



CONTRA COSTA
HEALTH



INDUSTRIAL SAFETY ORDINANCE
ANNUAL PERFORMANCE REVIEW
AND EVALUATION REPORT
June 2024
By Contra Costa Health
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 workplace 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.

Two major oil refineries and two chemical facilities are required to comply with ISO requirements. One refinery within the City of Richmond is 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 Health Hazardous Materials Programs (CCHHMP), a division of Contra Costa Health. Per ISO Section 450-8.030, CCHHMP annually evaluates and reports on ISO performance to the Board of Supervisors.

CCHHMP'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), US Chemical Safety and Hazardous Investigation Board and other local program agencies. This interagency collaboration includes the sharing of incident and inspection results, discussion of regulatory interpretations, and joint training.

Public Participation

CCHHMP has an established public outreach process and is continually looking for ways to improve it. Due to the easing of COVID-19 restrictions, CCHHMP began conducting community engagement activities in late 2022:

- Presented at a joint Community Advisory Panel (CAP) meeting at Eco Services and PBF Martinez Refining Company (MRC) for the MRC Safety Audit on September 19, 2022
- Shared Air Liquide Large Industry's Safety Audit and outreach information at a booth at the Rodeo-Hercules Fire District Open House on October 15, 2022
- Shared Air Products safety audit and safety plan and shared Martinez Refining Company risk management plan and safety plan at a booth at the John Muir Birthday and Earth Day celebration at the John Muir National Historic Site in Martinez on April 22, 2023
- Shared Chevron Richmond Refinery safety plan and safety audit at a booth at the Cinco De Mayo celebration in Richmond on May 7, 2023

The Board of Supervisors also requested that staff provide copies of the annual report to communities through the Community Advisory Panels (CAP). This 2023 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 the required programs. We completed one ISO audit and no RISO audits in fiscal year 2022-2023:

- Phillips 66 Refinery – November 2022

Major Chemical Accidents or Releases

There was one MCAR event for an ISO/RISO-regulated facility during the reportable period of this report, which is from July 1, 2022, through June 30, 2023:

- The PBF Martinez Refining Company (MRC) had a catalyst release from its Catalytic Cracking Unit (CCU) on November 24-25, 2022. This release resulted in 20-24 tons of catalyst powder dispersed into the community. CCHHMP classified this

event as a Community Warning System (CWS) Level 2 or higher incident. As a result, this incident met the requirements of an MCAR.

- As a result of the MRC November 2022 MCAR, CCHHMP conducted a Safety Inspection at the refinery between February and April 2023. A copy of the report can be found at: <https://www.cchealth.org/home/showpublisheddocument/29210/638386625764170000>
- CCHHMP was also instructed to conduct three third-party evaluations for the MRC November 2022 MCAR. To accomplish these evaluations, CCHHMP formed an Oversight Committee in February 2023. Information on the MRC Oversight Committee can be found at: www.cchealth.org/hazmat/mrc
- The following summarizes each of the three third-party evaluations for the MRC November 2022 MCAR. It should be noted that none of these evaluations were completed during the fiscal year 2022-2023 although additional information can be found in the link above associated with the MRC Oversight Committee.
 1. Screening Level Human Health and Ecological Risk Assessment. A toxicologist was hired to conduct community soil sampling to determine the extent of catalyst within soils in the release area and its potential risks to human and ecological receptors.
 2. Root Cause Analysis Incident Investigation. An independent incident investigation was commissioned to identify management system failures associated with the MCAR and recommendations to prevent reoccurrence.
 3. Safety Culture Assessment. A company was hired to conduct an independent assessment of the safety culture at MRC.

It should be noted that there was an MCAR event from the Marathon Martinez Renewable Fuels refinery that took place on November 19, 2023. There was also an MCAR from PBF MRC that took place on December 15, 2023. Both of these events fell outside of the reportable period of this report, which is from July 1, 2022, through June 30, 2023, and will be included in next year's report.

Conclusion

Even though there was one MCAR that took place during this fiscal year, the severity of MCAR events in Contra Costa County has declined since the implementation of the ISO. The ISO has improved regulated facilities' safety programs and operations.

CCHHMP 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 the likelihood of chemical accidents at these industrial facilities.

Introduction

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 timeline below shows the requirements of the ordinance and various changes to date:



RESPONSIBILITIES	CCHHMP	<ul style="list-style-type: none"> • May perform individual Root Cause Analysis or other third-party evaluations after an MCAR • Develop and Maintain Safety Plan Guidance Document • Review submitted Safety Plans • Audit every three years after initial ISO/RISO audits • Create Safety Culture Guidance and update as needed
	STATIONARY SOURCES	<ul style="list-style-type: none"> • Perform Root Cause Analysis after an MCAR • Consider Inherently Safer Systems for new and existing processes, expanded (2014 amendments) to include reviewing during major changes that could result in MCAR occur • Submit Safety Plan every 3 years • Perform Safeguard Protection Analysis [SPA] (2014 Amendments) • Include Maintenance in the Human Factors and Management of Organizational Change Programs (2006 Amendments) • Perform Security Vulnerability Assessments and Safety Culture Assessments (2006 Amendments) • Develop and Track Performance Indicators (2014 Amendments)

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, currently covering one stationary source: Chevron Richmond Refinery (Chevron). CCHHMP administers the RISO for the city. Previously, the RISO covered the Chemtrade West Richmond Works until they modified their processes such that they are no longer subject to the RISO.

There were no RISO audits conducted in this reporting period. CCHHMP receives annual performance updates from Chevron each June. CCHHMP worked with U.S. EPA, Cal OSHA, BAAQMD and CSB in CSB’s independent investigation of the August 6, 2012 incident. CCHHMP is currently working with an oversight committee regarding the incident investigation of the Chevron February 9, 2021, wharf oil spill incident.

Regulated Stationary Sources Listing

There are a total of four stationary sources covered by the ISO and one stationary source covered by RISO**:

- Air Liquide Large Industries Rodeo Hydrogen Plant at Phillips 66
- Air Products at MRC (formerly Shell Martinez Refinery)
- PBF Martinez Refining Company – MRC (formerly Shell Martinez Refinery)
- Phillips 66 Rodeo Refinery
- Chevron Richmond Refinery (RISO)

** Marathon Martinez Renewable Fuels and Air Products at Marathon Plants were idled for the 2022-2023 fiscal year. Chemtrade West Richmond Works modified its processes and is no longer subject to RISO.

