



INDUSTRIAL SAFETY ORDINANCE
ANNUAL PERFORMANCE REVIEW
AND EVALUATION REPORT

February 5, 2021

By Contra Costa Health Services Hazardous Materials Programs

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Executive Summary

Contra Costa County's Industrial Safety Ordinance (ISO), adopted in 1998 by the Board of Supervisors, requires regulated facilities in the county to implement comprehensive safety programs to prevent chemical accidents. The ISO's requirements are some of the most stringent in the United States, if not the world. The goal is for facilities to implement comprehensive safety programs, instill a safety culture at the work place and create management systems that prevent incidents that could have detrimental impacts to surrounding communities. The ISO also mandates outreach and participation from industries, agencies, elected officials and the public.

Three major oil refineries and three chemical facilities are required to comply with ISO requirements. Two facilities (one refinery and one chemical plant) within the City of Richmond are required to comply with the Richmond Industrial Safety Ordinance (RISO), which mandates the same requirements from a separate municipal authority. Both ordinances are administered by Contra Costa County's Hazardous Materials Programs (CCHMP), a division of Contra Costa Health Services. CCHMP annually evaluates and reports on ISO performance to the Board of Supervisors.

There were no Major Chemical Accidents or Releases (MCAR) as defined in the ISO at any regulated facility in this reporting period and, while there have been Community Warning System (CWS) Level II and CWS Level III incidents that caused community concern over the past two decades, there is an overall observable trend of fewer and less severe incidents in the county. CCHMP believes that ISO is a major contributor to the safety records of these facilities.

It can be a challenge to stay vigilant and ensure continuous safe facility operations in mature prevention programs, but recent amendments to program requirements have helped the ISO and RISO programs continue to improve the thoroughness and completeness of audits and inspections. In 2014, for example, the Board of Supervisors adopted amendments to the ISO as recommended by the U.S. Chemical Safety and Hazard Investigation Board (CSB). CCHMP staff incorporated additional field activities at ISO and other hazardous materials regulated facilities.

CCHMP also worked closely with Department of Industrial Relations (DIR), California Office of Emergency Services (Cal OES) and California Environmental Protection Agency (CalEPA) to develop two new, statewide petroleum refinery safety regulations: The California Accidental Release Prevention Program (Program 4) and the Process Safety Management requirement for Petroleum Refineries. Both were developed from requirements in Contra Costa's ISO and were adopted into regulation by the state in October 2017. CCHMP believes these new regulations will further improve safety programs at all California petroleum refineries as demonstrated here in Contra Costa County. CCHMP is also working closely with other Certified Unified Program Agencies (CUPA) in the development of guidance and implementation of these regulations for refineries.

CCHMP's Accidental Release Prevention (ARP) Program engineers oversee the ISO and RISO programs and work with other agencies such as the U.S. Environmental Protection Agency (EPA), the California Occupational Safety and Health Administration (Cal-OSHA), CSB and other local program agencies. This Interagency collaboration includes sharing of incident and inspection results, discussion of regulatory interpretations and joint training.

Public Participation

CCHMP has an established public outreach process and is continually looking for ways to improve it. The following community engagement efforts took place in this reporting period:

- Public outreach information booths at existing venues
 - Safety audits for Shell Martinez Refinery, Air Products Shell and Air Products Marathon Martinez Refinery were shared at Alhambra Christmas Tree Farm, Martinez, During National Night Out, August 6, 2019
- Presentations to Interested Groups
 - Presentation of the safety audit to the Marathon Martinez Refinery Community Advisory Panel (CAP) on August 28, 2019
 - Presentation of the safety audit to the Chemtrade Richmond's Community Advisory Panel (CAP) on February 19, 2020
- Attend public meetings after major incidents
 - There were no Severity III incidents of ISO-regulated facilities in this reporting period
- The most recent audit findings are summarized in an easily read format in English and Spanish and posted at cchealth.org/hazmat
- Information on regulated businesses is presented in an easily read format in English and Spanish
- Industrial Safety Ordinance Information Sheets are prepared in English and Spanish

The Board of Supervisors also requested that staff provide copies of the annual report to communities through the Community Advisory Panels (CAP). This 2020 Annual Report is available on our website and will be sent to CAP representatives for distribution.

Audits

Audits of regulated businesses are required at least once every three years to ensure that the facilities are implementing required programs. We completed three ISO and RISO audits in 2020:

- Phillips 66 Rodeo Refinery — January 2020
- Chemtrade West Richmond Works — July 2020*
- Air Products at Martinez Refining Company — October 2020*

*audits were conducted without on-site inspections due to COVID-19 health order precaution

Major Chemical Accidents or Releases

There were no MCAR events at ISO-regulated facilities in this reporting period.

Conclusion

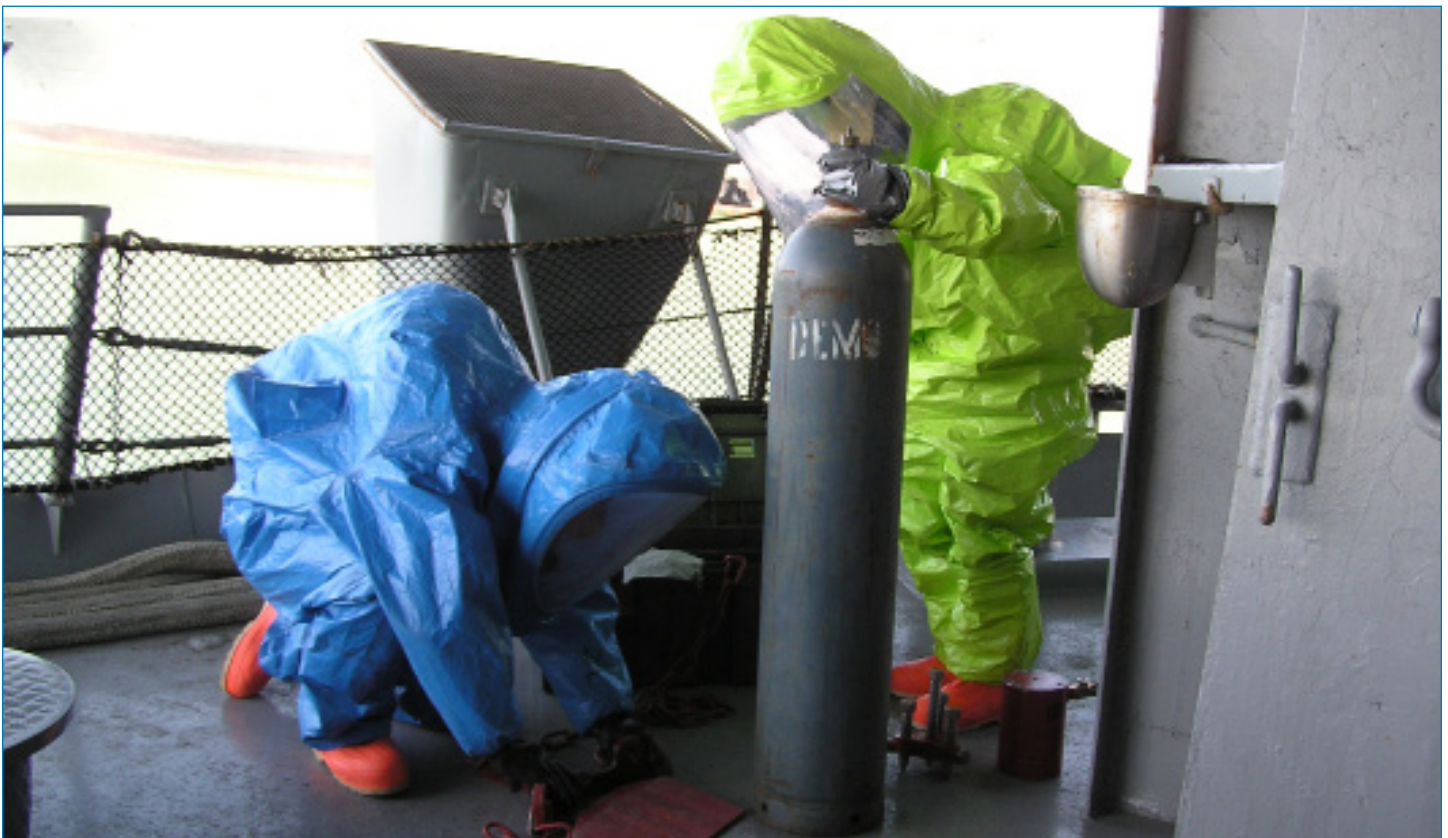
The severity of MCAR events in Contra Costa County has declined since the implementation of the ISO, with a few minor irregularities in the trend. The ISO has improved regulated facilities' safety programs and operations.

CCHMP has sought assistance from stakeholders, including regulated facilities, workers and community members, to include the CSB-recommended improvements to the ordinance that the Board of Supervisors adopted in 2014. These further reduce likelihood of chemical accidents at these industrial facilities.

Background

The Board of Supervisors adopted the ISO due to significant accidents that occurred at oil refineries and chemical plants in the county in the 1990s. The effective date of the ISO was January 15, 1999. The ordinance applies to oil refineries and chemical plants with specified North American Industry Classification System (NAICS) codes that were required to submit a Risk Management Plan to the U.S. EPA and are Program Level 3 Stationary Sources as defined by the U.S. EPA Risk Management Program. The ordinance specified the following:

- Stationary sources had one year to submit a safety plan to CCHMP stating how they are complying with the ordinance, except the Human Factors portion (completed January 15, 2000)
- CCHMP would develop a Human Factors Guidance Document (completed January 15, 2000)
- Stationary sources had one year to comply with the Human Factors Guidance Document (compliance date: January 15, 2001)
- After an MCAR event, stationary sources are required to perform a root cause analysis as part of their incident investigations (ongoing)
- CCHMP may perform its own incident investigation, including a root cause analysis (ongoing)
- All processes at stationary sources are covered as Program Level 3 (now Petroleum Refineries Program Level 4 processes as defined by the CalARP program)
- Stationary sources are required to consider inherently safer systems for new processes or facilities and for mitigations identified in a process hazard analysis
- CCHMP reviewed all the submitted safety plans and inspected all the stationary sources' safety programs within one year of receipt (completed January 15, 2001) and every three years after the initial audit or inspection



CCHMP issued the first Contra Costa County Safety Program Guidance Document on January 15, 2000. The stationary sources were required to comply with the Human Factors section of this guidance document by January 15, 2001. CCHMP performed specialized audit for all the stationary sources for their Human Factors programs and for Inherently Safer Systems in 2002.

The 2006 amendments to the ISO required:

1. Expanding the Human Factors Program to include Maintenance
2. Expanding the Management of Organizational Change to include Maintenance and all of Health and Safety positions
3. Requiring stationary sources to perform safety culture assessments one year after CCHMP developed guidance
4. Requiring stationary sources to perform Security Vulnerability Analysis

Hazardous Materials Programs staff worked with the regulated facilities to develop a Safety Culture Assessment Guidance Document, which was finalized and issued on November 10, 2009. Staff began reviewing these assessments in December 2010. A revised Safety Program Guidance Document that reflects the ISO amendments and additional clarifications based on the audit findings was issued in July 2011.

In June 2014, the Board of Supervisors approved an amendment to the ISO to address recommendations by CSB, set forth in the Chevron refinery fire interim investigation report (August 2012), that broadened the goals of the regulation by requiring:

1. Use of performance indicators in the evaluation of process safety systems and to provide required contents in the annual performance review and evaluation report provided to the Board of Supervisors
2. Expand the implementation of inherently safer systems as much and as soon as possible. Stationary sources are now required to evaluate and document inherently safer system analysis:
 - a. Every five years for existing covered processes,
 - b. In the development and analysis of recommended action items identified in a process hazard analysis,
 - c. As part of a management of change review, whenever a major change is proposed at a facility that could reasonably result in a major chemical accident or release,
 - d. When an incident investigation report recommends a major change that could reasonably result in a major chemical accident or release,
 - e. When a root cause analysis report recommends a major change that could reasonably result in a major chemical accident or release, and
 - f. During the design of new processes, process units and facilities.
3. Conduct, document and complete a safeguard protection analysis for all processes by June 30, 2019, and update and revalidate it every five years thereafter.

Regulated Stationary Sources Listing

The six stationary sources covered by the ISO are:

1. Air Liquide Large Industries—Rodeo Hydrogen Plant at Phillips 66
2. Air Products at MRC (formerly Shell Martinez Refining)
3. Air Products at the Marathon (formerly Tesoro Golden Eagle Refinery)
4. Martinez Refining Company—MRC (formerly Shell Martinez Refinery)
5. Phillips 66 Rodeo Refinery
6. Marathon Martinez Refinery (formerly Tesoro Golden Eagle Refinery)

The facilities covered by RISO are:

- Chevron Richmond Refinery
- Chemtrade West Richmond Works (formerly General Chemical Richmond)

Status of Safety Plans and Programs

The status of each of the regulated stationary sources is given in Table I and includes:

- When the latest updated safety plans were submitted
- When notices of deficiencies were issued
- When plans were determined to be complete by CCHMP
- When public meetings were held about safety plans
- When audits were complete
- When public meetings were held on preliminary audit findings
- When safety plans were revised to include human factors (HF) programs
- When notices of deficiencies were issued for human factors-revised safety plans
- When human factors components of safety plans were determined to be complete
- When audit/inspections were completed
- When human factors audit preliminary findings public meetings were held



Table I
Industrial Safety Ordinance Stationary Source Status

NAME	Safety Plan (SP) Received	Notice of Deficiencies (NOD) Issued-SP	Safety Plan Complete	SP Public Meeting Date	Audit/ Inspection	Audit Public Meeting
Air Liquide Large Industries Rodeo Hydrogen Plant	7/10/09 7/14/10 11/03/13 1/23/17 12/01/19 1/24/20	12/13/12 1/03/13	3/01/13 11/12/13	7/21/13 10/05/13 8/07/18	6/01/10 5/28/13 2/29/16 1/22/19	10/08/11 10/05/13 10/14/17
Air Products— MRC & Marathon	1/14/00 1/16/01 (HF update) 6/26/03 7/14/05 12/01/06 6/20/08 6/30/10 6/30/14 12/01/17 10/20/20	6/15/00 5/10/01 (HF update) 8/24/07 3/14/11 7/11/14	8/30/00 6/19/01 (HF update) 9/14/07 7/01/08 7/14/14	9/13/00 5/08/03 9/23/07 6/19/10 4/21/12 4/15/15 8/06/19	11/22/00 5/03/02 (HF) 2/27/04 1/22/07 7/20/09 4/16/12 3/30/15 1/11/18 10/26/20	5/08/03 9/24/06 9/23/07 6/19/10 4/20/13 4/23/15 4/23/16 8/06/19
Phillips 66 – Rodeo Refinery	1/15/00 1/12/01 (HF update) 8/10/05 8/7/09 8/07/12 8/07/15 8/06/18	3/14/00 9/10/01 (HF update) 3/28/06 11/22/10 6/05/17	5/30/00 3/18/02 (HF update) 8/9/02 11/5/07 1/27/11 7/03/13 11/19/18	6/15/00 5/09/02 10/07 & 10/13/07 10/08/11 10/05/13 7/21/2013 11/18/17	6/30/00 11/05/01 (HF) 8/01/03 8/15/06 10/06/08 8/01/11 4/28/14 1/04/17 1/06/20	4/09/02 6/22/04 7/08/04 10/07 & 10/13/07 7/18/10 10/09/10 10/08/11 7/21/13 10/05/13 10/24/15 10/14/17
Martinez Refining Company – MRC (formerly Shell Martinez Refinery)	1/14/00 1/16/01 (HF update) 7/22/02 1/11/06 9/03/10 9/03/13 8/26/16 8/23/19	7/19/00 11/9/01 (HF update) 3/21/03 8/15/06 10/25/11	4/09/01 1/03/02 (HF update) 9/15/03 11/2/06 3/27/12 3/25/15 3/30/17	5/8/03 9/24/06 9/23/07 4/21/12 4/18/15 4/22/17	10/31/00 4/29/02 (HF) 11/26/04 10/23/06 4/30/09 2/13/12 5/11/15 2/28/18	5/08/03 9/24/06 9/23/07 6/19/10 4/20/13 4/23/16 8/06/19

Marathon Martinez Refinery (formerly Tesoro Golden Eagle Refinery)	1/14/00 1/12/01 (HF update) 6/21/02 6/22/07 12/11/09 6/01/12 6/30/15 6/13/17	8/16/00 9/18/01 (HF update) 7/30/07 8/06/12	1/31/01 12/14/01 (HF update) 6/21/03 11/05/07 6/04/10 8/27/12	5/06/03 9/23/07 6/10/10 9/06/12 4/22/17 8/07/18	9/15/00 12/3/01 (HF) 9/8/03 11/07/05 8/18/08 4/18/11 1/06/14 10/05/16 9/16/19	5/06/03 9/24/06 9/23/07 6/10/10 9/06/12 4/18/15 8/07/18
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Locations of the Regulated Stationary Sources Safety Plans

Regulated stationary sources are required to update their safety plans at least once every three years. These plans are available for public review at the Hazardous Materials Programs office, 4585 Pacheco Blvd., Suite 100, Martinez. When CCHMP determines that a safety plan update is complete, prior to the required 45-day public comment period, staff places the updated plan in the Contra Costa Library branch or branches closest to the regulated stationary source so it is easily accessible for public review. Table II lists each safety plan location.

