
SECTION E: SAFETY PLAN

Stationary Sources are expected to submit a Safety Plan to CCHMP along with the Risk Management Plan (RMP) before a regulated substance is brought onsite at the Stationary Source. CCHMP recognizes that the Safety Plan may be further defined as Safety Programs are refined and implemented. Existing Stationary Sources adding a new covered process(es) must consult with CCHMP to determine when the Safety Plan must be revised. Existing Stationary Sources that significantly change covered process(es) or regulated substances should consult with CCHMP to determine when the Safety Plan should be revised.

Stationary Sources must review and update Sections E.1 through E.6, and Sections E.8 through E.10 of the Safety Plan every three years per Section 450-8.018(e) of County Ordinance Code Chapter 450-8, ¹ In addition, Sections E.6, Accident History, and E.7, Annual Performance Review and Evaluation, of the Safety Plan must be updated annually in accordance with the following schedule:

- Section E.6, Accident History - Stationary Sources must annually submit an accident history report (i.e., an update) to CCHMP per Section 450-8.016(e)(2) of County Ordinance Code Chapter 450-8. Reports shall be due June 30 of every year along with the annual ISO performance report as appropriate.
- Section E.7, Annual Performance Review and Evaluation – CCHMP must prepare an annual report for the Board of Supervisors by October for each fiscal year (i.e., July through June). Stationary Sources will therefore be asked to provide a submission of this information no later than June 30 of each year.

The remainder of this section describes CCHMP's expectations for the content of the Safety Plan. Stationary Sources electing to include information other than that which is requested below must consult with CCHMP. Stationary Sources may elect to develop the Safety Plan as a stand-alone document or as an addendum to the RMP. Stationary Sources should consult with CCHMP regarding an appropriate format for their Safety Plan. If the Safety Plan is included as an addendum to the RMP, it is acceptable to refer to the appropriate sections of the RMP within the Safety Plan where descriptions of the CalARP programs are required.

E.1 DESCRIPTION OF YOUR STATIONARY SOURCE AND THE REGULATED SUBSTANCES HANDLED

Conveying fundamental information regarding your non-exempt covered process(es)² will stimulate dialogue and increase the community's understanding of your operation. This information will also serve as an accompaniment to, or reference for, the remaining sections of the Safety Plan.

CCHMP recommends that you include the following information:

- A simplified process flow diagram of each non-exempt covered process that indicates risk management program boundaries;

- A brief description of the Stationary Source and the individual non-exempt covered processes, including the purpose(s);
- A table listing all non-exempt covered processes indicating program applicability for state and federal risk management regulations and Chapter 450-8 of County Ordinance Code, federal and state risk management program level, regulated substance(s)³, and quantities of each CalARP regulated substance; and,
- A brief description of the hazards associated with each CalARP regulated substance identified in the preceding bullet. The Stationary Source may generally describe the hazards associated with flammable mixtures, as appropriate.

E.2 SAFETY PROGRAM MANAGEMENT

Stationary Sources should adhere to the guidance provided in Section 9.3.1 Executive Summary, General Accidental Release Prevention Program and Chemical-Specific Prevention Steps, Program 3 Prevention Program; and Section 9.3.1 Executive Summary, Emergency Response Program of the *Contra Costa County CalARP Program Guidance Document* and Section A of this guidance when describing the following programs in the Safety Plan:

- Process Safety Information
- Operating Procedures
- Employee Participation
- Training
- Mechanical Integrity
- Management of Change
- Pre Start-up Reviews
- Compliance Audits
- Incident Investigation
- Hot Work
- Contractors
- Emergency Response Program
- Safety Program Management
- Line and Equipment Opening
- Lockout/Tagout
- Confined Space Entry

Additionally, the following information regarding Safety Program Management should be included in the Safety Plan.

