

California Accidental Release Prevention (CalARP) Program Overview

Purpose Of CalARP

Reduce Risks Through:

1. Evaluation of Hazards And Consequences
2. Development of Risk Management Plans
3. Implementation of Prevention Programs
4. Management Systems & Auditing

3 Program Levels

Program 1- No Offsite Consequences From Facility. Least Restrictive

Program 2- Offsite Consequences From Facility.

Program 3- Offsite Consequences From Facility. Most Restrictive

Program Level Requirements

COMPARISON OF PROGRAM REQUIREMENTS

Program 1	Program 2	Program 3
Executive Summary Worst-case release analysis 5-year accident history	Executive Summary Worst-case release analysis Alternate release analysis 5-year accident history Document management system	Executive Summary Worst-case release analysis Alternate release analysis 5-year accident history Document management system

Prevention Program

Certify no additional prevention steps needed	Safety Information Hazard Review Operating Procedures Training Maintenance Incident Investigation Compliance Audit	Process Safety Information Process Hazard Analysis Operating Procedures Training Maintenance Integrity Incident Investigation Compliance Audit Management of Change Pre-Startup Review Contractors Employee Participation Hot Work Permits
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Emergency Response Program

Coordinate with local emergency responders	Develop a plan and program (if applicable) and coordinate with local emergency responders	Develop a plan and program (if applicable) and coordinate with local emergency responders
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CalARP Process Definition

Covered Process Means A Process

That Has a Regulated Substance

Present In More Than A Threshold

Quantity. Can include Storage.

CalARP Process Definition

Do Not Include the Sum Of All The


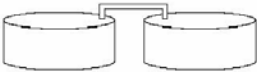
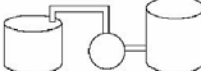
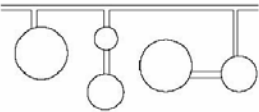




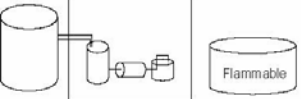
Regulated Chemicals Located On The

Facility. Just The Process or Amount In

Storage Of The Regulated Material At One

Location In Pounds.

Process Representation

Schematic Representation	Description	Interpretation
	1 vessel 1 regulated substance above TQ	1 process
	2 or more connected vessels <i>same</i> regulated substance above TQ	1 process
	2 or more connected vessels <i>different</i> regulated substances each above TQ	1 process
	pipeline feeding multiple vessels total above TQ	1 process
	2 or more vessels co-located <i>same</i> substance total above TQ	1 process
	2 or more vessels co-located <i>different</i> substances each above TQ	1 process
	2 vessels, located so they won't be involved in a single release <i>same</i> or <i>different</i> substances each above TQ	2 processes
	2 locations with regulated substances each above TQ	1 or 2 processes depending on distance
	1 series of interconnected vessels <i>same</i> or <i>different</i> substances above TQs <i>plus</i> a co-located storage vessel containing flammables	1 process

CCR Title 19 Tables App. A

Risk Management Plan (RMP) Required For Facilities That Exceed Threshold Quantities.

Table 1 Federal Threshold Quantity For Toxic Chemicals

Table 2 Federal Threshold Quantity for Flammable Chemicals

CCR Title 19 Tables App. A

Table 3: State Threshold Quantities For Toxic/Flammable Chemicals (Much Lower Than Federal Threshold Quantities)

CCR Title 19 App. A

Chemical Name	CAS Number	Table 1 TQs in (lbs)	Table 2 TQs in (lbs)	Table 3 TQs in (lbs)
Ammonia (Anhydrous)	7664-41-7	10,000		500
Ammonium Hydroxide	1336-21-6			500
Chlorine (Gas)	7782-50-5	2,500		100
Hydrochloric Acid	7647-01-0	15,000		
Hydrofluoric Acid	7664-39-3			100
Nitric Acid	7697-37-2			1000
Potassium Cyanide	151-50-8			100

CalARP Registration Form

All Facilities Subject To CalARP Are

Required To Submit Registration Form To

The Administrating Agency (AA).

RMP Submittal

A Risk Management Plan Must Be Prepared
And Submitted To The Administrating
Agency Before The Chemical Is Brought On
The Facility.