Table II
Location of Safety Plans—Libraries

Regulated Stationary Source	Location 1	Location 2	Location 3
Air Liquide Large Industries Rodeo Hydrogen Plant	Hazardous Materials Programs Office	Rodeo Public Library	Crockett Public Library
Air Products at MRC (formerly Shell)	Hazardous Materials Programs Office	Martinez Public Library	
Air Products at Marathon (formerly Tesoro)	Hazardous Materials Programs Office	Martinez Public Library	
Martinez Refining Company—MRC (formerly Shell Martinez Refinery)	Hazardous Materials Programs Office	Martinez Public Library	
Phillips 66 Rodeo Refinery	Hazardous Materials Programs Office	Rodeo Public Library	Crockett Public Library
Marathon Refinery (formerly Tesoro Golden Eagle Refinery)	Hazardous Materials Programs Office	Martinez Public Library	

Effectiveness of Implementation of the Industrial Safety Ordinance

Contra Costa Hazardous Materials Programs has developed policies, procedures, protocols and questionnaires to implement the California Accidental Release Prevention (CalARP) Program and the Industrial Safety Ordinance. The policies, procedures, protocols and questionnaires for these programs are listed below:

- Audits/Inspections Policy
- Conducting the Risk Management Plan/Safety Plan Completeness Review Protocol
- Risk Management Plan Completeness Review Questionnaires
- Safety Plan Completeness Review Questionnaires
- Conducting Audits/Inspections Protocol

- Safe Work Practices Questionnaires
- CalARP Program Audit Questionnaires
- Safety Program Audit Questionnaires
- Conducting Employee Interviews Protocol
- Employee Interview Questionnaires
- Procedure Field Verification Protocol
- Piping and Instrumentation Diagram Field Verification Protocol
- Public Participation Policy
- Dispute Resolution Policy
- Reclassification Policy
- Covered Process Modification Policy
- CalARP Internal Performance Audit Policy
- Conducting the Internal Performance Audit
- CalARP Internal Audit Performance Audit Submission
- Fee Policy
- Notification Policy
- Unannounced Inspection Policy
- Risk Management Plan Public Review Policy

Hazardous Materials Programs also developed the Contra Costa County CalARP Program Guidance Document and the Contra Costa County Safety Program Guidance Document, which was updated and reissued to regulated facilities on July 22, 2011. All policies, procedures, protocols and questionnaires are available through Hazardous Materials Programs office, and the guidance documents are available electronically at: <http://cchealth.org/hazmat/calarp/guidance-document.php> and http://cchealth.org/groups/hazmat/industrial_safety_ordinance_guidance.php

CCHMP staff is working with regulated facilities and labor representatives to revise the Safety Program Guidance Document based on audit results and set expectations for compliance with the ordinance.

Effectiveness of the Procedures for Records Management

CCHMP has digital files for each stationary source. The files include:

1. Annual status reports
2. Audits & inspections
3. Communications
4. Completeness review
5. Emergency response
6. Incident investigation
7. Trade secret information

Digital copies of the files are stored on the Hazardous Materials Programs network and are accessible to the Accidental Release Prevention Program engineers, supervisor and the Hazardous Materials Director. Portable document format (PDF) versions of these files are also available for public viewing at the CCHMP office. Since the CCHMP office and libraries are closed to the public during the COVID-19 pandemic, CCHMP has also provided select electronic documents on the facility description pages on our general website: <https://cchealth.org/hazmat/rmp/> The Accidental Release Prevention Program files contain regulations, policies, information from the U.S. EPA, the Governor's Office of Emergency Services, CSB, and other information pertinent to the engineers. The risk management and safety plans are received in hard copy, scanned and kept at the CCHMP office.

Number and Type of Audits and Inspections Conducted

Beginning in the fall of 2019, CCHMP began its next round of required audits at each of the ISO and RISO facilities. This is the eighth round of audits since 2000. When the Health Order was issued on March 16, 2020 in response to the COVID-19, pandemic, CCHMP adjusted the audit protocol to perform the audit remotely through file sharing records review, web conference and interviews with Subject Matter Experts and select employee and employee representatives and “live” navigation and query of selected databases. Procedure review was part of the audit but in-person procedure walkdown was not performed.

When CCHMP ARP engineers review a safety plan, a notice of deficiencies is issued documenting any changes the stationary source must make before the plan is determined to be complete. The stationary source has 60 to 90 days to respond. The ARP engineer will work with the stationary source until the plan contains the required changes. When the plan is complete, the ARP engineer will open a public comment period and make the plan available in a public meeting or venue as well as at the public library branch closest to the stationary source. The ARP engineer will respond to all written comments in writing and, when appropriate, use the comments in upcoming audit/inspections of the regulated stationary source.

An ARP engineer will issue a Preliminary Audit Findings report after each facility audit/inspection. The stationary source will have 90 days to respond and the ARP engineer will review the response. The stationary source must submit an action plan to correct any uncovered ISO compliance issues, which the ARP Engineer will review. If the ARP Engineer agrees with the action plan, CCHMP will issue the Preliminary Audit Findings for public comment and make them available in a public meeting or venue and at the public library branch closest to the stationary source. The ARP engineer will consider comments received during the public comment period and may revise the preliminary audit findings report. When the public review process is complete, the ARP engineer will issue the Final Audit Findings report and respond in writing to any written public comments received. Table I lists the status of each stationary source’s safety plan, audit and inspections of their safety programs, and public meetings.

Root Cause Analyses and/or Incident Investigations Conducted by CCHMP

CCHMP performed no root cause analyses or incident investigations in the past year. A historical listing of MCAR events starting in 1992 is available at http://cchealth.org/groups/hazmat/accident_history.php. This list also includes major accidents that occurred prior to the adoption of the ISO.

Annual Performance Review and Evaluation Report

The ISO specifies—that this report must contain:

- A brief description of how CCHMP is meeting the requirements of the ordinance including:
 - The program’s effectiveness in getting regulated businesses to comply
 - Effectiveness of the procedures for records management
 - Number and type of ISO-required audits and inspections conducted by CCHMP
 - Number of root cause analyses and/or incident investigations conducted by CCHMP

- CCHMP’s process for public participation
- Effectiveness of the Public Information Bank
- Effectiveness of the Hazardous Materials Ombudsperson
- Other required program elements necessary to implement and manage the ordinance
- A listing of stationary sources covered by the ordinance, including for each:
 - The status of the stationary source’s safety plan and program
 - A summary of safety plan updates and where they are publicly available
 - ISO-required annual accident history reports submitted by regulated stationary sources
 - A summary and status of any ISO-required root cause analyses and incident investigations conducted or being conducted by the stationary sources, including the status of implementation of recommendations
 - A summary and status of any audits, inspections, root cause analyses and/or incident investigations conducted by CCHMP, including the status for implementing the recommendations
 - Description of Inherently Safer Systems implemented by regulated stationary sources
 - Legal enforcement actions initiated by CCHMP, including administrative, civil and criminal actions
- Total fees, service charges and other assessments collected specifically for the support of the ordinance
- Total personnel and personnel years used by the jurisdiction to directly implement or administer the ordinance
- Comments that raise public safety issues from interested parties regarding the effectiveness of the local program
- The impact of the ordinance in improving industrial safety

CCHMP’s Process for Public Participation

CCHMP continues the practice of sharing results of safety plans and preliminary audit findings and receiving public comment about them at community events, as recommended by community members in 2005. Based on a 2012 recommendation from the Board of Supervisors, CCHMP also shares ISO annual reports and makes presentations to Community Advisory Panels.

Effectiveness of the Public Information Bank

The Hazardous Materials Programs section of the Contra Costa Health Services website (<http://cchealth.org/hazmat>) includes:

- Industrial Safety Ordinance
 - Description of covered facilities
 - Risk Management Chapter discussion
 - » Copy of the ordinance
 - Land Use Permit Chapter discussion
 - » Copy of the ordinance
 - Safety Program Guidance Document
 - Frequently Asked Questions
 - Public Outreach strategies
- California Accidental Release Prevention (CalARP) Program
 - Contra Costa County’s California Accidental Release Prevention Program Guidance Document
 - Program Level description

- Discussion on Public Participation for both CalARP Program and the Industrial Safety Ordinance
- A map locating the facilities that are subject to the CalARP Program and required to submit a Risk Management Plan to CCHMP. The map links to a description of each of the facilities and the regulated substances handled
- A link to the Office of Emergency Services (OES) website for the CalARP regulation
- Hazardous Materials Inventories and Emergency Response Program
 - Descriptions
 - Forms
- Underground Storage Tanks
 - Description of the program
 - Copies of the Underground Storage Tanks Health & Safety Code sections
 - Underground Storage Tanks forms
- Green Business Program
 - Description of the Green Business Program with a link to the Association of Bay Area Government's website on the Green Business Program
- Hazardous Materials Incident Response Team
 - Including information of the Major Chemical Accidents or Releases that have occurred
 - The County's Hazardous Materials Incident Notification Policy
- A link to the Phillips 66 Rodeo Refinery and Chevron Richmond Refinery Fenceline Monitors
- Unannounced Inspection Program
 - Lists the facilities that are subject to unannounced inspections under the Unannounced Inspection Program
- Hazardous Materials Interagency Task Force
 - Includes a matrix of who has what hazardous materials and regulatory responsibilities
 - Minutes from past meetings
 - Presentations from past meetings
- Incident Response
 - Accident history that lists summaries of major accidents from industrial facilities in Contra Costa County from 1992 to the most recent
 - Additional resource links for more information
- Incidents
 - Information on the November 14, 2019 Nustar Fire and the August 18, 2020 Chevron flaring incident
 - Relevant 72-hours and 30-day incident report for MCAR events

Effectiveness of the Hazardous Materials Ombudsperson

The Hazardous Materials Ombudsperson is a conduit for the public to express their concerns about how CCHMP personnel are performing their duties. Attachment A is a report from the Hazardous Materials Ombudsperson on the effectiveness of the position for this reporting period.

Other Required Program Elements Necessary to Implement and Manage the ISO

The CalARP Program is administered in Contra Costa County by CCHMP. Stationary sources are required to submit risk management plan similar and in addition to ISO safety plans. An ARP engineer reviews risk management plans and performs CalARP Program audits simultaneously with ISO audits.

CCHMP staff also perform unannounced inspections of CalARP program stationary sources that are also required to submit a risk management plan to the U.S. EPA. These inspections aim to exercise how a facility will respond to an incident, including notifying emergency response agencies and CCHMP.

Annual Accident History Report and Inherently Safer Systems Implemented as Submitted by the Regulated Stationary Sources

The ISO requires stationary sources to update their accident history in their safety plans and include how they have used inherently safer processes within the last year. Table III summarizes Inherently Safer Systems that have been implemented during this reporting period. Attachment B includes individual reports from stationary sources that also include the required reporting of four common process safety performance indicators.

Table III
Inherently Safer Systems Contra Costa County Facilities

Regulated Stationary Source	Inherently Safer System Implemented	Design Strategy	Approach
Air Liquide Large Industries Rodeo Hydrogen Plant	No new inherently safer systems have been implemented		
Air Products at MRC (formerly Shell Martinez Refinery)	No new inherently safer systems have been implemented		
Air Products at Marathon (formerly Tesoro Golden Eagle Refinery))	Reduced potential of exposure by changing layout or design, equipment (1 time)	Passive	Moderate
Phillips 66 —Rodeo Refinery	Eliminated hazard by changing equipment and or eliminating inventory in process (5 times)	Inherent	Simplify
	Reduced potential of incident by changing layout or design, equipment (14 times)	Passive	Moderate
	Reduced potential of exposure by changing equipment layout or design (5 times)	Passive	Minimize
	Reduced potential of exposure by changing equipment layout or design (1 time)	Active	Simplify
	Reduced potential of exposure by improving emergency access (1 time)	Passive	Simplify
Martinez Refining Company (formerly Shell Martinez Refinery)	Reduced potential of incident by changing layout of equipment (1 time)	Passive	Simplify
Marathon Martinez Refinery (formerly Tesoro Golden Eagle Refinery)	Eliminated hazard by modification of physical condition	Inherent	Eliminate
	Reduced potential of the hazardous condition by equipment design features (5 times)	Passive	Moderate
	Reduced potential of the hazardous condition by substitution (1 time)	Passive	Substitution

Status of the Incident Investigations, including the Root Cause Analyses Conducted by the Regulated Stationary Sources

The ISO requires regulated stationary sources to conduct an incident investigation including a root cause analysis (RCA) after each MCAR incident. MCAR incidents meet the definition of a Level 3 or Level 2 incident in the Community Warning System incident level classification system defined in the Hazardous Materials Incident Notification Policy, as determined by Contra Costa Health Services; or result in the release of a regulated substance and meet one or more of the following criteria:

- Results in one or more fatalities
- Results in at least 24 hours of hospital treatment of three or more persons
- Causes on–and/or off-site property damage (including cleanup and restoration activities) initially estimated at \$500,000 or more. On-site estimates shall be performed by the regulated stationary source. Off-site estimates shall be performed by appropriate agencies and compiled by Health Services
- Results in a vapor cloud of flammables and/or combustibles that is more than 5,000 pounds

The regulated stationary source is required to submit a report to CCHMP 30 days after the root cause analysis is complete. There was no MCAR incidents that occurred within this reporting period in Contra Costa County at an ISO facility. All RCA reports for MCAR incident reports are available at the CCHMP office and website.

Major Chemical Accidents or Releases

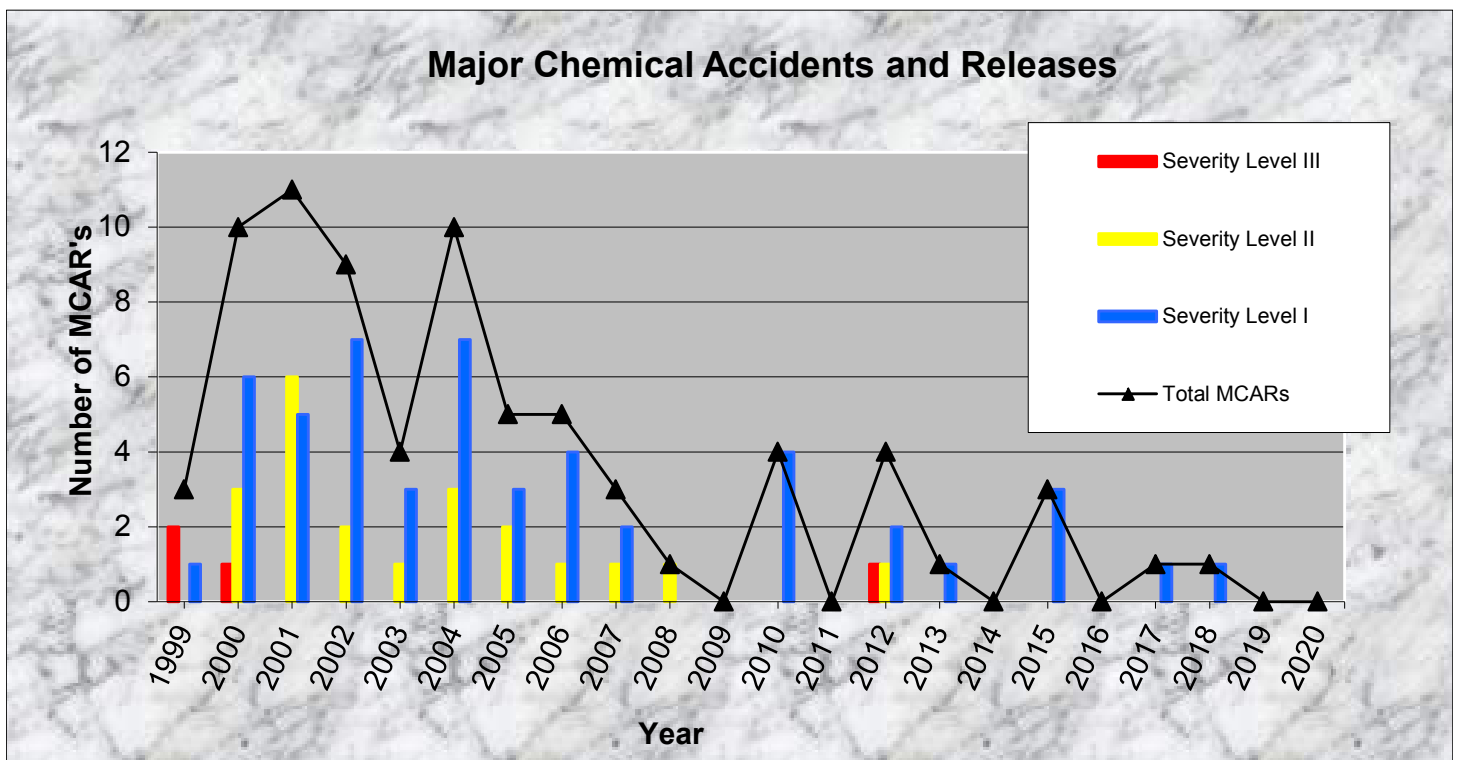
CCHMP analyzed the number and severity of MCARs that occurred since the implementation of the ISO:

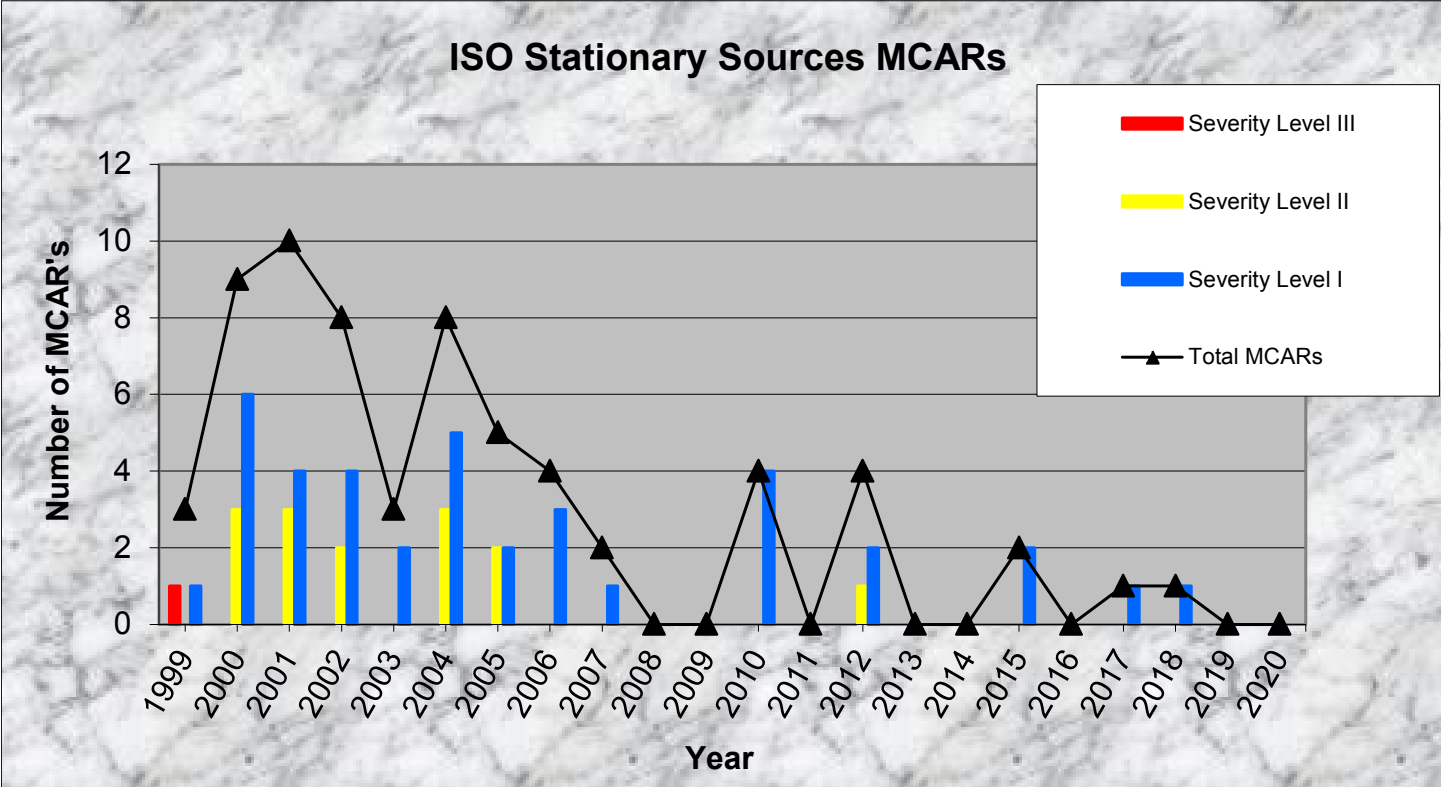
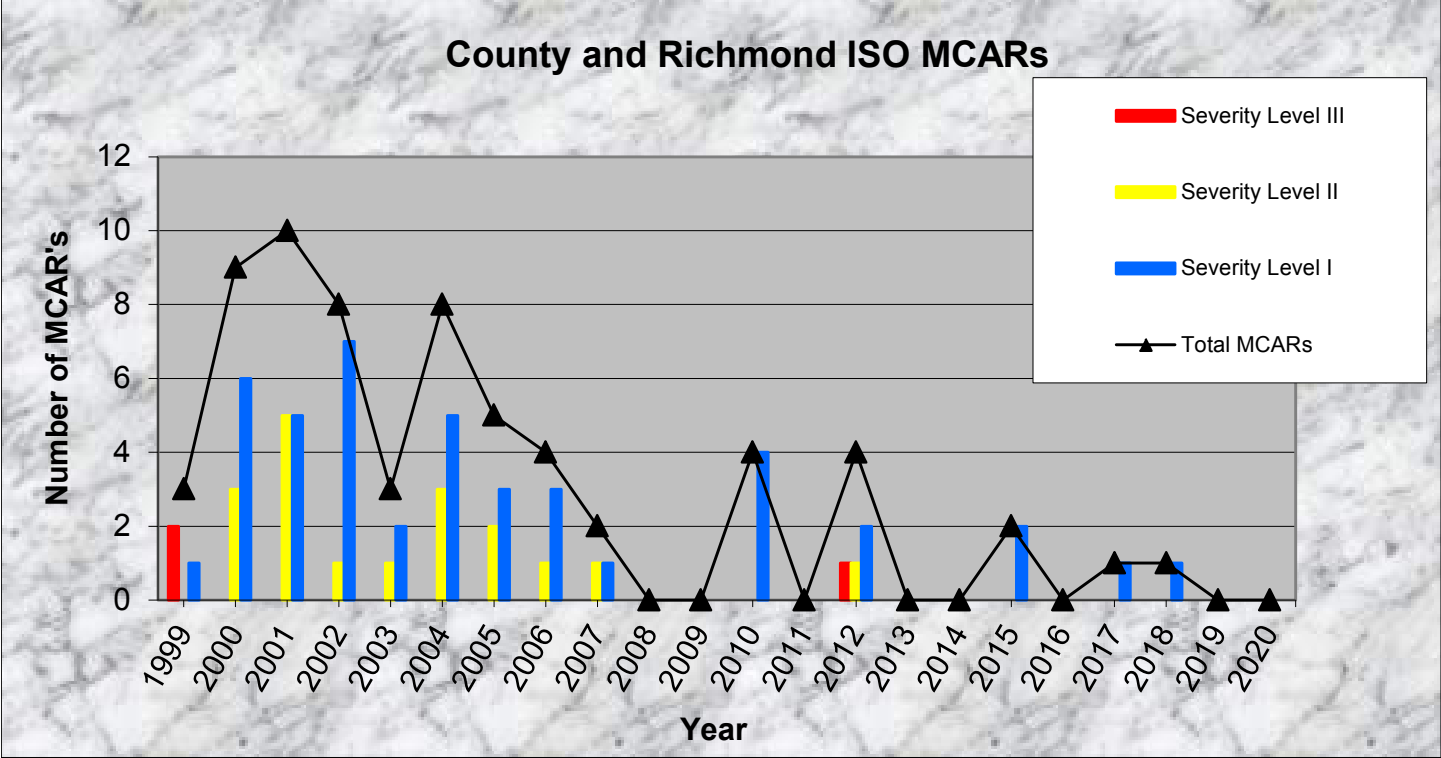


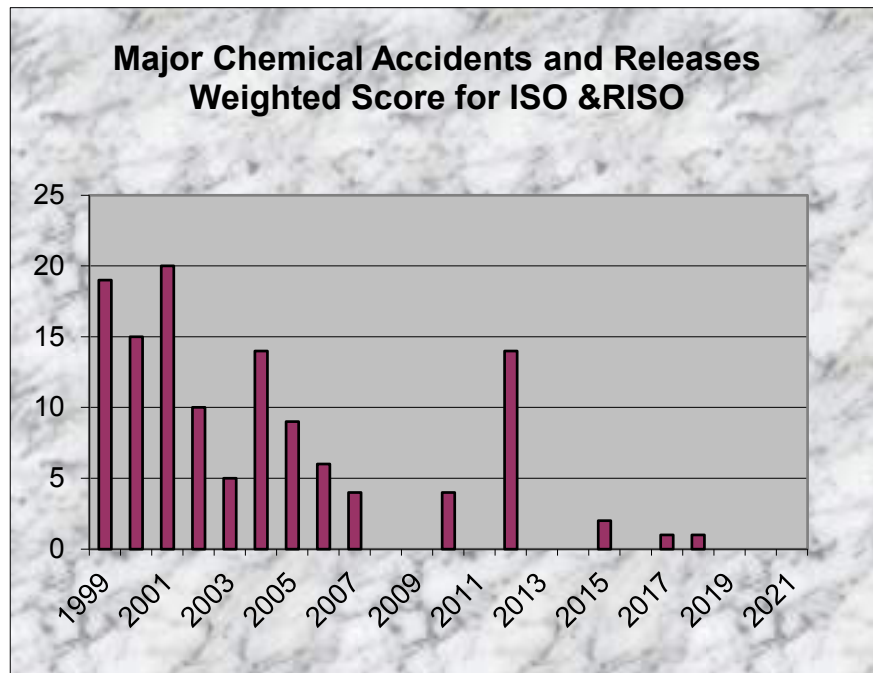
- *Severity Level III — Resulted in a fatality, serious injuries or major on-site and/or off-site damage*
- *Severity Level II — Resulted in an impact to the community, or could easily have become a Level III incident if the situation was slightly different, or it is a recurring type of incident at that facility*
- *Severity Level I — Resulted in no or minor injuries, no or slight impact to the community, and no or minor on-site damage*

These charts show MCARs from January 1999 through October 2017 for all stationary sources in Contra Costa County, MCARs at stationary sources regulated by the ISO, and MCARs at stationary sources regulated by the ISO or by the RISO. **The charts include MCARs at stationary sources only, none that occurred during transportation.**

The graph below uses a weighted score developed by CCHMP as an overall process safety metric for facilities regulated by ISO and RISO. This metric assigns a severity level III incident 9 points, a severity level II incident 3 points and a severity level I incident 1 point.







Legal Enforcement Actions Initiated by Contra Costa Hazardous Materials Programs

As part of the enforcement of the ISO and CalARP Program, CCHMP staff may issue notices of deficiency on the safety and risk management plans of ISO-regulated facilities and may issue audit findings detailing what a stationary source is required to change to come into compliance with the regulations. CCHMP has taken no legal enforcement actions on the ISO facilities during this reporting period.

Penalties Assessed as a Result of Enforcement

No penalties have been assessed in this period for noncompliance with the ISO.

Total Fees, Service Charges and Other Assessments Collected Specifically for the ISO

Fees charged for the ISO cover the time ARP engineers use to enforce the ordinance, the position of the Hazardous Materials Ombudsperson, outreach material and to cover a portion of the overhead for CCHMP. Fees charged for administering this ordinance for fiscal year 2019–2020 total \$ 585,721.

Total Personnel and Personnel Years Used by Hazardous Materials Program to Implement the Industrial Safety Ordinance

ARP engineers review resubmitted Safety Plans, prepare and present information for public meetings, perform audits of stationary sources for compliance with both the CalARP Program and ISO and do follow-up work after MCARs.

During the current reporting period:

- Three ISO/CalARP Program facility audits were performed in 2019, requiring four to five engineers four weeks to perform the on-site portion of each audit. The audit process encompasses off-site time that includes report preparation, a quality assurance review process, working with the facility to address any questions, assessing the facility's proposed remedies for completeness, preparing communication materials and posting public notices, attending a public forum to share audit findings, addressing any questions from the public and issuing the final report. The total time taken to perform these audits was 3,600 hours. Approximately one-third of the time was dedicated to the ISO, or 1, 200 hours. This year, CCHMP used larger teams that included recently hired ARP engineers, who participated in audits as part of their training for an additional 850 hours.
- Reviewing information for the website—180 hours
- Reviewing safety plans and following up with the facilities on any deficiencies—650 hours

- Reviewing and participating in investigation, root cause analysis and proposed recommendations—500 hours
- Preparing material for presentations and public meetings – 450 personnel hours.
- Approximately 3,828 hours total of CCHMP personnel time was spent on the ISO during the current reporting period.

The total does not include ombudsperson time spent preparing for public meetings, working with engineers on questions arising from the ISO, and answering questions from the public on the ISO.

Comments from Interested Parties Regarding the Effectiveness of the Industrial Safety Ordinance

No comments were received by CCHMP regarding ISO or RISO during current reporting period.

The Impact of the ISO on Improving Industrial Safety

The ISO is one of four programs that work together to reduce the risk of accidental release from a regulated stationary source that could impact communities in Contra Costa County. Those programs are:

- the Process Safety Management Program administered by Cal/OSHA
- the federal Accidental Release Prevention Program administered by the U.S. EPA
- the California Accidental Release Prevention Program administered by CCHMP
- the Industrial Safety Ordinance, also administered by CCHMP

Each of the programs is very similar in requirements. On October 1, 2017, California petroleum refineries are required to comply with requirements of CalARP Program 4 and OSHA PSM for refineries. Both are based on the ISO. CalARP Program 3 differs from the Federal Accidental Release Prevention Program in the following ways:

- The number of chemicals regulated
- The threshold quantity of these chemicals
- An external events analysis, including seismic and security and vulnerability analysis, is required
- Additional information in the Risk Management Plan
- CCHMP is required to audit and inspect stationary sources at least once every three years
- The interaction required between the stationary source and CCHMP

The ISO differs from CalARP Program 3, which the chemical facilities are required to follow, in the following ways:

- Stationary sources are required to include a root cause analysis with the incident investigations for Major Chemical Accidents or Releases
- The stationary sources are required to consider inherently safer systems for existing processes, in the development and analysis of recommended action items identified in a process hazard analysis, as part of a management of change review, as part of incident investigation or root cause analysis development of recommendation, and during the design of new processes, process units and facilities.
- All of the processes at the regulated stationary sources are covered
- The implementation of a Human Factors Program evaluation of latent conditions in existing units, operating and maintenance procedures and in root cause analysis
- Managing changes in the organization for operations, maintenance and emergency response
- A requirement that the stationary sources perform a Security and Vulnerability Analysis and test the effectiveness of the changes made as a result of the Security and Vulnerability Analysis
- The stationary sources perform Safety Culture Assessments
- Conduct, document and complete safeguard protection analysis for process hazard analysis to reduce catastrophic releases
- Use and report of process safety performance indicators in the annual performance review and evaluation report

Major Program difference of ISO from CalARP Program 4 and PSM for Refineries is that the Program 4 requirements include:

- Mechanical Integrity must include assessment of Damage Mechanism Review base on operating history and industry experience
- Process Hazard Analysis must include review of Damage Mechanism Review report compiled as part of process safety information
- Contractor and any subcontractors use a skilled and trained workforce pursuant to Health and Safety Code Section 25536.7
- Require a Management system with specific requirement for managing and communicating recommendations from the prevention program elements
- Require a Stop Work procedure and an anonymous hazard reporting system

The Safety Culture Assessment guidance chapter was finalized in November 2009. The Industrial Safety Ordinance Guidance Document was updated to reflect all the updates in September 2010. The Accidental Release Prevention Engineers have participated with the Center for Chemical Process Safety on developing the second edition of Inherently Safer Chemical Processes, a book that is referenced in the ordinance and with the Center for Chemical Process Safety on developing process safety metrics for leading and lagging indicators. CCHMP also participated in the developing the third edition of CCPS: Inherently Safer Chemical Processes to further clarify and promote the practice and consideration of Inherently Safer System.

The success of Contra Costa's programs at reducing MCARs and improving facility safety practices have been frequently cited as exemplary or model policies within the regulatory community:

- Contra Costa County was recognized as an alternative model for doing process-safety inspections by the CSB in its report on a 2005 refinery accident in Texas City, TX. The board also mentioned Contra Costa in its DVD, "Anatomy of a Disaster: Explosion at BP Texas City Refinery," as a model resource.
- CSB Chair Carolyn W. Merritt also recognized Contra Costa County in testimony to the House of Representatives Committee on Education and Labor.
- Senator Barbara Boxer, during a 2007 hearing to consider John Bresland's nomination to chair of the CSB Board, asked Mr. Bresland about the Contra Costa County program for process safety audits of refineries and chemical companies.
- In its final investigation report of a 2008 incident at the Bayer CropScience Institute in West Virginia, the CSB recommended that regulatory agencies in the area audit their chemical facilities using Contra Costa County's process. CCHMP staff and a representative from the local United Steelworkers Union were part of a panel when the CSB presented this report to the Kanawha Valley community.
- CCHMP was asked to give testimony at a June 2010 hearing on "Work Place Safety and Worker Protections in the Gas and Oil Industry" before the U.S. Senate Committee on Health, Education, Labor, and Pensions Subcommittee on Employment and Workplace Safety regarding the success of Accidental Release Prevention Programs in place in Contra Costa County.
- In September 2012, CCHMP was asked to present at the "Expert Forum on the Use of Performance-based Regulatory Models in the U.S. Oil and Gas Industry: Offshore and Onshore" in Texas City, Texas to share the regulatory experience at Contra Costa County and give testimony on how local, state and Federal agencies can work together and have an unprecedented alignment on regulations that is required for the same facilities. This meeting was spearheaded by Federal Occupational Safety and Health Administration and attended by Bureau of Safety and Environmental Enforcement, U.S. Coast Guard, U.S. EPA, Pipeline and Hazardous Materials Safety Administration, United Steelworkers, American Petroleum Institute, academia and

industry representatives.

- CCHMP staff also testified at a June 2013 hearing on “Oversight of Federal Risk Management and Emergency Planning Programs to Prevent and Address Chemical Threats, Including the Events Leading up to the Explosions in West, TX and Geismar, LA” before the U.S. Senate’s Committee on Environment and Public Works.

City of Richmond Industrial Safety Ordinance

The Richmond City Council passed its version of the ISO on December 18, 2001. Richmond’s Industrial Safety Ordinance (RISO) mirrors the ISO, covering two stationary sources: Chevron Richmond Refinery (Chevron) and Chemtrade West Richmond Works, (Chemtrade, formerly General Chemical Richmond). CCHMP administers the RISO for the city.

The seventh RISO/CalARP audit at Chevron was completed in July 2019 and in July 2020 for Chemtrade. CCHMP receives annual performance updates from Chevron and Chemtrade each June. CCHMP worked with U.S. EPA, Cal OSHA, BAAQMD and CSB in CSB’s independent investigation of the August 6, 2012.

