INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCEREVIEW AND EVALUATION REPORT

March 2022

By Contra Costa Health Services Hazardous Materials Programs

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Executive Summary

Contra Costa County's Industrial Safety Ordinance (ISO), adopted in 1998 by the Board of Supervisors, requires regulated facilities in the county to implement comprehensive safety programs to prevent chemical accidents. The ISO's requirements are some of the most stringent in the United States, if not the world. The goal is for facilities to implement comprehensive safety programs, instill a safety culture at the 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. Two facilities (one refinery and one chemical plant) within the City of Richmond are required to comply with the Richmond Industrial Safety Ordinance (RISO), which mandates the same requirements from a separate municipal authority. Both ordinances are administered by Contra Costa County's Health Hazardous Materials Programs (CCHHMP), a division of Contra Costa Health Services. 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 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 COVID 19 restrictions CCHMP does not have any activities to report for 2021.

The Board of Supervisors also requested that staff provide copies of the annual report to communities through the Community Advisory Panels (CAP). This 2021 Annual Report is available on our website and will be sent to CAP representatives for distribution.

Audits*

Audits of regulated businesses are required at least once every three years to ensure that the facilities are implementing required programs. We completed one ISO and no RISO audits in 2021:

- Martinez Refining Company February 2021

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

Major Chemical Accidents or Releases

There were no MCAR events at ISO-regulated facilities in this reporting period and there was one MCAR at a RISO-regulated facility (2/9/2021).

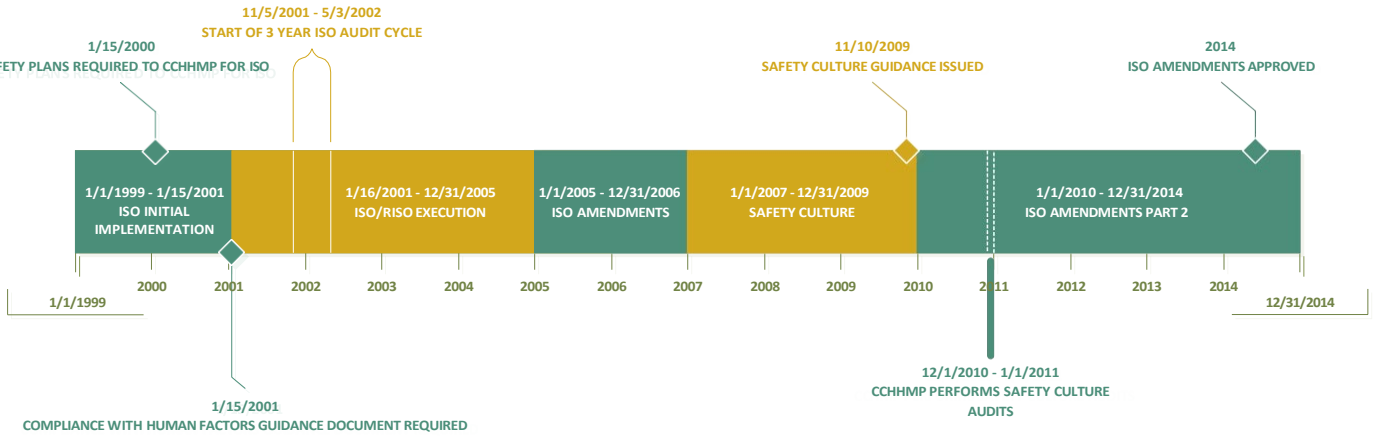
Conclusion

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

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 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	• May perform individual Root Cause Analysis 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	• 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, covering two stationary sources: Chevron Richmond Refinery (Chevron) and Chemtrade West Richmond Works (formerly General Chemical Richmond). CCHHMP administers the RISO for the city.

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

Regulated Stationary Sources Listing

There are a total of four stationary sources covered by the ISO and two stationary sources covered by RISO:

1. Air Liquide Large Industries Rodeo Hydrogen Plant at Phillips 66

2. Air Products at MRC (formerly Shell Martinez Refinery)
3. Martinez Refining Company – MRC (formerly Shell Martinez Refinery)
4. Phillips 66 Rodeo Refinery
5. Chevron Richmond Refinery **(RISO)**
6. Chemtrade West Richmond Works (formerly General Chemical Richmond) **(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 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 Stationary Source Status
(Most Recent)

NAME	Safety Plan (SP) Received	Safety Plan Complete	Audit/ Inspection	Audit Public Meeting
Air Liquide Rodeo	12/01/19	Yes	1/22/19	10/12/2017
Air Products— MRC	10/20/20	No	10/26/20	8/06/19
Phillips 66 Rodeo Refinery	08/06/21	Yes	1/06/20	7/15/18 8/16/18
Martinez Refining Company – MRC (formerly Shell Martinez Refinery)	8/23/19	Yes	1/25/21	8/06/19

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

Name	Safety Plan (SP) Received	Safety Plan Complete	Audit/ Inspection	Audit Public Meeting
Chevron	7/22/2021	No	6/03/19	5/05/19
Chemtrade	11/26/18	Yes	6/15/20	5/05/19

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, prior to the required 45-day public comment period, staff places the updated plan in the Contra Costa Library branch or branches closest to the regulated stationary source, so it is easily accessible for public review. Table III lists each safety plan location.

Table II
Location of Safety Plans—Libraries

Regulated Stationary Source	Location 1	Location 2	Location 3
Air Liquide Large Industries Rodeo Hydrogen Plant	Hazardous Materials Programs Office	Rodeo Public Library	Crockett Public Library
Air Products at MRC (formerly Shell)	Hazardous Materials Programs Office	Martinez Public Library	
Martinez Refining Company – MRC (formerly Shell Martinez Refinery)	Hazardous Materials Programs Office	Martinez Public Library	
Phillips 66 Rodeo Refinery	Hazardous Materials Programs Office	Rodeo Public Library	Crockett Public Library
Chevron Richmond Refinery	Hazardous Materials Programs Office	Point Richmond Library	Main Richmond Library
Chemtrade West	Hazardous Materials Programs Office	Point Richmond Library	Main Richmond 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 Hazardous Materials Programs office, and the guidance documents are available electronically at: *http://cchealth.org/hazmat/calarp/guidance-document.php* and *http://cchealth.org/groups/hazmat/industrial_safety_ordinance_guidance.php*

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

When 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 60 to 90 days to respond. The ARP engineer will work with the stationary source until the plan contains the required changes. When the plan is complete, the ARP engineer will open a public comment period and make the plan available in a public meeting or venue as well as at the public library branch closest to the stationary source. The ARP engineer will respond to all written comments in writing and, when appropriate, use the comments in upcoming audit/inspections of the regulated stationary source.

An ARP engineer will issue a Preliminary Audit Findings report after each facility audit/inspection. The stationary source will have 90 days to respond, and the ARP engineer will review the response. The stationary source must submit an action plan to correct any uncovered ISO compliance issues, which the ARP Engineer will review. If the ARP Engineer agrees with the action plan, CCHMP will issue the Preliminary Audit Findings for public comment and make them available in a public meeting or venue and at the public library branch closest to the stationary source. The ARP engineer will consider comments received during the public comment period and may revise the

Preliminary Audit Findings report. When the public review process is complete, the ARP engineer will issue the Final Audit Findings report and respond in writing to any written public comments received. Table I lists the status of each stationary source's safety plan, audit and inspections of their safety programs, and public meetings.

Root Cause Analyses and/or Incident Investigations Conducted by CCHHMP

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

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 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 section of the Contra Costa Health Services website (http://cchealth.org/hazmat) includes:

Programs	Incident Response and Follow-up	Resources
ISO and RISO	HazMat Incident Response Team Page	Links to Refinery Fenceline Monitoring
Land Use Permitting	List of recent Incidents	HazMat Interagency Task Force
CalARP (including P4)	MCAR Accident History	Chemical Safety Board Incident Search
Underground Storage Tanks	Incident Search Database	CCHHMP Guidance Documents
Green Business Program	Incident Notification Policy	CalARP/ISO/RISO Regulations
Unannounced Inspection Program	72 hr. and 30- day Reports	
Business Plan		

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 Required 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 plan similar and in addition to ISO safety plans. An ARP engineer reviews risk management plans and performs CalARP Program audits simultaneously with ISO audits.