Status of Safety Plans and Programs

Stationary sources were required to initially submit safety plans in 2000 (ISO) and 2003 (RISO) and resubmit every 3 years. Audits have also been completed on the same schedule. The most recent status of each of the regulated stationary sources is given in Tables I and II and includes:

- When the latest updated safety plans were submitted
- Status of safety plans (complete/incomplete)
- When audits were last completed
- When public meetings were held on preliminary audit findings in the last 3 years

A full summary of all Safety Plan Updates and audits is maintained via database at CCHHMP’s office.

**Table I
Industrial Safety Ordinance (ISO) Stationary Source Status
(Most Recent)**

NAME	Safety Plan (SP) Received	Safety Plan Complete	Audit/ Inspection	Audit Public Meeting
Air Liquide Large Industries Rodeo	1/10/2023	No	1/5/2022	10/15/2022
Air Products – MRC	7/25/2023	No	9/25/2023	Not yet
PBF Martinez Refining Company (MRC)	10/31/2022	Yes	1/8/2024	Not yet
Phillips 66 Rodeo Refinery	8/6/2021	Yes	10/24/2022	5/7/2023

**Table II
Richmond Industrial Safety Ordinance (RISO) Stationary Source Status
(Most Recent)**

NAME	Safety Plan (SP) Received	Safety Plan Complete	Audit/ Inspection	Audit Public Meeting
Chevron Richmond Refinery	7/22/2021	Yes	4/25/2022	5/7/2023

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 CCHHMP determines that a safety plan update is complete, before the required 45-day public comment period, the 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 III lists each safety plan location.

**Table III
Location of Safety Plans – Libraries**

Regulated Stationary Source	Location 1	Location 2	Location 3
Air Liquide Large Industries Rodeo	Hazardous Materials Programs Office	Rodeo Public Library	Crockett Public Library
Air Products – MRC	Hazardous Materials Programs Office	Martinez Public Library	
PBF Martinez Refining Company (MRC)	Hazardous Materials Programs Office	Martinez Public Library	
Phillips 66 Rodeo Refinery	Hazardous Materials Programs Office	Rodeo Public Library	Crockett Public Library
Chevron Richmond Refinery (RISO)	Hazardous Materials Programs Office	Point Richmond Public Library	Main Richmond Public Library

Effectiveness of Implementation of the Industrial Safety Ordinance

Contra Costa Health 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, & 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
- Field Verification Protocols
- Covered Process Modification Policy
- Public Participation Policy
- Dispute Resolution Policy
- Reclassification 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 the Hazardous Materials Programs office, and the guidance documents are available electronically at:

- <https://www.cchealth.org/health-and-safety-information/hazmat-programs/california-accidental-release-prevention-calarp-program/calarp-program-guidance-document> and

- <https://www.cchealth.org/health-and-safety-information/hazmat-programs/industrial-safety-ordinance/iso-guidance-document>

CCHHMP 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

CCHHMP 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 (ARP) engineers, supervisor, and the Hazardous Materials Program Director. Portable document format (PDF) versions of these files are also available for public viewing at the CCHHMP office. The Accidental Release Prevention Program files contain regulations, policies, information from the U.S. EPA, Cal EPA, CSB, and other information pertinent to the engineers. The risk management and safety plans are received in hard copy, scanned, and kept at the CCHHMP office.

Number and Type of Audits and Inspections Conducted

Beginning in the winter of 2022, CCHHMP began its next round of required audits at each of the ISO and RISO facilities. This is the ninth round of audits since 2000. In response to the COVID-19 pandemic, CCHHMP developed audit protocols to perform audits both onsite as well as remotely. The one ISO audit conducted during this period was onsite only.

When CCHHMP 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 up to 90 days to respond. Assigned ARP engineers 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 audits/inspections of the regulated stationary source.

An ARP engineer will issue a Preliminary Audit Findings report after each stationary source 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, CCHHMP 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 CCHHMP

The PBF Martinez Refining Company had an MCAR in November 2022 resulting in 20-24 tons of powdered catalyst being discharged into the surrounding community. CCHHMP contracted with a consultant to conduct a root cause analysis incident investigation during the fiscal year 2022-2023 although the report was not developed until 2024.

It should also be noted that a consultant was hired in 2021 to conduct an independent evaluation of an MCAR at the Chevron Richmond Refinery for their February 9, 2021, Wharf Oil Spill. A report for this independent evaluation was completed in 2023 and a public meeting was held where numerous comments were received. CCHHMP expects to have responses developed to all comments associated with this independent evaluation and present the report to the County Board of Supervisors in 2024.

A historical listing of MCAR events starting in 1992 is available at:

<https://www.cchealth.org/health-and-safety-information/hazmat-programs/hazmat-incident-response/major-accidents-at-chemical-refinery-plants>

This list also includes major accidents that occurred before the adoption of the ISO.

CCHHMP’s Process for Public Participation

CCHHMP 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 County Board of Supervisors, CCHHMP also shares ISO annual reports and makes presentations to Community Advisory Panels.

Effectiveness of the Public Information Bank

The Hazardous Materials Programs website (<https://www.cchealth.org/health-and-safety-information/hazardous-materials>) includes:

Programs	Incident Response and Follow-up	Resources
ISO and RISO	HazMat Incident Response	Chemical Safety Board Incident Search
Land Use Permitting Assistance	List of recent incidents	CCHHMP Guidance Documents
CalARP (Including P4)	MCAR Accident History	CalARP/ISO/RISO Regulations
Underground Storage Tanks	Incident Search Database	
Green Business Program	Incident Notification Policy	
Business Plan	72-hour and 30-day Reports	

Effectiveness of the Hazardous Materials Ombudsperson

The Hazardous Materials Ombudsperson is a conduit for the public to express their concerns about how CCHHMP 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 Program Elements Necessary to Implement and Manage the ISO

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

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 physical year. Tables IV and V summarize Inherently Safer Systems that have been implemented during this reporting period. Attachment B includes individual reports from the stationary sources that also include the required reporting of four common process safety performance indicators.