Table V Richmond Industrial Safety Ordinance Stationary Source Status

Name/ Location of copies	Safety Plan (SP) Received	Notice of Deficiencies (NOD) Issued-SP	Safety Plan Complete	SP Public Meeting Date	Audit/ Inspection	Audit Public Meeting
Chevron Richmond Refinery/ Point Richmond and Richmond Main Public Library	1/21/03 6/21/04 9/29/06 9/25/09 9/24/12 9/30/15 6/28/18	4/23/03 11/08/12	10/10/03 6/22/04 5/21/07 11/04/09 11/12/13 7/25/18	10/14/03 6/24/04 6/02/07 9/25/10 10/05/13 10/24/15 5/05/19	1/11/01 (Non- RISO) 9/29/03 2/13/06 4/14/08 2/08/11 10/03/13 7/18/16 6/03/19	6/24/04 6/02/07 4/25/09 9/24/11 10/24/15 5/05/19
Chemtrade West Richmond Works/Point Richmond and Richmond Main Public Library	1/17/03 6/21/04 4/17/09 8/05/14 11/26/18	4/11/03 2/18/10 7/10/15	10/10/03 4/17/06 5/26/10 7/09/19	10/14/03 6/02/07 9/25/10 5/01/16 5/05/19	5/29/01 (Non-RISO) 4/24/06 8/18/03 1/05/09 1/05/12 9/08/14 7/17/17 6/15/20	6/24/04 6/02/07 9/25/10 10/05/13 10/24/15 5/05/19

Table VI Inherently Safer Systems Richmond Facilities

Regulated Stationary source	Inherently Safer System Implemented	Design Strategy	Approach
Chevron Richmond Refinery	Eliminated hazard by changing chemical in process (1 time)	Inherent	Eliminate
	Eliminated hazard by eliminating equipment and inventory in process (1 time)	Inherent	Minimization
	Reduced potential of exposure by changing equipment layout or design (1 time)	Passive	Moderate
	Reduced potential unit upset by changing/adding equipment or alarms (2 times)	Active	Moderate
Chemtrade West Richmond Works	Reduced potential incident and exposure by changing/adding equipment or alarms (2 times)	Active	Moderate



NOVEMBER 2019
THROUGH
NOVEMBER 2020



ATTACHMENT A
HAZARDOUS MATERIALS
OMBUDSMAN REPORT
Hazardous Materials
Ombudsperson Evaluation

I. INTRODUCTION

On July 15, 1997, the Contra Costa County Board of Supervisors authorized creation of an Ombudsman position for the County's Hazardous Materials Programs. The first Hazardous Materials Ombudsman began work on May 1, 1998. The Contra Costa County Board of Supervisors adopted an Industrial Safety Ordinance on December 15, 1998. Section 450-8.022 of the Industrial Safety Ordinance requires the Health Services Department to continue to employ an Ombudsman for the Hazardous Materials Programs. Section 450-8.030(B)(vii) of the Industrial Safety Ordinance requires an annual evaluation of the effectiveness of the Hazardous Materials Ombudsman, with the first evaluation to be completed on or before October 31, 2000.

The goals of section 450–8.022 of the Industrial Safety Ordinance for the Hazardous Materials Ombudsman are:

1. To serve as a single point of contact for people who live or work in Contra Costa County regarding environmental health concerns, and questions and complaints about the Hazardous Materials Programs.
2. To investigate concerns and complaints, facilitate their resolution, and assist people in gathering information about programs, procedures, or issues.
3. To provide technical assistance to the public.

The Hazardous Materials Ombudsman currently accomplishes these goals through the following program elements:

1. Continuing an outreach strategy so that the people who live and work in Contra Costa County can know about and utilize the program.
2. Investigating and responding to questions and complaints, and assisting people in gathering information about programs, procedures, or issues.
3. Participating in a network of environmental programs for the purpose of providing technical assistance.

This evaluation covers the period from November 2019 through November 2020 for the Hazardous Materials Ombudsman program. The effectiveness of the program shall be demonstrated by showing that the activities of the Hazardous Materials Ombudsman meet the goals established in the Industrial Safety Ordinance. Due to the COVID-19 pandemic, 2020 was an unusual year. From March, 2020 – November, 2020 the Ombudsman worked from home, and conducted all business by phone or via virtual meetings. Also, from May, 2020 through August, 2020 the Ombudsman was designated a Disaster Service Worker and was re-assigned to conduct contact tracing for people who tested positive for COVID-19, or came in close contact with someone that tested positive for COVID-19. For these reasons, many of the activities of the Ombudsman were reduced this in year relation to previous years.

II. PROGRAM ELEMENTS

1. Continuing an Outreach Strategy

This period efforts were focused on maintaining the outreach tools currently available. The web page was maintained for the program as part of Contra Costa Health Services website. This page contains information

about the program, links to other related websites, and information about upcoming meetings and events. A toll-free phone number is published in all three Contra Costa County phone books in the Government section.

2. Investigating and Responding to Questions and Complaints, and Assisting in Information Gathering

During this period, the Hazardous Materials Ombudsman received 72 information requests. This number was significantly reduced over previous years, probably due to the Ombudsman being reassigned for 4 months. Over 95 percent of these requests occurred via the telephone, and have been requests for information about environmental issues. Requests via e-mail are slowly increasing, mainly through referrals from Health Services main web page. Most of these requests concern problems around the home such as asbestos removal, household hazardous waste disposal, pesticide misuse, mold and lead contamination.

Information requests about environmental issues received via the telephone were generally responded to within one business day of being received. Many of the information requests were answered during the initial call. Some requests required the collection of information or written materials that often took several days to compile. Telephone requests were responded to by telephone unless written materials needed to be sent as part of the response.

This year the Ombudsman began facilitating monthly debriefings of the Hazardous Materials Program Incident Response team incidents, but these were discontinued when the Shelter-in-Place went into effect in March.

3. Participating in a Network of Environmental Programs for the Purpose of Providing Technical Assistance.

Technical assistance means helping the public understand the regulatory, scientific, political, and legal aspects of issues. It also means helping them understand how to effectively communicate their concerns within these different arenas. This year, the Ombudsman continued to staff a number of County programs and participate in other programs to be able to provide technical assistance to the participants and the public. Many of these programs were significantly curtailed due to the COVID-19 pandemic.

- **CAER (Community Awareness and Emergency Response)**—This non-profit organization addresses industrial accident prevention, response and communication. The Ombudsman participated in the Emergency Notification subcommittee of CAER.
- **Hazardous Materials Commission**—In 2001, the Ombudsman took over as staff for the Commission. As staff to the Commission, the Ombudsman conducts research, prepared reports, drafts letters and provides support for 3 monthly Commission meetings. During this period the Commission did not meet from March through August. Even so, they sent letter a letter to the Board of Supervisors concerning the County's Legislative platform, provided input on proposed changes to the Hazardous Materials Incident Notification Policy, made improvements to the format and contents of the HMC web page, provided input on the Industrial Safety Ordinance Annual Report, seated two student interns for the school year, recommended

candidates to the Board of Supervisors for filling an Environmental Seat and Alternate and an Environmental Justice Seat and Alternate, and began developing recommendations to the Board of Supervisors on proposed goals, policies and actions pertaining to Environmental Justice for the update to the County's General Plan.

- **Integrated Pest Management Advisory Committee**—During this period the Ombudsman represented the Health Department on the County Integrated Pest Management Advisory Committee. This Committee brings Department representatives and members of the public together to help implement the County's Integrated Pest Management policy.
- **Asthma Program**—The Ombudsman participated in the Public Health Department's Asthma Program as a resource on environmental health issues. The Ombudsman represented the Asthma Program on a regional collaborative related to asthma issues, the Ditching Dirty Diesel Collaborative. The Ombudsman served on the Technical Advisory Board for RAMP, the Regional Asthma Management Prevention program, and supported the Public Health Department's participation in the AB 617 Community Air Quality program in Richmond. The Ombudsman completed and received a Technical Assistance grant with MCE, the new energy provider for 14 of the 19 jurisdictions in Contra Costa County and the Department of Conservation and Development to implement the Asthma Prevention program business model that was developed the previous year. The Ombudsman co-wrote and received two grants to implement the Asthma Prevention program described in the Business Plan with MCE, DCD and the Contra Costa Health Plan, One grant was for three years and \$528,000 from the Sierra Health Foundation and the other was for one year and \$100,000 from the Bay Area Air Quality Management District.
- **Climate Change**
During this period the Ombudsman provided technical assistance to the Public Health department on a variety of climate change issues. The Ombudsman participated in a County work-group to update the Climate Action Plan and the General Plan.

The Hazardous Materials Ombudsman also attended workshops, presentations, meetings and trainings on a variety of environmental issues to be better able to provide technical assistance to the public. Topics included Environmental Justice, Air Quality, emergency management, energy policy and land-use planning for greenhouse gas reduction.

III. PROGRAM MANAGEMENT

The Hazardous Material Ombudsman continued to report to the Public Health Director on a day-to-day basis during this period, while still handling complaints and recommendations about the Hazardous Materials Programs through the Health Services Director. The Ombudsman was also a member of Health Services Emergency Management Team (EMT), and participated on its HEEP management team until these were suspended when the Health Department went into a Emergency Management mode when the Shelter in Place started in March.

IV. GOALS FOR THE 2020–2021 PERIOD

In this period, the Ombudsman will provide essentially the same services to Contra Costa residents as was provided in the last period. The Ombudsman will continue respond to questions and complaints about the actions of the Hazardous Materials Programs; answer general questions that come from the public and assist them in understanding regulatory programs; staff the Hazardous Materials Commission; represent the Public Health Department in the Ditching Dirty Diesel Collaborative and the Integrated Pest Management Advisory Committee; and participate in the CAER Emergency Notification committee. The Ombudsman will continue to be part of the Health Department's HEEP team and the Emergency Management Team when they resume.

During this period the Ombudsman will continue to provide technical assistance to the Public Health Department on Climate Change issues by being on the County-wide work group updating the Climate Action Plan and the General Plan, and representing the Public Health Department on the BARHII Built Environment Committee. The Ombudsman will continue to work with collaboratives at the local, regional and state level. The Ombudsman will continue to coordinate the implementation of the two grants that were received to conduct the Asthma Prevention Program.





2019–20



ATTACHMENT B
COUNTY REGULATED
SOURCES ANNUAL
PERFORMANCE

With accident history and inherent safety implementation

Annual Performance Review and Evaluation Submittal

June 30, 2020

*Attach additional pages as necessary

1. **Name and address of Stationary Source:** Air Liquide Rodeo Hydrogen Plant, 1391 San Pablo Ave., Rodeo, California 94572
2. **Contact name and telephone number (should CCHMP have questions):**
3. **Summarize the status of the Stationary Source's Safety Plan and Program (450-8.030(B)(2)(i)):**
This facility utilizes the programs and procedures identified in the ISO Safety Program/Plan. Additionally, the site is in regular communication with the county regarding updates for the ongoing section E. Safety Plan guidance document review.
4. **Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)):** The Rodeo Hydrogen Production Facility Industrial Safety Plan was updated on January 24, 2020.
5. **List of locations where Safety Plans are/will be available for review, including contact telephone numbers if the source will provide individuals with copies of the document (450-8.030(B)(2)(ii)):** CCHMP Office at 4585 Pacheco Boulevard, Suite 100, Martinez; Martinez Library (libraries closest to the stationary source).
6. **Provide any additions to the annual accident history reports (i.e. updates) submitted pursuant to Section 450-8.016(E)(2) of County Ordinance 98-48 (450-8.030(B)(2)(iii)) (i.e., provide information identified in Section 450-8.016(E)(1) for all major chemical accidents or releases occurring between the last annual performance review report and the current annual performance review and evaluation submittal (12-month history)):** There were no major chemical accidents or releases in the past 12 months.
7. **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)):** There were no major chemical accidents or releases in the past 12 months.
8. **Summary of the status of implementation of recommendations formulated during audits, inspections, Root Cause Analyses, or Incident Investigations conducted by the Department (450-8.030(B)(2)(v)):** There were no major chemical accidents or releases in the past 12 months.
9. **Summary of inherently safer systems implemented by the source including but not limited to inventory reduction (i.e., intensification) and substitution (450-8.030(B)(2)(vi)):** Reviewed MOCs following ISS evaluation and change methodology.

- 10. 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)):** There were no enforcement actions during this period.
- 11. Summarize total penalties assessed as a result of enforcement of this Chapter (450-8.030(3)):**
No penalties have been assessed against this facility.
- 12. Summarize the total fees, service charges, and other assessments collected specifically for the support of the ISO (450-8.030(B)(4)):** The total CalARP Program fees for the eight facilities subject to the Industrial Safety Ordinance was \$1,111,605. The total Industrial Safety Ordinance program fees for these eight facilities was \$585,721. (NOTE: These fees include those for the County and City of Richmond ISO facilities).
- 13. Summarize total personnel and personnel years utilized by the jurisdiction to directly implement or administer this Chapter (450-8.030(B)(5)):** 3,008 hours were used to audit/inspect and issue reports on the Risk Management Chapter of the Industrial Safety Ordinance.
- 14. Copies of any comments received by the source (that may not have been received by the Department) regarding the effectiveness of the local program that raise public safety issues(450-8.030(B)(6)):** None
- 15. Summarize how this Chapter improves industrial safety at your stationary source (450-8.030(B)(7)):** This chapter reinforces the need to maintain, follow and continuously improve our structured safety program to help ensure the safety of our employees and the communities in which we operate.
- 16. List examples of changes made at your stationary source due to implementation of the Industrial Safety Ordinance (e.g., recommendations from PHA's, Compliance Audits, and Incident Investigations in units not subject to CalARP regulations; recommendations from RCA's) that significantly decrease the severity or likelihood of accidental releases.** (RMPCorp. to facilitate Latent Conditions Checklist reviews of all of our "Critical Procedures" in October 2020 Completed the Site Culture Assessment for October 2019 TAR.
- 17. Summarize the emergency response activities conducted at the source (e.g., CWS or TEN activation) in response to major chemical accidents or releases:** Table top discussion to be scheduled in Q4 2020 to discuss plot plan, emergency exits etc in light of covid-19. Correspondence to include Rodeo-Hercules Fire District, CCHS, and P66 Emergency Response.

- 18. Date the last Safety Culture Assessment was completed:** October-November 2019
- 19. Date the results of the Safety Culture Assessment were reported to the workforce and management:** December 2019
- 20. Answer the following regarding the Safety Culture Evaluation Previous to the one listed in 18:**
- Survey method: 34 Question Survey with contractors & operations personnel.
 - Areas of improvements being addressed: None based on the survey results. Following safe work culture is strongly exhibited at the Rodeo SMR.
 - Action Plan made Progress on the identified areas of improvement?: N/A
 - o If Yes, did the improvements meet the goals and if not was the action plan amended to address what is being done to meet the goals?
 - o If No, has a new action plan been developed to address the identified areas of improvement? N/A
- 21. Have milestones and metrics been developed to determine how the Safety Culture Assessment actions are being implemented? Yes or if not, Why not?** N/A
- 22. Describe the process in place that includes employees and their representatives that will determine if the action items effectively changed the expected culture items:**
The processes include CCHS ISO & Safety Plan audits, the inclusion of LCC & ISS within the ISO program, and organizations PSM efforts internal to Air Liquide.
- 23. Date of the mid-cycle progress evaluation:** N/A
- **Did the action plan (for no 18) make progress on the identified areas of improvement? Yes or if not, has a new action pan been developed?** N/A
- 24. If a mid-cycle progress evaluation was performed during this reporting year, describe the process that included participation of employees or their representatives that determined whether the action items effectively changed the expected culture items:** N/A

25. Common Process Safety Performance Indicators:

Overdue inspection for piping and pressure vessels based on total number of circuits

2020	Overdue	Repeat
January	117	117
February	119	117
March	52	52
April	52	52
May	52	52
June	52	52
July	52	52
August	52	52
September	40	40
October	40	40
November	40	40
December	11	11
TOTAL	11	11

Total number of circuits: 187 piping circuits & 36 vessels.

Total number of annual planned circuit inspection: 11 water circuits deferred to next year.

Low consequence of failure. 62 (additional to deferrals) inspections planned for 2020 based on RBI study.

Past due PHA recommended actions, includes seismic and LCC recommended actions

2020	Overdue	Repeat
January	5	5
February	5	5
March	5	5
April	5	5
May	5	5
June	5	5
July	5	5
August	5	5
September	5	5
October	5	5
November	5	5
December	5	5
TOTAL	5	5

Past due investigation recommended actions for API/ACC Tier 1 and Tier 2 incidents

2020	Overdue	Repeat
January	0	0
February	0	0
March	0	0
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	0	0

API/ACC TIER 1 & TIER 2 INCIDENTS AND RATES STARTING 2011

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019
No. Tier 1 LOPC	0	0	0	0	0	0	0	0	0
Incident rate for Tier 1	0	0	0	0	0	0	0	0	0
Refinery or Industry Rate ¹	0.155	0.099	0.094	0.092	0.104	0.062	0.076	0.057	0.061
Refinery or Industry Mean ²	*	1.49	1.30	1.38	1.55	1.01	1.13	0.92	1.03
Tier 2 LOPC	0	0	0	0	0	0	0	0	0
Incident rate for Tier 2	0	0	0	0	0	0	0	0	0
Refinery Rate ¹	*	0.24	0.25	0.23	0.20	0.17	0.18	0.17	0.16
Refinery Mean ²	*	*	*	*	3.08	2.78	2.73	2.79	2.67

¹ Petroleum refineries to report publicly available refinery rate for API Tier 1 and Tier 2 classification. Chemical plants to report publicly available mean only for ACC Tier 1

² Petroleum refineries to report publicly available refinery mean for API Tier 1 and Tier 2 classification. Chemical plants to report publicly available mean only for ACC Tier

Annual Performance Review and Evaluation Submittal

June 30, 2020

*Attach additional pages as necessary

- 1. Name and address of Stationary Source:**
[Air Products] Marathon Martinez Refinery, 150 Solano Avenue, 3rd & F Street, Inside Tesoro Refinery, CA 94553
- 2. Contact name and telephone number (should CCHMP have questions):**
- 3. Summarize the status of the Stationary Source's Safety Plan and Program (450-8.030(B)(2)(i)):** The stationary source's safety plan is complete per the CCHS requirement. The program was audited in January 2018 by CCHS as part of the three year CCHS site audit, and in October 2015 as part of an unannounced inspection.
- 4. Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)):** The three year periodic audit completed in 2018 by CCHS required some updates to the site safety plan. These are in process of being implemented.
- 5. List of locations where Safety Plans are/will be available for review, including contact telephone numbers if the source will provide individuals with copies of the document (450-8.030(B)(2)(ii)):** CCHMP Office at 4585 Pacheco Boulevard, Suite 100, Martinez; Martinez Library (libraries closest to the stationary source).
- 6. Provide any additions to the annual accident history reports (i.e. updates) submitted pursuant to Section 450-8.016(E)(2) of County Ordinance 98-48 (450-8.030(B)(2)(iii)) (i.e., provide information identified in Section 450-8.016(E)(1) for all major chemical accidents or releases occurring between the last annual performance review report and the current annual performance review and evaluation submittal (12-month history)):** There were no major accidents or injuries to report.
- 7. 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)):** No RCAs subject to MCAR event have been performed. There are no outstanding recommendations.
- 8. Summary of the status of implementation of recommendations formulated during audits, inspections, Root Cause Analyses, or Incident Investigations conducted by the Department (450-8.030(B)(2)(v)):** Final recommendations from the 3 year CCCHS audit are in progress.
- 9. Summary of inherently safer systems implemented by the source including but not limited to inventory reduction (i.e., intensification) and substitution (450-8.030(B)(2)(vi)):** In 2019: Chemicals inventory containment dike installed to prevent possibility of offsite impact, walkways at heights upgraded to provide safer work conditions(worker safety), and grating installed to prevent slips, trips, and falls(worker safety).
- 10. 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)):** There were no enforcement actions during this period.