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

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

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

Table III
Inherently Safer Systems Contra Costa County ISO Facilities
(July 2020-June 2021)

Regulated Stationary Source	Inherently Safer System Implemented	Design Strategy	Approach
Air Liquide Large Industries Rodeo Hydrogen Plant	No new inherently safer systems have been implemented	N/A	N/A
Air Products at MRC	Simplified equipment design by changing equipment metallurgy.	Passive	Simplify
Phillips 66 Rodeo Refinery	Reduced hazard by changing chemicals used in process (2 times)	Inherent	Substitute
	Reduced potential of exposure by changing layout or design of equipment (5 times)	Passive	Moderate
	Reduced potential unit upset by changing equipment or adding alarms (5 times)	Active	Moderate
	Reduced potential of exposure by removing equipment from service (2 times)	Inherent	Eliminate
Martinez Refining Company – MRC (formerly Shell Martinez Refinery)	Reduced potential of error by changing service in procedure (10 times)	Procedural	Simplify
	Reduced potential of exposure by repairing equipment or adding/replacing equipment (6 times)	Passive	Moderate
	Reduced potential unit upset by adding alarms (1 time)	Active	Moderate

Table IV
Inherently Safer Systems Richmond ISO Facilities
(July 2020-June 2021)

Regulated Stationary source	Inherently Safer System Implemented	Design Strategy	Approach
Chevron Richmond Refinery	Reduced the potential of exposure by equipment design (2 times)	Inherent	Moderate
	Reduced potential of exposure and hazard by equipment design (2 times)	Active	Moderate
	Reduced potential of exposure by updating procedures to reduce human error (1 time)	Procedural	Simplify
Chemtrade West Richmond Works	Eliminated chemicals in process (1 time)	Inherent	Eliminate

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

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

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

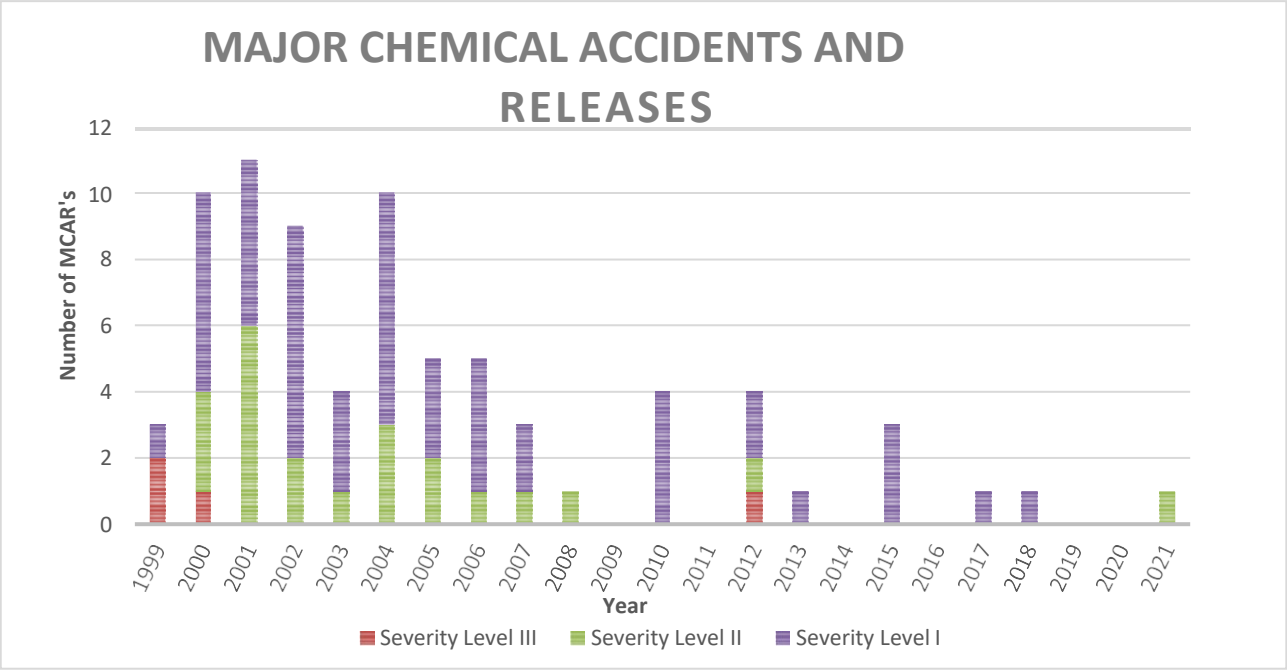
The regulated stationary source is required to submit a report to CCHHMP 30 days after the root cause analysis is complete. There was no MCAR incidents that occurred within this reporting period in Contra Costa County at an ISO facility. All RCA reports for MCAR incident reports are available at the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

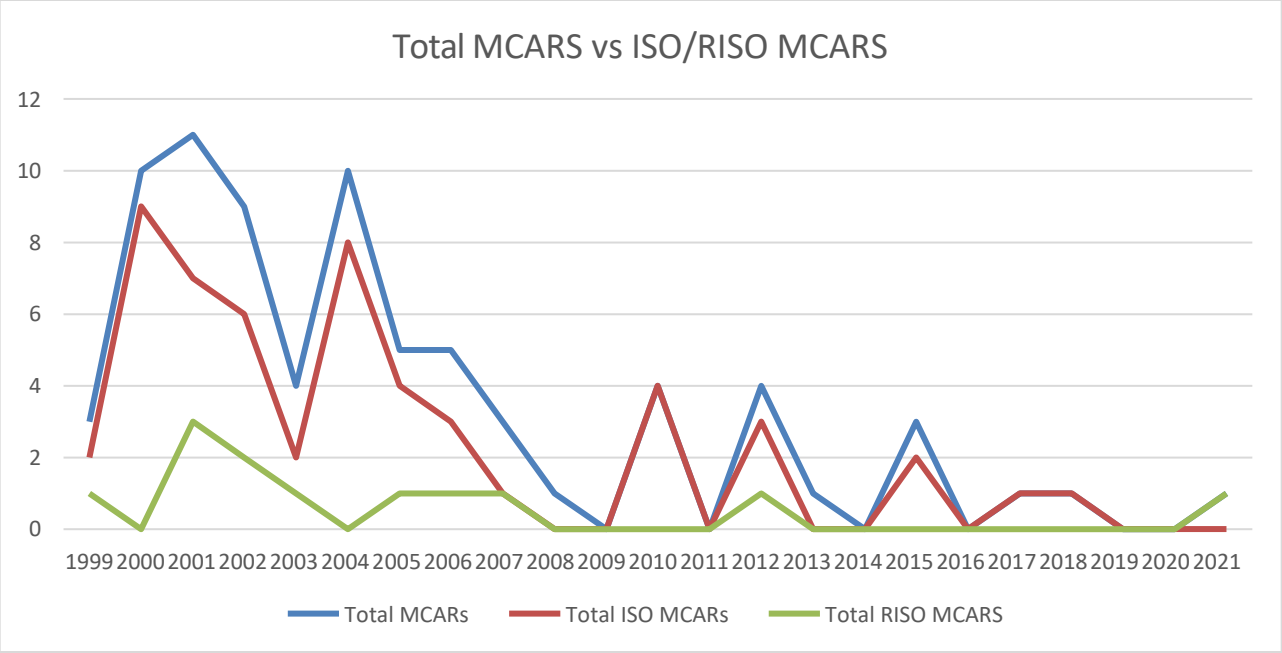
Major Chemical Accidents or Releases

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

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

These charts show MCARs from January 1999 through December 2021 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 on the safety and risk management plans of ISO-regulated facilities and may issue audit findings detailing what a stationary source is required to change to come into compliance with the regulations. CCHHMP has taken no legal enforcement actions on the ISO facilities during this reporting period.

Penalties Assessed as a Result of Enforcement

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

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

Fees charged for the ISO cover the time ARP engineers use to enforce the ordinance, the position of the Hazardous Materials Ombudsperson, outreach material and to cover a portion of the overhead for CCHHMP. Fees charged for administering this ordinance for fiscal year 2020–2021 total $ 575,404.

