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# Risk-based Decision-making Framework (RDF) Technical Working Group Meeting: Foundational Element Programs—

## Consideration of Safety Management Systems (SMS)

July 28, 2021

# SPD Staff Proposal: Foundational Elements

- Utilities should include in the baseline all actual and forecasted utility safety risks and risk reduction benefits via a total risk score, risk profile and risk map up to the start of the new General Rate Case (GRC) test-year...for all safety mitigation measures and/or activities approved for the current GRC cycle that the utilities plan to implement before the new GRC test-year begins
- Utilities should exclude from the baseline approved mitigations and the associated risk reduction benefits that the utilities do not plan to implement before the new GRC cycle starts
- Utilities should include in the baseline any risk reduction benefits of mitigations that exceed the original Commission-approved scope or budget
- Utilities should exclude foundational activities or programs, which support mitigations but do not directly reduce the consequences or likelihood of risk events from the baseline costs and risk reduction benefits

# RDF Foundational Elements

## Cal Advocates recommends that the Commission should:

1. Refine the definition of foundational programs to explicitly include **Safety Management Systems (SMS)** programs that have been used by other industries to improve safety and to reduce catastrophic events:  
“Foundational programs and/or activities, including safety management systems programs, are initiatives that support multiple mitigation programs but ~~do~~ may not directly reduce the consequences or reduce the likelihood of risk events.”
2. Provide explicit direction to utilities to include SMS programs and activities as foundational programs.
3. Direct utilities to supplement their initial list of foundational programs with SMS programs using broad industry safety management systems standards and best practices.

# RDF Foundational Elements

## **Cal Advocates Recommendations (continued):**

4. Convene a Technical Working Group in Phase 2 of the proceeding to further refine definition, detail, and guidance for utilities for submitting safety management system programs in their applications.
5. Initially, utilities should be required to report on current SMS programs, and SMS programs in development.
6. Direct utilities to provide the risk reduction associated with SMS program assessment, where those programs reduce the consequences or the likelihood of risk events.
7. All SMS programs relevant to a utility's application should be required to be included in the utility applications - no threshold should be applied in determining which safety management systems are included or not.



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# Background Information

# Safety Management System References:

## California Public Utilities Commission

# Safety Management System Introduction

Several industries and regulators have adopted Safety Management Systems and Standards to improve safety

## CPUC 2018 Safety En Banc on Safety Management Systems

[\(References from CPUC 2018 Safety En Banc on Safety Management Systems - Link\)](#)



AMERICAN PETROLEUM INSTITUTE



California  
Accidental Release Prevention  
(CalARP) Program



California Accidental Release Prevention Program

## Application of Safety Management Systems and Standards in Utility Safety

Safety Management Systems (SMS) and SMS Standards have been developed and employed by a number of industries and companies to improve safety. A Safety Management System may conform to a recognized standard. Such standards often encompass common safety “pillars” or elements, that may include, for example:

- |                    |                                    |                    |
|--------------------|------------------------------------|--------------------|
| *Leadership        | *Stakeholder Engagement            | *Safety Culture    |
| *Risk Management   | *Operational Controls              | *Safety Assurance  |
| *Quality Assurance | *Investigation/Root Cause Analysis | *Documentation     |
| *Training          | *Management of Change              | *Management Review |



# Safety Management System References:

## Federal Aviation Administration

# Federal Aviation Administration Approach

Risk management is dependent on safety assurance.

[Safety Management Systems \(SMS\) Fundamentals: Policy - YouTube](#)

## SMS Components (“Pillars”)



Federal Aviation  
Administration

SL-2

# FAA Pillars: Risk Management is dependent upon Safety Assurance

Safety Assurance should be explicitly addressed in the RDF by explicitly including SMS programs as Foundational Programs

[Safety Management Systems \(SMS\) Fundamentals: Safety Assurance Component - YouTube](#)



# FAA Pillars: Risk Management is dependent upon Safety Assurance

## SMS educational videos (as applied by FAA):

<https://www.youtube.com/watch?v=WFGg70HSOk>

<https://www.youtube.com/watch?v=j8N0PZx5YwM>

“SMS is not a substitute for compliance.”

“SMS is not a replacement for system safety.”

“Many people are aware of system safety and that it focused on safety risk management and intervention. SMS takes those components of system safety and adds to them, by including assurances that those safety components are and remain effective.”

“SMS adds an accountability aspect, as well as a focus on management functions...”

“SMS is not a requirement for a new department.”

“... is an integrated system that is found within the entire organization and has many applications at different levels of the company.”