- 11. Summarize total penalties assessed as a result of enforcement of this Chapter (450-8.030(3)):**
No penalties have been assessed against this facility.
- 12. Summarize the total fees, service charges, and other assessments collected specifically for the support of the ISO (450-8.030(B)(4)):** The total CalARP Program fees for the eight facilities subject to the Industrial Safety Ordinance was \$1,111,605. The total Industrial Safety Ordinance program fees for these eight facilities was—\$585,721. (NOTE: These fees include those for the County and City of Richmond ISO facilities).
- 13. Summarize total personnel and personnel years utilized by the jurisdiction to directly implement or administer this Chapter (450-8.030(B)(5)):** 3,008 hours were used to audit/inspect and issue reports on the Risk Management Chapter of the Industrial Safety Ordinance.
- 14. Copies of any comments received by the source (that may not have been received by the Department) regarding the effectiveness of the local program that raise public safety issues(450-8.030(B)(6)):** None.
- 15. Summarize how this Chapter improves industrial safety at your stationary source (450-8.030(B)(7)):**
Air Products is committed to the safer operation of our facilities and has implemented applicable requirements outlined in the ISO and CalARP regulations. Both the ISO and Human Factors programs are an integral part of our five year Operating Hazard Review revalidations and on going management of change process. The most recent OPHR was conducted in for April 2018. There have been no incidents resulting in an offsite impact. The Chapter has helped reinforce the need to maintain and follow a structured safety program to help ensure the safety of our employees and the communities in which we operate.
- 16. List examples of changes made at your stationary source due to implementation of the Industrial Safety Ordinance (e.g., recommendations from PHA's, Compliance Audits, and Incident Investigations in units not subject to CalARP regulations; recommendations from RCA's) that significantly decrease the severity or likelihood of accidental releases.**
The Air Products facility is tracking various metrics (leading and lagging). These include those called out in ISO API/ACC Tier 1 and 2 events, past due PHA recommendations and past due incident investigation recommendations. A baseline was developed, and metrics are tracked for the facility on a company share site.
- 17. Summarize the emergency response activities conducted at the source (e.g., CWS or TEN activation) in response to major chemical accidents or releases:** There were no emergency response activities to this site since the previous Annual Performance review associated with a chemical accident. However, the emergency response team was deployed in response to a series of personal medicals that resulted in the individual being treated for non-work-related conditions. Each condition, the response time was stellar.
- 18. Date the last Safety Culture Assessment was completed:** 2019 **Survey method:**
Electronic
- 19. Date the results of the Safety Culture Assessment were reported to the workforce and management:** Sept. 16–18, 2019.
- 20. Answer the following regarding the Safety Culture Evaluation previous to the one listed in 18:**
- Survey method: Electronic

- Areas of improvements being addressed: Quality of APT, improving field safety contact among regional engineering support, better implementing safety drills in the JSA process, and improvement in the shift logs.
- Action Plan made Progress on the identified areas of improvement?: (Yes or No) No
 - If Yes, did the improvements meet the goals and if not was the action plan amended to address what is being done to meet the goals?
 - If No, has a new action plan been developed to address the identified areas of improvement? Yes, and action plan has been developed with routine check ins to determine the effectiveness of the actions.

21. Have milestones and metrics been developed to determine how the Safety Culture

Assessment actions are being implemented? No. Currently under development. Actions are tracked as part of recurring meeting focused on implementation of the actions.

22. Describe the process that included employees and their representatives used to determine if the action items effectively changed the expected culture items:

Employees were involved in the development of the survey, collection of the data, analysis of the data, and distribution of the findings. Additionally, the same team of cross functional employees were responsible for developing the action plan, and double clicking on the potential areas for improvement. Steps were taken to develop SMART goals.

23. Date of the mid-cycle progress evaluation: Target completion in the August 2021 timeframe

» Did the action plan (for no 18) make progress on the identified areas of improvement? Not yet.

24. Describe the process that included participation of employees or their representatives used to determine whether the action items from the SCA and the mid-cycle progress effectively changed the expected culture items: NA.

25. Common Process Safety Performance Indicators:

Overdue inspection for piping and pressure vessels based on total number of circuits

2020	Overdue	Repeat	
January	0	0	
February	0	0	
March	0	0	
April	0	0	
May	0	0	
June	0	0	
July	0	0	
August	0	0	Total number of circuits: 397. Circuits inspected in FY20
September	0	0	
October	0	0	Total number of annual planned circuit inspections: 32 circuits for FY21
November	0	0	
December	0	0	

Past due PHA recommended actions, includes seismic and LCC recommended actions

2020	Overdue	Repeat
January	0	
February	0	
March	0	
April	0	
May	0	
June	0	
July	0	
August	0	
September	0	
October	0	
November	0	
December	0	

Past due investigation recommended actions for API/ACC Tier 1 and Tier 2 incidents

2020	Overdue	Repeat
January	0	0
February	0	0
March	0	0
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	0	0

API/ACC TIER 1 & TIER 2 INCIDENTS AND RATES STARTING 2011

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019
No. Tier 1 LOPC	0	0	0	0	0	0	0	0	0
Incident rate for Tier 1	0	0	0	0	0	0	0	0	0
Refinery or Industry Rate ¹	0.155	0.099	0.094	0.092	0.103	0.062	.07	0.053	0.061
Refinery or Industry Mean ²		1.49	1.30	1.38	1.55	1.01	1.13	0.92	1.03
Tier 2 LOPC	0	0	0	0	0	0	0	0	0
Incident rate for Tier 2	0	0	0	0	0	0	0	0	0
Refinery Rate ¹		0.24	0.253	0.238	0.206	0.172	0.179	0.172	0.16
Refinery Mean ²					3.08	2.78	2.73	0.172	0.16

¹Petroleum refineries to report publically available refinery rate for API Tier 1 and Tier 2 classification. Chemical plants to report publically available mean only for ACC Tier 1

²Petroleum refineries to report publically available refinery mean for API Tier 1 and Tier 2 classification. Chemical plants to report publically available mean only for ACC Tier 1

26. Common Process Safety Performance Indicators for refineries only: N/A

Annual Performance Review and Evaluation Submittal

June 30, 2020

*Attach additional pages as necessary

- 1. Name and address of Stationary Source:**
Air Products—Shell Martinez Refinery, 110 Waterfront Road, Martinez, CA 94553
- 2. Contact name and telephone number (should CCHMP have questions):**
- 3. Summarize the status of the Stationary Source's Safety Plan and Program (450-8.030(B)(2)(i)):** The stationary source's safety plan is complete per the CCHS requirement. The program was audited in January 2018 by CCHS as part of the three year CCHS site audit, and in October 2015 as part of an unannounced inspection.
- 4. Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)):** The three year periodic audit completed in 2018 by CCHS required some updates to the site safety plan. These are in process of being implemented
- 5. List of locations where Safety Plans are/will be available for review, including contact telephone numbers if the source will provide individuals with copies of the document (450-8.030(B)(2)(ii)):** CCHMP Office at 4585 Pacheco Boulevard, Suite 100, Martinez 94553; Martinez Library (libraries closest to the stationary source).
- 6. Provide any additions to the annual accident history reports (i.e. updates) submitted pursuant to Section 450-8.016(E)(2) of County Ordinance 98-48 (450-8.030(B)(2)(iii)) (i.e., provide information identified in Section 450-8.016(E)(1) for all major chemical accidents or releases occurring between the last annual performance review report and the current annual performance review and evaluation submittal (12-month history)):** There were no major accidents or releases to report.
- 7. 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)):** There are no outstanding recommendations.
- 8. Summary of the status of implementation of recommendations formulated during audits, inspections, Root Cause Analyses, or Incident Investigations conducted by the Department (450-8.030(B)(2)(v)):** Final recommendations from the 3 year CCCHS audit are in progress.
- 9. Summary of inherently safer systems implemented by the source including but not limited to inventory reduction (i.e., intensification) and substitution (450-8.030(B)(2)(vi)):** There were no inherently safer systems implemented during the calendar year.
- 10. 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)):** There were no enforcement actions during this period.

- 11. Summarize total penalties assessed as a result of enforcement of this Chapter (450-8.030(3)):**
No penalties have been assessed against this facility.
- 12. Summarize the total fees, service charges, and other assessments collected specifically for the support of the ISO (450-8.030(B)(4)):** The total CalARP Program fees for the eight facilities subject to the Industrial Safety Ordinance was \$1,111,605. The total Industrial Safety Ordinance program fees for these eight facilities was—\$585,721. (NOTE: These fees include those for the County and City of Richmond ISO facilities).
- 13. Summarize total personnel and personnel years utilized by the jurisdiction to directly implement or administer this Chapter (450-8.030(B)(5)):** 3,008 hours were used to audit/inspect and issue reports on the Risk Management Chapter of the Industrial Safety Ordinance.
- 14. Copies of any comments received by the source (that may not have been received by the Department) regarding the effectiveness of the local program that raise public safety issues(450-8.030(B)(6)):** None.
- 15. Summarize how this Chapter improves industrial safety at your stationary source (450-8.030(B)(7)):**
Air Products is committed to the safer operation of our facilities and has implemented applicable requirements outlined in the ISO and CalARP regulations. Both the ISO and Human Factors programs are an integral part of our five year Operating Hazard Review revalidations and on going management of change process. The most recent OPHR was conducted in April 2018. There have been no incidents resulting in an offsite impact. The Chapter has helped reinforce the need to maintain and follow a structured safety program to help ensure the safety of our employees and the communities in which we operate. The site conducted its Safety Culture assessment in August and September 2019, and published a report and actions in February 2020.
- 16. List examples of changes made at your stationary source due to implementation of the Industrial Safety Ordinance (e.g., recommendations from PHA's, Compliance Audits, and Incident Investigations in units not subject to CalARP regulations; recommendations from RCA's) that significantly decrease the severity or likelihood of accidental releases.**
The Air Products facility is tracking various metrics (leading and lagging). These include those called out in ISO API/ACC Tier 1 and 2 events, past due PHA recommendations and past due incident investigation recommendations. A baseline was developed, and metrics are tracked for the facility on a company share site.
- 17. Summarize the emergency response activities conducted at the source (e.g., CWS or TEN activation) in response to major chemical accidents or releases:** There were no emergency response activities to this site.
- 18. Date the last Safety Culture Assessment was completed:** January 2019 **Survey method:** Electronic
- 19. Date the results of the Safety Culture Assessment were reported to the workforce and management:** Sept. 16-18, 2019.
- 20. Answer the following regarding the Safety Culture Evaluation previous to the one listed in 18:**
- Survey method: Electronic

- Areas of improvements being addressed: Quality of APT, improving field safety contact among regional engineering support, better implementing safety drills in the JSA process, and improvement in the shift logs.
- Action Plan made Progress on the identified areas of improvement?: (Yes or No) No
 - If Yes, did the improvements meet the goals and if not was the action plan amended to address what is being done to meet the goals?
 - If No, has a new action plan been developed to address the identified areas of improvement? Yes, and action plan has been developed with routine check ins to determine the effectiveness of the actions.

21. Have milestones and metrics been developed to determine how the Safety Culture

Assessment actions are being implemented? Yes. A mid-cycle survey will be conducted in the same manner as the SCA to track progress towards the goals. The same measurement criteria will be used as in the 2019 SCA. Management will look at the results and compare to the 2019 survey for a gauge of progress, and evaluate if any course-corrections are required to continue to meet the action plan from the 2019 SCA.

22. Describe the process that included employees and their representatives used to determine if the action items effectively changed the expected culture items:

Employees were involved in the development of the survey, collection of the data, analysis of the data, and distribution of the findings. Additionally, the same team of cross functional employees were responsible for developing the action plan, and double clicking on the potential areas for improvement. Steps were taken to develop SMART goals.

23. Date of the mid-cycle progress evaluation: Target completion in the August 2021 timeframe

- » Did the action plan (for no 18) make progress on the identified areas of improvement? Progress has not yet been measured.

24. Describe the process that included participation of employees or their representatives used to determine whether the action items from the SCA and the mid-cycle progress effectively changed the expected culture items: NA.

25. Common Process Safety Performance Indicators:

Overdue inspection for piping and pressure vessels based on total number of circuits

2020	Overdue	Repeat	
January	0	0	
February	0	0	
March	0	0	
April	0	0	
May	0	0	
June	0	0	
July	0	0	
August	0	0	Total number of circuits: 660. Circuits inspected in FY20--(85)
September	0	0	
October	0	0	Total number of annual planned circuit inspections: 87 circuits for FY21
November	0	0	
December	0	0	

Past due PHA recommended actions, includes seismic and LCC recommended actions

2020	Overdue	Repeat
January	0	
February	0	
March	0	
April	0	
May	0	
June	0	
July	0	
August	0	
September	0	
October	0	
November	0	
December	0	

Past due investigation recommended actions for API/ACC Tier 1 and Tier 2 incidents

2020	Overdue	Repeat
January	0	0
February	0	0
March	0	0
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	0	0

API/ACC TIER 1 & TIER 2 INCIDENTS AND RATES STARTING 2011

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019
No. Tier 1 LOPC	0	0	0	0	0	0	0	0	0
Incident rate for Tier 1	0	0	0	0	0	0	0	0	0
Refinery or Industry Rate ¹	0.155	0.099	0.094	0.092	0.103	0.062	0.07	0.057	0.61
Refinery or Industry Mean ²		1.49	1.30	1.38	1.55	1.01	1.13	0.92	1.03
Tier 2 LOPC	0	0	0	0	0	0	0	0	0
Incident rate for Tier 2	0	0	0	0	0	0	0	0	0
Refinery Rate ¹		0.24	0.253	0.238	0.206	0.172	0.184	0.172	0.157
Refinery Mean ²					3.08	2.78	2.73	2.79	2.67

¹Petroleum refineries to report publically available refinery rate for API Tier 1 and Tier 2 classification. Chemical plants to report publically available mean only for ACC Tier 1

²Petroleum refineries to report publically available refinery mean for API Tier 1 and Tier 2 classification. Chemical plants to report publically available mean only for ACC Tier 1

26. Process Safety Performance Indicators for refineries only: N/A

Annual Performance Review and Evaluation Submittal

June 30, 2020

*Attach additional pages as necessary

1. Name and address of Stationary Source:

Tesoro Refining and Marketing Company LLC, DBA, Marathon Martinez Refinery, 150 Solano Way, CA 94553

2. Contact name and telephone number (should CCHMP have questions):

3. Summarize the status of the Stationary Source's Safety Plan and Program (450-8.030(B)(2)(i)):

The most recent Safety Plan was submitted to Contra Costa Hazardous Materials Program (CCHMP) in October, 2019. CCHMP has completed eight audits on the safety programs. The first audit was in September 2000 on the safety programs. The second audit was in December 2001 and focused on Inherently Safer Systems and Human Factors. CalARP/ISO audits were conducted in August 2003, November-December 2005, August-October 2008, April-May 2011, January, 2014, October 2016, and most recently, October 2019. All safety program elements required by the ISO have been developed and are implemented.

4. Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)):

The original Safety Plan for this facility was filed with CCHMP on January 14, 2000. An amended plan, updated to reflect CCHS recommendations and an ownership change, was filed on November 30, 2000. A Human Factors Amendment was submitted on January 15, 2001. A Power Disruption Plan was submitted, per Board of Supervisor request, on June 1, 2001.

The Safety Plan for this facility is updated whenever changes at the facility warrant an update or every three years. In addition, the accident history along with other information is updated every year on June 30 in the Annual ISO Update to CCHMP. The most recent Safety Plan was submitted in October, 2019.

5. List of locations where Safety Plans are/will be available for review, including contact telephone numbers if the source will provide individuals with copies of the document (450-8.030(B)(2)(ii)): CCHMP Office at 4585 Pacheco Boulevard, Suite 100, Martinez; Martinez Library (libraries closest to the stationary source).

6. Provide any additions to the annual accident history reports (i.e. updates) submitted pursuant to Section 450-8.016(E)(2) of County Ordinance 98-48 (450-8.030(B)(2)(iii)) (i.e., provide information identified in Section 450-8.016(E)(1) for all major chemical accidents or releases occurring between the last annual performance review report and the current annual performance review and evaluation submittal (12-month history)): There have been no MCARs during the last year.

7. 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)): Status of Root Cause Analysis Recommendations: The recommended action items for all MCARs are closed.

