



INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION REPORT

December 6, 2011

By Contra Costa Health Services
Hazardous Materials Programs



TABLE OF CONTENTS

Executive Summary	3
Public Participation.....	3
Audits.....	3
Major Chemical Accidents or Releases.....	4
Conclusion	4
Introduction.....	4
Annual Performance Review and Evaluation Report.....	5
Effectiveness of Contra Costa Hazardous Materials Program’s Implementation of The Industrial Safety Ordinance.....	6
Effectiveness of The Procedures For Records Management	7
Number and Type of Audits and Inspections Conducted.....	7
Number of Root Cause Analyses and/or Incident Investigations Conducted by Hazardous Materials Program.....	8
Hazardous Materials Program’s Process For Public Participation	8
Effectiveness of The Public Information Bank.....	8
Table I.....	9
Effectiveness of The Hazardous Materials Ombudsman.....	10
Other Required Program Elements Necessary To Implement and Manage The Industrial Safety Ordinance	10
Regulated Stationary Sources Listing	11
The Status of The Regulated Stationary Sources’ Safety Plans and Programs	11
Annual Accident History Report and Inherently Safer Systems Implemented as Submitted by The Regulated Stationary Sources	11
Table II.....	12
Table III.....	13
Status of The Incident Investigations, Including The Root Cause Analyses Conducted by The Regulated Stationary Sources	14
Table IV	15
Major Chemical Accidents or Releases	16
Legal Enforcement Actions Initiated by Hazardous Materials Program.....	18
Penalties Assessed as A Result of Enforcement	18
Total Fees, Service Charges, and Other Assessments Collected Specifically For The Industrial Safety Ordinance	18
Total Personnel and Personnel Years Used by Hazardous Materials Program To Implement The Industrial Safety Ordinance	18
Comments From Interested Parties Regarding The Effectiveness of The Industrial Safety Ordinance.....	18
The Impact of The Industrial Safety Ordinance on Improving Industrial Safety	18
City of Richmond Industrial Safety Ordinance	20
Attachment A	22
Hazardous Materials Ombudsman Report	22
Hazardous Materials Ombudsman Evaluation	23
I. Introduction.....	23
Ii. Program Elements.....	23
Iii. Program Management.....	25
Iv. Goals For The 2011/12 Period.....	26
Attachment B.....	27
Regulated Sources Annual Performance with Accident History and Inherent Safety Implementation	27

EXECUTIVE SUMMARY

The Board of Supervisors passed the Contra Costa County Industrial Safety Ordinance on December 15, 1998, requiring regulated facilities to implement safety programs to prevent chemical accidents that could have detrimental impacts to the surrounding communities. The requirements of the Industrial Safety Ordinance are some of the most stringent in the United States, if not the world.

This is the 11th year that there has not been a severity level III Major Chemical Accident or Release in Contra Costa since the adoption of the County's Industrial Safety Ordinance. The trend has been fewer Major Chemical Accidents or Releases (MCAR) and less severe incidents over the years. Overall, this is a general indication of the effect of the Industrial Safety Ordinance on the regulated facilities' implementation of prevention programs and the oversight by the Accidental Release Prevention Programs Engineers in the Hazardous Materials Division of Contra Costa Health Services. Additionally, the Industrial Safety Ordinance is designed to include participation from all stakeholders, including industries, agencies, elected officials and the public at large.

The Accidental Release Prevention Program Engineers are continuing to develop ways to improve the overall implementation of the Industrial Safety Ordinance and the prevention program elements. The staff continues to work with other agencies such as the U.S. Environmental Protection Agency, the California Occupational Safety and Health Administration and other local program agencies for sharing of regulatory interpretations and inspection results.

The Contra Costa Hazardous Materials Programs have been nationally recognized as a successful program for accidental release prevention. The U.S. Chemical Safety and Hazard Investigation Board's (CSB) DVD "Anatomy of a Disaster: Explosion at BP Texas City Refinery" acknowledges the efforts of Contra Costa County and suggests modeling this program for other local jurisdictions. Contra Costa Hazardous Materials Programs have also been asked to give testimony at U.S. Senate hearings and at the Bayer CropScience CSB investigation's public community meeting.

PUBLIC PARTICIPATION

The Hazardous Materials Programs have an established public outreach process and is constantly looking at ways to improve. The following items have been implemented based on recommendations from stakeholders and the actions taken this year:

- Public outreach information booths at existing venues
 - » General Chemical Richmond Risk Management Plan and Chevron Richmond Refinery preliminary audit findings were shared at West County Emergency Preparedness Fair at El Cerrito Del Norte BART station in El Cerrito on September 24, 2011.
 - » ConocoPhillips Rodeo Refinery Safety Plan and Air Liquide Rodeo Hydrogen Plant preliminary Audit Findings were shared at the Rodeo-Hercules Fire District Open House, in October 2011.
- Most recent audit findings summarized in easily read format in English and Spanish
- Information on regulated businesses in an easily read format in English and Spanish
- Industrial Safety Ordinance Information Sheet in English and Spanish

The Board of Supervisors also requested that staff provides copies of the annual report to communities through the Community Advisory Panels (CAP). CCHMP provided copies of the 2010 Annual ISO Report to CAP representatives for distribution for ConocoPhillips, General Chemical Bay Point Works, General Chemical Richmond, Shell Martinez Refinery and Tesoro Golden Eagle Refinery. This 2011 annual report will be available on our website and will also be sent to CAP representatives for distribution. We also plan to schedule presentations at the CAPs to review the finalized audit reports.