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

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

- Approximately 2668 hours total of CCHHMP personnel time was spent on the ISO 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, and participating in investigations (including Root Cause Analysis). The total does not include Ombudsperson time spent preparing for public meetings, working with engineers on questions arising from the ISO, and answering questions from the public on the ISO.

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

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

The Impact of the ISO on Improving Industrial Safety

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

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

Each of the programs is very similar in requirements. On October 1, 2017, California petroleum refineries are required to comply with requirements of CalARP Program 4 and OSHA PSM for refineries. Both are based on the ISO.

CalARP Program 3 differs from the Federal Accidental Release Prevention Program in the following ways:

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

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

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

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

- Mechanical Integrity must include assessment of Damage Mechanism Review based on operating history and industry experience
- Process Hazard Analysis must include review of Damage Mechanism Review report compiled as part of process safety information
- Contractor and any subcontractors use a skilled and trained workforce pursuant to Health and Safety Code Section 25536.7
- Require a management system with specific 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 on developing the second edition of Inherently Safer Chemical Processes, a book that is referenced in the ordinance and with the Center for Chemical Process Safety on developing process safety metrics for leading and lagging indicators. 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 System.

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

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

December 2020-December 2021

ATTACHMENT A
HAZARDOUS MATERIALS OMBUDSMAN REPORT

Hazardous Materials Ombudsperson Evaluation

I. INTRODUCTION

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

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

1. To serve as a single point of contact for people who live or work in Contra Costa County regarding environmental health concerns, and questions and complaints about the Hazardous Materials Programs.

2. To investigate concerns and complaints, facilitate their resolution, and assist people in gathering information about programs, procedures, or issues.

3. To provide technical assistance to the public.

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

1. Continuing an outreach strategy so that the people who live and work in Contra Costa County can know about and utilize the program.

2. Investigating and responding to questions and complaints, and assisting people in gathering information about programs, procedures, or issues.

3. Participating in a network of environmental programs for the purpose of providing technical assistance.

This evaluation covers the period from December 1. 2020 through December 31, 2021 for the Hazardous Materials Ombudsman program. The effectiveness of the program shall be demonstrated by showing that the activities of the Hazardous Materials Ombudsman meet the goals established in the Industrial Safety Ordinance. Due to the COVID-19 pandemic, 2021 was an unusual year. For the entire year the Ombudsman worked from home and conducted all business by phone or via virtual meetings. For these reasons, many of the activities of the Ombudsman were reduced this in year relation to previous years.

II. PROGRAM ELEMENTS

1. Continuing an Outreach Strategy

   This period efforts were focused on maintaining the outreach tools currently available. The web page was maintained for the program as part of Contra Costa Health Services website. This page contains information about the program, links to other related websites, and information about upcoming meetings and events. A toll-free phone number is published in all three Contra Costa County phone books in the Government section.

2. Investigating and Responding to Questions and Complaints, and Assisting in Information Gathering During this period, the Hazardous Materials Ombudsman received 137 information requests. Over 95 percent of these requests occurred via the telephone, and have been requests for information about environmental issues. Requests via e-mail are slowly increasing, mainly through referrals from Health Services main web page. Most of these requests concern problems around the home such as asbestos removal, household hazardous waste disposal, pesticide misuse, mold and lead contamination.

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

   In 2019 the Ombudsman began facilitating monthly debriefings of the Hazardous Materials Program Incident Response team incidents.

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

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

- **CAER (Community Awareness and Emergency Response)**—This non-profit organization addresses industrial accident prevention, response and communication. The Ombudsman participated in the Emergency Notification subcommittee of CAER.

- **Hazardous Materials Commission**—In 2001, the Ombudsman took over as staff for the Commission. As staff to the Commission, the Ombudsman conducts research, prepared reports, drafts letters and provides support for 3 monthly Commission meetings. This year, the Commission made recommendations to the Transportation, Water and Infrastructure committee of the Board of Supervisors concerning potential policies to address the impacts of sea level rise on the storage, use and transportation of hazardous materials and hazardous waste in Contra Costa County, Conducted a survey of businesses potentially impacted directly by sea level rise, made recommendations to the County Board of Supervisors concerning the update to the County's General Plan, made recommendations to the Board of Supervisors concerning treated wood waste management, provided input to the Hazardous Materials Program on proposed changes to the Hazardous Materials Incident Notification Policy, sponsored two student internships for the 2020/2021 school year and appointed two new student interns for the 2021/2022 school year, and recommended candidates to the Board of Supervisors for the Environmental Engineer seat and alternate.

- **Integrated Pest Management Advisory Committee**—During this period the Ombudsman represented the Health Department on the County Integrated Pest Management Advisory Committee. This Committee brings Department representatives and members of the public together to help implement the County's Integrated Pest Management policy.

- **Asthma Program**—The Ombudsman participated in the Public Health Department's Asthma Program as a resource on environmental health issues. The Ombudsman served on the Technical Advisory Board for RAMP, the Regional Asthma Management Prevention program, and supported the Public Health Department's participation in the AB 617 Community Air Quality program in Richmond. The Ombudsman provided The Ombudsman continued to facilitate the implementation of two grants to provide asthma trigger mitigations and energy efficiency improvements to Contra Costa Health Plan Medical 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 one year and $100,000 from the Bay Area Air Quality Management District. The Ombudsman also began managing 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.

- **Climate Change**
  During this period the Ombudsman provided technical assistance to the Public Health department on a variety of climate change issues. The Ombudsman participated in a County work-group to update the Climate Action Plan and the General Plan.

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

III. PROGRAM MANAGEMENT

The Hazardous Material Ombudsman continued to report to the Public Health Director on a day-to-day basis during this period, but in October, 2021 began reporting to the newly-created Chief Climate and Health Policy Officer. The Ombudsman was also a member of Health Services Emergency Management Team (EMT) and participated on its EP3RC management team.

IV. GOALS FOR THE 2022 PERIOD

In this period, the Ombudsman will provide essentially the same services to Contra Costa residents as was provided in the last period. The Ombudsman will continue respond to questions and complaints about the actions of the Hazardous Materials Programs; answer general questions that come from the public and assist them in understanding regulatory programs; staff the Hazardous Materials Commission; represent the Public Health Department on the Integrated Pest Management Advisory Committee; and participate in the CAER Emergency Notification committee. The Ombudsman will continue to be part of the Health Department's EP3RC team and the Emergency Management Team.

During this period the Ombudsman will continue to provide technical assistance to Contra Costa Health on Climate Change issues by being on the County-wide work group updating the Climate Action Plan and the General Plan and representing Contra Costa Health on the BARHII Built Environment Committee if it resumes. The Ombudsman will continue to work with collaboratives at the local, regional and state level. The Ombudsman with continue to coordinate the implementation of the three grants that were received to conduct the Asthma Mitigation Program and anticipates receiving another grant from the Bay Area Air Quality Management District to conduct additional in-home asthma trigger assessments.

July 2020-June 2021

ATTACHMENT B
COUNTY REGULATED SOURCES ANNUAL PERFORMANCE

With accident history and inherent safety implementation

Annual Performance Review and Evaluation Submittal June 30, 2021

*Attach additional pages as necessary

1. **Name and address of Stationary Source:** Air Liquide Rodeo Hydrogen Plant, 1391 San Pablo Ave., Rodeo, California 94572

2. **Contact name and telephone number (should CCHMP have questions):** 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 updates for the ongoing section E. Safety Plan guidance document review.

4. **Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)):** Several documents have been updated – Rodeo Inherently Safety Systems Policy (Dec 2020), Rodeo Latent Conditions Procedure (Dec 2020), Rodeo Process Hazard Analysis for Covered Processes (Oct 2020).
5. **List of locations where Safety Plans are/will be available for review, including contact telephone numbers if the source will provide individuals with copies of the document (450-8.030(B)(2)(ii)):** CCHMP Office at 4585 Pacheco Boulevard, Suite 100, Martinez; Martinez Library, (libraries closest to the stationary source).
6. **Provide any additions to the annual accident history reports (i.e. updates) submitted pursuant to Section 450-8.016(E)(2) of County Ordinance 98-48 (450-8.030(B)(2)(iii)) (i.e., provide information identified in Section 450-8.016(E)(1) for all major chemical accidents or releases occurring between the last annual performance review report and the current annual performance review and evaluation submittal (12-month history)):** There were no major chemical accidents or releases during the past 12 months.