Table IV
Inherently Safer Systems Contra Costa County ISO Stationary Sources

(July 2022 – June 2023)

Regulated Stationary Source	Inherently Safer System Implemented	Risk Reduction Level	Strategy
Air Liquide Large Industries Rodeo	No new inherently safer systems have been implemented	N/A	N/A
Air Products – MRC	No new inherently safer systems have been implemented	N/A	N/A
PBF Martinez Refining Company (MRC)	Designate select check valves as Class I (critical) Check Valves accompanied with annual testing (2 times)	Active	Moderate
	Create a procedure associated with the start-up and shutdown of equipment (2 times)	Procedural	Moderate
	Install alarms on select equipment combined with operator response (9 times)	Active	Moderate
	Require select valve be maintained open to prevent pump deadheading	Procedural	Moderate
Phillips 66 Rodeo Refinery	Upgraded gasket material on select valves to minimize corrosion (2 times)	Passive	Substitute/Simplify
	Upgraded a fire hydrant to a fire monitor	Passive	Simplify
	Upgraded piping to minimize corrosion	Passive	Substitute
	Installed block valves on lines with discharge bleed valves to prevent leakage (2 times)	Active	Moderate
	Installed tank inlet temperature transmitters on two tanks	Active	Simplify
	Replaced a float with a radar tank gauging system	Active	Simplify
	Updated high-level alarms and high-level safe operating limits on a tank	Active	Simplify
	Added a high NOx alarm on a heater and linked alarm to provide email notifications to plant personnel	Active	Simplify
	Updated alarms and limits within MP-30 and U-228 based on internal 2022 audit	Procedural	Simplify

**Table V
Inherently Safer Systems Richmond ISO Stationary Sources
(July 2022 – June 2023)**

Regulated Stationary Source	Inherently Safer System Implemented	Risk Reduction Level	Strategy
Chevron Richmond Refinery (RISO)	Upgraded pump to dual seals to eliminate loss of containment from seal failure	Inherent	Eliminate/Moderate
	Implemented multiple pump seal upgrades to reduce loss of containment from seal failure	Passive	Moderate
	Upgraded valve to stabilize flow to a knockout drum	Passive	Simplify
	Removed an automated pump start system to reduce the potential to damage the pump on low flow	Active	
	Updated inspection strategy to monitor for dead leg corrosion on select piping	Procedural	
	Updated sulfiding procedures to use a different fluid that is heavier and less volatile	Procedural	

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; 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 the department.
- 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 one MCAR incident that occurred within this reporting period in Contra Costa County at an ISO facility. This incident, MRC Catalyst Release in November 2022, resulted in the submittal of a root cause analysis report submitted to CCHMP. This report can be found at:

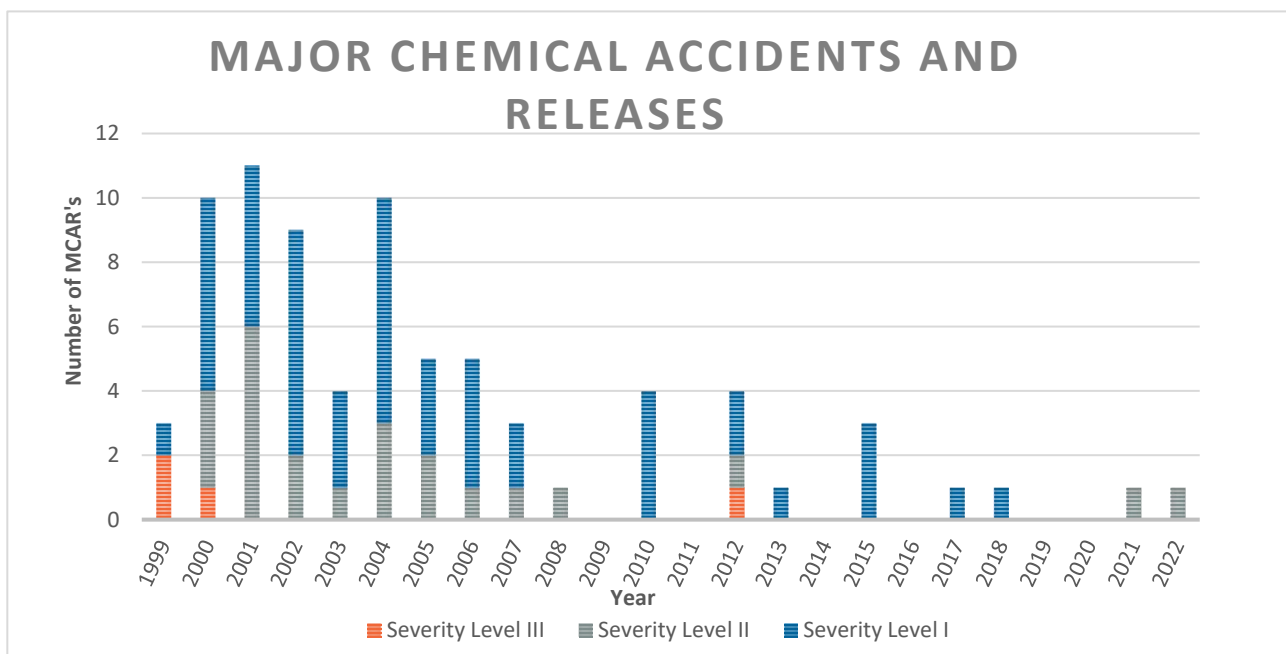
<https://www.cchealth.org/home/showpublisheddocument/28722/638344494921470000>

