Safety Beginnings



Landmark Industrial Accidents – Bhopal (1984)



Landmark Industrial Accidents



Chernobyl (1986)

Landmark Industrial Accidents



Piper Alpha (1988)

Landmark Industrial Accidents



Phillips 66 (1989)

Landmark Industrial Accidents



Exxon Valdez (1989)

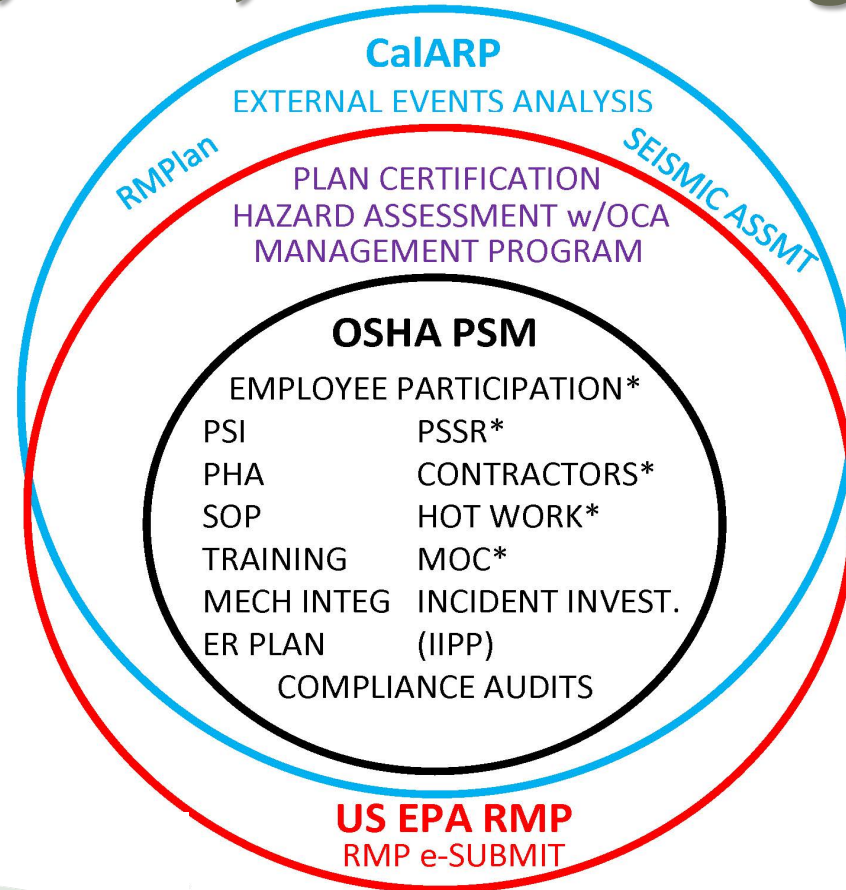
Process Safety Regulation Rule Making

- 1992 OSHA PSM: OSHA Process Safety Management of highly hazardous chemicals (29 CFR 1910.119)
- 1996 EPA RMP: Federal Risk Management Program (Clean Air Act Section 112(r)/40 CFR Part 68)
- 1997 CalARP: California Accidental Release Prevention Program (Title 19, Division 2, Chapter 4.5)

CaLARP, RMP, and PSM Regulations

	CaLARP - CalEPA	RMP - USEPA	PSM - OSHA	PSM - Ca/OSHA
Goal	Protect the public and environment from the accidental release of hazardous substances.	Protect the public and environment from the accidental release of hazardous substances.	Protect employees from the accidental release of hazardous substances.	Protect employees from the accidental release of hazardous substances.
Regulation	California Code of Regulations Title 19 (19 CCR), Division 2, Chapter 4.5	Code of Federal Regulations Title 40 (40 CFR) Part 68	Code of Federal Regulations Title 29 (29 CFR) Section 1910.119	California Code of Regulations Title 8 (8 CCR) Section 5189 and 5189.1
Applies to	The owner or operator of a stationary source.	The owner or operator of a stationary source.	Employers	Employers

CalARP, RMP, and PSM Regulations



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*For RMP & CalARP, these are only in Program 3



CalARP, RMP, and PSM Regulations

Tues 1:00- 2:45	Tu-A3 ACCIDENTAL RELEASE PREVENTION: FEDERAL, STATE, AND LOCAL PROGRAMS (Panel Discussion) (Liz Brega, Cal EPA; Rick Sakow, US EPA; Mark Wingard, CSB; Cyntia Steiner, US EPA; Mike Dossey, CCHHMP; Andrew Kong, CalOSHA; Robert Salgado, CalOSHA)
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Common Regulated Industries

Industry Type	Examples of Potential Regulated Substances
Cold Storage Facilities	Ammonia
Water and Sewage Treatment Plants	Chlorine, Sulfur Dioxide, Methane
Power Plants	Ammonia
Plating Shops	Cyanides
Chemical Warehousing	Various
Chemical Manufacturing	Various

Applicability

CalARP requirements apply to the ***owner or operator*** of a ***stationary source*** with more than a ***threshold quantity*** of a ***regulated substance*** in a ***process***.

Reference: [19 CCR Section 2735.4](#)

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Applicability - Definitions

- “**Stationary source**” is defined in [19 CCR Section 2735.3\(rrr\)](#)
- “**Process**” is defined in [19 CCR Section 2735.3\(xx\)](#)
- “**Owner or operator**” is defined in [19 CCR Section 2735.3\(tt\)](#) as any person who owns, leases, operates, controls, or supervises a stationary source.
- “**Regulated substance**” (RS) is defined in [19 CCR Section 2735.3\(kkk\)](#) and means any substance, unless otherwise indicated, listed in [19 CCR Chapter 4.5, Article 8, Section 2770.5](#).
- “**Threshold quantity**” (TQ) is defined in [19 CCR Section 2735.3\(ttt\)](#) and means the quantity specified for a regulated substance pursuant to Section 2770.5 and determined to be present at a stationary source as specified in Section 2770.2.