7. **Summary of each Root Cause Analysis (Section 450-8.016(C)) including the status of the analysis and the status of implementation of recommendations formulated during the analysis (450-8.030(B)(2)(iv)):** There were no major chemical accidents or releases in the past 12 months.

8. **Summary of the status of implementation of recommendations formulated during audits, inspections, Root Cause Analyses, or Incident Investigations conducted by the Department (450-8.030(B)(2)(v)):** There were no major chemical accidents or releases in the past 12 months.
9. **Summary of inherently safer systems implemented by the source including but not limited to inventory reduction (i.e., intensification) and substitution (450-8.030(B)(2)(vi)):** Reviewed MOCs following ISS evaluation and change methodology
10. **Summarize the enforcement actions (including Notice of Deficiencies, Audit Reports, and any actions turned over to the Contra Costa County District Attorney's Office) taken with the Stationary Source pursuant to Section 450-8.028 of County Ordinance 98-48 (450-8.030(B)(2)(vii)):** There were no enforcement actions during this period.

11. **Summarize total penalties assessed as a result of enforcement of this Chapter (450-8.030(3)):** No penalties have been assessed against this facility.

12. **Summarize the total fees, service charges, and other assessments collected specifically for the support of the ISO (450-8.030(B)(4)):** The total CalARP Program fees for the eight facilities subject to the Industrial Safety Ordinance was $822,604. The total Industrial Safety Ordinance program fees for these eight facilities was $575,404. (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)):** 2,668 hours were used to audit/inspect and issue reports on the Risk Management Chapter of the Industrial Safety Ordinance.

14. **Copies of any comments received by the source (that may not have been received by the Department) regarding the effectiveness of the local program that raise public safety issues(450-8.030(B)(6)):** None

15. **Summarize how this Chapter improves industrial safety at your stationary source (450-8.030(B)(7)):** This chapter reinforces the need to maintain, follow, and continuously improve our structured safety program to help ensure the safety of our employees and the community 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.** LCC Procedure reviews were facilitated by RMP Corp in October 2020. The recommendations that resulted from the review were incorporated to the procedures and updated. PHA evaluation for the facility scheduled for August 2021.

17. **Summarize the emergency response activities conducted at the source (e.g., CWS or TEN activation) in response to major chemical accidents or releases:** Tabletop Emergency drill was conducted in Dec 2020 and attendees included Rodeo-Hercules Fire dept, Air Liquide Operations and HSE specialist, CCHS, P66 Emergency Response. A drill will be conducted in 2021 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

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

22. **Describe the process in place that includes employees and their representatives that will determine if the action items effectively changed the expected culture items:** N/A 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:

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

2020	Overdue	Repeat
January	11	11
February	11	11
March	11	11
April	11	11
May	11	11
June	11	11
July	11	11
August	11	11
September	11	11
October	11	11
November	11	11
December	11	11
TOTAL	**11**	**11**

1. Total number of circuits: 187 piping circuits & 36 vessels
2. Total number of annual planned circuit inspection: 11 water circuits deferred till July 2023 due to Low consequence of failure based on RBI study. Deferral letter attached.

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

2020	Overdue	Repeat
January	5	5
February	5	5
March	5	5
April	5	5
May	5	5
June	5	5
July	5	5
August	5	5
September	5	5
October	5	5
November	5	5
December	2	2
TOTAL	**2**	**2**

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

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

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

Year	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20
No. Tier 1 LOPC	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
Refinery or Industry Rate[1]	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
Tier 2 LOPC	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
Refinery Rate[1]	0	0	0	0	0	0	0	0	0	0
Refinery Mean[2]	0	0	0	0	0	0	0	0	0	0

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

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

26. Process Safety Performance Indicators for refineries only:

I. Number of Major Incidents in 2020: 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:

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

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

Annual Performance Review and Evaluation Submittal June 30, 2021

*Attach additional pages as necessary

1. **Name and address of Stationary Source:**
   Air Products—Shell Martinez Refinery, 110 Waterfront Road, Martinez, CA 94553

2. **Contact name and telephone number (should CCHMP have questions):** Nicola Maher, 925-723-1517

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 at time of submission, the report was in draft.

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)):** CCCHMP Office at 4585 Pacheco Boulevard, Suite 100, Martinez; Martinez Library (libraries closest to the stationary source).

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

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)):** FCCHS Site Audit occurred in Q4 2020. At time of submission of this document the audit is under review and not finalized. At time of submission, there are no open recommendations from inspections, root cause analyses or incident investigations.

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)):**
   TE-109 Steam Superheat Thermocouple was replaced with a model with Upgrade CG Detectors w/ Draeger Polytron 8200 DQ Model (Simplification) PSA Vote Boat Configuration Changes - Help reduce single point of failure on PSA voting scheme (Simplification)added material that reduces the risk of failure of the thermocouple in service. (Simplification).

10. **Summarize the enforcement actions (including Notice of Deficiencies, Audit Reports, and any actions turned over to the Contra Costa County District Attorney's Office) taken with the Stationary Source pursuant to Section 450-8.028 of County Ordinance 98-48 (450-8.030(B)(2)(vii)):** There were no enforcement actions during this period.

11. Summarize total penalties assessed as a result of enforcement of this Chapter (450-8.030(3)): No penalties have been assessed against this facility.

12. Summarize the total fees, service charges, and other assessments collected specifically for the support of the ISO (450-8.030(B)(4)): The total CalARP Program fees for the eight facilities subject to the Industrial Safety Ordinance was $603,958. The total Industrial Safety Ordinance program fees for these eight facilities was—$575,404 (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)): 2,668 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)): 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 2020.

17. Summarize the emergency response activities conducted at the source (e.g., CWS or TEN activation) in response to major chemical accidents or releases: None.

18. Date the last Safety Culture Assessment was completed: January 2015 **Survey method:** August 2019.

19. Date the results of the Safety Culture Assessment were reported to the workforce and management: Sept. 16-18, 2019.

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

- Survey method: Electronic, Anonymous Survey
- Areas of improvements being addressed: 2020 actions focus on improving Accident Prevention Techniques (APTs), safety suggestions and near miss reporting. BSPs (Monthly Safety Meetings) used as the forum for communication. Future actions will focus on Contractor safety and Maintenance Safety
- 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? N/A
  - If No, has a new action plan been developed to address the identified areas of improvement? (Yes or No).

21. Have milestones and metrics been developed to determine how the Safety Culture Assessment actions are being implemented? Yes or if not, Why not? No – N/A (only Program 4 requires this)

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 next survey results will show whether actions were effective.

Date of the mid-cycle progress evaluation: N/A Program 4

- 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

23. 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 – Program 4

24. Common Process Safety Performance Indicators:

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

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

Total number of circuits: 89 Circuits were inspected in FY20 (660 total)
Total number of annual planned circuit inspections: 57 circuits are scheduled for FY21

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

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

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

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

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

Year	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20
No. Tier 1 LOPC	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
Refinery or Industry Rate[1]	.155	.099	.094	.092	.103	.062	0.07	.053	.067	0
Refinery or Industry Mean[2]	0	1.49	1.30	1.38	1.55	1.01	0	0	0	0
Tier 2 LOPC	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
Refinery Rate[1]	0	.24	.253	.238	.206	.172	.179	.172	.017	0
Refinery Mean[2]	0	0	0	0	3.08	2.78	0	0	0	0

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

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

26. Process Safety Performance Indicators for refineries only:

I. Number of Major Incidents in 2020:

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

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

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

Annual Performance Review and Evaluation Submittal June 30, 2021

*Attach additional pages as necessary

1. **Name and address of Stationary Source:** Phillips 66 Rodeo Refinery, 1380 San Pablo Avenue, Rodeo, CA 94572

2. **Contact name and telephone number (should CCHMP have questions):** Morgan Walker 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 2018. The Phillips 66 Refinery was audited by the county's Hazardous Materials Program in January 2020

4. **Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)):** The original Safety Plan for this facility was filed with Contra Costa Health Services on January 14, 2000. A revised plan was filed on April 7, 2000 with the updated recommendations requested by CCHS. A Human Factors Amendment was submitted on January 15, 2001. In conjunction with CCHS's required 2nd public meeting on our plan and audit findings, we submitted a complete revision of the plan to reflect the change in ownership of our facility and to update where needed. We took this opportunity to include Human Factors within the plan instead of having it as an amendment. On August 9, 2002 the plan was resubmitted. Public meetings for our plans were held on June 22, 2004 in Rodeo and July 8, 2004 in Crockett. As required the Plan was fully updated in August 2005 on the 3 year cycle. The Plan was reviewed by CCHS and was revised on July 28, 2006 with recommended changes. The Safety Plan was updated in July 2009 per the 3 year cycle.. Recommendations requested by CCHMP were incorporated into the Safety Plan on November 4, 2010. Safety Plan was updated in August 2012 and August 2015 per the 3 year cycle. Recommendations requested by CCHMP on May 22, 2017 were incorporated into the plan on August 4, 2017. An updated Safety Plan was submitted in August 2018. The plan will be updated in 2021 per the 3 year cycle.