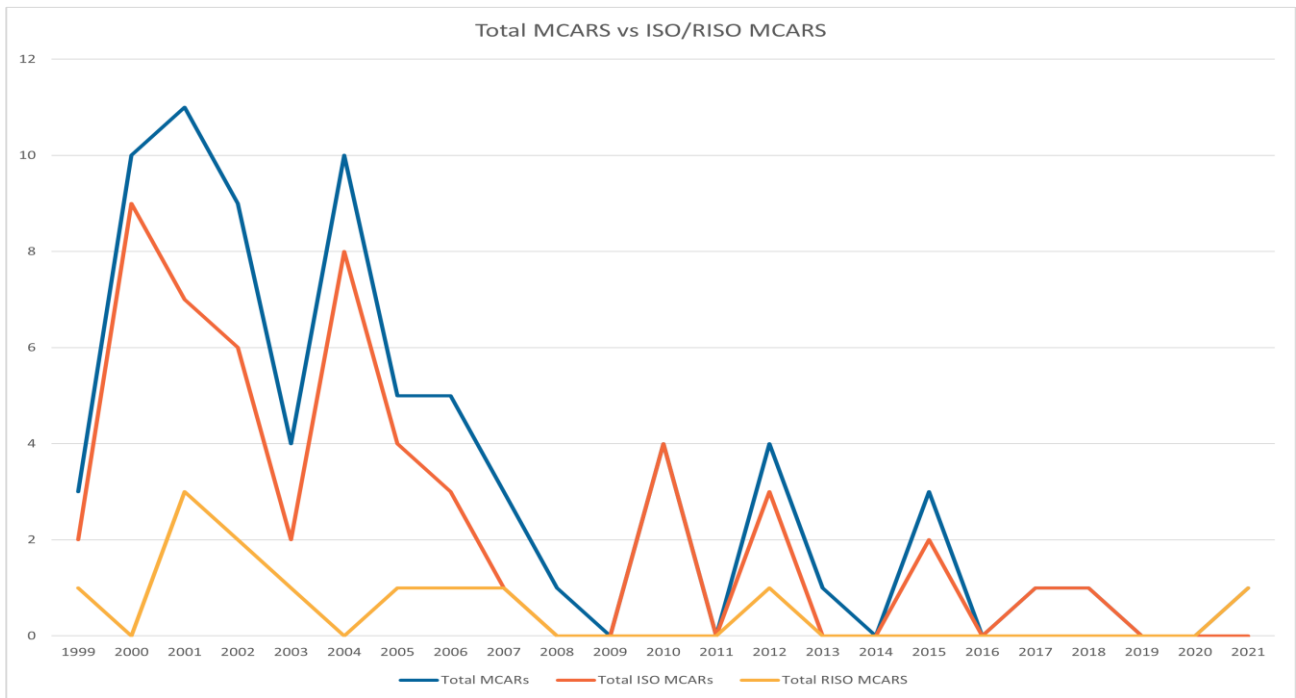
Major Chemical Accidents or Releases

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 1999 through June 30, 2023, for all stationary sources in Contra Costa County. The charts include MCARs at stationary sources only, none that occurred during transportation.





Legal Enforcement Actions Initiated by Contra Costa Health Hazardous Materials Programs

As part of the enforcement of the ISO and CalARP Program, CCHHMP staff may issue notices of deficiency in 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. CCHHMP referred a case to the District Attorney associated with the lack of proper notification of the MRC November 2022 MCAR incident. The District Attorney is working on this case although no legal enforcement actions took place on any ISO facility 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/RISO

Fees charged for the ISO/RISO cover the time ARP engineers use to enforce the ordinance, the position of the Hazardous Materials Ombudsperson, outreach material, and a portion of the overhead for CCHHMP. Fees charged for administering this ordinance for fiscal year 2022–2023 total \$601,809.

Total Personnel and Personnel Years Used by the Hazardous Materials Programs 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:

Approximately 5550 hours total of CCHHMP personnel time was spent on the ISO/RISO during the current reporting period. This includes hours spent performing on-site audit activities, reviewing and updating information for the website, performing safety plan reviews, follow-up of deficiencies from audits or plan reviews, preparing materials for presentations and/or public meetings, working with oversight committees, and participating in investigations (including Root Cause Analysis). This also includes time in activities specifically related to the MRC November 2022 MCAR, including the Safety Inspection, public

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

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

No comments were received by CCHHMP regarding ISO or RISO during the current reporting period. It should be noted that CCHHMP held public meetings associated with the Chevron Wharf Oil Spill MCAR and the MRC Catalyst Release MCAR after the current reporting period. Any comments related to the effectiveness of the ISO from these meetings will be shared in next year's report.

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 CCHHMP
- The Richmond Industrial Safety Ordinance, also administered by CCHHMP.

Each of the programs is very similar in requirements. On October 1, 2017, California petroleum refineries were required to comply with the 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 to be included within the Risk Management Plan
- CCHHMP is required to audit and inspect stationary sources at least once every three years
- The interaction required between the stationary source and CCHHMP.

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 the management of change review, as part of an 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, root cause analysis, and process hazard analysis
- Managing changes in the organization for operations, maintenance, health and safety, 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 associated with process hazard analysis to reduce catastrophic releases.
- Use and reporting of process safety performance indicators in the annual performance review and evaluation report.

The major program differences of ISO from CalARP Program 4 and PSM for Refineries is that the Program 4 requirements identify:

- Mechanical Integrity must include an assessment of Damage Mechanism Review based on operating history and industry experience.
- Process Hazard Analysis must include a review of the 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 requirements 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 in 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. CCHHMP also participated in developing the third edition of CCPS: Inherently Safer Chemical Processes to further clarify and promote the practice and consideration of Inherently Safer Systems.

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 Crop Science Institute in West Virginia, the CSB recommended that regulatory agencies in the area audit their chemical facilities using Contra Costa County's process. CCHHMP 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.
- CCHHMP was asked to give testimony at a June 2010 hearing on "Workplace 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 the federal Occupational Safety and Health Administration and attended by the 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.
- CCHHMP 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.



ATTACHMENT A
HAZARDOUS MATERIALS
OMBUDSMAN EVALUATION
January 1, 2023 – December 31, 2023

Hazardous Materials Ombudsman Evaluation

January 1, 2023 – December 31, 2023

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:

- 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.
- To investigate concerns and complaints, facilitate their resolution, and assist people in gathering information about programs, procedures, or issues.
- To provide technical assistance to the public.
- The Hazardous Materials Ombudsman currently accomplishes these goals through the following program elements:
 - Continuing an outreach strategy so that the people who live and work in Contra Costa County can know about and utilize the program.
 - Investigating and responding to questions and complaints, and assisting people in gathering information about programs, procedures, or issues.
 - Participating in a network of environmental programs for the purpose of providing technical assistance.

This evaluation covers the period from January 1, 2023 through December 30, 2023 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.

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 web site. This page contains information about the program, links to other related web sites, 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.

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

During this period, the Hazardous Materials Ombudsman received 110 information requests. Over 95 percent of these requests occurred via the telephone and have mainly 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. This year, due to the catalyst release from the MRC facility in Martinez in November, 2022, many of the calls were about the health impacts of the Catalyst, especially the safety of eating fruits and vegetables from gardens.

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.

The Ombudsman responded to one formal complaint about the Hazardous Materials Program concerning their decision to refer potential violations of the County's Hazardous Materials Notification policy by MRC for the November, 2022 catalyst release to the District Attorney.

The Ombudsman continued to provide assistance to a group of residents concerned about a DTSC cleanup of a contaminated site in North Richmond.

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.

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. In 2023, the Commission recommended to the Board of Supervisors that they support the development of the AIA model web page, recommended to the Board of Supervisors that they support AB 1238 related to the development of Alternative Minimum Standards for solar panels, developed a letter of support for DCD applications for brownfield remediation grants, worked with Contra Costa CAER to distribute Pipeline Emergency Preparedness brochures to schools in Contra Costa County, appointed 2 student interns for the 2023/2024 school year, recommended candidates to the Board of Supervisors for the General Public and Environmental Organization seats and conducted annual meetings with all five members of the Board of Supervisors.