- A description of the Goals and Objectives for the Safety Program
- A description of how the Stationary Source ensures continuous management commitment, including:
 - A description of how senior Stationary Source staff has established detailed Safety Program goals for management with specific objectives and goals, and tracks management involvement in workplace safety meetings, audits, and

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- related activities
- A description of how the senior Stationary Source staff encourages and promotes “safety first” approach
 - ◆ A description of how the Safety Program elements are discussed in management meetings on a periodic basis
 - ◆ A description of how senior Stationary Source staff participates in specific Safety Program initiatives/programs (e.g., safety newsletters, safety slogans, bonuses for safety performance, near miss reporting, etc.)
 - A description of how senior Stationary Source staff is held accountable for their Health and Safety Program record, and how do the rewards and penalties compare to those for production performance
 - A description of how senior Stationary Source staff receives information on incident and incident investigations and inspection/compliance audit reports
 - A description of how senior Stationary Source staff assist in the development of or issue specific types of Safety Program information and guidance
 - A description of how senior Stationary Source staff ensures that there is expertise available in each of the different Safety Program elements
 - A description of how the senior Stationary Source management ensures two-way communication between management and non-management personnel for the Safety Program elements, including what the elements consist of, implementing the Safety program elements, modifying the prevention elements, and the effectiveness of the Safety Program elements. Note: This may have already been addressed in the employee participation section. If so, it does not have to be included in this section.
 - A description of how the Stationary Source ensures the management system for the Safety Program elements are consistent with the Safety Program guidance developed by CCHMP, CCHMP CalARP Guidance Document Chapters 5, 7, and 8, the CalARP Program, Process Safety Management, and Industry Codes, Standards, and Guidelines as defined in 450-8.014(f) of the County Ordinance Code.
 - A description of the roles and responsibilities for the required Safety Program elements
 - A description of how senior Stationary Source staff have been assigned overall responsibility to oversee compliance for the Safety Program
 - A description of how the Stationary Source ensures that the Safety Program elements remain current and effective
 - A description of how senior Stationary Source staff periodically reviews the Safety Program elements for continuing appropriateness, adequacy, and effectiveness
 - A description of the Stationary Source’s process to make changes when necessary to any of the Safety Program elements

E.3 HUMAN FACTORS

E.3.1 PROCESS HAZARD ANALYSIS

The Safety Plan should contain a brief, site-specific overview of the method used to ensure inclusion of human factors in the Process Hazard Analysis process, including but not limited to:

- A description of the approach used to identify active failures or unsafe acts
- A description of the approach used to identify latent conditions that exist at the Stationary Source,
 - Selection process for questions from the Latent Conditions Checklist in Attachment A⁴ of Section B
 - Description of approach if a method other than the Latent Conditions Checklist in Attachment A of Section B is used
- A description of the approach used to consider the effects of latent conditions on the frequency of and consequences associated with the active failure or unsafe act
- A description of the approach used to assess the adequacy of safeguards towards reducing the risk associated with the active failure or unsafe act.
- A description of the approach used to evaluate recommendations made during the explicit latent conditions review, if applicable, during the PHA
- A description of the approach used to include human factors and latent conditions in PHA revalidations
- A description of the approach used to determine whether a procedural PHA should be conducted and the method for conducting the procedural PHA

E.3.2 INCIDENT INVESTIGATION

The Safety Plan should contain a brief, site-specific overview of the methods used to ensure compliance with the requirement to consider human systems as causal factors in incident investigations for two types of incidents: (1) actual Major Chemical Accidents or Releases; or (2) incidents that could reasonably have resulted in a Major Chemical Accident or Release. Since the incident investigation for a Major Chemical Accident or Release must be a root cause analysis, which is covered in Section E.4, and a Major Chemical Accident or Release must be described under Accident History in Section E.6, the discussion in this section regarding actual incidents should be consistent with these sections. For both types of incidents, the overview should include but is not limited to:

- A brief description of what a human system is (See Chapter 5)
- A brief description of causal factors (See Chapter 5)
- A description of the methodology used for considering human systems as causal factors for:
 - Major Chemical Accidents or Releases (this may be a reference to the root cause analysis Section E.4)

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- Incidents that could reasonably have resulted in a Major Chemical Accident or Release.
 - Describe human systems considered as casual factors for both Major Chemical Accidents or Releases and incidents that could reasonably have resulted in a Major Chemical Accident or Release.
 - Describe or cite the incident
 - ◆ For Major Accidents or Releases (the Stationary Source may reference Accident History Section E.6.)
 - ◆ For incidents that could reasonably have resulted in a Major Chemical Accident or Release, the Stationary Source should describe the incident and potential impacts following the incident description outlined in Section E.6 as appropriate to put the human systems determined to be causal factors in context.
 - Discuss the human systems determined to be causal factors. For Major Accidents or Releases, identify whether the human system was a contributing cause or root cause.
 - Describe the recommendations for improvements made as a result of the human systems considerations and the implementation of the recommendations.