AUDITS

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

- General Chemical Bay Point Works — March 2011
- Tesoro Golden Eagle Refinery — April 2011

- ConocoPhillips Refinery—August 2011

MAJOR CHEMICAL ACCIDENTS OR RELEASES

Another measure of the effectiveness of the Industrial Safety Ordinance is by the number and severity of the Major Chemical Accidents or Releases that have occurred. Since the 2010 report to the County Board of Supervisors, there have been no Major Chemical Accidents or Releases with a severity Type I that resulted in minor injury or impact to the community. There were four Major Chemical Accidents or Releases with a severity level I that occurred from October 2010 to December 2010, which were captured in this reporting period.

CONCLUSION

The number and severity of the Major Chemical Accidents or Releases have been in a general declining trend since the implementation of Industrial Safety Ordinance. The implementation of the Industrial Safety Ordinance has improved and, in most cases, is being done as required by the ordinance. It is believed that by continuing implementation of the Industrial Safety Ordinance and strengthening the requirements of the Ordinance, the possibility of accidents that could impact the community will continue to decrease.



INTRODUCTION

The Contra Costa County Board of Supervisors passed the Industrial Safety Ordinance because of accidents that occurred at oil refineries and chemical plants in Contra Costa County. The effective date of the Industrial Safety Ordinance was January 15, 1999. The ordinance applies to oil refineries and chemical plants with a 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 California Accidental Release Prevention (CalARP) Program. The ordinance specifies the following:

- Stationary sources had one year to submit a Safety Plan to Contra Costa Hazardous Materials Programs stating how the stationary source is complying with the ordinance, except the Human Factors portion (completed January 15, 2000)
- Contra Costa Hazardous Materials Programs develop a Human Factors Guidance Document (completed January 15, 2000)
- Stationary sources had one year to comply with the requirements of the Human Factor Guidance Document that was developed by Contra Costa Hazardous Materials Programs (completed January 15, 2001)
- For Major Chemical Accidents or Releases, the stationary sources are required to perform a root cause analysis as part of their incident investigations (ongoing)
- Contra Costa Hazardous Materials Programs may perform its own incident investigation, including a root cause analysis (ongoing)
- All of the processes at the stationary source are covered as program level 3 processes as defined by the California Accidental Release Prevention Program
- The stationary sources are required to consider Inherently Safer Systems for new processes or facilities and for mitigations resulting from a process hazard analysis
- Contra Costa Hazardous Materials Programs will review all of the submitted Safety Plans and audit/inspect all of the stationary source's Safety Programs within one year of the receipt of the Safety Plan (completed January 15, 2001)

and every three years after the initial audit/inspection (ongoing)

- Contra Costa Hazardous Materials Programs will give an annual performance review and evaluation report to the Board of Supervisors

The 2006 amendments to the Industrial Safety Ordinance require or expand the following:

1. Expand the Human Factors Program to include Maintenance
2. Expand the Management of Organizational Change to include Maintenance and all of Health and Safety positions
3. Require the stationary sources to perform Safety Culture Assessments one year after the Hazardous Materials Programs develop guidance on performing a Safety Culture Assessment (Nov 2009)
4. Perform Security Vulnerability Analysis

The seven stationary sources now covered by the county's Industrial Safety Ordinance are:

1. Air Products at the Shell Martinez Refining Company
2. Air Products at the Tesoro Golden Eagle Refinery
3. Shell Martinez Refining Company
4. General Chemical West in Bay Point
5. ConocoPhillips Rodeo Refinery
6. Tesoro Golden Eagle Refinery
7. Air Liquide Rodeo Hydrogen Plant

The Air Liquide Rodeo Hydrogen Plant began operation in July 2009 and is located adjacent to the ConocoPhillips Rodeo Refinery. The facility produces purified hydrogen for ConocoPhillips Refinery and other industrial customers. It also produces steam and electricity for the ConocoPhillips Refinery. Contra Costa Hazardous Materials Programs completed the CalARP/ISO audit of this facility in June 29, 2010 and made the audit report available to the public at the local libraries and at the Rodeo-Hercules Fire District Open House in October 2011.

Contra Costa Hazardous Materials Program completed and issued the first Contra Costa County Safety Program Guidance Document on January 15, 2000. The stationary sources were required to comply with the Human Factors section of this guid-

ance document by January 15, 2001. The Hazardous Materials Programs staff has worked with the stationary sources to develop a Safety Culture Assessment Guidance Document, which was finalized and issued on November 10, 2009. Staff began reviewing these Safety Culture Assessments in December 2010. Additionally, staff is currently working with the stationary source to revise the Safety Program Guidance Document to reflect the ISO amendments, and clarifications based on the audit findings.

Contra Costa Hazardous Materials Programs reviewed all of the Safety Plans submitted to the department and started the fifth round of audits of the stationary sources, as required by the ordinance. In addition, Contra Costa Hazardous Materials Programs performed a specialized audit for all the stationary sources for their Human Factors programs and for Inherently Safer Systems in 2002. The status of the reviews and all audits are discussed in Table I within the report.