Asthma Mitigation Program – The Ombudsman participated in the Public Health Department's Asthma Mitigation Program as a resource on environmental health issues. The Ombudsman served on the Technical Advisory Board for RAMP, the Regional Asthma Management Prevention program. The Ombudsman also participated in presentations on the Asthma Mitigation Program for an EPA National Webinar, for a California Department of Public Health Chronic Disease workgroup, for a UC Berkeley meeting on Climate Change and Heat and for a MCE's Community Power Coalition meeting.

The Ombudsman facilitated the completion of two grants to provide asthma trigger mitigations and energy efficiency improvements to Contra Costa Health Plan Medi-Cal clients with poorly controlled asthma. The Ombudsman partnered with staff from MCE, AEA, the Department of Conservation and Development and the Contra Costa Health Plan to implement this program. One grant was for three years and \$528,000 from the Sierra Health Foundation and the other was for three years and \$100,000 from the Bay Area Air Quality Management District.

The Ombudsman also continued to manage a two-year EPA grant for \$200,000 to provide two community health clinics, Lifelong and La Clinica, funding to provide asthma trigger education and mitigations to their clients. The Ombudsman also facilitated the Bay Area Healthy Homes Initiative (BAHHI) grant from the Bay Area Air Quality Management District for 2 years and \$240,000 that provided asthma trigger mitigations and energy efficiency improvements to Contra Costa Health Plan Medi-Cal clients with poorly controlled asthma near mobile sources of pollution. The Ombudsman also implemented a grant from the Air Quality Management District to distribute portable home air purifiers and replacement filters for Contra Costa Medi-Cal patients through the Public Health Nursing program and soon through the Youth Ambassador program.

The Ombudsman continued to participate in the California Healthy Homes Collaborative workgroups on Habitability and Indoor Air Quality.

Climate Change Program - 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 Public Health workgroup to update the Climate Action Plan and the General Plan and represented the Health Department of the County Climate Action Task Force.

Health Careers Pathways – The Ombudsman served as a mentor to a High School Student as part of the Health Careers Pathways summer internship program.

AB 617 – In March, 2023 the Ombudsman began representing the Health Department on the AB 617 Community Steering Committee for the Richmond/North Richmond/San Pablo area. This committee was empowered by the Bay Area Air Quality Management District to develop a Community Emission Reduction Plan for the area. The Ombudsman served on the Public Health and Fuel Refining committees and well as on full Steering Committee.

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, water quality, toxic chemicals, and asthma.

Program management


The Hazardous Material Ombudsman reported to the Climate and Health Officer until he retired in March, 2023. After that, the Ombudsman reported to the Deputy Director of Contra Costa Health Services. The Ombudsman participated on the Health Department's CoCo Cool management team.

Goals for 2024

In this period, the Ombudsman will provide essentially the same services to Contra Costa residents as was provided in the last period until he retires at the end of April, 2024. The Ombudsman will continue to respond to questions and complaints about the actions of the Hazardous Materials Program; answer general questions that come from the public and assist them in understanding regulatory programs; staff the Hazardous Materials Commission; support the Health Department on Climate Change issues; participate in the CAER Emergency Notification committee; participate in the Health Department's Co Co Cool meetings; represent the Health Department in the AB 617 process; and facilitate the completion of the EPA asthma grant, the BAHHI grant and the Air District grant distributing portable air purifiers to MediCal clients.



ATTACHMENT B
HAZARDOUS MATERIALS
COUNTY REGULATED SOURCES
ANNUAL PERFORMANCE
July 1, 2022 – June 30, 2023

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS Policy	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
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Annual Performance Review and Evaluation Submittal

June 30, 2023


*Attach additional pages as necessary

1. Name and address of Stationary Source: Air Liquide Rodeo Hydrogen Plant, 1391 San Pablo Ave, Rodeo, CA 94572
2. Contact name and telephone number (should CCHMP have questions): Nidhi Jacob (281-917-3895)
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 action items, and any other updates in general.
4. Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)): RODEO HYDROGEN PRODUCTION FACILITY INDUSTRIAL SAFETY PLAN - Periodic review and updates made to suffice action item A26-02 from Contra Costa Audit 2022, RODEO SMR INHERENTLY SAFETY SYSTEMS POLICY - Additions include: ISS review needs to be done during development of PHA action items, ISS review to be completed during different phases of a project, ISS to be performed on any major change resulting from investigation of an incident that could have reasonably led to MCAR, to review if existing and new technologies previously not considered for a project could make it inherently safer, RODEO SMR EMERGENCY ACTION PLAN - Updated contact list in the EAP
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)): CCHHMP Office at 4585 Pacheco Boulevard, Suite 100, Martinez; Rodeo and Crockett 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)): All MOCs are reviewed using 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.

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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 six facilities subject to the Industrial Safety Ordinance were \$701,192. The total Industrial Safety Ordinance program fees for these six facilities were - \$632,852. (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)): 3210 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)): _____

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: Human Factor review for SOPs were completed by December 2022, LCC reviews and Procedural HAZOPs were completed for selected SOPs in 2022.

17. Summarize the emergency response activities conducted at the source (e.g., CWS or TEN activation) in response to major chemical accidents or releases Emergency Action Plan Drill was conducted in Aug 2022 with Rodeo-Hercules Fire Dept, P66 Emergency Response, CCHS, Air Liquide HSE and Operational team. Fire Department battalions conducted training for their teams at our following the drill as well.

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

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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, metrics have been developed as a response to an action item from CCCHS.

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
 o 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) 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:

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

Month	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Overdue	23	23	23	23	23	23	23	23	23	23	23	24	24
Repeat	23	23	23	23	23	23	23	23	23	23	23	24	24

Total number of circuits: 187 circuits 36 vessels

Total number of annual planned circuit inspection: 12 circuits and 12 vessel inspections deferred till Q1 2024 due to Low risk of failure based on RBI study. Deferral letter attached

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

Month	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0
Repeat	0	0	0	0	0	0	0	0	0	0	0	0	0


c. Past due Investigation recommended actions for API/ACC Tier1 and Tier 2 incidents.