Applicability

“**Regulated substance**” means any substance, unless otherwise indicated, listed in [19 CCR Chapter 4.5, Article 8, Section 2770.5](#).

Chemical Name	CAS Number	Table 1 TQ (lbs)	Table 2 TQ (lbs)	Table 3 TQ (lbs)
Ammonia (anhydrous)	7664-41-7	10,000		500
Ammonia (conc 1% or greater)	7664-41-7			500
Ammonia (conc 20% or greater)	7664-41-7	20,000		500
Chlorine	7782-50-5	2,500		100
Isopentane [Butane, 2-methyl-]	78-78-4		10,000	
Nitric acid (conc 80% or greater)	7697-37-2	15,000		
Nitric acid (conc 1% or greater)	7697-37-2			1,000
Nitrogen dioxide	10102-44-0			100

Applicability

TABLE 1 & 2	TABLE 3
<ul style="list-style-type: none">Federal Regulated Substance Lists	<ul style="list-style-type: none">State Regulated Substance List (276)
<ul style="list-style-type: none">Table 1: Toxics (77)	<ul style="list-style-type: none">Lower Threshold Quantities
<ul style="list-style-type: none">Table 2: Flammables (63)	<ul style="list-style-type: none">Adds more Regulated Substances to the list
<ul style="list-style-type: none">Higher Threshold Quantities	

Applicability

(xx) “**Process**” means **any activity involving a regulated substance** including any use, storage, manufacturing, handling, or on-site movement of such substances, or combination of these activities.

For the purposes of this definition, **any group of vessels that are interconnected, or separate vessels that are located such that a regulated substance could be involved in a potential release, shall be considered a single process.** This definition shall not apply to Article 6.5.

(p) “**Covered process**” means a process that has a regulated substance present in more than a threshold quantity as determined under Section 2770.2 of this chapter.

Applicability

Stationary
Source





Regulated
Substance

Threshold
Quantity
(TQ)

Process

Covered Process

Applicability – Number of Processes

Schematic Representation	Description	Interpretation – # of processes?
	1 vessel. 1 RS above TQ.	1 Process
	2 or more connected vessels. Different RS, each above TQ.	1 Process
	2 or more co-located vessels. Same substance. Total above TQ.	1 Process
	2 vessels located so they won't be involved in a single release. Same or difference substances, each above TQ.	2 Processes

Applicability – Threshold Determination

A threshold quantity of a regulated substance is present at a stationary source if the total quantity of a regulated substance contained in a process exceeds the threshold listed in [19 CCR Section 2770.5](#).

When determining whether more than a threshold quantity of a regulated substance is present, the conditions in [19 CCR Section 2770.2](#) apply.

Reference: [19 CCR Section 2770.2](#)

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Threshold Determination - Toxics

Count regulated toxic substances in a mixture when:

- Greater than 1% RS in mixture by weight.
 - Only count the weight of the regulated substance in the mixture, not the entire weight of the mixture.

Do not count toxic substances in a mixture when:

- Less than 1% RS in mixture by weight; or,
- If under the handling or storage conditions the regulated substance in the mixture (solution) can be demonstrated to have a partial pressure less than 10 millimeters of mercury (mm Hg).
 - 10 mm Hg ~ 1.33 kPa

Reference: [19 CCR Section 2770.2\(b\)\(1\)](#)

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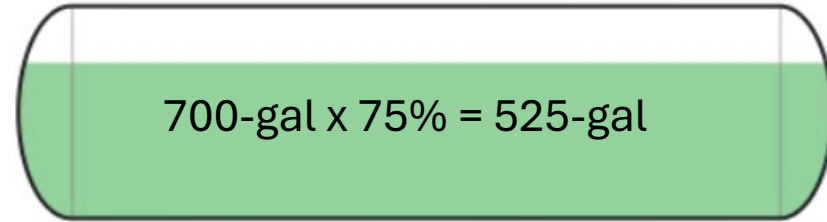
Threshold Determination - Toxics

Example (1):

A system contains refrigeration grade (>99.95% pure) ammonia and has a maximum intended inventory equivalent to 75% of the 700-gal high-pressure receiver.

What is the threshold quantity in lbs?

[volume] x [density] x [concentration] = total lbs
 $525\text{-gal} \times 5.15\text{-lbs/gal} \times 100\% = 2,704\text{-lbs}$



Does the CalARP Program apply?

500-lbsTQ exceeded → Yes

Filled Volume (Max. Inventory)	525-gal
Volume (Capacity)	700-gal

Chemical Name	CAS Number	Density (lbs/gal)	Table 3 TQ (lbs)
Ammonia	7664-41-7	5.15	500

Threshold Determination - Toxics

Example (2):

A process of three co-located 3,000-gal tanks of 53% nitric acid and water solution.

What is the threshold quantity in lbs?

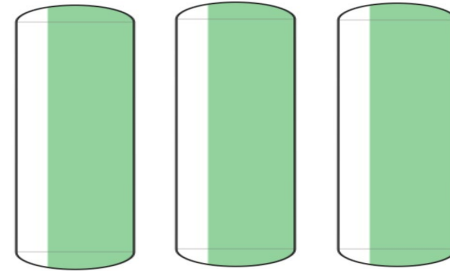
[volume] x [density] x [concentration] = total lbs

$$9,000\text{-gal} \times 12\text{-lbs/gal} \times 53\% = 57,240\text{-lbs}$$

Individual Volume	3,000-gal
Total Volume	9,000-gal

Does the CalARP Program apply?