ANNUAL PERFORMANCE REVIEW AND EVALUATION REPORT

The Industrial Safety Ordinance specifies that the contents of the annual performance review and evaluation report contain the following:

- A brief description of how Hazardous Materials Program is meeting the requirements of the ordinance as follows:
 - » Effectiveness of the Department's program to ensure stationary sources comply with the ordinance
 - » Effectiveness of the procedures for records management
 - » Number and type of audits and inspections conducted by Hazardous Materials Program as required by the ordinance
 - » Number of root cause analyses and/or incident investigations conducted by Hazardous Materials Program
 - » Hazardous Materials Program' process for public participation
 - » Effectiveness of the Public Information Bank
 - » Effectiveness of the Hazardous Materials Ombudsperson
 - » Other required program elements necessary to implement and manage the ordinance

- A listing of stationary sources covered by the ordinance, including for each:
 - » The status of the stationary source's Safety Plan and Program
 - » A summary of the stationary source's Safety Plan updates and a listing of where the Safety Plans are publicly available
 - » The annual accident history report submitted by the regulated stationary sources and required by the ordinance
 - » A summary, including the status, of any root cause analyses and incident investigations conducted or being conducted by the stationary sources and required by the ordinance, including the status of implementation of recommendations
 - » A summary, including the status, of any audits, inspections, root cause analyses and/or incident investigations conducted by Hazardous Materials Program, including the status for implementing the recommendations
 - » Description of Inherently Safer Systems implemented by the regulated stationary source
 - » Legal enforcement actions initiated by Hazardous Materials Program, including administrative, civil and criminal actions
- Total penalties assessed as a result of enforcement of the ordinance
- Total fees, service charges and other assessments collected specifically for the support of the ordinance
- Total personnel and personnel years used by the jurisdiction to directly implement or administer the ordinance
- Comments that raise public safety issues from interested parties regarding the effectiveness of the local program
- The impact of the ordinance in improving industrial safety

EFFECTIVENESS OF CONTRA COSTA HAZARDOUS MATERIALS PROGRAM'S IMPLEMENTATION OF THE INDUSTRIAL SAFETY ORDINANCE

Hazardous Materials Program has developed policies, procedures, protocols and questionnaires to implement the California Accidental Release Preven-

tion Program and the Industrial Safety Ordinance. The policies, procedures, protocols and questionnaires for these programs are listed below:

- Audits/Inspections Policy
- Conducting the Risk Management Plan/Safety Plan Completeness Review Protocol
- Risk Management Plan Completeness Review Questionnaires
- Safety Plan Completeness Review Questionnaires
- Conducting Audits/Inspections Protocol
- Safe Work Practices Questionnaires
- CalARP Program Audit Questionnaires
- Safety Program Audit Questionnaires
- Conducting Employee Interviews Protocol
- Employee Interview Questionnaires
- Public Participation Policy
- Dispute Resolution Policy
- Reclassification Policy
- Covered Process Modification Policy
- CalARP Internal Performance Audit Policy
- Conducting the Internal Performance Audit
- CalARP Internal Audit Performance Audit Submission
- Fee Policy
- Notification Policy
- Unannounced Inspection Policy
- Risk Management Plan Public Review Policy

The Hazardous Materials Program has developed the Contra Costa County CalARP Program Guidance Document and the Contra Costa County Safety Program Guidance Document including the Safety Culture Assessment. An updated Contra Costa County Safety Program Guidance Document, which incorporated updates from the ISO amendments and additional clarifications from all the audits, was issued July 22, 2011 to the regulated facilities. These documents give guidance to the stationary sources for complying with the Industrial Safety Ordinance. The policies, procedures, protocols and questionnaires are available through Hazardous Materials Program. The guidance documents can be downloaded through Health Services' website: http://www.cchealth.org/groups/hazmat/california_accidental_release_prevention_guidance_document.php and http://www.cchealth.org/groups/hazmat/industrial_safety_ordinance_guidance.php

EFFECTIVENESS OF THE PROCEDURES FOR RECORDS MANAGEMENT

Hazardous Materials Program has set up hard-copy and digital files for each stationary source. The files include the following folders:

1. Annual status reports
2. Audits & Inspections
3. Communications
4. Completeness Review
5. Emergency Response
6. Incident Investigation
7. Trade Secret Information

Hard-copy files for the stationary sources are kept in a central location. Digital copies of the files are stored on the Hazardous Materials Program network and are accessible to the Accidental Release Prevention Programs Engineers, Supervisor and the Environmental Health and Hazardous Materials Chief. Portable document format (PDF) of these files is also available at the Hazardous Materials Programs office for public access and viewing. The Accidental Release Prevention Program files contain regulations, policies, information from the U.S. EPA, the Governor's Office of Emergency Services, the U.S. Chemical Safety and Hazards Investigation Board, and other information pertinent to the engineers. The risk management and safety plans received are kept at the Hazardous Materials Programs office.