Month	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0
Repeat	0	0	0	0	0	0	0	0	0	0	0	0	0

d. API/ACC Tier 1 and Tier 2 Incidents and rates starting 2011

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
No. Tier 1 LOPC	0	0	0	0	0	0	0	0	0	0	0	0
Incident rate for Tier 1	0	0	0	0	0	0	0	0	0	0	0	0
Refinery or Industry Rate ¹	0	0	0	0	0	0	0	0	0	0	0	0
Refinery or Industry Mean ²	0	0	0	0	0	0	0	0	0	0	0	0
Tier 2 LOPC	0	0	0	0	0	0	0	0	0	0	0	0
Incident rate for Tier 2	0	0	0	0	0	0	0	0	0	0	0	0
Refinery Rate ¹	0	0	0	0	0	0	0	0	0	0	0	0
Refinery Mean ²	0	0	0	0	0	0	0	0	0	0	0	0

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

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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 2022: 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:

Month	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Total*	0	0	0	0	0	0	0	0	0	0	0	0	0
Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0
Repeat	0	0	0	0	0	0	0	0	0	0	0	0	0

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

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Annual Performance Review and Evaluation Submittal

June 30, 2023

*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): Ken Axe: (925) 313-5371

3. Summarize the status of the Stationary Source's Safety Plan and Program (450-8.030(B)(2)(i)): Public notice for MRC's current Safety Plan ended on May 31, 2023, without comment. The next revision is due August 23, 2025.

4. Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)): The most recent Safety Plan update was made in 2022 to address a finding from the audit conducted by CCHS in 2021. The update entailed clarifying the relationship and distinctions between ISSA and HCA.

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)): CCHHMP 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)): An MCAR occurred at the Catalytic Cracking Unit (CCU) from about 8:30 on the evening of November 24, 2022, until about 4 AM on November 25, based on differential pressure measurements at the Fourth Stage Separator. Between 20 and 24 tons of spent catalyst carried over from the CCU Regenerator through the CO Boiler stacks to atmosphere. Regenerated spent catalyst consists substantially of kaolin (clay mineral), aluminum oxide, and amorphous silica, with small amounts of various heavy metals (tens to hundreds of micrograms of metal per gram of spent catalyst). During the release, wind speeds varied from 0 to 4 mph, the wind direction was out of the Southeast (toward the Northwest), and there was no precipitation. On-site impacts were not observed. There was no knowledge of off-site deposition of spent catalyst during the release, and evidence of off-site deposition was not observed until the morning of November 25 (although it was not identified as spent catalyst until later). Because there was no knowledge of deposition of catalyst off-site, no off-site response was initiated. As feed was being reintroduced to the CCU, the pressure in the Reactor increased, and the difference in pressure between the Reactor and Regenerator also increased, driving the catalyst level in the Regenerator higher. When the catalyst level in the Regenerator became too high, the separators were unable to continue effectively disengaging large catalyst particles from the gas stream flowing to the CO Boilers. The root causes of the high catalyst level in the Regenerator were: insufficient adjustments to the pressure control valve to increase the pressure in the Regenerator relative to Reactor pressure; and insufficient adjustments to the Stripper slide valve to reduce flow of catalyst into the Regenerator. Eleven actions were generated as a result of investigating this MCAR. The actions will result in changes to process controls, operating procedures, and training. Three of the actions have already been implemented, and the remaining eight will be completed by July 31, 2023.

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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)): An RCA was completed for the MCAR summarized in item 6 of this submittal. Eleven actions were generated as a result of the RCA. Three of the actions have already been implemented, and the remaining eight will be completed by July 31, 2023.

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)): 60 actions resulted from the ISO/CalARP audit conducted by CCHS between January 25 and March 3, 2021, including 28 Ensures and 32 Considers. All 60 actions have been implemented.

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 I.

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 six facilities subject to the Industrial Safety Ordinance were \$701,192. The total Industrial Safety Ordinance program fees for these six facilities were - \$632,852. (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)): 3210 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)): MRC has integrated requirements of the Industrial Safety Ordinance into our Process Safety Management System; in the context of our Process Safety Management System, 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 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 was one MCAR (summarized in item 6) in the

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c. Past due Investigation recommended actions for API/ACC Tier1 and Tier 2 incidents.

Month	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0
Repeat	0	0	0	0	0	0	0	0	0	0	0	0	0

d. API/ACC Tier 1 and Tier 2 Incidents and rates starting 2011

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
No. Tier 1 LOPC	1	1	1	0	1	0	2	1	2	0	1	0
Incident rate for Tier 1	0.07	0.07	0.08	0	0.07	0	0.11	0.06	0.12	0	0.10	0
Refinery or Industry Rate ¹	0.15	0.09	0.09	0.09	0.10	0.06	0.08	0.06	0.06	0.06	0.08	0.07
Refinery or Industry Mean ²	*	1.49	1.30	1.41	1.53	1.00	1.11	0.92	1.03	0.84	1.00	1.12
Tier 2 LOPC	2	0	5	2	5	1	2	2	5	1	0	0
Incident rate for Tier 2	0.14	0	0.41	0.11	0.42	0.06	0.11	0.11	0.31	0.11	0	0
Refinery Rate ¹	*	0.24	0.25	0.24	0.21	0.17	0.19	0.17	0.16	0.13	0.18	0.17
Refinery Mean ²	*	*	*	3.59	3.07	2.75	2.75	2.79	2.67	1.80	2.28	2.60

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 2022: 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:


Month	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Total*	109	109	108	106	107	107	109	113	113	115	115	114	---
Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0
Repeat	0	0	0	0	0	0	0	0	0	0	0	0	0

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

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Attachment 1: Inherently Safer Systems Implemented in 2022 (for 2023 ISO Annual Report)

Count	ISS Category/ Approach	Description
1	Procedural	Developed a new operational procedure for placing P-2030 into service and adding a critical step to ensure the suction and discharge block valves are open prior to starting up the pump. This will mitigate the seal failure scenario due to pump deadhead from a blocked discharge of P2030. Procedure ID is CUVF-1180. (CU/VF)
2	Active	Designated the check valves on the wash water makeup to the Desalters #3/4 as "Class I (Critical) Check Valves". (CU/VF)
3	Procedural	Critical pressure alarm added on 21PI477 at 150psig. This will be used as an indicator for pump dead head if LV-284B malfunctions closed with on full unit circulation. (DSU)
4	Procedural	Bring existing alert (45UA846) on P-13478/79 Seal pot high level to an in-house alarm with appropriate operator response in ACM to address pump deadhead. (DCU)
5	Procedural	Bring existing alert (45UA844) on P-13476/77 Seal pot to an in-house alarm with appropriate operator response in ACM to address pump deadhead. (DCU)
6	Procedural	Created a procedure (VGT-2001) to provide instructions for taking the caustic column off-line. (VGT)
7	Procedural	Updated the Operator action in ACM for PT1002 to address C-14490/14491 overpressure due to PV-106 failing closed. (VGT)
8	Procedural	Car sealed open the P-5274/5275 minimum flow bypass valve to prevent pump deadhead scenario. (DIMERSOL)
9	Procedural	Created an alarm for 16FC172 to address pump deadhead due to XV-152A/X or XV-904 failing closed. (DIMERSOL)
10	Procedural	Created an alarm for 16L143 to address pump deadhead due to LC-144 loop failure. (DIMERSOL)
11	Active	Designated the P-5286 discharge check valve a Class I check valve to prevent sump overfill due to reverse flow scenario. (DIMERSOL)
12	Procedural	Created an alarm for 16L1011 to address overfilling the sump while draining spent caustic from V-1141. (DIMERSOL)
13	Procedural	Updated the Operator action for alarm on 16LI109 to address pump deadhead due to HV1030 failing closed (when bypassing DSHT). (DIMERSOL)
14	Procedural	Updated the Operator action for alarm on 16LC479 to address pump deadhead due to FV476 failing closed. (DIMERSOL)