1,000-lbs TQ exceeded → No, because the partial pressure is below 10-mmHg



SDS	Chemical Name	CAS #	Density (lbs/gal)	Vapor pressure at 20 °C (mmHg)	Table 3 TQ (lbs)
	Nitric Acid (53%)	7697-37-2	12	6.7-7.99	1,000

Threshold Determination - Flammables

Count regulated flammable substances in a mixture when:

- Greater than 1% RS in mixture by weight;
- Only count the regulated substance in the mixture, with NFPA flammability rating of 3 or less; and,
- Count entire weight of a mixture with NFPA flammability of 4.



Do not count regulated flammable substances in a mixture when:

- Less than 1% RS in mixture by weight;
- Regulated substances when gasoline in distribution or related storage for use as fuel for internal combustion engines; or,
- Regulated substances in naturally occurring hydrocarbon mixtures prior to entry into a natural gas processing plant or a petroleum refining process unit.

Program Level Overview

The CalARP program has distinct program levels that relate to the accident potential at a facility.

There are four program levels with increasing requirements depending upon the complexity, accident history, and potential offsite impact of a release.

Reference: [19 CCR Section 2735.4](#)

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Program Level 1

A process is eligible for Program Level 1 if ***all*** of the following apply:

- There have been no accidental releases for the past 5-years
- Public receptors are not affected by the worst-case release scenario
- Emergency response procedures have been coordinated between the stationary source and local emergency planning and response organizations.

Program Level 3

A process is subject to Program 3 if it does not meet the Program 1 eligibility requirements and if **any** of the following conditions apply:

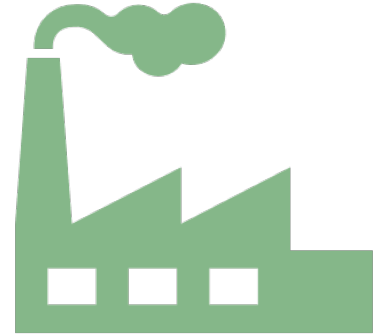
- The process is in any of the NAICS codes listed in [19 CCR Section 2735.4\(e\)\(1\)](#)
- The process is subject to the Cal OSHA process safety management standards of [Section 5189 of Title 8 of CCR](#)
- The UPA determines the accident risk posed requires the additional safety measures afforded by Program 3 requirements.

Program Level 2

A covered process is subject to Program 2 requirements if it does not meet the eligibility requirements for Program 1, 3, or 4.

Program Level 4

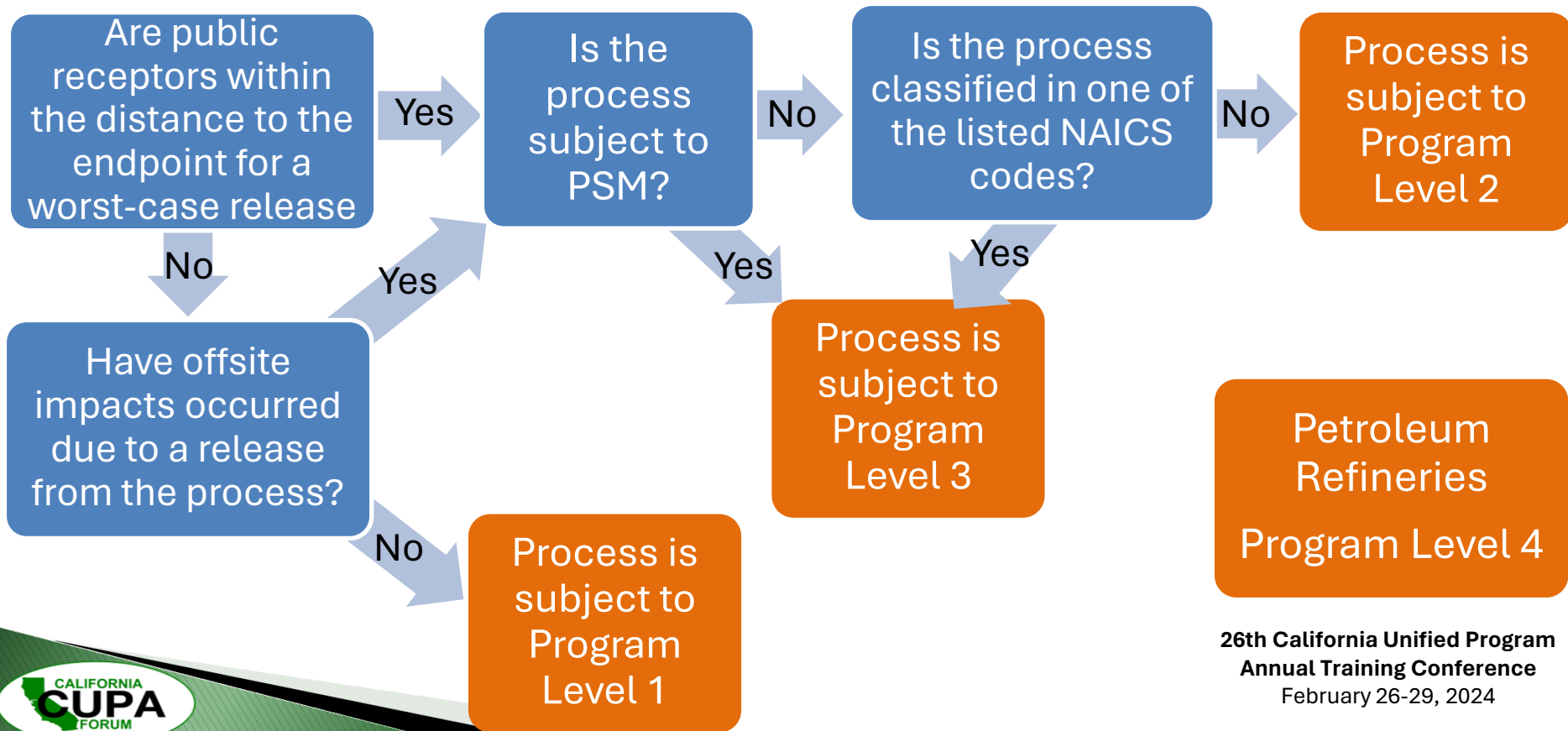
Program 4 applies specifically to petroleum refineries (NAICS code 324110).