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

6. **Provide any additions to the annual accident history reports (i.e. updates) submitted pursuant to Section 450-8.016(E)(2) of County Ordinance 98-48 (450-8.030(B)(2)(iii)) (i.e., provide information identified in Section 450-8.016(E)(1) for all major chemical accidents or releases occurring between the last annual performance review report and the current annual performance review and evaluation submittal (12-month history)):** There were no major chemical accidents or releases at the Rodeo Refinery in the June 1, 2020 to May 31, 2021 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 the 2018–2019 time period.

8. **Summary of the status of implementation o45f recommendations formulated during audits, inspections, Root Cause Analyses, or Incident Investigations conducted by the Department (450-8.030(B)(2)(v)):** There are 20 Ensure and 34 Consider recommendations from the 2020 county ISO-CalARP audit. Phillips66 responded to the Administrative Draft Audit Report on December 18, 2020. There were no other audits, inspections, Root Cause Analyses, or Incident Investigations conducted by the Department.

9. **Summary of inherently safer systems implemented by the source including but not limited to inventory reduction (i.e., intensification) and substitution (450-8.030(B)(2)(vi)):** See ATTACHMENT 1 for the listing of Inherently Safer Systems Improvements 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)):** No penalties have been assessed against this facility.

12. **Summarize the total fees, service charges, and other assessments collected specifically for the support of the ISO (450-8.030(B)(4)):** The total CalARP Program fees for the eight facilities subject to the Industrial Safety Ordinance was $603,958. The total Industrial Safety Ordinance program fees for these eight facilities was—$75,404. (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)):** 2,668 hours were used to audit/inspect and issue reports on the Risk Management Chapter of the Industrial Safety Ordinance.

14. **Copies of any comments received by the source (that may not have been received by the Department) regarding the effectiveness of the local program that raise public safety issues(450-8.030(B)(6)):** No comments were received.

15. **Summarize how this Chapter improves industrial safety at your stationary source (450-8.030(B)(7)):** In addition to the Phillips 66 Corporate Health Safety Environment Management Systems the ISO provides another tool for the improvement of process safety performance and industrial safety.

16. **List examples of changes made at your stationary source due to implementation of the Industrial Safety Ordinance (e.g., recommendations from PHA's, Compliance Audits, and Incident Investigations in units not subject to CalARP regulations; recommendations from RCA's) that significantly decrease the severity or likelihood of accidental releases.** Units that were not covered by RMP, CalARP, and PSM are covered under the ISO and PHAs are scheduled and performed on all these units. Recommendations from the PHAs are implemented at an accelerated rate. A list of inherently safer system improvements, required by the ISO for PHA recommendations and projects, are listed in ATTACHMENT1.

17. **Summarize the emergency response activities conducted at the source (e.g., CWS or TEN activation) in response to major chemical accidents or releases:** There were no major chemical accidents or releases at the Rodeo Refinery in the 2018–2019 time period.

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

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

20. **Answer the following regarding the Safety Culture Evaluation for no. 18:**
    - SURVEY METHOD: written survey
    - Areas of improvements being addressed:
        - No areas were identified as scoring significantly below normal values.
        - Improvements require too many reviews/approvals.
        - Employees are reluctant to reveal problems or errors.
        - Having enough qualified people to do the work in their area.
    - Action Plan made Progress on the identified areas of improvement? YES
        - **If Yes, did the improvements meet the goals and if not, was the action plan amended to address what is being done to meet the goals?** Yes, Progress was made and improvements observed in the subsequent SCA. Improvement opportunities were identified in the most recent SCA and recommendations identified.
        - If No, has a new action plan been developed to address the identified areas of improvement? (Yes or No)

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

22. **Describe the process that included employees and their representatives used to determine if the action items effectively changed the expected culture items:** A midcycle team review was done to evaluate the effects of the actions on the safety culture. The evaluation team included management and union representatives per policy.

23. **Date of the mid-cycle progress evaluation: November 1, 2019**
        - Did the action plan (for no 18) make progress on the identified areas of improvement? **Yes** or if not, has a new action 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 used to determine whether the action items from the SCA and the mid-cycle progress effectively changed the expected culture items:** By policy, our process includes management and union representatives to review the results and develop modified recommendations as appropriate. Each action was discussed and compared to site performance indicators to determine if improvement was made. The Mid-Cycle Review was conducted on November 1, 2019 by the Process Safety Director, USW PSM Representative, and Senior H&S Consultant.

25. Common Process Safety Performance Indicators:

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

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

Total number of circuits: 29,176. Total number of annual planned circuit inspections: 2,413

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

2020	Overdue	Repeat
January	2	2
February	1	1
March	3	1
April	1	1
May	1	1
June	1	1
July	1	1
August	1	1
September	2	1
October	1	1
November	1	1
December	0	0
TOTAL	**5**	**2**

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

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

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

Year	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20
No. Tier 1 LOPC	2	3	0	0	2	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
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
Refinery or Industry Mean[2]	*	1.49	1.30	1.38	1.55	1.00	1.11	0.92	1.03	0.84
Tier 2 LOPC	5	3	0	1	2	2	2	0	2	2
Incident rate for Tier 2	0.43	0.29	0.00	0.10	0.21	0.17	0.22	0.00	0.16	0.21
Refinery Rate[1]	*	0.24	0.25	0.23	0.20	0.17	0.18	0.17	0.16	0.13
Refinery Mean[2]	*	*	*	*	3.08	2.75	2.75	2.79	2.67	1.80

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

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

* Tier 1 & 2 Refinery Rate and Mean data was not available at the time of submittal.

26. Process Safety Performance Indicators for refineries only:

I. Number of Major Incidents in 2018: NONE

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

2020	Total*	Overdue	Repeat
January	30	0	0
February	31	0	0
March	31	0	0
April	31	0	0
May	31	0	0
June	34	0	0
July	35	0	0
August	34	0	0
September	35	0	0
October	35	0	0
November	32	0	0
December	32	0	0
TOTAL	**32**	**0**	**0**

*** Tier 1 & 2 Refinery Rate and Mean data was not available at the time of submittal**

Attachment 1: June 2020—June 2021 ISS improvements

Reference	Approach	ISS Category	MOC Description
M20212637-001	Substitute	Inherent	Introduced a more inherently safe and renewable feedstock to Unit 250 called RB Soybean Feed
M20201934-001	Moderate	Active	Installed germicidal UVC light to kill virus COVID-19 in the Central Control Room air conditioning unit
M2021456-001	Simplify	Procedural	Converted existing Crude/Coker Complex Operating Procedures to Digital Versions
M20205613-001	Moderate	Passive	Upgraded gasket material to increase the reliability of E-809 as part of the Refinery Wide Heat Exchanger Upgrading Gasket to Kammpro Style effort
M20202207-001	Eliminate	Inherent	Permanently removed Tank TK-674 from service
M20201741-001	Moderate	Procedural Active	Implemented new alarms to protect against the potential of chloride stress corrosion cracking for 300 series stainless steel sour water piping system as a result of a Damage Mechanism Review
M20196214-002	Moderate	Passive	Installed dual mechanical pump seals on the 236:G- 801 Regenerator Reflux Pump
M20195796-001	Substitute	Inherent	Substituted the liquid boiler feed water treatment chemical, Nalco BT-3811, for Nalco BT-3411 which is more stable and will decrease the plugging in the injection lines
M20194263-001	Moderate	Passive	Upgraded Unit 250 Diglycolamine (DGA) sample station to a closed-loop system
M20194092-001	Moderate	Passive	Installed three closed-loop foul water sample stations and associated piping at Unit 267
M20193185-002	Moderate	Active	Installed pump seal integrity alarms on Unit 200 Crude/Coker pumps
M20162681-001	Eliminate	Inherent	Disconnected and plugged a 150# steam-to-process connection line to prevent blackflow
M20203088-001	Moderate	Active	Upgraded 6" check valve on discharge of G-3 Richmond Shipping Pump
M20201360-010	Moderate	Active	Installed a check valve, bleed valves, and spectacle blind on 150# steam utility cross connection to prevent backflow
M20201925-001	Moderate	Active	Installed a valve and other piping on top of Tank 104 roof hatch to allow for safer degassing of the vapor space
M20201453-001	Moderate	Passive	Upgraded metallurgy of antifoulant piping from carbon steel to stainless steel for better chemical compatibility and less corrosion