- 8. Summary of the status of implementation of recommendations formulated during audits, inspections, Root Cause Analyses, or Incident Investigations conducted by the Department (450-8.030(B)(2)(v)):** "CCHS Information": CCHS completed an audit on September 15, 2000, December, 2001, August, 2003, November/December, 2005, August-October, 2008, April-May 2011, January, 2014, October, 2016 and October, 2019. There are no RCA or Incident Investigations that have been conducted by the Department.
Facility status of audit recommendations: All recommendations from CCHMP audits are closed. The site is awaiting the recommendations from the 2019 audit.
- 9. Summary of inherently safer systems implemented by the source including but not limited to inventory reduction (i.e., intensification) and substitution (450-8.030(B)(2)(vi)):** The refinery is submitting a list of the Inherently Safer Systems (ISS) that meet the criteria for Inherent or Passive levels only and that were completed within the last year (see attached).
- 10. 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)):** "CCHMP Information": There were no enforcement actions during this period.
- 11. Summarize total penalties assessed as a result of enforcement of this Chapter (450-8.030(3)):** "CCHMP Information": No penalties have been assessed against this facility.
- 12. Summarize the total fees, service charges, and other assessments collected specifically for the support of the ISO (450-8.030(B)(4)):** The total CalARP Program fees for the eight facilities subject to the Industrial Safety Ordinance was \$1,111,605. The total Industrial Safety Ordinance program fees for these eight facilities was - \$585,721. (NOTE: These fees include those for the County and City of Richmond ISO facilities)
- 13. Summarize total personnel and personnel years utilized by the jurisdiction to directly implement or administer this Chapter (450-8.030(B)(5)):** 3,008 hours were used to audit/inspect and issue reports on the Risk Management Chapter of the Industrial Safety Ordinance.
- 14. Copies of any comments received by the source (that may not have been received by the Department) regarding the effectiveness of the local program that raise public safety issues(450-8.030(B)(6)):** This facility has not received any comments to date regarding the effectiveness of the local program.
- 15. Summarize how this Chapter improves industrial safety at your stationary source (450-8.030(B)(7)):** Chapter 450-8 improves industrial safety by expanding the safety programs to all units in the refinery. In addition, the timeframe is shorter to implement recommendations generated from the Process Hazard Analysis (PHA) safety program than state or federal law. This has resulted in a faster implementation of these recommendations.

Chapter 450-8 also includes requirements for inherently safer systems as part of implementing PHA recommendations and new construction. This facility has developed an aggressive approach to implementing inherently safer systems in these areas.

Chapter 450-8 has requirements to perform root cause analyses on any major chemical accidents or releases (MCAR). This facility has applied that rigorous methodology to investigate any MCARs that have occurred since January, 1999.

Chapter 450-8 requires a human factors program. This facility has developed a comprehensive human factors program and is in the process of implementing the program.

Chapter 450-8 requires a safety culture assessment. This facility has developed a safety culture assessment program that meets the requirements in the ordinance..

16. List examples of changes made at your stationary source due to implementation of the Industrial Safety Ordinance (e.g., recommendations from PHA's, Compliance Audits, and Incident Investigations in units not subject to CalARP regulations; recommendations from RCA's) that significantly decrease the severity or likelihood of accidental releases.

This question was broadly answered under question 15 above. Some examples of changes that have been made due to implementation of the ordinance are as follows. There are some units that were not covered by RMP, CalARP or PSM. Those units are now subject to the same safety programs as the units covered by RMP, CalARP and PSM. They have had PHAs performed on them according to the timeline specified in the ISO and the PHA recommendations have been resolved on the timeline specified in the ISO. A list of inherently safer systems as required by the ISO for PHA recommendations and new construction is attached to this filing as mentioned in the response to question 9. With respect to Compliance Audits, there was a compliance audit performed in April 2015 in addition to the CCHMP audits mentioned above. All audit findings are being actively resolved. Root Cause Analysis findings and recommendations for MCARs are listed in the response under question 6.

17. Summarize the emergency response activities conducted at the source (e.g., CWS or TEN activation) in response to major chemical accidents or releases: Please refer to #6 which has the CWS classifications for the major chemical accidents and releases as well as any information regarding emergency responses by agency personnel.

18. Date the last Safety Culture Assessment was completed: 8/8/16-9/1/16. **Survey method:** survey

19. Date the results of the Safety Culture Assessment were reported to the workforce and management: Communicated in all employees/contractors in safety training: 4/4/17-5/15/17. Reported to Management: 11/17/16.

20. Answer the following regarding the Safety Culture Evaluation previous to the one listed in 18:

- Survey method: Survey

- Areas of improvements being addressed:

The safety culture areas of improvement identified are: the maintenance work process, procedures, leadership of process safety, resources for process safety, and new hire training.

- Action Plan made Progress on the identified areas of improvement?: (Yes or No) YES.

If Yes, did the improvements meet the goals and if not was the action plan amended to address what is being done to meet the goals?

There was improvement from 2013 to 2016 in some of the identified areas. The action plan for 2016 included the work that was performed previously and addressed continuing the effort to completion.

If No, has a new action plan been developed to address the identified areas of improvement? (Yes or No)

21. Have milestones and metrics been developed to determine how the Safety Culture Assessment actions are being implemented? Yes.

- 22. Describe the process that included employees and their representatives used to determine if the action items effectively changed the expected culture items:** Once the initial report was received on the survey from the 3rd party consultant, the PSM Superintendent and USW Process Safety Representative reviewed the data and recommendations from the consultant in great detail as well as the 2013 survey. A preliminary action plan was developed from the in depth analysis. The consultant's report and the preliminary action plan were reviewed with management, the Jt. H&S Committee and the union negotiation committee for input. In addition, the USW Process Safety Representative held several sessions with USW leadership to review the data in more detail. After this process was completed, it was determined the preliminary action plan was the final action plan.
- 23. Date of the mid-cycle progress evaluation:** 2019 for PSCA dated 2016
- o Did the action plan (for no 18) make progress on the identified areas of improvement? YES
 - o Yes or if not, has a new action plan been developed? (Yes or No) Although progress was made according to the interim safety culture assessment, an additional action plan was developed
- 24. If a mid-cycle progress evaluation was performed during this reporting year, describe the process that included participation of employees or their representatives that determined whether the action items effectively changed the expected culture items:** The Interim Safety Culture Assessment included both Focus Groups and one-on-one interviews. The results from those activities were analyzed for common threads and then an action plan was formulated to address the areas that still needed further action.
- 25. Common Process Safety Performance Indicators:**

Overdue inspection for piping and pressure vessels based on total number of circuits

2020	Overdue	Repeat
January	0	0
February	0	0
March	0	0
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
October	5	0
November	0	5
December	0	4
Total	5	5

Total number of circuits: 5,978

Total number of annual planned circuit inspections: 1,932 in the year 2019

Past due PHA recommended actions, includes seismic and LCC recommended actions

2020	Overdue	Repeat
January	15	68
February	20	77
March	21	45
April	10	66
May	18	71
June	27	78
July	16	64
August	4	76
September	17	77
October	0	93
November	0	88
December	0	83
Total	148	136

Past due investigation recommended actions for API/ACC Tier 1 and Tier 2 incidents

2020	Overdue	Repeat
January	0	3
February	1	3
March	0	4
April	0	3
May	0	2
June	0	2
July	0	2
August	0	1
September	0	1
October	0	1
November	0	1
December	0	1
Total	1	4

API/ACC TIER 1 & TIER 2 INCIDENTS AND RATES STARTING 2011

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019
No. Tier 1 LOPC	0	0	0	1	1	0	1	1	1
Incident rate for Tier 1	0	0	0	0.05	0.06	0	0.04	0.04	0.07
Refinery or Industry Rate ¹	0.15	0.09	0.09	0.09	0.10	0.06	0.07	0.06	0.06
Refinery or Industry Mean ²	*	1.49	1.30	1.38	1.55	1.01	1.13	0.92	1.03
Tier 2 LOPC	1	1	2	3	3	0	3	4	3
Incident rate for Tier 2	0.06	0.05	0.12	0.16	0.17	0	0.12	0.17	0.21
Refinery Rate ²	**	0.24	0.25	0.23	0.20	0.17	0.18	0.17	0.16
Refinery Mean	*	*	*	*	3.08	2.78	2.71	2.79	2.67

¹Petroleum refineries to report publicly available refinery rate for API Tier 1 and Tier 2 classification. Chemical plants to report publicly available mean only for ACC Tier 1

²Petroleum refineries to report publicly available refinery mean for API Tier 1 and Tier 2 classification. Chemical plants to report publicly available mean only for ACC Tier 1

* Petroleum refineries to report publicly available refinery mean for API Tier 1 and Tier 2. Chemical plants to report publicly available mean only for ACC Tier 1

**Data is not publicly available; report from AFPM only went back to 2012.

***Data not available at the time of reporting

26. Process Safety Performance Indicators for refineries only:

I. Number of Major Incidents in 2019: Zero (0)

II. The number of temporary piping and equipment repairs that are installed on hydrocarbon and high energy utility systems that are past their date of replacement with a permanent repair:

2020	Total*	Overdue	Repeat
January	98	0	61
February	98	0	61
March	106	1	61
April	109	0	62
May	111	0	62
June	105	0	59
July	108	0	28
August	103	0	9
September	93	0	1
October	93	0	1
November	84	0	0
December	85	0	0
Total	85	1	62

*the total number of temporary piping and equipment repairs installed on hydrocarbon and high energy utility systems

Inherently Safer Systems Implemented

Item Identifier	Implementation Category	Risk Reduction Category	ISS Approach
A004-2017-005	PHA	Inherent	Second Order Inherent Safety— Application of inherently safer principles to reduce the likelihood of an incident..
A004-2017-018	PHA	Passive	Moderate—Modification of physical conditions to less hazardous conditions.
A004-2017-022	PHA	Passive	Moderate—Modification of physical conditions to less hazardous conditions.
A004-2017-023	PHA	Passive	Moderate—Modification of physical conditions to less hazardous conditions..
A004-2017-024	PHA	Passive	Moderate—Modification of physical conditions to less hazardous conditions.
A004-2017-025	PHA	Passive	Moderate—Modification of physical conditions to less hazardous conditions.
A004-2017-026	PHA	Passive	Moderate—Modification of physical conditions to less hazardous conditions.
A004-2017-027	PHA	Passive	Moderate—Modification of physical conditions to less hazardous conditions.
A011-2018-019	PHA	Passive	Substitute—Removal of temporary equipment and replaced with a permanent solution which allows for unobstructed access.
A016-2016-014	PHA	Inherent	Second Order Inherent Safety—The hazard associated with emergency response equipment design was resolved through the application of inherently safer principles to improve accessibility.
A016-2016-016	PHA	Passive	Moderate—Modification of physical conditions to less hazardous conditions.
A016-2016-017	PHA	Passive	Moderate—Modification of physical conditions to less hazardous conditions.
A016-2016-018	PHA	Inherent	First Order Inherent Safety – Elimination of the hazard by modifying physical conditions.

Annual Performance Review and Evaluation Submittal

June 30, 2020

*Attach additional pages as necessary

- 1. Name and address of Stationary Source:** Phillips 66 Rodeo Refinery, 1380 San Pablo Avenue, Rodeo, CA 94572
- 2. Contact name and telephone number (should CCHMP have questions):**
- 3. Summarize the status of the Stationary Source's Safety Plan and Program (450-8.030(B)(2)(i)):**
The Safety Plan was last updated in August of 2018. The Phillips 66 Refinery was audited by the county's Hazardous Materials Program in January 2020.
- 4. Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)):** The original Safety Plan for this facility was filed with Contra Costa Health Services on January 14, 2000. A revised plan was filed on April 7, 2000 with the updated recommendations requested by CCHS. A Human Factors Amendment was submitted on January 15, 2001. In conjunction with CCHSs required 2nd public meeting on our plan and audit findings, we submitted a complete revision of the plan to reflect the change in ownership of our facility and to update where needed. We took this opportunity to include Human Factors within the plan instead of having it as an amendment. On August 9, 2002 the plan was resubmitted. Public meetings for our plans were held on June 22, 2004 in Rodeo and July 8, 2004 in Crockett. As required the Plan was fully updated in August 2005 on the 3 year cycle. The Plan was reviewed by CCHS and was revised on July 28, 2006 with recommended changes. The Safety Plan was updated in July 2009 per the 3 year cycle.. Recommendations requested by CCHMP were incorporated into the Safety Plan on November 4, 2010. Safety Plan was updated in August 2012 and August 2015 per the 3 year cycle. Recommendations requested by CCHMP on May 22, 2017 were incorporated into the plan on August 4, 2017. An updated Safety Plan was submitted in August 2018..
- 5. List of locations where Safety Plans are/will be available for review, including contact telephone numbers if the source will provide individuals with copies of the document (450-8.030(B)(2)(ii)):** CCHMP Office at 4585 Pacheco Boulevard, Suite 100, Martinez; Crockett and Rodeo Libraries (libraries closest to the stationary source).
- 6. Provide any additions to the annual accident history reports (i.e. updates) submitted pursuant to Section 450-8.016(E)(2) of County Ordinance 98-48 (450-8.030(B)(2)(iii)) (i.e., provide information identified in Section 450-8.016(E)(1) for all major chemical accidents or releases occurring between the last annual performance review report and the current annual performance review and evaluation submittal (12-month history)):** There were no major chemical accidents or releases at the Rodeo Refinery in the 2019-2020 time period.
- 7. 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)):** There were no root cause analysis of major chemical accidents or releases at the Rodeo Refinery in the 2018-2019 time period.

8. **Summary of the status of implementation of recommendations formulated during audits, inspections, Root Cause Analyses, or Incident Investigations conducted by the Department (450-8.030(B)(2)(v)):** There are no open recommendations from audits, inspections, Root Cause Analyses, or Incident Investigations conducted by the Department.
9. **Summary of inherently safer systems implemented by the source including but not limited to inventory reduction (i.e., intensification) and substitution (450-8.030(B)(2)(vi)):** See ATTACHMENT 1 for the listing of Inherently Safer Systems Improvements.
10. **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)):** There were no enforcement actions during this period.
11. **Summarize total penalties assessed as a result of enforcement of this Chapter (450-8.030(3)):** No penalties have been assessed against this facility.
12. **Summarize the total fees, service charges, and other assessments collected specifically for the support of the ISO (450-8.030(B)(4)):** The total CalARP Program fees for the eight facilities subject to the Industrial Safety Ordinance was \$1,111,605. The total Industrial Safety Ordinance program fees for these eight facilities was - \$585,721. (NOTE: These fees include those for the County and City of Richmond ISO facilities)
13. **Summarize total personnel and personnel years utilized by the jurisdiction to directly implement or administer this Chapter (450-8.030(B)(5)):** 3,008 hours were used to audit/inspect and issue reports on the Risk Management Chapter of the Industrial Safety Ordinance.
14. **Copies of any comments received by the source (that may not have been received by the Department) regarding the effectiveness of the local program that raise public safety issues(450-8.030(B)(6)):** No comments were received.
15. **Summarize how this Chapter improves industrial safety at your stationary source (450-8.030(B)(7)):** In addition to the Phillips 66 Corporate Health Safety Environment Management Systems the ISO provides another tool for the improvement of process safety performance and industrial safety.
16. **List examples of changes made at your stationary source due to implementation of the Industrial Safety Ordinance (e.g., recommendations from PHA's, Compliance Audits, and Incident Investigations in units not subject to CalARP regulations; recommendations from RCA's) that significantly decrease the severity or likelihood of accidental releases.** Units that were not covered by RMP, CalARP, and PSM are covered under the ISO and PHAs are scheduled and performed on all these units. Recommendations from the PHAs are implemented at an accelerated rate. A list of inherently safer system improvements, required by the ISO for PHA recommendations and projects, are listed in Attachment 1.
17. **Summarize the emergency response activities conducted at the source (e.g., CWS or TEN activation) in response to major chemical accidents or releases:** There were no major chemical accidents or releases at the Rodeo Refinery in the 2019-2020 time period.

18. Date the last Safety Culture Assessment was completed: 4/15/2016 **Survey method:** written survey

19. Date the results of the Safety Culture Assessment were reported to the workforce: 6/24/16
management: 4/15/16

20. Answer the following regarding the Safety Culture Evaluation for no. 18:

- Survey Method: written survey
- Areas of improvements being addressed:
 - » No areas were identified as scoring significantly below normal values.
 - » Improvements require too many reviews/approvals.
 - » Employees are reluctant to reveal problems or errors.
 - » Having enough qualified people to do the work in their area.
- Action Plan made Progress on the identified areas of improvement? YES
 - » **If Yes, did the improvements meet the goals and if not, was the action plan amended to address what is being done to meet the goals?** Yes, Progress was made and improvements observed in the subsequent SCA. Improvement opportunities were identified in the most recent SCA and recommendations identified.
 - » If No, has a new action plan been developed to address the identified areas of improvement? (Yes or No)

21. Have milestones and metrics been developed to determine how the Safety Culture Assessment actions are being implemented? Yes or if not, Why not? YES. Specific improvements were identified by a management & union team and implemented.

22. Describe the process that included employees and their representatives used to determine if the action items effectively changed the expected culture items: A midcycle written survey will be utilized to evaluate the effects on the culture. The evaluation team will include management and union representatives per policy.

23. Date of the mid-cycle progress evaluation: November 1, 2019

- » Did the action plan (for no 18) make progress on the identified areas of improvement? Yes or if not, has a new action plan been developed? N/A

24. Describe the process that included participation of employees or their representatives used to determine whether the action items from the SCA and the mid-cycle progress effectively changed the expected culture items: By policy, our process includes management and union representatives to review the results and develop modified recommendations as appropriate. Each action was discussed and compared to site performance indicators to determine if improvement was made. The Mid-Cycle Review was conducted on November 1, 2019 by the Process Safety Director, USW PSM Representative, and Senior H&S Consultant.