Program 4 covers all processes within the refinery.

- The definition of “process” for purposes of program 4 is more expansive than the definition that applies to Programs 1 through 3.
 - See [19 CCR Section 2735.3\(yy\)](#)

Program Level Flow Chart



Risk Management Plan (RMP) Submittal

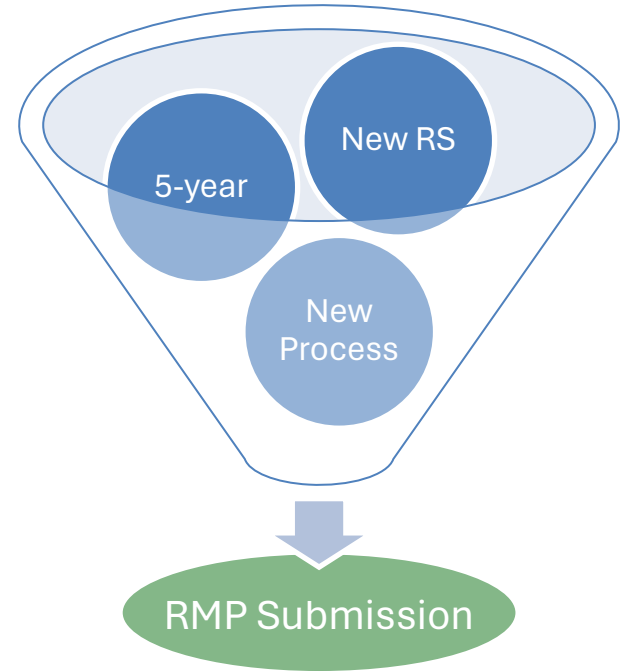
All CalARP Program Levels



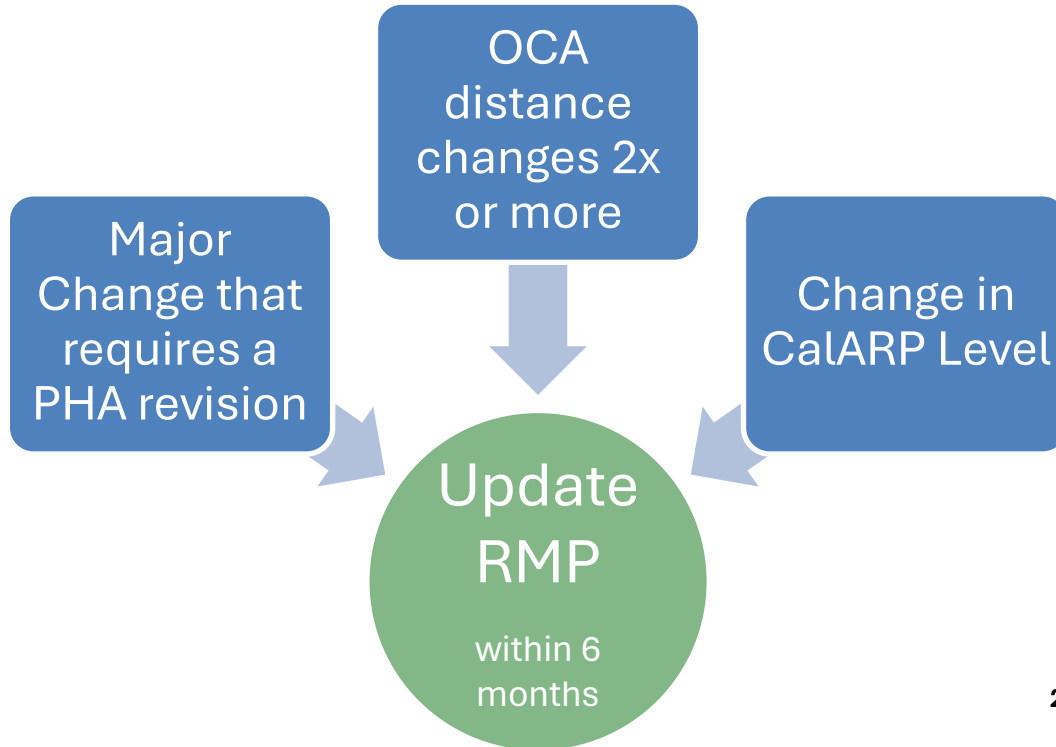
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RMP Submission