E.3.3 PROCEDURES

The Safety Plan should contain a brief, site-specific overview of the methods used to ensure inclusion of human factors in operating and maintenance procedures, including but not limited to:

- A description of the approach used to evaluate the current situation (i.e., evaluate existing operating, safe work practices, and maintenance procedures)
- A description of the approach used to determine the activities that require written procedures
- A description of the approach used to develop operating, safe work practices, and maintenance procedures
 - Format selection
 - Participant selection
 - Method used (e.g., task analysis)
- A description of the approach used to maintain the procedures accurate and current
- A description of the approach used to ensure that the effects of procedural errors (i.e., consequences of deviation) are identified and fully understood
- A description of any special considerations taken when writing Emergency Operating Procedures

E.3.4 MANAGEMENT OF ORGANIZATIONAL CHANGE

The Safety Plan should contain a brief, site-specific overview of the method used to review staffing changes in permanent staffing levels/reorganization in operations, maintenance, health and safety, or emergency response, including but not limited to:

- A description of the criteria used by personnel to determine when a Management of Organizational Change MOOC should be initiated
 - A description of how a physical change to the process or a change in procedures could trigger an MOOC
- A description of how the Stationary Source ensures that affected employees and their representatives are consulted as part of the MOOC process
 - Composition of “change team” if a team is used
 - Criteria used to determine that a team approach is necessary
- A description of the method used by the Stationary Source to conduct the MOOC including
 - Defining the existing situation
 - Developing the technical basis for the change
 - Assessing the impact of the change on safety and health, including during emergency situations
- A description of how employees affected by the change are informed of, and trained in, the change prior to the change occurring
- A description of how the Stationary Source ensures that operating, maintenance and emergency response procedures are updated accordingly

E.3.5 EMPLOYEE PARTICIPATION

The Safety Plan should contain a brief, site-specific overview of the method used to ensure that employees and their representatives participate in the development of the written human factors program including but not limited to:

- A description of how employees and their representatives participated in the development of the initial human factors program
 - Any training provided
 - How input was solicited on the initial written program development
 - Method for submitting comments
 - Method for responding to all written comments
- A description of how employees and their representatives participated in the customization of the latent conditions checklist, if applicable
- A description of how employees and their representatives participate in the implementation of the human factors program
 - Any special training provided to employees prior to their involvement in the implementation
 - Evaluation and minimization of latent conditions
 - PHA
 - Incident investigation
 - Operating procedures
 - Maintenance procedures
 - MOOC
 - Periodic review of human factors program

E.3.6 TRAINING

The Safety Plan should contain a brief, site-specific overview of the method used to ensure that all employees are trained on the human factors program including but not limited to:

- A description of any basic awareness, overall human factors program, specialized, and refresher training provided
 - Curriculum of the course
 - Duration of the course
 - Instructor qualifications
 - Means used to ensure participants understood training

E.4 ROOT CAUSE ANALYSIS

Section C of this document describes the requirements and gives guidance for implementing a program for conducting Root Cause Analysis (RCA) following a Major Chemical Accident or Release. The Safety Plan should contain a brief, site-specific overview of their implementation of the applicable requirements of the RCA procedure, including:

- Describe the purpose, depth of investigation, and objectives of a root cause analysis. If applicable, make reference to the root cause analyses cited in Section E.6, Accident History, and the implementation of the resulting recommendations.
- Describe your implementation and administrative requirements for the RCA procedure including:
 - Requirements or criteria for initiating a RCA.
 - Requirements for the method or procedure for conducting a RCA (e.g., TapRoot™)
 - Requirements for the make-up of a root cause analysis team
 - RCA team leader and members' qualifications and experience requirements
 - RCA team leader training and team member training requirements
 - RCA team leader responsibilities and team member responsibilities
 - RCA record retention requirements
 - Content requirements of RCA report
 - Requirements for formulation, addressing, resolving, and tracking recommendations
 - Requirements for communicating RCA report findings to affected employees (including contract, where appropriate), CCHMP, the public, and other Stationary Sources as applicable. NOTE: Stationary Sources have various outlets available for communicating with the public through CCHMP (e.g., 72-hour reports, 30-day reports, 5-year accident histories) or for communicating with the public directly (e.g., statements to Board of Supervisors, press conferences, presentations to Community Advisory Panels (CAP's)). Depending upon the incident, none, some, or all of these outlets may be applicable.

E.5 PROCESS HAZARD ANALYSIS/ACTION ITEMS

By identifying hazards associated with the design and operation of a covered process, you can manage these hazards to secure the safety of your employees, the community, and the environment. The purpose of performing a process hazard analysis (PHA) is to identify these hazards, determine if existing hazard safeguards are adequate, and where existing safeguards are inadequate, identify recommendations/action items that can be taken to mitigate the hazard. The Safety Plan should contain a brief, site-specific overview of your PHA process, including:

- A description of the approach used for conducting the PHA, including;
 - Applicable external events⁵, including seismic events;
 - Human errors
 - Equipment malfunctions
- The rationale used in selecting the PHA methodology;
- The rationale used to select the team conducting the PHA, including their qualifications;
- A description of the revalidation and updating procedures;
- A description of the method used to document and resolve recommendations/action items identified during the PHA; and
 - Criteria applied to justifiably decline a recommendation
 - Method used to ensure recommendations are incorporated within the prescribed time limits
- A description of the method used to ensure that inherently safer systems were considered in the development and analysis of mitigation items from the PHA's and in the design and review of new processes and facilities
- A description of those recommended action items selected for implementation, but not yet complete, that are expected to reduce the risk (severity or likelihood) of an incident which could have reasonably resulted in an offsite consequence as defined in the CalARP program regulations:
 - Toxic substances – Exceeding values provided in Appendix A to Title 19, Division 2, Chapter 4.5, Subchapter 1 "Table of Toxic Endpoints". NOTE: Stationary Sources should consult with CCHMP on an acceptable endpoint for regulated substances not listed in the "Table of Toxic Endpoints"
 - Flammable substances – Exceeding an overpressure of 1 psi or a radiant heat of 5 kw/m² for 40 seconds.

Stationary Sources are continually conducting PHA's and PHA revalidations. Therefore, the list of selected action items that meet the appropriate criteria for inclusion in the Safety Plan could be continually changing. Stationary Sources do not have to submit updates (other than the 3 year Safety Plan update) of the action items; however, they should be prepared to provide the current list to CCHMP during on-site audits.

- The scheduled completion date for the action item and the reason it was not

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- completed within a year (i.e., a shutdown is required to complete the action item), if appropriate.
 - The inherently safer systems considered during the development and analysis of the action item.

The Stationary Source should include the following information regarding the seismic assessment:

- A list of all covered processes for which a seismic assessment was conducted;
- A description of the method the Stationary Source uses to identify general/specific seismic hazards that may affect the Stationary Source (refer to the reference list in Appendix B, Seismic Assessment Guidelines, of the *Contra Costa County CalARP Program Guidance Document*);
- A description of the performance objective(s) used for the review (e.g., primary containment, maintain position, etc.);
- A discussion of the site relative to known active faults as defined by the State Geologist, as well as a discussion of any site-specific seismic hazards considered (e.g., liquefaction, fault rupture, etc.);
- A description of any design practices or standards used by the Stationary Source to minimize the risk resulting from the identified seismic hazards; and
- A description of inspection and maintenance practices to maintain integrity of structural components.

With the exception of Security and Vulnerability Assessments, other studies and analyses related to the PHA (external events such as seismic, , facility siting for a process unit, and other studies such as evaluations for LCC, HF, ISS, etc.), are subject to the same 1-year completion time frame for any action items/recommendations developed as a result of these studies or analyses, unless a turnaround is required. Stationary Sources must send CCHMP a request for extension before PHA actions (including other studies and analysis related to the PHA) become overdue when they cannot be addressed within 1 year and a turnaround is not required.