25. Common Process Safety Performance Indicators:

Overdue inspection for piping and pressure vessels based on total number of circuits

2020	Overdue	Repeat
January	0	0
February	0	0
March	0	0
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	0	0
Total	0	0

Total number of circuits: 30,263

Total number of annual planned circuit inspections: 3,124

Past due PHA recommended actions, includes seismic and LCC recommended actions

2020	Overdue	Repeat
January	0	0
February	0	0
March	0	0
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	5	0
October	5	4
November	5	5
December	4	4
Total	19	13

Past due investigation recommended actions for API/ACC Tier 1 and Tier 2 incidents

2020	Overdue	Repeat
January	0	0
February	0	0
March	0	0
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	0	0
Total	0	0

API/ACC TIER 1 & TIER 2 INCIDENTS AND RATES STARTING 2011

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019
No. Tier 1 LOPC	2	3	0	0	2	0	0	0	0
Incident rate for Tier 1	0.17	0.29	0	0	0.21	0	0	0	0
Refinery or Industry Rate ¹	0.15	0.09	0.09	0.09	0.10	0.06	0.07	0.06	0.06
Refinery or Industry Mean ²	*	1.49	1.30	1.38	1.55	1.01	1.13	0.92	1.03
Tier 2 LOPC	5	3	0	1	2	2	2	0	2
Incident rate for Tier 2	0.43	0.29	0	0.10	0.21	0.17	0.22	0	0.16
Refinery Rate ¹	*	0.24	0.25	0.23	0.20	0.17	0.18	0.17	0.16
Refinery Mean ²	*	*	*	*	3.08	2.78	2.73	2.79	2.67

¹Petroleum refineries to report publicly available refinery rate for API Tier 1 and Tier 2 classification. Chemical plants to report publicly available mean only for ACC Tier 1.

²Petroleum refineries to report publicly available refinery mean for API Tier 1 and Tier 2 classification. Chemical plants to report publicly available mean only for ACC Tier 1.

26. Process Safety Performance Indicators for refineries only:

I. Number of Major Incidents in 2019: NONE

II. The number of temporary piping and equipment repairs that are installed on hydrocarbon and high energy utility systems that are past their date of replacement with a permanent repair:

2020	Total*	Overdue	Repeat
January	42	0	0
February	42	0	0
March	43	0	0
April	43	0	0
May	47	0	0
June	49	0	0
July	48	0	0
August	48	0	0
September	50	0	0
October	51	0	0
November	33	0	0
December	33	0	0
TOTAL	33	0	0

*the total number of temporary piping and equipment repairs installed on hydrocarbon and high energy utility systems

Attachment 1: June 2019–June 2020 ISS improvements

Reference	Approach	ISS Category	MOC Description
IMP232563	Simplify	Inherent	Three pumps were decommissioned to eliminate potential back flow and release of process materials from the discharge check valves on G-9, G-10, and G-11.
IMP226903	Simplify	Inherent	Additional piping was added to eliminate the potential pinch point at ROD 3 101 valves and make operation easier.
IMP230973	Minimize	Passive	Vehicles barricades were installed to minimize piping damage after removing a road that ran over previous underground piping between F-302 Butane Sphere and the G-2
IMP226935	Moderate	Passive	The installed equipment, E-561A has a higher MAWP than the deadhead pressure of G-563/563A.
IMP226847	Moderate	Passive	The G-104A Pump Turbine was replaced with a lower speed turbine that cannot reach a pressure near the E-102A/B/C/D limit.
IMP226890	Simplify	Passive	The switchrack obstructing the G-102 area was demolished to improve emergency access in the event of an emergency.
IMP232563	Moderate	Passive	Project installed new anchors and guides to sufficiently mitigate stresses to piping downstream of 1E-101 and re-rate the line at a higher design temperature and lower design pressure to satisfy overpressure scenarios.
IMP226902	Moderate	Passive	The E-237 outlet and bypass piping was upgraded to meet over temperature scenarios when bypass valve is opened.
IMP226903	Moderate	Passive	A flexibility analysis of the E-240 downstream piping was done to support rerating to 490 degrees to meet the over temperature scenarios during bypass operations.
IMP226913	Moderate	Passive	The design temperature of E-52 was re-rated to 650 degrees to minimize the hazard of a release of hazardous material.
IMP226848	Minimize	Passive	A cover was installed on the E-101A/B/C saltwater outfall box to reduce the potential of exposure to hot water or H ₂ S..
IMP226849	Moderate	Passive	A closed loop sample station was installed to minimize operator exposure to high H ₂ S vapors by routing liquids back to the process and prevent vapors from being released.
IMP226879	Minimize	Passive	A cover was installed on the E-206 saltwater outfall box to reduce the potential of exposure to hot water or H ₂ S.
IMP226887	Minimize	Passive	The internal trim components of PV-702 (G202/A spillback) pressure control valve to reduce the likelihood of the control valve to plug.
IMP226888	Minimize	Passive	H-204 BT Bottom Circulation Strainer outlet valves were moved closer to the platform to eliminate poor positioning when operating the valves between the G-218 Coke Strainer (H-204) and the D-206 Bubble Tower.
IMP226891	Moderate	Passive	A concrete wall secondary containment was constructed around the F-256 Silicone Tank to prevent loss of chemical contents to surrounding area.

M20195848-001	Moderate	Passive	Upgraded metallurgy installed on D-170 Reboiler Draw Elbow.
M20185788-001	Moderate	Active	Installed two pressure relief devices on 248:6E-611A&B Lube Oil Coolers and 248:6F-611A&B Filters.
M20191124-001	Moderate	Inherent	Demolished the Unit 76 out-of-service tanks 162, 163, 165, 166, 305, 306, and Tank 695.
M20191850-001	Moderate	Active	Installed multiple check valves on Utility to Process connections for backflow protection.
M20157077-001	Moderate	Active	Installed a second check valve in series with the existing check valve on: 1. The regeneration gas line from 228F-515 2. The PSA purge gas line from 228GB-522
M20195907-001	Moderate	Passive	Upgraded metallurgy for 235FE-115 (ammonia acid gas) and 235FE-635 (H2S to the Rear) to 316L stainless steel.
M20192008-001	Moderate	Passive	Upgraded five thermal wells (TE-517, TE-518, TE-519, TE-520, and TE-521/003) on the B-101 to D-101 transfer line. Material was INCO 625 for corrosion resistance with stellite overlay for erosion resistance.
M20185067-001	Moderate	Active	Installed a pressure relief device to protect 5F-516A/B (seal oil filters) from overpressure.
M20193697-001	Moderate	Passive	Upgraded metallurgy for D-803 Reflux Line Spool to stainless steel.
M20186555-001	Moderate	Active	Installed four pressure relief devices on the demineralization anion and cation exchangers in Plant 31 of the Unicracker.
M20195805-00	Simplify	Inherent	Removed deadleg from overhead of butane vaporizer.
M20185036-001	Moderate	Active	Installed a relief valve to protect the MTC slops header from overpressure due to thermal expansion.
M20201018-001	Simplify	Passive	Removed the 4" inspection nozzle and upgraded metallurgy of steam exhaust head on V-9 CO2 Stripper.
M20195075-001	Moderate	Active	Installed a strainer on the pump suction of 200:G-208A Charge Pump.
M20196340-001	Moderate	Passive	Upgraded material of 228PSV-911& 913 gaskets.
M20185320-001	Moderate	Passive	Installed a closed-loop sample station on the rich DGA line out of the Unit 233 contactor, D-601, that was previously routed to the refinery blowdown system.

Annual Performance Review and Evaluation Submittal

June 30, 2020

*Attach additional pages as necessary

1. **Name and address of Stationary Source:** Martinez Refining Company, 3485 Pacheco Blvd., Martinez, CA 94553.
2. **Contact name and telephone number (should CCHMP have questions):**
3. **Summarize the status of the Stationary Source's Safety Plan and Program (450-8.030(B)(2)(i)):**
The current revision of the Safety Plan was submitted in August 2019. The Safety Program elements are consistent with the descriptions in the Safety Plan.
4. **Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)):** Pending updates to the Safety Plan will address change of refinery ownership (sale of Refinery from Shell to PBF Energy), and sale of two hydrogen plants (HP-1 and HP-2) to Air Products. During the transition of hydrogen plant ownership, Martinez Refining Company personnel continue to operate and maintain the plants as described in the current Safety Plan. Changes to the Safety Plan will depend on post-transition arrangements. The transition period may last 18 months.
5. **List of locations where Safety Plans are/will be available for review, including contact telephone numbers if the source will provide individuals with copies of the document (450-8.030(B)(2)(iii)):** CCHMP Office at 4585 Pacheco Boulevard, Suite 100, Martinez; Martinez Library (library closest to the stationary source).
6. **Provide any additions to the annual accident history reports (i.e. updates) submitted pursuant to Section 450-8.016(E)(2) of County Ordinance 98-48 (450-8.030(B)(2)(iii)) (i.e., provide information identified in Section 450-8.016(E)(1) for all major chemical accidents or releases occurring between the last annual performance review report and the current annual performance review and evaluation submittal (12-month history)):** There have been no MCARs at the Martinez Refinery in the 12-month period beginning July 1, 2019.
7. **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)):** There have been no RCAs for MCARs or potential MCARs in the 12-month period beginning July 1, 2019.
8. **Summary of the status of implementation of recommendations formulated during audits, inspections, Root Cause Analyses, or Incident Investigations conducted by the Department (450-8.030(B)(2)(v)):** Of the 49 recommendations from the audit conducted by CCHS in 2018, 48 have been completed. The one action remaining has a target date of December 2020, and it is expected that this action will be completed on time.
9. **Summary of inherently safer systems implemented by the source including but not limited to inventory reduction (i.e., intensification) and substitution (450-8.030(B)(2)(vi)):** See Attachment 1.

- 10. 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)):** There were no enforcement actions during this period.
- 11. Summarize total penalties assessed as a result of enforcement of this Chapter (450-8.030(3)):**
No penalties have been assessed against this facility.
- 12. Summarize the total fees, service charges, and other assessments collected specifically for the support of the ISO (450-8.030(B)(4)):** The total CalARP Program fees for the eight facilities subject to the Industrial Safety Ordinance was \$1,111,605. The total Industrial Safety Ordinance program fees for these eight facilities was - \$585,721. (NOTE: These fees include those for the County and City of Richmond ISO facilities).
- 13. Summarize total personnel and personnel years utilized by the jurisdiction to directly implement or administer this Chapter (450-8.030(B)(5)):** 3,008 hours were used to audit/inspect and issue reports on the Risk Management Chapter of the Industrial Safety Ordinance.
- 14. Copies of any comments received by the source (that may not have been received by the Department) regarding the effectiveness of the local program that raise public safety issues(450-8.030(B)(6)):** None received.
- 15. Summarize how this Chapter improves industrial safety at your stationary source (450-8.030(B)(7)):** SMRC has integrated requirements of the Industrial Safety Ordinance into our Health, Safety, and Environment Management System; in the context of our HSE MS, the ISO requirements drive continual improvement in our HSE performance.
- 16. List examples of changes made at your stationary source due to implementation of the Industrial Safety Ordinance (e.g., recommendations from PHA's, Compliance Audits, and Incident Investigations in units not subject to CalARP regulations; recommendations from RCA's) that significantly decrease the severity or likelihood of accidental releases.** All process units are now covered under CalARP Program 4. Examples of changes made to the stationary source during the reporting year are summarized in Attachment 1 (see question 9).
- 17. Summarize the emergency response activities conducted at the source (e.g., CWS or TEN activation) in response to major chemical accidents or releases:** There were no MCARs at the stationary source during the reporting year.
- 18. Date the last Safety Culture Assessment was completed:** 3/31/2019.
- 19. Date the results of the Safety Culture Assessment were reported to the workforce and management:** 4/10-22/2019.
- 20. Answer the following regarding the Safety Culture Evaluation for no. 18:**
- Survey method: Anonymous computer based and paper based survey
 - Areas of improvements being addressed: Incident reporting and learnings from incidents and rewards and recognition
 - Action Plan made Progress on the identified areas of improvement?: (Yes or No) YES

- » If Yes, did the improvements meet the goals and if not was the action plan amended to address what is being done to meet the goals? Goals for working off backlog of investigations, timely investigation completion, and timely communication of results have been achieved. Rewards and recognition aligned with new company expectations..
- » If No, has a new action plan been developed to address the identified areas of improvement? (Yes or No)

21. Have milestones and metrics been developed to determine how the Safety Culture Assessment actions are being implemented? Yes.

22. Describe the process that included employees and their representatives used to determine if the action items effectively changed the expected culture items: Team which includes employee representatives meets quarterly to assess progress and effectiveness of Safety Culture improvement efforts.

23. Date of the mid-cycle progress evaluation:TBD

- » Did the action plan (for no 18) make progress on the identified areas of improvement? (Yes or No) Yes

24. If a mid-cycle progress evaluation was performed during this reporting year, describe the process that included participation of employees or their representatives that determined whether the action items effectively changed the expected culture items: No mid-cycle review conducted during this review period

25. Common Process Safety Performance Indicators:

Overdue inspection for piping and pressure vessels based on total number of circuits

2020	Overdue	Repeat
January	0	0
February	0	0
March	0	0
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	0	0

Total number of circuits: 11,923

Total number of annual planned circuit inspections: 1,455

Past due PHA recommended actions, includes seismic and LCC recommended actions

2020	Overdue	Repeat
January	0	0
February	0	0
March	0	0
April	0	0
May	0	0
June	4	0
July	3	0
August	0	0
September	0	0
October	0	0
November	0	0
December	0	0
TOTAL	7	0

Past due investigation recommended actions for API/ACC Tier 1 and Tier 2 incidents

2020	Overdue	Repeat
January	0	0
February	0	0
March	0	0
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	0	0
TOTAL	0	0

API/ACC TIER 1 & TIER 2 INCIDENTS AND RATES STARTING 2011

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019
No. Tier 1 LOPC	1	1	1	0	1	0	2	1	2
Incident rate for Tier 1	0.07	0.07	0.08	0	0.07	0	0.11	0.06	0.12
Refinery or Industry rate ¹	0.15	0.09	0.09	0.09	0.10	0.06	0.08	0.06	0.06
Refinery or Industry mean ²	*	1.49	1.30	1.41	1.53	1.00	1.11	0.92	1.03
No. Tier 2 LOPC	2	0	5	2	5	1	2	2	5
Incident rate for Tier 2	0.14	0	0.41	0.11	0.42	0.06	0.11	0.11	0.31
Refinery rate ¹	*	0.24	0.25	0.24	0.21	0.17	0.19	0.17	0.16
Refinery mean ²	*	*	*	3.59	3.07	2.75	2.75	2.79	2.67

¹Petroleum refineries to report publicly available refinery rate for API Tier 1 and Tier 2 classification. Chemical plants to report publicly available mean only for ACC Tier 1

²Petroleum refineries to report publicly available refinery mean for API Tier 1 and Tier 2 classification. Chemical plants to report publicly available mean only for ACC Tier 1

26. Process Safety Performance Indicators for refineries only:

I. Number of Major Incidents in 2019: 0

II. The number of temporary piping and equipment repairs that are installed on hydrocarbon and high energy utility systems that are past their date of replacement with a permanent repair:

2020	Total	Overdue	Repeat
January	1	0	0
February	6	0	0
March	1	0	0
April	5	0	0
May	3	0	0
June	11	0	0
July	0	0	0
August	1	0	0
September	4	0	0
October	1	0	0
November	1	0	0
December	3	0	0
TOTAL*	37	0	0

*the total number of temporary piping and equipment repairs installed on hydrocarbon and high energy utility systems

Attachment 1

Table 1: Summary of Implemented ISS	
ISS/HCA Type	MOC Description
Active / Moderate, Simplify	Lower 40PI1017 critical high set point (located at PSV F-468 inlet).
Active / Moderate, Simplify	Move the Low Flow alarm from 40FI0959.PV to 40FC287.PV located downstream of P-12566/7.
Procedural / Simplify	Update procedure ISOM-3130, Lead ISOM RX Sulfur Stripping, to include more descriptive steps.
Active / Moderate, Simplify	Add high pressure alarm with operator response on existing pressure indication 40PI1700.
Active / Moderate, Simplify	Upgrade 4 existing check valves on the discharge of P-13311/312 to class 1 check valves to strengthen an existing barrier to prevent reverse flow in the event of a seal failure and allow for valid emergency response.
Active / Moderate	Install ammonia area monitors near V-13311 to ensure that console operator can be notified of a potential release in the area and provide adequate emergency response.
Active/ Moderate	Add low level alarm 17LI156 to protect against loss of level in V-1162 and reverse flow of 160# steam.
Active/ Moderate	Reclassify 2 existing check valves on the filtered stripped sour water header to class 1 check valves: (1) Check valve located at P-4110 discharge and (2) Check valve located at the combined outlet of the stripped sour water filters V-841/842.
Active / Moderate	Install hardware to allow P-8695 acid gas KO pot pump to be operated remotely from the board. This will allow pump to be operated remotely, eliminating the scenario of potential personnel exposure in case of a seal failure when starting/stopping the pump manually.
Procedural	Create a new call card to verify that the critical steam traps associated with SRU-1/2 sulfur seals are checked on a regular basis.
Active / Simplify	Add position indication with feedback to DCS for posi-seal valves between SRU1/2 and SCOT1/2 and the incinerators.
Passive / Simplify	Modify TDC displays to clearly differentiate between the following screens: SCOT1/SCOT2 RX, SCOT1/SCOT2 Absorber, DEA1/2, and SWS3/4/5.
Procedural / Moderate, Simplify	Add weekly operator round to verify tank TK 952 interface level using thermal profile.