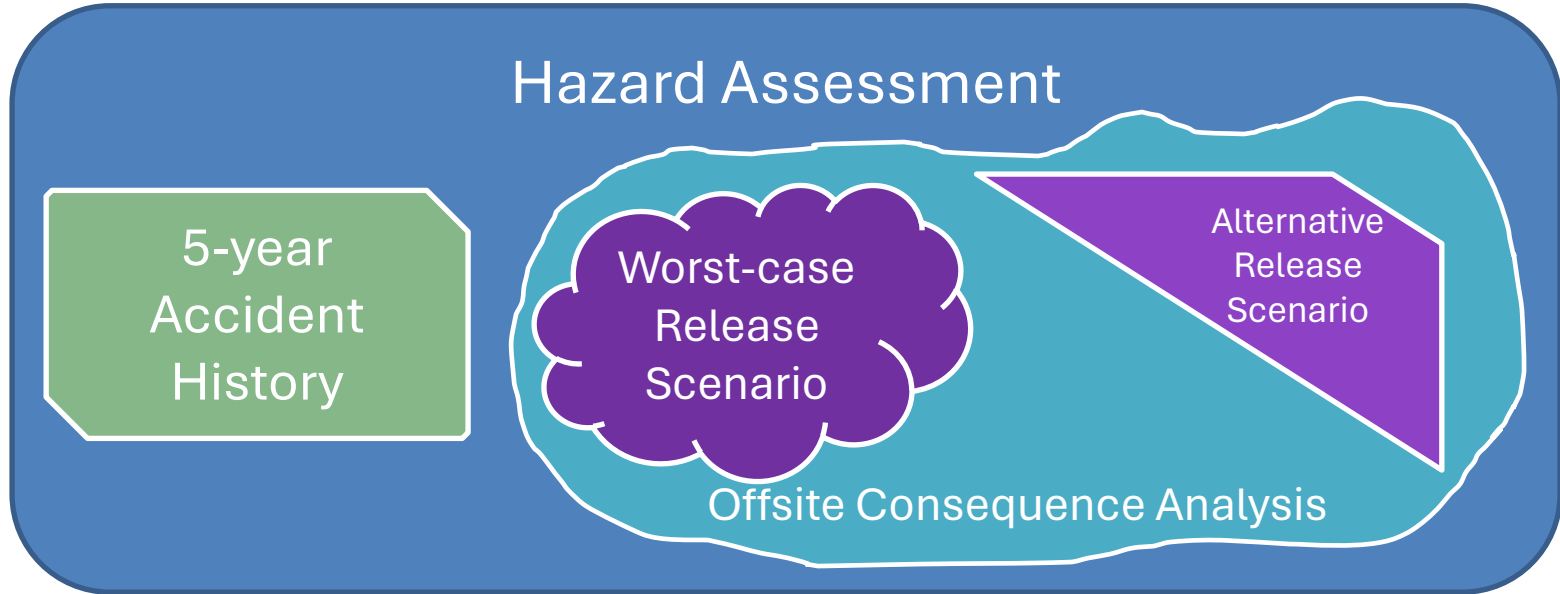
- At least every 5 years
- Within 3 years of a newly added regulated substance
- Before the addition of a new process



RMP Update



Hazard Assessment



Hazard Assessment Definitions

“**Worst-case release**” means the release of the **largest quantity of a regulated substance from a vessel or process** line failure that results in the greatest distance to an endpoint defined in [Section 2750.2\(a\)](#) of this chapter.

“**Offsite**” means areas **beyond the property boundary** of the stationary source, and areas within the property boundary to which the **public has routine and unrestricted access** during or outside business hours

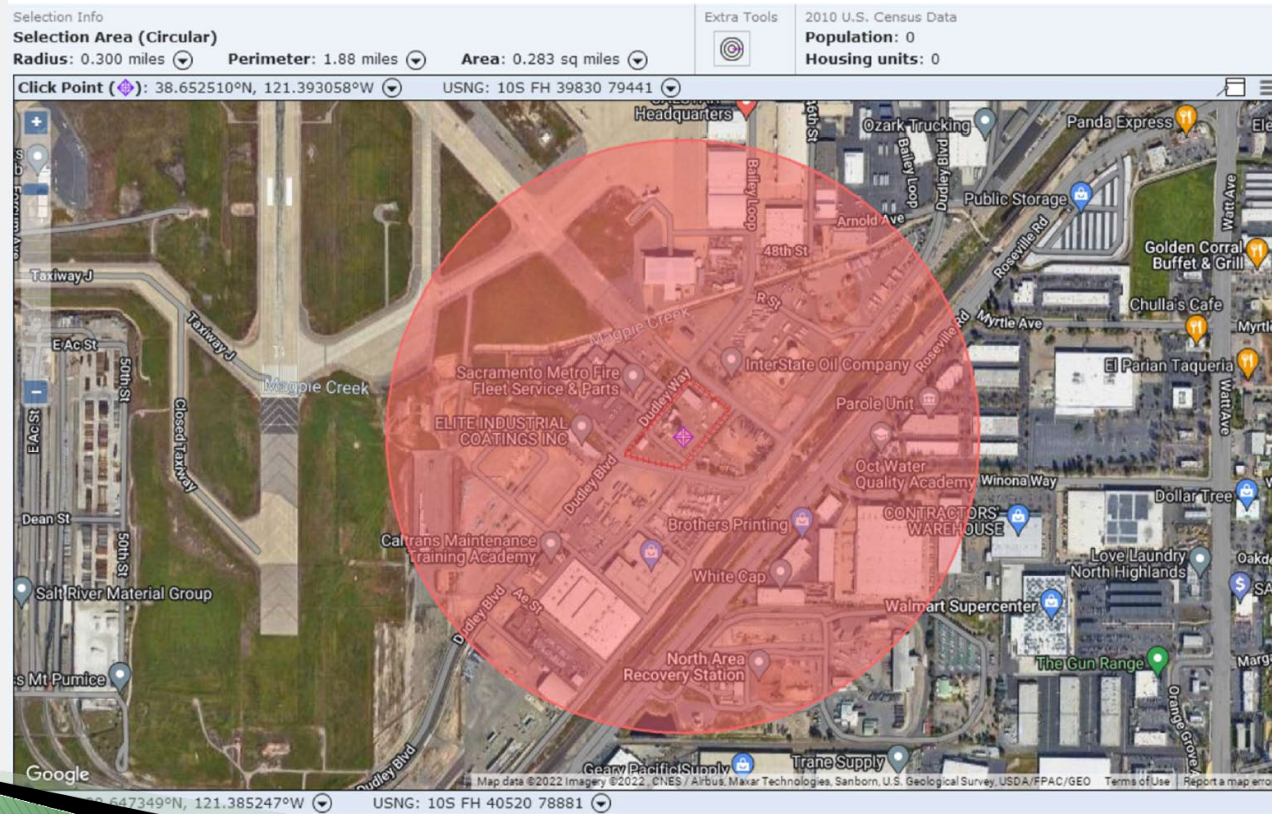
Hazard Assessment – Toxic Endpoints

Toxic endpoints listed in [Appendix A](#)

CAS Number	Chemical Name	Endpoint (mg/l)
7664-41-7	Ammonia	0.14
7782-50-5	Chlorine	0.0087
79-21-0	Peracetic Acid	0.0045
7446-09-5	Sulfur Dioxide	0.0078

Hazard Assessment – Model

Figure 1. MARPLOT – Worst-case Ammonia Release Scenario



Hazard Assessment – Alternative Release Scenario

One alternative release is required for each regulated substance in a process, except CalARP Level 1.