E.6 ACCIDENT HISTORY

Section 450-8.016(e) of County Ordinance requires facilities to include an accident history in the Safety Plan for all Major Chemical Accidents or Releases from June 1, 1992 through the date of Safety Plan submittal. A Major Chemical Accident or Release is defined as an incident that meets the definition of a Level 3⁶ or Level 2⁷ incident in the community warning system incident level classification system defined in the CCHMP Hazardous Materials Incident Notification Policy, as determined by CCHMP; or results in the release of a regulated substance⁸ and meets one or more of the following criteria:

- Results in one or more fatalities
- Results in greater than 24 hours of hospital treatment of three or more persons

- Causes on and/or off-site property damage (including clean-up and restoration activities) initially estimated at \$500,000 or more. On-site estimates shall be performed by the Stationary Source. Off-site estimates shall be performed by appropriate agencies and compiled by CCHMP
- Results in a vapor cloud of flammables and/or combustibles that is more than 5000 pounds

The triggering criteria for this accident history is different than the five-year accident history required under the CalARP program regulations and described in Chapter 3 of the *Contra Costa County CalARP Program Guidance Document*.

Stationary Sources must report the following information, where applicable and to the extent known. Subsequent reports (updates) must be provided to CCHMP as part of the annual ISO performance reports, and in the triannual Safety Plan update:

- Date, time and approximate duration of the release
- Chemicals released
- Estimated quantity released in pounds
- Type of release event and its source
- Weather conditions at the time of the release
- On-site impacts
- Known off-site impacts
- Initiating event and contributing factors
- Root cause(s)
- Whether off-site responders were notified
- Operations or process changes that resulted from the investigation of the release

CCHMP also recommends that Stationary Sources develop a brief, narrative description of the following elements, taken from Section 9.3.3 of the *Contra Costa County CalARP Program Guidance Document*:

- Include the name of the unit or operation where the accidental release occurred;
- Include information regarding the types of injuries (e.g., very minor requiring simple first aid, very serious requiring hospitalization) and the equipment or units involved in the property damage;
- Include information regarding the types of offsite injuries and medical treatment provided and whether evacuations and shelter in place were initiated (perhaps through the Community Warning System). The discussion should also include the property that was damaged and a description of any environmental damage that occurred;
- Include a description of the initiating event, rather than simply noting equipment failure, human error, or weather condition. The initiating event may be a combination of these (e.g., piping failure due to installation of pipe with incorrect metallurgy is an equipment failure as a result of a human error).
- Include a description of the root cause(s) and contributing factors;

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- Include information regarding how the accidental release was discovered (and by whom) and how the offsite responders and various agencies were first contacted; and,
 - Include specific information regarding the changes, including the status of implementation.

E.7 ANNUAL PERFORMANCE REVIEW AND EVALUATION

Section 450-8.030 of County Ordinance requires CCHMP to annually (1) Review its activities to implement Chapter 450-8, Risk Management (2) Evaluate the effectiveness of the Risk Management Chapter in achieving it's purpose and goals pursuant to the following:

- Requiring the conduct of process hazard analyses for Covered Processes handling hazardous materials not covered by the Federal or State Risk Management Programs
- Requiring the review of action items resulting from process hazard analyses and requiring completion of those action items selected by the Stationary Source for implementation within a reasonable time frame
- Requiring the review of accidental release prevention efforts of Stationary Sources and providing for the conduct of investigations and analyses for the determination of the Root Cause(s) for certain incidents
- Providing review, inspection, auditing and safety requirements that are more stringent than those required in existing law and regulations
- Providing for public input into the Safety Plan and Safety Program and public review of any inspection and audit results
- Facilitating cooperation between industry, the County, and the public in the prevention and reduction of incidents at Stationary Sources
- Expanding the application of certain provisions of the Federal and State Risk Management Programs to processes not covered by the Federal or State Risk Management Programs
- Requiring the development and implementation of a written human factors program
- Preventing and reducing the number, frequency, and severity of accidental releases in the County