NUMBER AND TYPE OF AUDITS AND INSPECTIONS CONDUCTED

The Hazardous Materials Programs staff was required to audit and inspect all seven regulated stationary sources that were required to comply with the Industrial Safety Ordinance within one year after the initial submittal of their Safety Plans. Hazardous Materials Program reviewed all of the Safety Plans and audited/inspected all of the stationary sources' Safety Programs within that year (2000). Hazardous Materials Program performed focused audits of the stationary sources for their Human Factors Programs (this was not included in the original audit/inspection, since the stationary sources were not required to have their Human Factors Program in place until January 2001) and Inherently Safer Systems in 2001 and 2002. Additional focused audits were performed to look at how two stationary sources would

manage the organizational change in case there was a strike and non-striking personnel were used instead of the striking personnel (2002). Hazardous Materials Programs completed the second round of audits for all of the Industrial Safety Ordinance stationary sources in 2003 and 2004 and began a third round of audits in the autumn of 2005, which were completed in the spring of 2007. The fourth round of audits was completed in August 2009. Air Liquide submitted a Risk Management Plan and Safety Plan to Hazardous Materials Program in July 2009 and was audited in June 2010.

When the Hazardous Materials Programs staff reviews a Safety Plan, a Notice of Deficiencies is produced that documents what changes to a Safety Plan the stationary source is required to make before Hazardous Materials Program determines that the Safety Plan is complete. The stationary source has 60 to 90 days to respond to the Notice of Deficiencies. When the stationary source has responded to this Notice of Deficiencies, the Hazardous Materials Programs staff will review the response. Hazardous Materials Programs will either determine that the Safety Plan is complete or will work with the stationary source until the Safety Plan contains the required information for it to be considered complete. When the Safety Plan is deemed complete, Hazardous Materials Programs will open a public comment period on the Safety Plan and will make available the plan in a public meeting or venue. The Hazardous Materials Programs staff will respond to all written comments in writing and when appropriate use the comments in the audit/inspection of the regulated stationary sources.

The Hazardous Materials Programs staff will issue Preliminary Audit Findings after an audit/inspection is complete. The stationary source will have 90 days to respond to these findings. Hazardous Materials Programs will review the response from the stationary source on the Preliminary Audit Findings. When the stationary source has developed an action plan to come into compliance with the regulations, the Hazardous Materials Programs staff will issue the Preliminary Audit Findings for public comment and will make available the findings in a public meeting or venue. The Hazardous Materials

Programs staff will consider any public comments that were received during the public comment period and if appropriate will revise the Preliminary Audit Findings. When this is complete, the Hazardous Materials Programs staff will issue the Final Audit Findings and will respond in writing to any written public comments received. Table I lists the status of the Hazardous Materials Programs staff review of each stationary source's Safety Plan, and audit and inspections of their Safety Programs.

NUMBER OF ROOT CAUSE ANALYSES AND/OR INCIDENT INVESTIGATIONS CONDUCTED BY HAZARDOUS MATERIALS PROGRAM

The Hazardous Materials Programs staff has not performed any root cause analysis or incident investigations in this last year. A historical listing of the Major Chemical Accidents or Releases dating back to 1992 can be found on the Health Services website at www.cchealth.org/groups/hazmat/accident_history.php. This list includes major accidents that occurred prior to the adoption of the Industrial Safety Ordinance.

HAZARDOUS MATERIALS PROGRAM'S PROCESS FOR PUBLIC PARTICIPATION

Hazardous Materials Programs in 2005 worked with the community and developed materials that would describe the Industrial Safety Ordinance using a number of different approaches. The community representatives suggested that the Hazardous Materials Programs staff look at existing venues that are attended by the public that the Hazardous Materials Programs staff can share and receive comments on Preliminary Audit Findings and the stationary source's Safety Plans.

EFFECTIVENESS OF THE PUBLIC INFORMATION BANK

The Hazardous Materials Programs section of Health Services website www.cchealth.org/groups/hazmat/ includes the following information:

- Industrial Safety Ordinance
 - » Description of covered facilities
 - » Risk Management Chapter discussion
 - Copy of the ordinance
 - » Land Use Permit Chapter discussion
 - Copy of the ordinance

- » Safety Program Guidance Document
- » Frequently Asked Questions
- » Public Outreach strategies
- California Accidental Release Prevention (CalARP) Program
 - » Contra Costa County's California Accidental Release Prevention Program Guidance Document
 - » Program Level description
 - » Discussion on Public Participation for both CalARP Program and the Industrial Safety Ordinance
 - » A map locating the facilities that are subject to the CalARP Program and are required to submit a Risk Management Plan to Hazardous Materials Program. The map links to a description of each of the facilities and the regulated substances handled.
 - » Hazardous Materials Inventories and Emergency Response Program
 - » Descriptions
 - » Forms
- Underground Storage Tanks
 - » Description of the program
 - » Copies of the Underground Storage Tanks Health & Safety Code sections
 - » Underground Storage Tanks forms
- Green Business Program
 - » Description of the Green Business Program with a link to the Association of Bay Area Government's website on the Green Business Program
- Hazardous Materials Incident Response Team
 - » Including information of the Major Chemical Accidents or Releases that have occurred
 - » The County's Hazardous Materials Incident Notification Policy
- A link to the ConocoPhillips Fenceline Monitors
- Hazardous Materials Program Incident Search
 - » Online search of the hazardous materials incident database for incidents that have occurred from 1993 to current year by entering a date range, address, city or facility name
- Facility Search
 - » Online search of the facilities that handle hazardous materials by e and city, or any combination of the three