Annual Performance Review and Evaluation
Submittal June 30, 2021

*Attach additional pages as necessary

1. **Name and address of Stationary Source:** Martinez Refinery 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)):** The current revision of the Safety Plan was submitted in August 2019. The Safety Program elements are generally consistent with the descriptions in the Safety Plan. There will be revisions to the Safety Plan as a result of the ISO/CalARP audit conducted in February/March 2021.
4. **Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)):** In addition to the revisions mentioned above, pending updates to the Safety Plan will address change of refinery ownership (sale of Refinery from Shell to PBF Energy), and sale of two hydrogen plants (HP-1 and HP-2) to Air Products. During the transition of hydrogen plant ownership, Martinez Refining Company personnel continue to operate the plants as described in the current Safety Plan. Air Products is currently maintaining the hydrogen plants. The operations transition is anticipated in September 2021.
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 740 Court Street Martinez.
6. **Provide any additions to the annual accident history reports (i.e. updates) submitted pursuant to Section 450-8.016(E)(2) of County Ordinance 98-48 (450-8.030(B)(2)(iii)) (i.e., provide information identified in Section 450-8.016(E)(1) for all major chemical accidents or releases occurring between the last annual performance review report and the current annual performance review and evaluation submittal (12-month history)):** There have been no MCARs at the Martinez Refinery in the 12-month period beginning July 1, 2020.
7. **Summary of each Root Cause Analysis (Section 450-8.016(C)) including the status of the analysis and the status of implementation of recommendations formulated during the analysis (450-8.030(B)(2)(iv)):** There have been no RCAs for MCARs or potential MCARs in the 12-month period beginning July 1, 2020.
8. **Summary of the status of implementation of recommendations formulated during audits, inspections, Root Cause Analyses, or Incident Investigations conducted by the Department (450-8.030(B)(2)(v)):** Of the 49 recommendations from the audit conducted by CCHS in 2018, all 49 have been completed. Proposed remedies and due dates for actions stemming from the February/March 2021 audit will be submitted to CCHS by July 29, 2021.
9. **Summary of inherently safer systems implemented by the source including but not limited to inventory reduction (i.e., intensification) and substitution (450-8.030(B)(2)(vi)):** See Attachment 1
10. **Summarize the enforcement actions (including Notice of Deficiencies, Audit Reports, and any actions turned over to the Contra Costa County District Attorney's Office) taken with the Stationary Source pursuant to Section 450-8.028 of County Ordinance 98-48 (450-8.030(B)(2)(vii)):** There were no enforcement actions during the period.

11. **Summarize total penalties assessed as a result of enforcement of this Chapter (450-8.030(3)):** No penalties have been assessed against this facility.

12. **Summarize the total fees, service charges, and other assessments collected specifically for the support of the ISO (450-8.030(B)(4)):** The total CalARP Program fees for the eight facilities subject to the Industrial Safety Ordinance was $603,958. The total Industrial Safety Ordinance program fees for these eight facilities was—$575,404. (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)):** 2,668 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.** All process units are now covered under CalARP Program 4. Examples of changes made to the stationary source during the reporting year are summarized in Attachment 1 (see question 9).

17. **Summarize the emergency response activities conducted at the source (e.g., CWS or TEN activation) in response to major chemical accidents or releases:** There were no MCARs at the stationary source during the reporting year.

18. **Date the last Safety Culture Assessment was completed:** 3/31/2019

19. **Date the results of the Safety Culture Assessment were reported to the workforce and management:** 4/10-22/2019

20. **Answer the following regarding the Safety Culture Evaluation for no. 18:**
    - Survey method: Anonymous computer based and paper based survey
    - Areas of improvements being addressed: Incident reporting and learnings from incidents and rewards and recognition

- Action Plan made Progress on the identified areas of improvement?: (Yes or No) YES
  - If Yes, did the improvements meet the goals and if not was the action plan amended to address what is being done to meet the goals? Goals for working off backlog of investigations, timely investigation completion, and timely communication of results have been achieved.
  - If No, has a new action plan been developed to address the identified areas of improvement? Yes

21. **Have milestones and metrics been developed to determine how the Safety Culture Assessment actions are being implemented? Yes or if not, Why not?** New milestones and metrics being established as a result of mid-cycle assessment.

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

23. **Date of the mid-cycle progress evaluation:** February 9, 2021
    - Did the action plan (for no 18) make progress on the identified areas of improvement? Yes or if not, has a new action pan been developed? (Yes or No) Yes

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

25. Common Process Safety Performance Indicators:

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

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

Total number of circuits: 11,930

Total number of annual planned circuit inspections: 1,182

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

2020	Overdue	Repeat
January	1	0
February	0	0
March	0	0
April	0	0
May	0	0
June	0	0
July	0	0
August	1	0
September	1	0
October	0	0
November	0	0
December	0	0
TOTAL	**3**	

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

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

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

Year	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20
No. Tier 1 LOPC	1	1	1	0	1	0	2	1	2	0
Incident rate for Tier 1	0.07	0.07	0.08		0.07	0	0.11	0.06	0.12	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
Refinery or Industry Mean[2]	*	1.49	1.30	1.41	1.53	1.00	1.11	0.92	1.03	0.84
Tier 2 LOPC	2	0	5	2	5	1	2	2	5	1
Incident rate for Tier 2	0.14	0	0.41	0.11	0.42	0.06	0.11	0.11	0.31	0.11
Refinery Rate[1]	*	0.24	0.25	0.24	0.21	0.17	0.19	0.17	0.16	0.13
Refinery Mean[2]	*	*	*	3.59	3.07	2.75	2.75	2.79	2.67	1.80

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

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

26. Process Safety Performance Indicators for refineries only:

I. Number of Major Incidents in 2020: 0

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

2020	Total	Overdue	Repeat
January	132	0	0
February	130	0	0
March	130	0	0
April	129	0	0
May	130	0	0
June	132	0	0
July	135	0	0
August	136	0	0
September	136	0	0
October	139	0	0
November	141	0	0
December	142	0	0