CCHMP will conduct the annual performance review and evaluation in accordance with the following CCHMP Policy and Procedures: *ISO Annual Performance Review and Evaluation Policy; Conducting the ISO Annual Performance Review and Evaluation; ISO Annual Performance Review and Evaluation Submission*. CCHMP will prepare and submit an annual performance review and evaluation report containing this information for the Board of Supervisors on or before October 31 each year. Stationary Sources shall coordinate with CCHMP on the preparation of the following information:

- Summarize the status of the Stationary Source's Safety Plan and Program (450-8.030(b)(2)(i))

- Summarize Safety Plan update information (i.e., brief explanation for update and corresponding date) (450-8.030(b)(2)(ii))
- List of locations where Safety Plans are available for review, including contact telephone numbers if the Stationary Source will provide individuals with copies of the document (450-8.030(b)(2)(ii))
- Summarize annual accident history reports pursuant to Section 450-8.016(e)(2) of County Ordinance 98-48 (450-8.030(b)(2)(iii))
- Summary of each Root Cause Analysis (Section 450-8.016(c)) including the status of the analysis and the status of implementation of recommendations formulated during the analysis (450-8.030(b)(2)(iv))
- Summary of the status of implementation of recommendations formulated during audits, inspections, Root Cause Analyses, or Incident Investigations conducted by CCHMP (450-8.030(b)(2)(v))
- Summary of inherently safer systems implemented by the Stationary Source including but not limited to inventory reduction (i.e., intensification) and substitution (450-8.030(b)(2)(vi))
- Summarize the enforcement actions (including Notice of Deficiencies, Audit Reports, and any actions turned over to the *Contra Costa County District Attorney's Office*) taken with the Stationary Source pursuant to Section 450-8.028 of County Ordinance 98-48 (450-8.030(b)(2)(vii))
- Summarize total penalties assessed as a result of enforcement of this Chapter (450-8.030(b)(3))
- Summarize the total fees, service charges, and other assessments collected specifically for the support of the ISO (450-8.030(b)(4))
- Summarize total personnel and personnel years utilized by the jurisdiction to directly implement or administer this Chapter (450-8.030(b)(5))
- Copies of any comments received by the Stationary Source (that may not have been received by CCHMP) regarding the effectiveness of the local program that raise public safety issues (450-8.030(b)(6))
- Summarize the impact of the Chapter in improving industrial safety (450-8.030(b)(7))
- Summarize the emergency response activities conducted at the Stationary Source (e.g., CWS activation) in response to major chemical accidents or releases.
- Was a Safety Culture Assessment performed at this stationary source during the reporting year? (If a Safety Culture Assessment was not performed during the reporting year the following questions do not need to be addressed).
 - What method(s) were used in the Safety Culture Assessment?
 - ◆ Written Survey
 - ◆ Interviews
 - ◆ Focus Groups
 - ◆ Observational
 - What areas of improvements are being addresses as the result of the Safety Culture Assessment?

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- Did the action plan developed by the previous Safety Culture Assessment make the improvements the actions were designed to address? If not, were changes made to to the action plan to achieve the desired improvements?
- If a Safety Culture Assessment was not performed in the reporting year, complete the following questions:
 - Have milestones and metrics been developed to determine that the Safety Culture Assessment actions are being implemented?
 - How is the effectiveness of the actions that are being implemented addressing the findings from the Safety Culture Assessment?
 - If based on the measuring of the effectiveness of the Safety Culture Assessment, have changes been made in the actions being taken to address any shortcomings?
- Performance Indicators reported as defined in Section A.1.2.9 of this guidance

Annual updates must also be submitted to CCHMP by June 30 of each year.

E.8 CERTIFICATION

The owner or operator or senior official with management responsibility for your Stationary Source must sign and date the certification statement in your Safety Plan that reads “The undersigned certifies that, to the best of my knowledge, information, and belief formed after reasonable inquiry, the information submitted is true, accurate, and complete.”