- Unannounced Inspection Program
 - » Lists the facilities that are subject to unannounced inspections under the Unannounced Inspection Program
- Hazardous Materials Interagency Task Force
 - » Includes a matrix of who has what hazardous materials and regulatory responsibilities
 - » Minutes from past meetings
 - » Presentations from past meetings
- Incident Response
 - » Accident history that lists summaries of major accidents from industrial facilities in Contra Costa County from most recent to 1992
 - » Additional resource links for more information

Table I
Industrial Safety Ordinance Stationary Source Status

<i>NAME</i>	<i>Safety Plan (SP) Received</i>	<i>Notice of Deficiencies</i>	<i>Safety Plan Complete (NOD) Issued-SP</i>	<i>SP Public Meeting Date</i>	<i>Audit/ Inspection</i>	<i>Audit Public Meeting</i>
Air Liquide Rodeo Hydrogen Plant	07/10/09 07/19/10				6/1/2010	10/8/11
Air Products Shell & Tesoro	01/14/00 01/16/01 (HF update) 06/26/03 07/14/05 12/01/06 06/20/08 06/30/10	06/15/00 05/10/01 (HF update) 08/24/07	08/30/00 06/19/01 (HF update) 09/14/07 07/01/08	09/13/00 05/8/03 09/23/07 06/19/10	11/22/00 05/3/02 (HF) 02/27/04 01/22/07 07/20/09	05/8/03 09/24/06 09/23/07 06/19/10
ConocoPhillips Rodeo	01/15/00 01/12/01 (HF update) 08/10/05 08/07/09	03/14/00 09/10/01 (HF update) 03/28/06 10/22/10	05/30/00 03/18/02 (HF update) 08/9/02 11/5/07	06/15/00 04/09/02 10/7,13/07	06/30/00 11/05/01 (HF) 08/01/03 08/15/06 10/06/08 08/01/11	04/09/02 06/22/04 07/08/04 10/7,13/07 07/18/10, 10/09/10 10/08/11

<i>NAME</i>	<i>Safety Plan (SP) Received</i>	<i>Notice of Deficiencies</i>	<i>Safety Plan Complete (NOD) Issued-SP</i>	<i>SP Public Meeting Date</i>	<i>Audit/ Inspection</i>	<i>Audit Public Meeting</i>
General Chemical/ Bay Pt. Works	01/14/00 01/15/01 (HF update) 12/10/03 10/90/07	06/12/00 07/23/01 (HF update) 07/28/08	12/20/00 11/16/01 (HF update) 03/17/04 12/13/08	01/02/01 05/01/03 11/16/05 01/31/06 11/04/08	08/11/00 05/20/02 (HF) 06/20/03 08/29/05 01/07/08 03/21/11	01/02/01 05/01/03 11/16/05 01/31/06 11/08/06 01/02/07 11/04/08
Shell Martinez Refinery	01/14/00 01/16/01 (HF update) 07/22/02 01/11/06 09/03/10	07/19/00 11/09/01 (HF update) 03/21/03 08/15/06	04/09/01 01/03/02 (HF update) 09/15/03 11/02/06	05/08/03 09/24/06 09/23/07	10/31/00 04/29/02 (HF) 11/26/04 10/23/06 04/30/09	05/08/03 09/24/06 09/23/07 06/19/10
Tesoro Golden Eagle Refinery	01/14/00 01/12/01 (HF update) 06/21/02 06/22/07 12/11/09	08/16/00 09/18/01 (HF update) 07/30/07	01/31/01 12/14/01 (HF update) 06/21/03 11/05/07 06/04/10	05/06/03 09/23/07 06/10/10	09/15/00 12/3/01 (HF) 09/08/03 11/07/05 08/18/08 04/18/11	05/06/03 09/24/06 09/23/07 06/10/10

EFFECTIVENESS OF THE HAZARDOUS MATERIALS OMBUDSMAN

The Board of Supervisors created the Hazardous Materials Ombudsperson position in 1997. This position was filled in April 1998. The Board believed that the ombudsperson would be a conduit for the public to express their concerns about how Hazardous Materials Programs personnel are performing their duties. Attachment A is a report from the Hazardous Materials Ombudsman on the effectiveness of the position.

OTHER REQUIRED PROGRAM ELEMENTS NECESSARY TO IMPLEMENT AND MANAGE THE INDUSTRIAL SAFETY ORDINANCE

The California Accidental Release Prevention (CalARP) Program is administered in Contra Costa County by the Hazardous Materials Division of

Contra Costa Health Services. The Industrial Safety Ordinance expands on this program. Stationary sources are required to submit a Risk Management Plan that is similar to the Safety Plans that are submitted. Hazardous Materials Programs reviews these Risk Management Plans and perform the CalARP Program audit simultaneously with the Industrial Safety Ordinance audit.