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*Attach additional pages as necessary

1. Name and address of Stationary Source: Air Products PBF/MRC Martinez Refinery, 110 Waterfront Road, Martinez, CA 94553
2. Contact name and telephone number (should CCHMP have questions): Joe Cremona, 925-270-9691
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 was submitted to CCHS in October 2020. CCHS audited the site in Q4 2020 and the audit was finalized in 2022.
4. Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)): The October 2020 Safety Plan submission included routine updates to sections describing Process Safety Programs and changes required from previous audit items. There were no MCARS so no additions to that section in the Safety Plan.
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)): CCHHMP 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 incidents (MCARs) in the last 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)): No Root Cause Analysis were required in the last calendar year and there are no outstanding action items from previous root cause investigations.
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)): Recommendations from the 3 year CCCHS audit have been finalized with the county. 12 of the 16 ensure items have been completed and site operations are progressing through the remainder of the ensures and considers.
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 none for 2022

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-
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 six facilities subject to the Industrial Safety Ordinance were \$701,192. The total Industrial Safety Ordinance program fees for these six facilities were - \$632,852. (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)): 3210 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 were received
-
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 (PHA) was conducted in February 2020. 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.
-
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: None in 2022
-
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 none
-
18. Date the last Safety Culture Assessment was completed: August 2019
-
19. Date the results of the Safety Culture Assessment were reported to the workforce and management: 9/16-18, 2019

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d. API/ACC Tier 1 and Tier 2 Incidents and rates starting 2011

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
No. Tier 1 LOPC	0	0	0	0	0	0	0	0	0	0	0	0
Incident rate for Tier 1	0	0	0	0	0	0	0	0	0	0	0	0
Refinery or Industry Rate ¹	.155	.099	.094	.092	.103	.062	.070	.053	.067			
Refinery or Industry Mean ²												
Tier 2 LOPC	0	0	0	0	0	0	0	0	0	0	0	0
Incident rate for Tier 2	0	0	0	0	0	0	0	0	0	0	0	0
Refinery Rate ¹	.24	.253	.238	.206	.172	.179	.172	.170				
Refinery Mean ²												

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 2022: N/A

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:

Month	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Total*													
Overdue													
Repeat													

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


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*Attach additional pages as necessary

1. Name and address of Stationary Source:
Phillips 66 Rodeo Refinery, 1380 San Pablo Ave., Rodeo Ca. 94572
2. Contact name and telephone number (should CCHMP have questions):
(Not for Publication) Morgan Walker, PSM Director (510) 245-4665
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 2022. The Phillips 66 Refinery was audited by the county’s Hazardous Materials Program in October 2022.
4. Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)):
The Safety Plan was updated August 2022
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)): CCHHMP 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 January 1, 2022 to December 31, 2022 reporting 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 this reporting 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)): Facility received the Preliminary Determination Audit Report on May 26, 2023 and is developing responses to identified recommendations.
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 a listing of Inherently Safer Systems Improvements that were implemented.
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)):

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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 six facilities subject to the Industrial Safety Ordinance were \$701,192. The total Industrial Safety Ordinance program fees for these six facilities were - \$632,852. (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)):
 3210 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 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 this reporting time period.
18. Date the last Safety Culture Assessment was completed:
 Administered December 2021
19. Date the results of the Safety Culture Assessment were reported to the workforce and management:
 December 2022
20. Answer the following regarding the Safety Culture Evaluation Previous to the one listed in 18:
 - Survey method: Written survey
 - Areas of improvements being addressed: Yes.
 - Action Plan made Progress on the identified areas of improvement? (**Yes** or 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? Yes. Progress was reviewed during Interim review conducted in November, 2019

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d. API/ACC Tier 1 and Tier 2 Incidents and rates starting 2011

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
No. Tier 1 LOPC	2	3	0	0	2	0	0	0	0	0	0	0
Incident rate for Tier 1	0.17	0.29	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Refinery or Industry Rate ¹	0.15	0.09	0.09	0.09	0.10	0.06	0.07	0.06	0.06	0.06	0.08	0.07
Refinery or Industry Mean ²	*	1.49	1.30	1.38	.155	1.01	1.13	0.92	1.03	0.84	1.00	1.12
Tier 2 LOPC	5	3	0	1	2	2	2	0	2	2	1	2
Incident rate for Tier 2	0.43	0.29	0.00	0.10	0.21	0.17	0.18	0.17	0.16	0.13	0.10	0.20
Refinery Rate ¹	*	0.24	0.25	0.23	0.20	0.17	0.18	0.17	0.16	0.13	0.18	0.17
Refinery Mean ²	*	*	*	*	3.08	2.78	2.73	2.79	2.67	1.80	2.28	2.60

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


27. Process Safety Performance Indicators for refineries only:

I. Number of Major Incidents in 2022: 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:

Month	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Total*	55	59	59	59	60	62	62	63	64	66	65	64	64
Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0
Repeat	0	0	0	0	0	0	0	0	0	0	0	0	0