“The Safety Risk Management (SRM) side of the workflow evaluates the design of the system.”

“The Safety Assurance side of the workflow evaluates the performance of that system.”

“The Safety Assurance process is a performance assurance process that monitors and measures risk controls, to assure or gain confidence maintain confidence”

“Together SRM and SA are tools to be used in decision-making.

Decision-making to manage risk: a safety management system.”

## Safety Management System References:

Contra Costa County: Proven Results



# Accidental Release Prevention Process Safety Management Systems

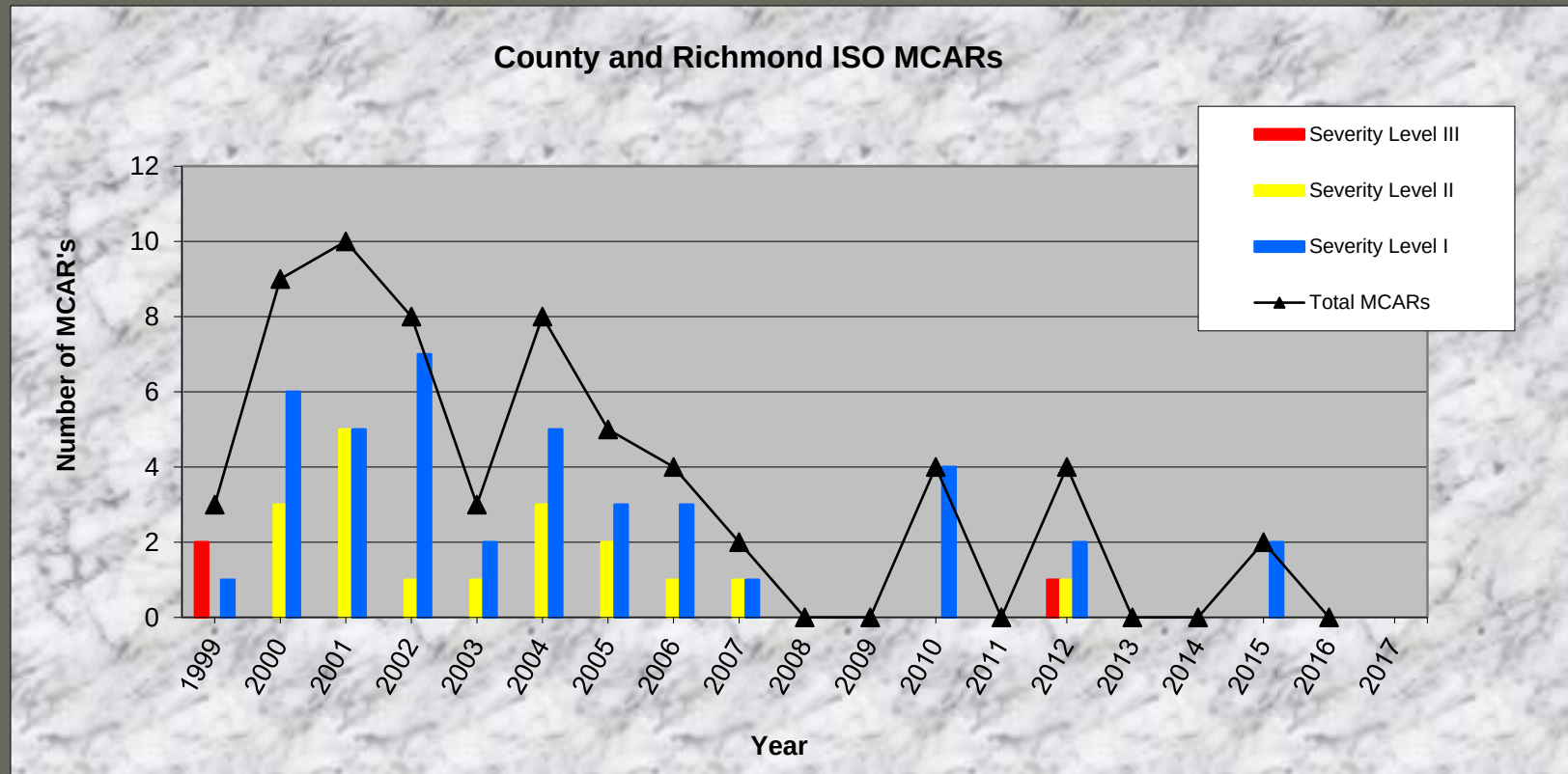


Randall L. Sawyer  
Chief Environmental  
Health and Hazardous  
Materials Officer

March 7, 2018



# Accident History





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## Discussion & Questions





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Thank You