Hazardous Materials Programs perform Unannounced Inspections of stationary sources that are part of the CalARP Program and are also required to submit a Risk Management Plan to the U.S. EPA. These inspections look at a focused portion of the CalARP Program or Industrial Safety Ordinance requirements, as well as elements from the other Hazardous Materials Programs.

REGULATED STATIONARY SOURCES LISTING

THE STATUS OF THE REGULATED STATIONARY SOURCES' SAFETY PLANS AND PROGRAMS

All of the stationary sources that are regulated by the Industrial Safety Ordinance were required to submit their Safety Plans to Hazardous Materials Program by January 15, 2000 and to have their Safety Programs completed and implemented. The stationary sources were also required to have a Human Factors Program in place that follows the County's Safety Program Guidance Document by January 15, 2001. The status of each of the regulated stationary sources is given in Table I and includes the following:

- When the latest updated Safety Plan was submitted
- When the Notice of Deficiencies was issued
- When the plan was determined to be complete by Hazardous Materials Program
- When the public meeting was held on the Safety Plan
- When the audits were complete
- When the public meetings were held on the preliminary audit findings
- When the Human Factors to the Safety Plan were revised
- When the Notice of Deficiencies was issued for the Human Factors revised Safety Plan
- When the Human Factors Safety Plan was determined to be complete
- When the Audit/Inspection was completed
- When the Human Factors Audit preliminary findings Public Meeting was held

Locations of the Regulated Stationary Sources Safety Plans

Each of the regulated stationary sources was required to submit a Safety Plan to Hazardous Materials Program on January 15, 2000 and an updated Safety Plan that includes the implementation of the stationary source's Human Factors Program by January 15, 2001. The regulated stationary sources are required to update their Safety Plan at least once every three years. These plans are available for public review at the Hazardous Materials Programs Offices at 4585 Pacheco Blvd., Suite 100, Martinez. When Hazardous Materials Programs determines that the Safety Plan is complete, and prior to going out for a 45-day public comment period, Hazardous Materials Programs will place the plan in the library(ies) closest to the regulated stationary source. Table II lists the regulated stationary sources with the location of each the Safety Plans.

ANNUAL ACCIDENT HISTORY REPORT AND INHERENTLY SAFER SYSTEMS IMPLEMENTED AS SUBMITTED BY THE REGULATED STATIONARY SOURCES

The Industrial Safety Ordinance requires the stationary sources to update the information on their accident history in their Safety Plans and include how they have used inherently safer processes within the last year. Table III lists some of the Inherently Safer Systems that have been implemented by the different stationary sources during the same period. Attachment B includes the individual reports from the stationary sources.



Table II
Location of Safety Plans - Libraries

Regulated Stationary Source	Location 1	Location 2	Location 3
Air Liquide Large Industries	Hazardous Materials Programs Office		
Air Products at Shell	Hazardous Materials Programs Office	Martinez Public Library	
Air Products at Tesoro	Hazardous Materials Programs Office	Martinez Public Library	
Shell Refining – Martinez	Hazardous Materials Programs Office	Martinez Public Library	
General Chemical West Bay Point Works	Hazardous Materials Programs Office	Bay Point Public Library	
ConocoPhillips Rodeo Refinery	Hazardous Materials Programs Office	Rodeo Public Library	Crockett Public Library
Tesoro Golden Eagle Refinery	Hazardous Materials Programs Office	Martinez Public Library	

Table III
Inherently Safer Systems

Regulated Stationary Source	Inherently Safer System Implemented	Design Strategy	Category
Air Liquide Large Industries	Reduction of inventory by design with no storage vessels (2 times)	Inherent	Minimization
	Reduce the impact by using a less hazardous chemical (2 times)	Inherent	Moderate
Air Products at Shell Martinez Refinery	Reduced the potential of a hazard by adding controls (1 time)	Active	Moderate
	Reduced potential of error by standardizing into procedure (1 time)	Procedural	Simplify
Air Products at Tesoro	Reduced the potential of a hazard by adding controls (1 time)	Active	Moderate
	Reduced potential of error by standardizing into procedure (1 time)	Procedural	Simplify
ConocoPhillips- Rodeo Refinery	Reduced inventory by combining or removing equipment from the process (7 times)	Inherent	Minimization
	Revised equipment metallurgy, components, controls features or personnel placement (37 times)	Passive	Moderate
	Reduced the potential of a hazard by design change (1 time)	Passive	Simplify
	Reduced potential of exposure by adding controls (1 time)	Active	Moderate
General Chemical West Bay Point Works	Substantial reduction of chemical inventory (8 times)	Inherent	Minimization
Shell Martinez Refinery	Reduction of inventory by removing equipment and piping (7 times)	Inherent	Minimization
	Reduced potential of exposure by eliminating equipment/leak source (1 time)	Inherent	Moderate
	Reduced potential of exposure by changing equipment metallurgy (2 times)	Passive	Moderate
	Change equipment design to reduce potential of a hazard (2 time)	Passive	Simplify
Tesoro Golden Eagle Refinery	Eliminated hazardous materials storage vessel (12 times)	Inherent	Minimization
	Reduced hazardous conditions by equipment design features. (7 times)	Passive	Moderate
	Reduced frequency of exposure by changing equipment design (3 times)	Passive	Simplify