Attachment 1

Table 1: Summary of Implemented ISS	
Approach	**MOC Description**
Procedural	Upgraded existing 6" check valve in CRU, upstream of the hydrogen injection point, to a Class 1 check valve
Procedural	Upgraded 4ES007 SIF Trip of J-240 on high level in V-1320/1321/1322 to SIL1
Procedural/ Simplify	Lowered CGDP V-14229 Critical High-Level alarm setpoint on 41LC23 to provide required operator response time to the alarm
Procedural/ Simplify	Car Seal Open (CSO) inlet and outlet block valves on local pressure controllers: PIC-2505, PIC-2520, PIC-2532, PIC-2588 and PIC-2729 and added CSO valves to Pentane Storage PSV/Car Seal Checklist.
Procedural	Established and implemented routine testing/inspection/preventive maintenance for identified C5 Storage local control loops (PIC-2505, PIC-2520, PIC-2532, PIC-2588 and PIC-2729) in order to ensure sufficient availability to qualify for IPL credit
Passive/Moderate	Replaced 3L4 PSV with a liquid certified PSV in order to accommodate liquid relief
Procedural/ Simplify	Added 6" block valve on shell side outlet of E-551 to SRHT PSV/Car Seal Checklist
Procedural/Simplify	Added 8" block valve on inlet of V-15759 (from E-15760) to car seal/PSV checklist in SRHT and Car Seal Open valve in field.
Procedural/Simplify	Added block valve on TB-121 (for J-76) discharge to SRHT car seal/PSV checklist and Car Seal Open valve in field
Procedural/Simplify	Add 1 block valve on TB-139 (for J-76 lube oil pump, P-2350) discharge to SRHT car seal/PSV checklist and Car Seal Open valve in field.
Procedural/ Simplify	Added valves to ensure H2 purge flows to PSV H194 inlet/outlet and HV166 inlet (on top of HPS V-414) and PSV M60 inlet (on top of LPS V-416) to car seal/PSV checklist and Car Seal Open valve in field.
Active/Moderate	Added a high temperature ESP alarm on 3TC243
Passive/Moderate	Repaired damaged concrete at base of V-651 (Seismic)
Passive/Moderate	Repair concrete cracking on E-1424 north pedestal, west side (Seismic)
Passive/Moderate	Repaired cracks and spalling on E-542A/B concrete pipe supports that also support walkway for J-80 (Seismic)
Passive/Moderate	Repaired E-548 spalling at ~1 ft above grade on west side of north support (Seismic)
Passive/Moderate	Installed a new relief valve on the 300 psig condensate line downstream of PCV-110 with relief to the process sewer

July 2020-June 2021

ATTACHMENT C
RICHMOND REGULATED SOURCES ANNUAL PERFORMANCE

Contra Costa Health Services

Annual Performance Review and Evaluation Submittal June 30, 2021

*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, 2018.. The SSP was prepared in accordance with the City of Richmond Industrial Safety Ordinance (RISO), which was adopted by the Richmond City Council on January 17, 2002.

4. **Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)):** The SSP was updated in 2018. The next revision will be shared in 3Q2021.

5. **List of locations where Safety Plans are/will be available for review, including contact telephone numbers if the source will provide individuals with copies of the document (450-8.030(B)(2)(ii)):** CCHMP Office at 4585 Pacheco Boulevard, Suite 100, Martinez; Martinez Library, Richmond Public Library at 325 Civic Center Plaza Richmond, CA 94804; and Point Richmond Public Library at 135 Washington Ave., Richmond, CA 94801.

6. **Provide any additions to the annual accident history reports (i.e. updates) submitted pursuant to Section 450-8.016(E)(2) of County Ordinance 98-48 (450-8.030(B)(2)(iii)) (i.e., provide information identified in Section 450-8.016(E)(1) for all major chemical accidents or releases occurring between the last annual performance review report and the current annual performance review and evaluation submittal (12-month history)):** There was one major chemical accidents or releases ("MCAR") as defined in Section 450-8.014(h) between June 1, 2020 and June 1, 2021.The 2021 Site Safety Plan update will include the February 9, 2021 Wharf spill, which is the MCAR in question.

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 was one MCAR event between June 1, 2020 and June 1, 2021, which was the February 9, 2021 Wharf spill. This event is still under investigation.

8. **Summary of the status of implementation of recommendations formulated during audits, inspections, Root Cause Analyses, or Incident Investigations conducted by the Department (450-8.030(B)(2)(v)):** The 2011 Cal APR/ISO Audit had 73 ensure and consider recommendations, from which 85 total action items were created, and 85 of those action items are complete. The final report and action plans from the 2013 Cal ARP/Richmond ISO audit were accepted by the County and Richmond Refinery in 2015. The 2013 Cal ARP/ISO audit had 163 ensure and consider recommendations, from which 177 total action items were created, and 177 of those action items are complete. The report and action plans from the 2016 Cal ARP/ Richmond ISO audit had 74 ensure and consider recommendations, from which 80 total action items were created, and 80 of those action items are complete. The ensure and consider items for the 2016 audit were finalized on November 6, 2017. The 2019 Cal ARP/ISO audit closing meeting was held on June 28th 2019. There were 97 ensure and consider recommendations, from which 110 total action items were created, and 100 of those action items are complete.

9. **Summary of inherently safer systems implemented by the source including but not limited to inventory reduction (i.e., intensification) and substitution (450-8.030(B)(2)(vi)):** See Attachment 1 on page 5.

10. **Summarize the enforcement actions (including Notice of Deficiencies, Audit Reports, and any actions turned over to the Contra Costa County District Attorney's Office) taken with the Stationary Source pursuant to Section 450-8.028 of County Ordinance 98-48 (450-8.030(B)(2)(vii)):** There were no enforcement actions during this period.

11. **Summarize total penalties assessed as a result of enforcement of this Chapter (450-8.030(3)):** No penalties have been assessed against this facility.

12. **Summarize the total fees, service charges, and other assessments collected specifically for the support of the ISO (450-8.030(B)(4)):** The total CalARP Program fees for the eight facilities subject to the Industrial Safety Ordinance was $603,958. The total Industrial Safety Ordinance program fees for these eight facilities was—$575,404. (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)):** 2,668 hours were used to audit/inspect and issue reports on the Risk Management Chapter of the Industrial Safety Ordinance.

14. **Copies of any comments received by the source (that may not have been received by the Department) regarding the effectiveness of the local program that raise public safety issues(450-8.030(B)(6)):** No comments were received during this period regarding the effectiveness of the local program that raise public safety issues.

15. **Summarize how this Chapter improves industrial safety at your stationary source (450-8.030(B)(7)):**Operating safely is one of CUSA's core values and underpins our commitment to enhancing our process safety programs. The RISO assists CUSA in improving our process safety performance. We have worked closely with CCHMP in its implementation of the RISO and its oversight of our operations, including during its periodic reviews of our operations. Consistent with this commitment, and as part of the company's efforts to continually improve its process safety performance, CUSA will continue to confer with the CCHMP as it refines and implements these actions.

16. **List examples of changes made at your stationary source due to implementation of the Industrial Safety Ordinance (e.g., recommendations from PHA's, Compliance Audits, and Incident Investigations in units not subject to CalARP regulations; recommendations from RCAs) that significantly decrease the severity or likelihood of accidental releases.**
In addition to the Inherently Safer Systems implemented in Question 9, CUSA has also made other changes to the facility pursuant to the RISO and beyond to decrease the severity or likelihood of accidental releases. A few examples include the following:
    - Changes implemented based on findings from Tier 1 and Tier 2 Incident Investigation with solutions due between June 2020 to June 2021

- » Replace in kind bad order flow meter.
- » Stress analysis to determine if/where additional supports need to be added
- » Upgraded to alloy 825 on bottoms piping system from carbon steel
- » Replaced heat exchanger shell with upgraded alloy

- Continued effort to conduct Fixed Equipment Asset Strategies (FEAS) Piping studies. These studies improve the refinery's existing asset strategy, designed to prevent and mitigate loss of containment in piping systems and to describe the process for creating and maintaining these strategies.
- SRCM (Streamlined Reliability-Centered Maintenance) continued implementing studies to set up ITPM's (inspection, testing, and preventative maintenance tasks) refinery wide.
- Continued effort to conduct Damage Mechanism Reviews (DMRs) on PSM-covered equipment and piping.

- Equipment and procedural changes implemented to reduce risks identified during PHAs, including:
  - » Richmond has developed a comprehensive Centrifugal Pump Seal Upgrade (CPSU) program. Centrifugal pump seal upgrades are inherently safer solutions. Seal upgrades will either reduce or eliminate the hazard associated with seal failure.
  - » Continued effort to conduct procedural PHAs across refinery units to identify and mitigate potential human factors that may lead to loss of containment; with a focus on emergency, startup, and shutdown procedures.

17. Summarize the emergency response activities conducted at the source (e.g., CWS or TEN activation) in response to major chemical accidents or releases: There was one CWS 2 activation on February 9, 2021 in response to an MCAR. The Chevron Fire Department Incident Command System took lead of the incident for oil spill recovery and clean up. There was mutual aid (Spill response taskforce) for this event. Everyone listed on the communications responded to this event. The following agencies responded: Bay Area Air Quality Management District (BAAQMD), CDFW-OSPR, Richmond Fire Department, Contra Costa County Health Services Department, Easy Bay Regional Parks, MSRC, Oiled Wildlife Care Network (OWCN), Cal OSHA, Richmond Local Police Department, USCG.