Alternative release should be:

- More likely to occur than worst-case; and,
- Reach an offsite endpoint and public receptor, unless no scenario exists.

Select a scenario that was in five-year accident history, industry accidents/incidents or scenarios covered in a hazard review or PHA.

Reference: [19 CCR Section 2750.4](#)

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Hazard Assessment – Offsite Impacts

Public Receptors

- Population
- Schools
- Hospitals
- Long term health care facilities
- Child day care facilities
- Prisons
- Parks and recreation areas
- Major commercial, office and industrial buildings

Environmental Receptors

- National or state parks, forests, or monuments;
- Officially designated wildlife sanctuaries, preserves or refuges; and,
- Federal wilderness areas.

USGS maps can be used to identify environmental receptors.

References: [19 CCR Section 2750.5](#) & [19 CCR Section 2750.6](#)

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Hazard Assessment – Five-Year Accident History

Five-year Accident History:

- Release resulted in deaths, injuries, or significant property damage on site, or
- Known offsite deaths, injuries, evacuations, sheltering in place, property damage, or environmental damage

Releases from a process that qualify for 5-year accident history disqualify a process from CalARP Level 1 designation.

Reference: [19 CCR Section 2750.9](#)

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Hazard Assessment

Wed 8:00- 9:45	W-A1 CALARP OFFSITE CONSEQUENCE ANALYSIS (Jack Becker, Condor Earth Technologies)
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RMP Review Process

- RMP Completeness Review by UPA
 - If deficiencies are noted, facility has 60 days to correct and resubmit the RMP
- RMP posted for public review
 - RMP made available for 45-day comment period
- RMP Evaluation Review (i.e. Technical Review)
 - Up to 36 months to review the RMP for technical deficiencies

Prevention Program

CalARP Program Level 2 vs Level 3

Program Level 2 Requirements

Safety Information – [Section 2755.1](#)

Hazard Review – [Section 2755.2](#)

Operating Procedures – [Section 2755.3](#)

Training – [Section 2755.4](#)

Maintenance – [Section 2755.5](#)

Compliance Audits – [Section 2755.6](#)

Incident Investigation – [Section 2755.7](#)

Program Level 3 Requirements

Process Safety Information – [Section 2760.1](#)

Process Hazard Analysis (PHA) – [Section 2760.2](#)

Operating Procedures – [Section 2760.3](#)

Training – [Section 2760.4](#)

Mechanical Integrity – [Section 2760.5](#)

Compliance Audits – [Section 2760.8](#)

Incident Investigation – [Section 2760.9](#)

Management of Change (MOC) – [Section 2760.6](#)

Pre-Startup Safety Review (PSSR) – [Section 2760.7](#)

Employee Participation – [Section 2760.10](#)

Hot Work Permit – [Section 2760.11](#)

Contractors – [Section 2760.12](#)

Safety Information (P2)/ Process Safety Information (P3)

Safety information related to the regulated substances, processes, and equipment must be compiled and maintained.

The process must be designed in compliance with recognized and generally accepted good engineering practices (RAGAGEP).

Reference: [19 CCR Section 2755.1](#) and [19 CCR Section 2760.1](#)

Safety Information (P2)/ Process Safety Information (P3)

Mon 1:00- 2:45	M-A2 APPLICATION OF P&ID DRAWINGS WITHIN SELECT PREVENTION PROGRAMS (Eileen Woodbury, Applied Process Cooling Inc; Alvin Dong, Los Angeles City Fire Dept; Jesus Salazar, Western Precooling Systems)
Mon 3:00 - 4:45	

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Hazard Review (P2) / Process Hazard Analysis (P3)

Identify, evaluate, and control the hazards involved in the process using a methodology agreed upon with the UPA as best suited for the process.

- Includes consideration of applicable external events (earthquakes, floods, fires, etc)
- Must be updated and revalidated at least once every 5-years

Reference: [19 CCR Section 2755.2](#) and [19 CCR Section 2760.2](#)

Hazard Review (P2) / Process Hazard Analysis (P3)

Tues 8:00- 9:45	Tu-A1 AN IN DEPTH EXPLORATION OF PHAS FOR AUDITORS & INDUSTRY (Sam Calvert, Contra Costa County HS; Jeff Geiger, Contra Costa County HS) Video
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Operating Procedures (P2/P3)

Written operating procedures that provide clear instructions for safely conducting activities consistent with the process safety information.

Operating procedures must include steps for each operating phase:

- Initial startup
- Normal operations
- Temporary operations
- Emergency shutdown
- Emergency operations
- Normal shutdown
- Startup following a turnaround or emergency shutdown

Reference: [19 CCR Section 2755.3](#) and [19 CCR Section 2760.3](#)

Operating Procedures (P2/P3)

Operating procedures must include operating limits:

- Consequences of deviation (references to other documents are generally not acceptable)
- Steps to correct or avoid deviation
- Health and safety considerations (hazards, precautions, PPE, engineering and administrative controls)
- Quality control for raw materials and inventory levels
- Safety considerations for unique hazards
- Safety systems and their functions

Operator must annually certify that the procedures are current and accurate (P3 requirement)

Reference: [19 CCR Section 2755.3](#) and [19 CCR Section 2760.3](#)

Operating Procedures (P2/P3)

<p>Tues 10:00- 11:45</p>	<p>Tu-A2 CURRENT AND ACCURATE OPERATING PROCEDURES (Jack Becker, Condor Earth Technologies)</p>
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Training (P2/P3)

Employees who operate a process must be trained.