**STATUS OF THE INCIDENT INVESTIGATIONS,
INCLUDING THE ROOT CAUSE ANALYSES
CONDUCTED BY THE REGULATED STATIONARY
SOURCES**

The Industrial Safety Ordinance requires the regulated stationary sources to do an incident investigation with a root cause analysis for each of the major chemical accidents or releases as defined by the following: “Major Chemical Accident or Release means an incident that meets 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 results in the release of a regulated substance and meets one or more of the following criteria:

- Results in one or more fatalities
- Results in greater than 24 hours of hospital treatment of three or more persons
- Causes on- and/or off-site property damage

(including 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 Service

- 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 Hazardous Materials Programs 30 days after the root cause analysis is complete. There were four Major Chemical Accidents or Releases that have occurred within the last year in Contra Costa County. Major Chemical Accidents or Releases that occurred within the last year and the status of each of these incidents investigations are included in Table IV. The 72-hour reports related to these four incidents are available at the Hazardous Materials Program office and website.



Table IV

Regulated Source	Date MCAR	Severity	MCAR Descriptions	Onsite Impact	Offsite Impact
Tesoro Golden Eagle Refinery	12/09/10 (CWS 2)	1	Partial Power outage due to damage at substation led to excess flaring and some unit shut down. CWS 2 activated at 10:31. CCHMP monitored the surrounding area and no hazardous substance was detected. Incident downgraded to CWS 0 at 13:18.	Unit shutdown, damage at one of the substation.	Visible flare, overcast and light wind condition.
Tesoro Golden Eagle Refinery	11/10/10 (CWS 3)	1	Power outage from 3rd party power and steam supplier led to excess flaring and refinery-wide shutdown, very dark smoky plume. At 16:14, CWS 2 and at 16:37 upgraded to CWS 3. CCHMP monitored the surrounding area and took air samples. No hazardous substance was detected. Power restored plantwide at 19:53.	Refinery shutdown, a grass fire around the flare.	Visible smoke and reports of burnt grass smell in N. Concord.
Conoco Phillips Rodeo Refinery	10/22/10 (CWS 2)	1	Third party (Air Liquide) hydrogen plant tripped resulting in elevated pressure in the Refinery's fuel gas system, and decreases in available hydrogen and steam to the Refinery. One turbine at the Refinery power plant immediately tripped further reducing available steam. Excess flaring (Level 1) resulted from Refinery units powering down due to less available hydrogen and steam and the fuel gas system imbalance. Approximately 3 hours into the incident (~2:20 pm), the remaining two turbines at the power plant tripped offline. Without a sufficient amount of steam to the flare, visible smoke was generated (Level 2). Refinery had to significantly slow down/shut down some operations. Refinery had a smokey flare until about 7pm.	Overpressured fuel gas system resulted in flaring. Loss of steam and hydrogen resulted in a slow down of some units. Power plant turbine tripped off resulted in smoky flare and further slow down of select operations. No equipment damage was reported.	The BAAQMD received a number of complaints of visible smoke and odor in the area. No contaminants were found in community air samples taken by Refinery personnel. No activity was seen on the Refinery's fenceline monitor.

Regulated Source	Date MCAR	Severity	MCAR Descriptions	Onsite Impact	Offsite Impact
Tesoro Golden Eagle Refinery	10/10/10 (CWS 2)	1	At 12:20, fire on Tank 650 (foul water), contractor was replacing seal. Tank has a 3 foot diesel to layer for odor control. One Contractor treated for smoke inhalation, released same day. No odor reported. All clear at 16:10.	Emergency Operation Center was activated. No reportable quantities of hazardous compounds were exceeded.	Visible smoke plume, but air monitoring by Tesoro industrial hygiene yielded non-detect levels.