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

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Reference	ISS Category	ISS Approach	MOC Description
ME2022150-001	Active	Moderate	Addition of block valve downstream of G-503 bleed valve
ME2022222-001	Passive	Simplify	Upgrade from spiral wound gaskets to corrugated gaskets on the 200-HV-2314B Coke Drum 3 overhead vapor valve.
ME2022150-001	Active	Substitute	Add additional block valve on G503 discharge bleed valve to prevent leakage
M2022980-001	Active	Simplify	Installation of new wireless tank inlet temperature transmitters at TK-168 & TK-170
M2022833-002	Active	Simplify	TK-281 Replace OOS VAREC float with Radar wired to Tank Gauging System.
M20223994-001	Active	Simplify	Update the High level SOL, the Maximum Working level and the independent high level alarms for tank 296 based on new offloading rate.
M20223254-001	Procedural	Simplify	Make various updates to the MP-30 and U-228 ROL tables and alarms based on findings from the 2022 internal Audit completed by the PCA Group
M20222566-001	Active	Simplify	Add the new U-267 heaters NOx predictive calculation tag to the U-267 EOL Table. The new high NOx alarm will be implemented on the DCS as well as in Topview to provide email notifications to refinery personnel.
M20222475-001	Passive	Substitute	E-309B Bundle Tube Thickness Upgrade
M2022867-001	Passive	Substitute	Upgrade gasket on control valve PV-607, to a CMG
M2022668-001	Passive	Simplify	Upgrade fire hydrant 79 at U-110 to a Hydrant Under Monitor (HUM)



ATTACHMENT C
HAZARDOUS MATERIALS
RICHMOND REGULATED SOURCES
ANNUAL PERFORMANCE
July 1, 2022 – June 30, 2023


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*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): Maggie Botka, 510-242-3361
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, 2021. 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 2021. The next revision will be shared in 3Q2024.
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, 2022, and June 1, 2023.
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, 2022, and June 1, 2023.
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)): All action items from prior report periods have been completed. The following is the status of recommendations as of June 30th, 2022: The 2022 Cal ARP/ISO audit closing meeting was held on June 2nd, 2022. There were 44 ensure and consider recommendations, from which 43 total action items were created, and 23 of those action items are complete. The ensure and consider items for the 2022 audit were finalized on January 17th, 2023.
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

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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 six facilities subject to the Industrial Safety Ordinance were \$701,192. The total Industrial Safety Ordinance program fees for these six facilities were - \$632,852. (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)): 3210 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 RCA's) 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 in these categories between June 2022 to June 2023.
 - Continued rolling out the V&V tool to assess opportunities for learning around high risk activities.
 - Enhanced the start of shift agenda to focus on discussing high risk activities and the identification of safeguards between maintenance and operations.
 - 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.
 - Implemented asset strategies for applicable instruments and equipment from PHA-SPA checklists.
 - Continued implementation and assessment of overflow protection and backflow prevention systems during PHA-SPAs. Scope includes SIS upgrades and furnace upgrades.
 - Continued to optimize asset strategies based on inspection findings.


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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, 2022, and June 1, 2023.
18. Date the last Safety Culture Assessment was completed: Data collected October 2020 and reported to the workforce on July 2021.
19. Date the results of the Safety Culture Assessment were reported to the workforce and management: July 2021.
20. Answer the following regarding the Safety Culture Evaluation Previous to the one listed in 18:
 - Survey method: Online survey
 - Areas of improvements being addressed: Training, resource planning, staffing / succession 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, action plan and metrics developed. In the process of being monitored.
 - 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 and metrics are tracked in Chevron systems of record.
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: 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: Not required until the second half of 2023 from the RI-333. The PSCA team (with Union Representatives) shall conduct a written Interim Assessment of the implementation and effectiveness of each PSCA corrective action within three (3) years following the completion of a PSCA report. If a corrective action is found to be ineffective, the employer shall implement changes necessary to ensure effectiveness in a timely manner not to exceed six (6) months.
 - 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) 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:
 - a. Overdue inspection for piping and pressure vessels based on total number of circuits:

Month	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0
Repeat	0	0	0	0	0	0	0	0	0	0	0	0	0

Total number of circuits: 6,530*

Total number of annual planned circuit inspection: 2,840*

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*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.

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

Month	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0
Repeat	0	0	0	0	0	0	0	0	0	0	0	0	0

c. Past due Investigation recommended actions for API/ACC Tier1 and Tier 2 incidents.

Month	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Overdue	0	0	0	1	0	0	0	0	3	0	0	0	0
Repeat	0	0	0	0	1	1	1	1	0	3	0	0	0

d. API/ACC Tier 1 and Tier 2 Incidents and rates starting 2011

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
No. Tier 1 LOPC	4	3	0	1	2	1	1	1	0	0	1
Incident rate for Tier 1	0.14	0.11	0.00	0.02	0.05	0.02	0.02	0.01	0.00	0.00	0.04
Refinery or Industry Rate ¹	0.1553	0.0995	0.0947	0.0925	0.1038	0.0627	0.0761	0.0570	0.0608	0.0612	0.0768
Refinery or Industry Mean ²	**	1.49	1.30	1.38	1.55	1.01	1.13	0.92	1.03	0.84	1.00
Tier 2 LOPC	5	8	6	3	1	3	5	4	0	1	2
Incident rate for Tier 2	0.18	0.29	0.19	0.07	0.02	0.07	0.10	0.06	0.00	0.031	0.079
Refinery Rate ¹	**	0.2405	0.2531	0.2380	0.2063	0.1726	0.1843	0.1728	0.1574	0.1311	0.1768
Refinery Mean ²	**	**	**	**	3.08	2.78	2.73	2.79	2.67	1.80	2.30


Year	2022
No. Tier 1 LOPC	0
Incident rate for Tier 1	-
Refinery or Industry Rate ¹	0.0682
Refinery or Industry Mean ²	0.97
Tier 2 LOPC	2
Incident rate for Tier 2	0.063
Refinery Rate ¹	0.1728
Refinery Mean ²	2.45

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 2022: 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:

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Month	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Total*	54	54	51	52	53	53	43	32	33	34	34	34	34
Overdue	0	0	0	0	0	0	0	0	0	0	0	0	0
Repeat	0	0	0	0	0	0	0	0	0	0	0	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 – for all but procedural & active	Description
Procedural	-	Updated inspection strategy to monitor dead leg corrosion on sour gas piping at a fuel gas mixing drum.
Procedural	-	Updated sulfiding procedures to include using a different fluid that is heavier and less volatile.
Active	-	Removed an automatic pump start system where there was a redundant safety system to reduce the potential to damage both pumps on low flow.
Passive	Simplify	Updated valve to the correct trim to increase flow to help sustain level in a knockout drum.
Passive	Moderate	Implemented multiple centrifugal pump seal upgrades to reduce loss of containment resulting from seal failures.
Inherent	Eliminate & Moderate	Upgrade centrifugal pump to dual seals to eliminate loss of containment resulting from seal failure.