Initial training:

- Overview of the process;
- Operating procedures;
- Emphasize hazards, emergency operations, and safe work practices in initial training.

Refresher training (every 3 years or when necessary):

- Assure understanding and adhere to operating procedures.
- Consult with employees on refresher training frequency

Reference: [19 CCR Section 2755.4](#) and [19 CCR Section 2760.4](#)

Training (P2/P3)

Training documentation must include the:

- Identity of the employee
- Date of training

Means used to verify that the employee understood the training (P3 requirement):

- Observation
- Written test
- Demonstration

Reference: [19 CCR Section 2755.4](#) and [19 CCR Section 2760.4](#)

Maintenance (P2) / Mechanical Integrity (P3)

Written procedures to maintain the ongoing mechanical integrity of process equipment (in house or contractor)

- Inspection and testing must be performed to industry standards
- Documentation on inspections and test must include:
 - Date
 - Name of person
 - Equipment ID
 - Description of inspection or test
 - Results of the inspection or test

Reference: [19 CCR Section 2755.5](#) and [19 CCR Section 2760.5](#)

Mechanical Integrity (P3)

Equipment deficiencies (outside process safety information limits)

- Must be addressed before further use or taken out of service when safe to do so
- Document actions taken to correct deficiencies before further use of equipment

Quality assurance of equipment process application:

- Assure new equipment is suitable for process application
- Perform checks and inspections to assure equipment is installed properly and consistent with manufacturer's instructions
- Assure spare parts and equipment are suitable for process application

Reference: [19 CCR Section 2755.5](#) and [19 CCR Section 2760.5](#)

Maintenance (P2) / Mechanical Integrity (P3)

Thur 8:00- 9:45	Th-A1 MECHANICAL INTEGRITY INSPECTION OF AN NH3 VESSEL (Peter Thomas, Resource Compliance)
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Compliance Audits (P2/P3)

- Owner/operators are required to evaluate compliance at least every 3 years to verify procedures and practices are adequate and followed.
- Must be conducted by at least one person knowledgeable in the process and develop a report of the scope, methods, results and findings of the audit.
- Recommendations are required to be completed within 1.5 years

Reference: [19 CCR Section 2755.6](#) and [19 CCR Section 2760.8](#)

Compliance Audits (P2/P3)

Document response to compliance audit recommendations:

- Actions taken to address recommendations
- Actual completion dates

Retain the two most recent audits

Reference: [19 CCR Section 2755.6](#) and [19 CCR Section 2760.8](#)

Incident Investigation (P2/P3)

An incident investigation must be **initiated within 48 hours** of a release or potential catastrophic release. Requires a team knowledgeable in the process and with experience to analyze the incident.

Investigation report must include:

- The date the investigation began
- Detailed description of the incident including five-year accident including data from [§2750.9\(b\)](#)
- List of recommendations or findings

Reference: [19 CCR Section 2755.7](#) and [19 CCR Section 2760.9](#)

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Incident Investigation (P2/P3)

Recommendations must be completed within 1.5 years of the investigation report or 2 years from date of incident.

- Document the actual completion dates of recommendations.
- Retain incident investigation reports for five years.

Reference: [19 CCR Section 2755.7](#) and [19 CCR Section 2760.9](#)

Incident Investigation (P2/P3)

<p>Tues 3:00- 4:45</p>	<p>Tu-A4 2015 TORRANCE REFINERY EXPLOSION: INDUSTRY IMPACTS THEN AND NOW (Melike Yersiz, US CSB)</p>
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Management of Change (MOC) (P3)

Written procedures to manage changes other than “replacements in kind” that affect the process. MOCs must address the following prior to any change:

- Technical basis
- Impact on health and safety
- Modifications to and/or development of new operating and maintenance procedures
- Necessary time period for change
- Authorization requirements for the proposed change

The following must be completed prior to startup after the change is completed:

- Update operating and maintenance procedures prior to start-up
- Complete employee training prior to start-up
- Update process safety information

Reference: [19 CCR Section 2760.6](#)

Management of Change (MOC) (P3)

<p>Wed 3:00- 4:45</p>	<p>W-A4 MOC-O-NAUTS: EXPLORING THE UNIVERSE OF CHANGE (Miguel Rizo, CCHHMP) <i>Video</i></p>
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Pre-Startup Safety Review (PSSR) (P3)

PSSR is required when modification or change is significant and process safety information changes. Prior to introduction of substance or startup of process verify:

- Construction and equipment is in accordance to design specifications
- Safety, operating, maintenance, emergency procedures are in place and adequate
- Training for each employee operating the process has been completed

Reference: [19 CCR Section 2760.7](#)

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Employee Participation (P3)

Developed a written plan of action regarding the implementation of employee participation of CalARP elements. The written plan should include:

- Obtaining employee input
- Reviewing employee input
- Dissemination of information back to employees
- Consult with employees on the conduct and development of PHA and other CalARP elements
- Provide employees access to PHAs and other information required to be developed under CalARP

Reference: [19 CCR Section 2760.10](#)

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Hot Work (P3)/Contractors (P3)

Hot Work

- Hot work permit procedure to prevent injury or loss to property while ensuring safe work conditions during welding, cutting, brazing, and grinding operations.

Contractors

- Facility employer and Contract Employer must cooperate to ensure all employees and contractors have the necessary information and training to perform work safely.
- Applies to work conducted by contractors on or adjacent to a covered process.