2019–2020



ATTACHMENT C
RICHMOND REGULATED
SOURCES ANNUAL
PERFORMANCE
Contra Costa Health Services

Annual Performance Review and Evaluation Submittal

June 30, 2020; Update sent with industry rates on 10/29/2020

*Attach additional pages as necessary

1. **Name and address of Stationary Source:** Chevron U.S.A. Inc. (CUSA), Richmond Refinery, 841 Chevron Way, Richmond, California 94801
2. **Contact name and telephone number (should CCHMP have questions):**
3. **Summarize the status of the Stationary Source's Safety Plan and Program (450-8.030(B)(2)(i)):**
The CUSA Richmond Refinery (Refinery) initial Site Safety Plan (SSP) was completed in 2003, and the most recent revision is dated July 24, 2018. The SSP was prepared in accordance with the City of Richmond Industrial safety Ordinance (RISO), which was adopted by the Richmond City Council on January 17, 2002.
4. **Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)):** The SSP was updated in 2018. The next revision will be shared in 3Q2021.
5. **List of locations where Safety Plans are/will be available for review, including contact telephone numbers if the source will provide individuals with copies of the document (450-8.030(B)(2)(ii)):** CCHMP Office at 4585 Pacheco Boulevard, Suite 100, Martinez; Martinez Library; Richmond Public Library at 325 Civic Center Plaza Richmond, CA 94804; and Point Richmond Public Library at 135 Washington Ave., Richmond, CA 94801.
6. **Provide any additions to the annual accident history reports (i.e. updates) submitted pursuant to Section 450-8.016(E)(2) of County Ordinance 98-48 (450-8.030(B)(2)(iii)) (i.e., provide information identified in Section 450-8.016(E)(1) for all major chemical accidents or releases occurring between the last annual performance review report and the current annual performance review and evaluation submittal (12-month history)):** There were no major chemical accidents or releases ("MCAR") as defined in Section 450-8.014(h) between June 1, 2019 and June 1, 2020.
7. **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)):** There were no MCAR events between June 1, 2019 and June 1, 2020, and accordingly there were no Root Cause Analyses conducted under section 450-8.016(c) during this period.
8. **Summary of the status of implementation of recommendations formulated during audits, inspections, Root Cause Analyses, or Incident Investigations conducted by the Department (450-8.030(B)(2)(v)):** The 2011 Cal APR/ISO Audit had 73 ensure and consider recommendations, from which 85 total action items were created, and 85 of those action items are complete. The final report and action plans from the 2013 Cal ARP/Richmond ISO audit were accepted by the County and Richmond Refinery in 2015. The 2013 Cal ARP/ISO audit had 163 ensure and consider recommendations, from which 177 total action items were created, and 177 of those action items are complete. The report and action plans from the 2016 Cal ARP/Richmond ISO audit had 74 ensure and consider recommendations, from which 80 total action items were created, and 80 of those action items are complete. The ensure and consider items for the 2016 audit were finalized on November 6, 2017. The 2019 Cal ARP/ISO audit closing meeting was held on June 28th 2019. There were 94 ensure and consider recommendations, from which 104 total action items were created, and 3 of those action items are complete.

9. **Summary of inherently safer systems implemented by the source including but not limited to inventory reduction (i.e., intensification) and substitution (450-8.030(B)(2)(vi)):** See Attachment 1 on page 5.
10. **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)):** There were no enforcement actions during this period.
11. **Summarize total penalties assessed as a result of enforcement of this Chapter (450-8.030(3)):**
No penalties have been assessed against this facility.
12. **Summarize the total fees, service charges, and other assessments collected specifically for the support of the ISO (450-8.030(B)(4)):** The total CalARP Program fees for the eight facilities subject to the Industrial Safety Ordinance was \$1,111,605. The total Industrial Safety Ordinance program fees for these eight facilities was - \$585,721. (NOTE: These fees include those for the County and City of Richmond ISO facilities).
13. **Summarize total personnel and personnel years utilized by the jurisdiction to directly implement or administer this Chapter (450-8.030(B)(5)):** 3,008 hours were used to audit/inspect and issue reports on the Risk Management Chapter of the Industrial Safety Ordinance.
14. **Copies of any comments received by the source (that may not have been received by the Department) regarding the effectiveness of the local program that raise public safety issues(450-8.030(B)(6)):** No comments were received during this period regarding the effectiveness of the local program that raise public safety issues.
15. **Summarize how this Chapter improves industrial safety at your stationary source (450-8.030(B)(7)):** Operating safely is one of CUSA's core values and underpins our commitment to enhancing our process safety programs. The RISO assists CUSA in improving our process safety performance. We have worked closely with CCHMP in its implementation of the RISO and its oversight of our operations, including during its periodic reviews of our operations. Consistent with this commitment, and as part of the company's efforts to continually improve its process safety performance, CUSA will continue to confer with the CCHMP as it refines and implements these actions.
16. **List examples of changes made at your stationary source due to implementation of the Industrial Safety Ordinance (e.g., recommendations from PHA's, Compliance Audits, and Incident Investigations in units not subject to CalARP regulations; recommendations from RCAs) that significantly decrease the severity or likelihood of accidental releases.**
In addition to the Inherently Safer Systems implemented in Question 9, CUSA has also made other changes to the facility pursuant to the RISO and beyond to decrease the severity or likelihood of accidental releases. A few examples include the following:
 - Changes implemented based on findings from Tier 1 and Tier 2 Incident Investigation with solutions due between June 2019 to June 2020. There was no Tier 1 and Tier 2 incident in 2019.

- » Completed Fixed Equipment Asset Strategies Piping Project. The Fixed Equipment Asset Strategies Piping Project improves the refinery's existing asset strategy, designed to prevent and mitigate loss of containment in piping systems and to describe the process for creating and maintaining these strategies.
 - » Completed review of asset history and data for all blending and shipping pumps, including field survey for pumps with missing information to determine reliability threats.
 - » Plant shutdown procedure was update.
 - SRCM (Streamlined Reliability-Centered Maintenance) continued implementing studies to set up ITPM's (inspection, testing, and preventative maintenance tasks) refinery wide.
 - Completed Damage Mechanism Reviews on PSM-covered equipment and piping.
 - Equipment and procedural changes implemented to reduce risks identified during PHAs, including:
 - » Upgraded centrifugal pump seals to reduce or eliminate potential consequences that may result from seal failures. A few of the pumps completed are P-430, P-420, P-3551/A.
 - » Updated Operation's procedural changes to minimize potential loss of containment.
 - » Continued effort to conduct procedural PHAs across refinery units to identify and mitigate potential human factors that may lead to loss of containment; with a focus on emergency, startup, and shutdown procedures.
- 17. Summarize the emergency response activities conducted at the source (e.g., CWS or TEN activation) in response to major chemical accidents or releases:** There were no level two or three CWS or TENS activations between June 1, 2019 and June 1, 2020.
- 18. Common Process Safety Performance Indicators:** Data collected Sept 2015 reported to work force June 2016
- 19. Date the results of the Safety Culture Assessment were reported to the workforce:** June 2016
- 20. Answer the following regarding the Safety Culture Evaluation to the one listed in 18:**
- **Survey method:** Focus Groups
 - **Areas of improvements being addressed:** Communication and resource planning
 - **Action Plan made Progress on the identified areas of improvement?: (Yes or No)** Yes
 - » If Yes, did the improvements meet the goals and if not was the action plan amended to address what is being done to meet the goals? Yes, the improvements met the goals.
 - » If No, has a new action plan been developed to address the identified areas of improvement? (Yes or No) N/A
- 21. Have milestones and metrics been developed to determine how the Safety Culture Assessment actions are being implemented? Yes or if not, Why not?**
Yes. Milestones are tracked in the Chevron Database system of record.
- 22. Describe the process that included employees and their representatives used to determine if the action items effectively changed the expected culture items:** Employees and their representatives were involved in the review of data, development of the improvement suggestions as well

as the development of the final action items. Through the process of meeting with the representatives we came to agreement on what data needed an action and what action would solve the milestones.

- 23. Date of the mid-cycle progress evaluation:** None were conducted as they were not required at the time for SCA dated: June 2016
- » Did the action plan (for no 18) make progress on the identified areas of improvement? Yes or if not, has a new action plan been developed? (Yes or No) N/A

- 24. If a mid-cycle progress evaluation was performed during this reporting year, describe the process that included participation of employees or their representatives that determined whether the action items effectively changed the expected culture items:** N/A. Mid-cycle progress evaluation was not performed in this reporting year.

25. Common Process Safety Performance Indicators:

Overdue inspection for piping and pressure vessels based on total number of circuits

2020	Overdue	Repeat
January	0	0
February	0	0
March	0	0
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	0	0
Total	0	0

Total number of circuits: 12,240*

Total number of annual planned circuit inspection: 3,377*

*An ongoing project is re-evaluating piping circuit designations to align each circuit with the anticipated damage mechanisms. As the project progresses, the total number of piping circuits and subsequently, the number inspected, will change to accommodate the long-term strategy for inspections and reliability

Past due PHA recommended actions, includes seismic and LCC recommended actions

2020	Overdue	Repeat
January	0	0
February	0	0
March	0	0
April	0	0
May	3	0
June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	0	0
Total	3	

Past due investigation recommended actions for API/ACC Tier 1 and Tier 2 incidents

2020	Overdue	Repeat
January	0	0
February	0	0
March	0	0
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	0	0
Total	0	0

API/ACC TIER 1 & TIER 2 INCIDENTS AND RATES STARTING 2011

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019
No. Tier 1 LOPC	4	3	0	1	2	1	1	1	0
Incident rate for Tier 1	0.14	0.11	0.00	0.02	0.05	0.02	0.02	0.01	0
Refinery or Industry rate ¹	0.1553	0.995	0.0947	0.0925	0.1038	0.0627	0.0761	0.0570	0.0608
Refinery or Industry mean ²	**	1.49	1.30	1.38	1.55	1.01	1.13	0.92	1.03
No. Tier 2 LOPC	5	8	6	3	1	3	5	4	0
Incident rate for Tier 2	0.18	0.29	0.19	0.07	0.02	0.07	0.10	0.06	0
Refinery or Industry rate ¹	**	0.2405	0.2531	0.2380	0.2063	0.1726	0.1843	0.1728	0.1574
Refinery or Industry mean ²	**	**	**	**	3.08	2.78	2.73	2.79	2.67

¹Petroleum refineries to report publicly available refinery rate for API Tier 1 and Tier 2 classification. Chemical plants to report publicly available mean only for ACC Tier 1
²Petroleum refineries to report publicly available refinery mean for API Tier 1 and Tier 2 classification. Chemical plants to report publicly available mean only for ACC Tier 1

26. Process Safety Performance Indicators for refineries only:

- I. Number of Major Incidents in 2019: 0
- II. The number of temporary piping and equipment repairs that are installed on hydrocarbon and high energy utility systems that are past their date of replacement with a permanent repair.

2020	Total	Overdue	Repeat
January	61	0	0
February	65	0	0
March	65	0	0
April	68	0	0
May	73	0	0
June	71	0	0
July	71	0	0
August	69	0	0
September	69	0	0
October	69	0	0
November	64	0	0
December	64	0	0
TOTAL*	64	0	0

*The total number of temporary piping and equipment repairs installed on hydrocarbon and high energy utility systems.

Attachment 1—Question 9

Risk Reduction Category	ISS Approach	Description
Inherent	Eliminate	Replace Glycol as medium for jacket cooling system for H2 compressor with tempered water.
Inherent	Minimize	Remove old gas fill station equipment and piping in berth 9 and removal of unused piping in 9 Plant East-West Pipe Rack to reduce risk of loss of containment.
Passive	Moderate	Upgrade pump mechanical seals to CCSTB (Close Clearance Segmented Throttle Bushing) or dual seals to minimize the seal leakage in case of failure.
Active	Safeguard	Furnace bogging alarm installed on a critical alarm panel for fired heaters and boilers to reduce the risk of overpressure and potential loss of containment.
Active	Safeguard	Install SIF on furnaces fuel gas system to reduce the risk of furnace incident.
Procedural	Safeguard	Richmond Refinery can convert a portion of the existing anhydrous ammonia inventory into Hydrogen and Updated emergency procedure for HNC plant to include evacuation as first step.

Annual Performance Review and Evaluation Submittal June 30, 2020

*Attach additional pages as necessary

1. **Name and address of Stationary Source:** Chemtrade Logistics West US, LLC. 525 Castro St. Richmond, CA 94801
2. **Contact name and telephone number (should CCHMP have questions):**
3. **Summarize the status of the Stationary Source's Safety Plan and Program (450-8.030(B)(2)(i)):**
The sites Safety Plan is currently up to date after program updates were completed in 2019.
4. **Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)):** The 2019 Safety Plan submittal included updates to meet current site practices including changes to the sites investigation and corrective action plans, human factors program, process hazard analysis procedures and document control procedures.
5. **List of locations where Safety Plans are/will be available for review, including contact telephone numbers if the source will provide individuals with copies of the document (450-8.030(B)(2)(ii)):** CCHMP Office at 4585 Pacheco Boulevard, Suite 100, Martinez; Martinez Library (libraries closest to the stationary source).
6. **Provide any additions to the annual accident history reports (i.e. updates) submitted pursuant to Section 450-8.016(E)(2) of County Ordinance 98-48 (450-8.030(B)(2)(iii)) (i.e., provide information identified in Section 450-8.016(E)(1) for all major chemical accidents or releases occurring between the last annual performance review report and the current annual performance review and evaluation submittal (12-month history)):** No new accidents in the previous 12 months.
7. **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)):** N/A.
8. **Summary of the status of implementation of recommendations formulated during audits, inspections, Root Cause Analyses, or Incident Investigations conducted by the Department (450-8.030(B)(2)(v)):** N/A.
9. **Summary of inherently safer systems implemented by the source including but not limited to inventory reduction (i.e., intensification) and substitution (450-8.030(B)(2)(vi)):** Source has installed redundant level transmitters on various tank systems as well as installing remotely activated valves that are required to be manipulated in emergency situations.

- 10. 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)):** There were no enforcement actions during this period.
- 11. Summarize total penalties assessed as a result of enforcement of this Chapter (450-8.030(3)):**
No penalties have been assessed against this facility.
- 12. Summarize the total fees, service charges, and other assessments collected specifically for the support of the ISO (450-8.030(B)(4)):** The total CalARP Program fees for the eight facilities subject to the Industrial Safety Ordinance was \$1,111,605. The total Industrial Safety Ordinance program fees for these eight facilities was - \$585,721. (NOTE: These fees include those for the County and City of Richmond ISO facilities).
- 13. Summarize total personnel and personnel years utilized by the jurisdiction to directly implement or administer this Chapter (450-8.030(B)(5)):** 3,008 hours were used to audit/inspect and issue reports on the Risk Management Chapter of the Industrial Safety Ordinance.
- 14. Copies of any comments received by the source (that may not have been received by the Department) regarding the effectiveness of the local program that raise public safety issues(450-8.030(B)(6)):** No additional comments have been received by the source.
- 15. Summarize how this Chapter improves industrial safety at your stationary source (450-8.030(B)(7)):** The ISO ordinance helps the site to continually improve it's implementation of new policies and changes to processes by encouraging more thorough system reviews, executing a more inclusive Human Factors program and continually promoting Inherently Safer Systems.
- 16. List examples of changes made at your stationary source due to implementation of the Industrial Safety Ordinance (e.g., recommendations from PHA's, Compliance Audits, and Incident Investigations in units not subject to CalARP regulations; recommendations from RCAs) that significantly decrease the severity or likelihood of accidental releases.**
Site has made significant improvements to it's MOC, PHA and ISS programs due to the Industrial Safety Ordinance.
- 17. Summarize the emergency response activities conducted at the source (e.g., CWS or TEN activation) in response to major chemical accidents or releases:** No major chemical accidents or releases since last report.
- 18. Date the last Safety Culture Assessment was completed:** 8/14/18
- 19. Date the results of the Safety Culture Assessment were reported to the workforce and management:** 9/19/18

20. Answer the following regarding the Safety Culture Evaluation previous to the one listed in 18:

- Survey method: Anonymous multiple choice survey developed with comments available for each question
- Areas of improvements being addressed: Improve safety incentives and improve including hourly employees when conducting investigations
- Action Plan made Progress on the identified areas of improvement?: (Yes or No) Yes
 - » If Yes, did the improvements meet the goals and if not was the action plan amended to address what is being done to meet the goals? Process is on-going. Another SCA will be conducted to measure success.
 - » If No, has a new action plan been developed to address the identified areas of improvement? (Yes or No)

21. Have milestones and metrics been developed to determine how the Safety Culture Assessment actions are being implemented? Yes or if not, Why not? Yes

22. Describe the process that included employees and their representatives used to determine if the action items effectively changed the expected culture items: A follow-up SCA will be conducted.

23. Date of the mid-cycle progress evaluation: Scheduled for April 2021

- » Did the action plan (for no 18) make progress on the identified areas of improvement? Yes or if not, has a new action pan been developed? (Yes or No)

24. If a mid-cycle progress evaluation was performed during this reporting year, describe the process that included participation of employees or their representatives that determined whether the action items effectively changed the expected culture items. N/A

25. Common Process Safety Performance Indicators:

Overdue inspection for piping and pressure vessels based on total number of circuits

2020	Overdue	Repeat
January	0	0
February	0	0
March	0	0
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	0	0
Total	0	0

Past due PHA recommended actions, includes seismic and LCC recommended actions

2020	Overdue	Repeat
January	0	0
February	0	0
March	0	0
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
October	1	0
November	1	1
December	1	1
Total	1	1

Past due investigation recommended actions for API/ACC Tier 1 and Tier 2 incidents

2020	Overdue	Repeat
January	0	0
February	0	0
March	0	0
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	0	0
Total	0	0

API/ACC TIER 1 & TIER 2 INCIDENTS AND RATES STARTING 2011

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019
No. Tier 1 LOPC	0	0	0	0	0	0	0	0	0
Incident rate for Tier 1	0	0	0	0	0	0	0	0	0
Refinery or Industry rate ¹	0.1553	0.0995	0.0947	0.0925	0.1038	0.0627	0.0761	0.057	0.061
Refinery or Industry mean ²	*	1.49	1.30	1.38	1.55	1.01	1.13	0.92	1.03
No. Tier 2 LOPC	0	0	0	0	0	0	0	1	0
Incident rate for Tier 2	0	0	0	0	0	0	0	1.8	0
Refinery rate ¹	**	0.2405	0.2531	0.2380	0.2063	0.1726	0.1843	0.1728	0.1574
Refinery mean ²	**	**	**	**	3.08	2.78	2.73	2.79	2.67

¹Petroleum refineries to report publicly available refinery rate for API Tier 1 and Tier 2 classification. Chemical plants to report publicly available mean only for ACC Tier 1

²Petroleum refineries to report publicly available refinery mean for API Tier 1 and Tier 2 classification. Chemical plants to report publicly available mean only for ACC Tier 1

26. Process Safety Performance Indicators for refineries only: N/A



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HAZARDOUS MATERIALS PROGRAMS
A Division of Contra Costa Health Services