Jurisdiction

Santa Clara County CUPA Currently Has
(26) CalARP Facilities Under Its Jurisdiction

(7) Program 3 (Federal Program)

(16) Program 2 (State Program)

(3) Program 1 (State) No Offsite
Consequences

RMP Review

Santa Clara County CUPA Is Required To
Review The Risk Management Plans (RMP)
And Allow For a Public Review/Comment
Period.

CalARP Facilities

Types of Cal ARP Facilities In Santa Clara County CUPA Jurisdiction Include:

4 Water Treatment Plants (Aqua Ammonia)

7 Cold Storage Facilities (Anhydrous Ammonia)

3 Bulk Chemical Distribution Facilities (Chlorine, Anhydrous Ammonia, HF and HCL Acids)

CalARP Facilities

Types of Cal ARP Facilities In Santa Clara County CUPA Jurisdiction Include:

3 Power Production Facilities (Aqua Ammonia)

3 Plating Shops (Potassium Cyanide)

2 Semiconductor Facilities (Hydrofluoric Acid and Anhydrous Ammonia)

CalARP Facilities

Types of CalARP Facilities In Santa Clara County CUPA Jurisdiction Include:

2 Production Facilities (Anhydrous Ammonia, Nitric Acid)

3 Research and Development Facilities (HF and HCL Acid, Anhydrous NH₄)

Toxic Gas Regulations

Most CalARP Facilities Are Also

Captured By The Toxic Gas

Ordinance (TGO). An Indicator That

The Facility May Be Subject To CalARP.

RMP Program

The Risk Management Program Includes:

1. A Process Hazard Analysis (PHA)
2. Major Hazards Identified
3. Process Controls In Use
4. Mitigation Systems In Use
5. Monitoring and Detection Systems In Use.
6. Emergency Response Plan Component

Common CalARP Chemicals

Common Cal ARP Chemical Thresholds
Found In Santa Clara County:

Anhydrous Ammonia (500 lbs-State)

Aqua Ammonia (500 lbs-State TQ)

Chlorine (100 lbs- State TQ)

Common CalARP Chemicals

Common CalARP Chemical Thresholds
Found In Santa Clara County:

Potassium Cyanide (100 lbs-State TQ)

Nitric Acid (1,000 lbs-State TQ)

Hydrofluoric Acid (100 lbs-State TQ)

Inspection Frequency

Cal ARP Facilities Are Required To Be Inspected At Least Once Every Three Years By The Administrating Agency To Ensure Compliance With the Risk Management Plan.

Updated Risk Management Plan

An Updated Risk Management Plan Must Be Submitted to the Administrative Agency Every Five Years After Date the First Submittal or Any Changes in Processes.

Compliance Audit

The Facility Must Do a Compliance Audit

Once Every Three Years To Verify the

Risk Management Plan Is Still Valid And

No New Processes Have Been Added.

Release Scenarios

A Risk Management Plan Normally
Contains Two Release Scenarios For
Each Regulated Process Chemical
Under CalARP.

Release Scenarios

A Worst Case Release Scenario (Total Failure of Containment Vessel Or Process)

Alternative Release Scenario (Most Likely Event to Occur)

PROCESS HAZARD ANALYSIS

1. Key Component to the Risk Management Plan.
2. Examines Failure Nodes In The Process.
3. Most Common Analysis “ What If?”
4. Mainly Looks At External, Seismic, Operational and Environmental Failure Events.

Process Hazard Analysis

Multidisciplinary Team Involved In PHA:

1. Safety/Environmental Professionals
2. Facility Engineer/Maintenance Techs
3. Process Operators/Supervisors
4. Contractors/Vendors/Chemical Suppliers
5. Factory Technical Representatives

Process Hazard Analysis

Team Develops List Of Recommendations.

Facility Personnel Accepts or Rejects Recommendations.

Facility Personnel Must Document Why They Rejected Recommendations.

Seismic Component

A Seismic Walk Down of the Process is Conducted By a Registered Structural Engineer. Recommendations Such As Seismic Bracing Are Made.

Public Disclosure

A Copy of the Facilities Risk Management Plan Must Be Made Available to the Public When Requested.

Offsite Consequences Must Also Be Provided To The Public When Requested.

Participating Agencies Plan Check

If You Think a Facility is Subject to CalARP

Regulations for A Regulated Chemical In

CCR Title 19 App. A Contact The CUPA Or

Notify The Owner/Operator To Contact Us.

SCC CUPA CalARP Contact Information

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QUESTIONS?