18. Date the last Safety Culture Assessment was completed: Data collected October 2020 and ready to report to work force.

19. Date the results of the Safety Culture Assessment were reported to the workforce and management: Ready to report out to work force.

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

21. Have milestones and metrics been developed to determine how the Safety Culture Assessment actions are being implemented? Yes, or if not, Why not? Yes, milestones are tracked in the Chevron Database system of record (KMS)

22. **Describe the process that included employees and their representatives used to determine if the action items effectively changed the expected culture items:** Employees and their representatives were involved in the review of data, development of the improvement suggestions as well as the development of the final action items. Through the process of meeting with the representatives we came to agreement on what data needed an action and what action would solve the milestones.

23. **Date of the mid-cycle progress evaluation:** Not required until ~May 2024 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.
    - » 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:**

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

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

Total number of circuits: 6,883*
Total number of annual planned circuit inspection: 2,196*
*An ongoing project is re-evaluating piping circuit designations to align each circuit with the anticipated damage mechanisms. As the project progresses, the total number of piping circuits and subsequently, the number inspected, will change to accommodate the long-term strategy for inspections and reliability.

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

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

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

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

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

Year	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20
No. Tier 1 LOPC	4	3	0	1	2	1	1	1	0	0
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
Refinery or Industry Rate[1]	0.1553		6							
Refinery or Industry Mean[2]	**	0.2405	0.2531	0.2380	0.2063	0.1726	0.1843	0.1728	0.1574	**
Tier 2 LOPC	5	8	**	3	3.08	2.78	2.73	2.79	2.67	1*
Incident rate for Tier 2	0.18	0.29	0.19	0.07	0.02	0.07	0.10	0.06	0.00	0.31
Refinery Rate[1]	**									
Refinery Mean[2]	**									
	0.0995	0.0947	0.0995	0.1038	0.0627	0.0761	0.0570	0.0608	**	
	1.49	1.30	1.38	1.55	1.01	1.13	0.92	1.03	**	

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 2018: 0

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

2020	Total	Overdue	Repeat
January	65	0	0
February	66	0	0
March	66	0	0
April	66	0	0
May	67	0	0
June	68	0	0
July	68	0	0
August	68	0	0
September	68	0	0
October	68	0	0
November	67	0	0

December	38	0	0
TOTAL	**38**	**0**	**0**

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

Attachment 1—Question 9

Risk Reduction Category	ISS Approach	Description
Inherent	Moderate	Installed piping for rerouting SDA feed piping around charge solution trim coolers and routing only circulating solvent through them because feed has a history of plugging charge solution trim coolers.
Active	Safeguard	Eliminated known relief deficiencies and integrity threats on the North/ South Isomax relief header. Scope included removing out of service inert gas piping and installing new relief valves, inlet and downstream piping, and a new letdown station..
Active	Safeguard	Implemented multiple Safety Instrumented functions such as furnace trips and reverse flow prevention devices to properly mitigate scenarios that could result in major incidents from loss of containment.
Inherent	Eliminate & Moderate	Implemented multiple centrifugal pump seal upgrades to either reduce or eliminate loss of containment resulting from seal failures.
Procedural	Safeguard	Updated procedures resulting from Procedural PHAs to reduce human error that could result in a major incident from a loss of containment
Inherent	Substitute	Richmond Refinery can convert a portion of the existing anhydrous ammonia inventory into Hydrogen and Nitrogen and this will lead to a reduction in anhydrous ammonia inventory within the refinery.

Annual Performance Review and Evaluation Submittal June 30, 2021

*Attach additional pages as necessary

1. **Name and address of Stationary Source:** Chemtrade Logistics West US, LLC. 525 Castro St. Richmond, CA 94801

2. **Contact name and telephone number (should CCHMP have questions):** Mike Shepherd – 510- 685-8791

3. **Summarize the status of the Stationary Source's Safety Plan and Program (450-8.030(B)(2)(i)):** The sites Safety Plan is currently up to date after program reviews were completed in 2019.

4. **Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)):** The 2019 Safety Plan submittal included updates to meet current site practices including changes to the site's investigation and corrective action plans, human factors program, process hazard analysis procedures and document control procedures.

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

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

7. **Summary of each Root Cause Analysis (Section 450-8.016(C)) including the status of the analysis and the status of implementation of recommendations formulated during the analysis (450-8.030(B)(2)(iv)):** N/A

8. **Summary of the status of implementation of recommendations formulated during audits, inspections, Root Cause Analyses, or Incident Investigations conducted by the Department (450-8.030(B)(2)(iv)):** N/A

9. **Summary of inherently safer systems implemented by the source including but not limited to inventory reduction (i.e., intensification) and substitution (450-8.030(B)(2)(vi)):** Source has eliminated the production of petroleum as of December 2020.

10. **Summarize the enforcement actions (including Notice of Deficiencies, Audit Reports, and any actions turned over to the Contra Costa County District Attorney's Office) taken with the Stationary Source pursuant to Section 450-8.028 of County Ordinance 98-48 (450-8.030(B)(2)(vii)):** There were no enforcement actions during this period.

11. **Summarize total penalties assessed as a result of enforcement of this Chapter (450-8.030(3)):** No penalties have been assessed against this facility.

12. **Summarize the total fees, service charges, and other assessments collected specifically for the support of the ISO (450-8.030(B)(4)):** The total CalARP Program fees for the eight facilities subject to the Industrial Safety Ordinance was $603,958. The total Industrial Safety Ordinance program fees for these eight facilities was - $575,404. (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)):** 2,668 hours were used to audit/inspect and issue reports on the Risk Management Chapter of the Industrial Safety Ordinance.

14. **Copies of any comments received by the source (that may not have been received by the Department) regarding the effectiveness of the local program that raise public safety issues(450-8.030(B)(6)):** No additional comments have been received by the source.

15. **Summarize how this Chapter improves industrial safety at your stationary source (450-8.030(B)(7)):** The ISO ordinance helps the site to continually improve its implementation of new policies and changes to processes by encouraging more thorough system reviews, executing a more inclusive Human Factors program and continually promoting Inherently Safer Systems.

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

17. **Summarize the emergency response activities conducted at the source (e.g., CWS or TEN activation) in response to major chemical accidents or releases:** No major chemical accidents or releases since last report

18. **Date the last Safety Culture Assessment was completed:** 8/14/18

19. **Date the results of the Safety Culture Assessment were reported to the workforce and management:** 9/19/18

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

- Survey method: Anonymous multiple choice survey developed with comments available for each question
- Areas of improvements being addressed: Improve safety incentives and improve including hourly employees when conducting investigations
- Action Plan made Progress on the identified areas of improvement?: (Yes or No) **Yes**

» If Yes, did the improvements meet the goals and if not was the action plan amended to address what is being done to meet the goals? Process is on-going. Another SCA will be conducted to measure success.
» If No, has a new action plan been developed to address the identified areas of improvement? (Yes or No)

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

22. Describe the process in place that includes employees and their representatives that will determine if the action items effectively changed the expected culture items: A follow-up SCA will be conducted in 2022.

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

24. If a mid-cycle progress evaluation was performed during this reporting year, describe the process that included participation of employees or their representatives that determined whether the action items effectively changed the expected culture items:
No. A new action plan will be developed post safety culture assessment conducted in 2022.

25. Common Process Safety Performance Indicators:

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

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

Total number of circuits: 382
Total number of annual planned circuit inspections: 382

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

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

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

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

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

Year	'11	'12	'13	'14	'15	'16	'17	'18	'19	'20
No. Tier 1 LOPC	0	0	0	0	0	0	0	0	0	
Incident rate for Tier 1	0	0	0	0	0	0	0	0	0	
Refinery or Industry Rate[1]										
Refinery or Industry Mean[2]										
Tier 2 LOPC	0	0	0	0	0	0	0	1	0	
Incident rate for Tier 2	0	0	0	0	0	0	0	1.8	0	
Refinery Rate[1]										
Refinery Mean[2]										

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

26. Process Safety Performance Indicators for refineries only:

I. Number of Major Incidents in 2018: 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.

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

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

CONTRA COSTA

HAZARDOUS MATERIALS PROGRAMS

A Division of Contra Costa Health Services