Reference: [19 CCR Section 2760.11](#) and [19 CCR Section 2760.12](#)

Recognized and Generally Accepted Good Engineering Practices (RAGAGEP)

Standardized best practices and minimum criteria for:

- Design
- Installation
- Startup
- Inspection, Testing, and Maintenance (ITM)

Four types of RAGAGEP:

- Widely adopted codes – e.g. NFPA
- Consensus Documents – e.g. ASME, IIAR
- Non-consensus Documents – e.g. Chlorine Institute
- Internal Standards

Recognized and Generally Accepted Good Engineering Practices (RAGAGEP)



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Recognized and Generally Accepted Good Engineering Practices (RAGAGEP)

Thur 10:00- 11:45	Th-A2 UNDERSTANDING COMMON RAGAGEPS (Chad Collin, Resource Compliance)
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Emergency Response Program



- All Program Levels - include in the RMP the ER information specified in [19 CCR Section 2745.8](#).
- Program Levels 2 and 3 - comply with the ER requirements in [19 CCR Section 2765.2](#), unless all of the following conditions are met:
 - Employees will not respond to accidental releases of regulated substances;
 - The owner or operator has documented that response actions have been coordinated with the local fire department and hazardous materials response agencies; and
 - Appropriate mechanisms and written procedures are in place to notify emergency responders when there is a need for a response.
- Program Level 4- comply with the ER requirements in [19 CCR Section 2765.2](#)

Reference: [19 CCR Section 2765.1](#)

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Emergency Response Program



The emergency response program must include the following:

- An emergency response plan, maintained at the stationary source, containing at minimum the following:
 - Procedures for informing and interfacing with the public and local emergency response agencies about accidental releases, emergency planning, and emergency response;
 - Documentation of proper first-aid and emergency medical treatment necessary to treat accidental human exposures; and,
 - Procedures and measures for emergency response after an accidental release of a regulated substance;
- Procedures for the use of emergency response equipment and for its inspection, testing, and maintenance;
- Training for all employees in relevant procedures and relevant aspects of the Incident Command System; and,
- Procedures to review and update, as appropriate, the emergency response plan to reflect changes at the stationary source and ensure that employees are informed of changes.

Reference: [19 CCR Section 2765.2](#)

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Emergency Response Program



Emergency Action Plan (EAP)

- Evacuate, deny entry and notify

Requirements:

- Current and accepted HMBP
- Documentation on coordination of response actions.

Emergency Response Plan (ERP)

- Procedures for emergency planning, response and informing responders
- Equipment, personnel and training
- First-aid and medical treatment
- Procedures after response
- Coordination with community plan.

Reference: [19 CCR Section 2765.2](#)

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Emergency Response Program



<p>Wed 10:00- 11:45</p>	<p>W-A2 AMMONIA HAZMAT RESPONSE: IT IS ALL ABOUT COMPETENCY (Scott Melton, SCS Engineers; Will Grass; Eileen Woodbury, Applied Process Cooling Inc)</p>
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Release Reporting



RELEASE REPORTING REQUIREMENTS MATRIX

AIR INCIDENTS					
TYPES OF RELEASES	AMOUNT	WHO REPORTS?	TO WHOM	WHEN	LEGAL AUTHORITY
Release or Threatened Release (except transporting on highway)	If there is a reasonable belief that the release poses a significant hazard to human health & safety, property, or environment.**	Handler	Cal OES, CUPA, and/or 911	Immediately upon knowledge of a release.	HSC 25510
Schools	A threat of an air contaminant within 1000 feet of a school.	Air Pollution Control Officer	CUPA, Local Fire Dept	Within 24 hours	HSC 42301.7

Reference: [CalOES Release Reporting Matrix](#)

Exemptions/Exclusions 2770.4/2770.4.1

- Agricultural Nutrients – Ammonia, when used as an agricultural nutrient
- Flammable Substances (Table 2) – when used as a fuel or held for sale as fuel at a retail facility



CaLARP 101 Review

- Purpose and Scope
- Definitions
- Applicability and Exemptions
- General Requirements
- Registration and Submission
- Hazard Assessment
- Prevention Program Requirements
- Emergency Response Program

CalARP 101 Review

Wed 1:00- 2:45	W-A3 CALARP 201 (Uriah Donaldson, Resource Compliance; Dominick Salazar, Stanislaus County)
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Resources & Further Reading

- EPA RMP eSubmit: <https://www.epa.gov/rmp/rmpesubmit>
- EPA RMP Guidance: <https://www.epa.gov/rmp/risk-management-program-guidance-and-fact-sheets>
- Seismic Assessment Guidance: <https://hazmat.sccgov.org/sites/g/files/exjcpb471/files/report/SGD%20LEPC%20Approved%2008%2007%202019.pdf>
- Contra Costa Health Guidance Docs: <https://www.cchealth.org/health-and-safety-information/hazmat-programs/california-accidental-release-prevention-calarp-program/calarp-program-guidance-document>
- San Diego Threshold Determination Guidance: [https://www.sandiegocounty.gov/content/dam/sdc/deh/hmd/pdf/hm-9181%20\(02-11\).pdf](https://www.sandiegocounty.gov/content/dam/sdc/deh/hmd/pdf/hm-9181%20(02-11).pdf)
- IIAR Government Portal: https://www.iiar.org/IIAR/IIAR/Government_Agency/Government_Portal.aspx
- Resource Compliance Blog & Youtube: <https://www.youtube.com/@resourcecompliance7275>
- Chemical Safety Board (CSB) Youtube: <https://www.youtube.com/@USCSB>
- AIChE books: <https://www.aiche.org/publications/books>
- CalARP Technical Advisory Group: Reach out to Daniel Abellon to join
- RAGAGEP
 - OSHA Interpretation (2016): <https://www.osha.gov/laws-regs/standardinterpretations/2016-05-11-0>
 - Historical Variants and Importance of IIAR Standards presented by Resource Compliance: <https://calcupa.org/CMS15/upload-manager/presentations/CUPA-2023/4221-20616-2023-cupa-conference---ragagep-historical-variants.pdf>
 - RAGAGEP Challenges: <https://www.resourcecompliance.com/wp-content/uploads/2017/07/20170710-RAGAGEP-Codes-Standards-and-Good-Engineering-Practices.pdf>
- USEPA List of Lists (Federal release reporting thresholds): <https://www.epa.gov/epcra/consolidated-list-lists>

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Questions?

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