E.9 SECURITY VULNERABILITY ASSESSMENT

The Safety Plan shall include a discussion of the Security and Vulnerability Assessment (SVA) performed and any associated follow-up activities, including:

- Indication if the Stationary Source submitted an SVA or SVA revalidation to the Department of Homeland Security (DHS) either to United States Coast Guard (USCG); or via Chemical Facility Anti Terrorism Standards (CFATS);
- Indication that an SVA has been or will be performed and methodology used;
- Indication of the intent to perform regular SVA revalidations, and description of the frequency and method used to perform a revalidation;
- Indication of what mechanism is in place to track and ensure that recommendations are addressed; and
- Indication of the criteria for rejecting recommendations.

Preparation and submittal of DHS Chemical Security Assessment Tool Top-Screen does not constitute an SVA revalidation.

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E.10 SAFETY CULTURE ASSESSMENTS

The Safety Plan shall contain a description of the Safety Culture Assessment program including but not limited to:

- Description of what Safety Culture means to your Stationary Source;
- The purpose and overall objectives of safety culture assessments;
- A discussion of the type of data gathering technique(s) used (written survey, interviews, etc.) and rationale;
- Description of how the Stationary Source ensures that the Safety Culture Assessment is performed as expected and how the results will be evaluated for their site; and
- Plans for future revalidations.

¹ Modifications were made to the Contra Costa County's Industrial Safety Ordinance (ISO) in 2006. Major changes included: requiring Security Vulnerability Assessments; requiring Safety Culture Assessments; requiring changes to maintenance and emergency response staffing to undergo a Management of Organizational Change evaluation; and requiring human factors evaluations of maintenance safe work practice procedures and maintenance procedures for specialized equipment, piping, and instruments. Since the corresponding City of Richmond's Industrial Safety Ordinance has not been amended, Stationary Sources subject to the City of Richmond's ISO are encouraged to comply with the County ISO amendments.

² **Non-Exempt Covered Process** means any process or activity at a Stationary Source (Section 450-8.014(a)) that is not otherwise exempt, per Section 450-8.010(b)

³ **Regulated substance** means (1) any chemical substance which satisfies the provisions of California Health and Safety Code section 25532(g), as amended from time to time, or (2) a substance which satisfies the provisions of Hazard Categories A or B in section 84-63.1016. Mixtures containing less than 1% of a regulated substance shall not be considered in the determination of the presence of a regulated material (Section 450-8.014(i)).

⁴ CCHMP added additional questions for evaluation of latent conditions that may help improve the overall human factors program in 2010. Stationary Sources should review Attachment A to incorporate into their latent conditions checklists.

⁵ Included as part of the PHA is an analysis of external events associated with the process. External events are those occurrences whose causes are outside of the scope of the process, but which may impact the process and, in some cases, may initiate a release of a regulated substance.

⁶ **Level 3:** Offsite impact and categorized by any of the following (see the CCHMP Hazardous Materials Incident Notification Policy for the most accurate definition):

- Off-site impact that may cause eye, skin, nose and/or respiratory irritation to the general population.
- Fire, explosion, heat, or smoke with an off-site impact.
- Example: On a process unit/storage tank where mutual aid is requested to mitigate the event and the fire will last longer than 15 minutes.
- Hazardous material or fire incident where the incident commander or unified command, through consultation with the Contra Costa Health Services Hazardous Material Incident Response Team, requests that sirens should be sounded.

⁷ **Level 2:** Offsite impact with possible health impact and categorized by any of the following (see the CCHMP Hazardous Materials Incident Notification Policy for the most accurate definition):

- Off-site impact where eye, skin, nose and/or respiratory irritation may be possible for individuals with respiratory sensitivities.
- Explosion with noise/pressure wave impact off-site.
- Fire/smoke/plume (other than steam) leaving or expected to leave site.

⁸ **Regulated substance** means (1) any chemical substance which satisfies the provisions of California Health and Safety Code section 25532(g), as amended from time to time, or (2) a substance which satisfies the provisions of Hazard Categories A or B in Section 84-63.1016 in Contra Costa County's Land Use Permits for Development Projects Involving Hazardous Waste or Hazardous Materials, or (2) a substance which satisfies the provisions of Hazard Categories A or B in Section 84-63.1016 in Contra Costa County's Land Use Permits for Development

Projects Involving Hazardous Waste or Hazardous Materials zoning ordinance. Mixtures containing less than 1% of a regulated substance shall not be considered in the determination of the presence of a regulated material.