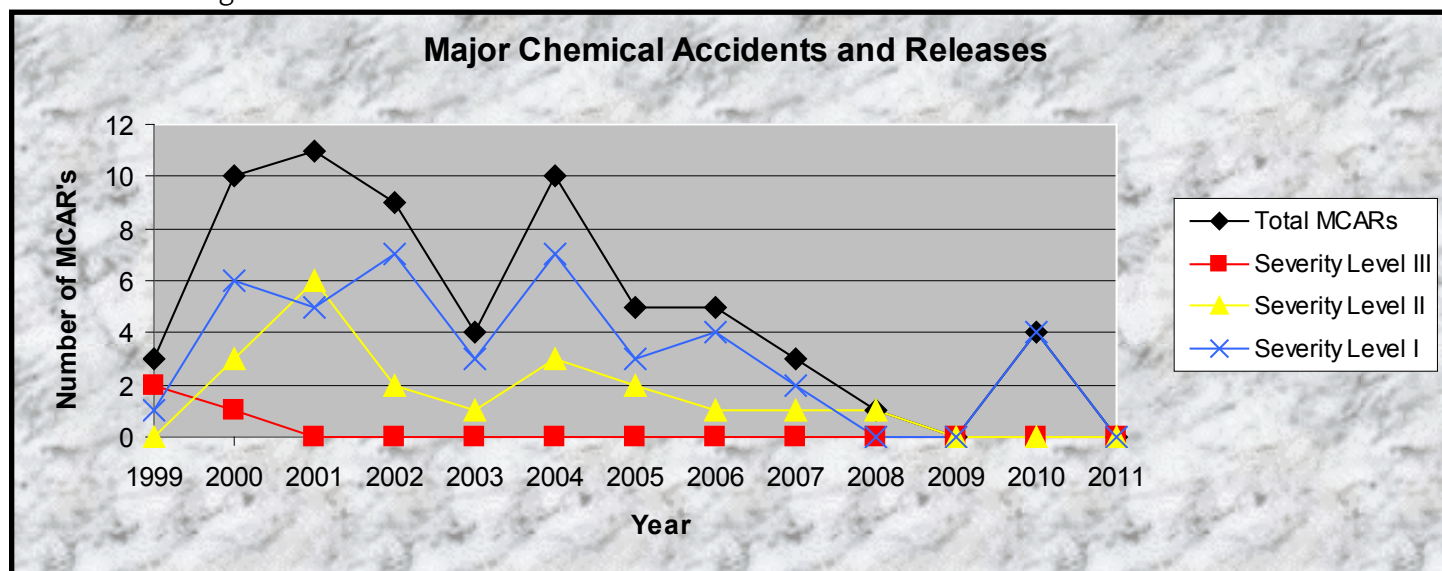
MAJOR CHEMICAL ACCIDENTS OR RELEASES

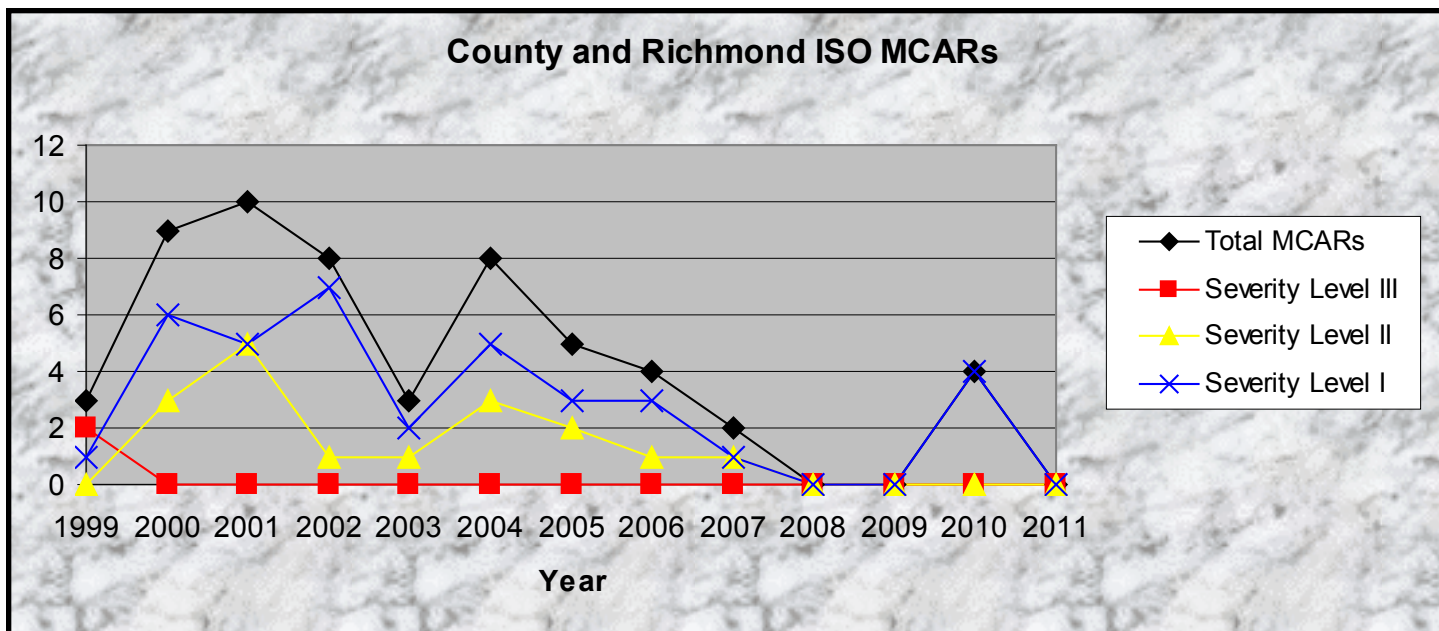
Hazardous Materials Programs analyzed the Major Chemical Accidents or Releases (MCAR) that occurred since the implementation of the Industrial Safety Ordinance. The analysis includes the number of MCARs and the severity of the MCARs. Three different levels of severity were assigned:

- Severity Level III – A fatality, serious injuries or major onsite and/or offsite damage occurred
- Severity Level II – An impact to the community occurred, or if the situation was slightly different the accident may have been considered major, or there is a recurring type of incident at that facility
- Severity Level I – A release where there was no or minor injuries, the release had no or slight impact to the community, or there was no or minor onsite damage

Below are charts showing the number of MCARs from January 1999 through October 2011 for all stationary sources in Contra Costa County, the MCARs that occurred at stationary sources regulated by the County's Industrial Safety Ordinance, and a chart showing the MCARs that have occurred at the County and the City of Richmond's Industrial Safety Ordinance stationary sources. The charts also show the number of severity I, II and III MCARs for this period.

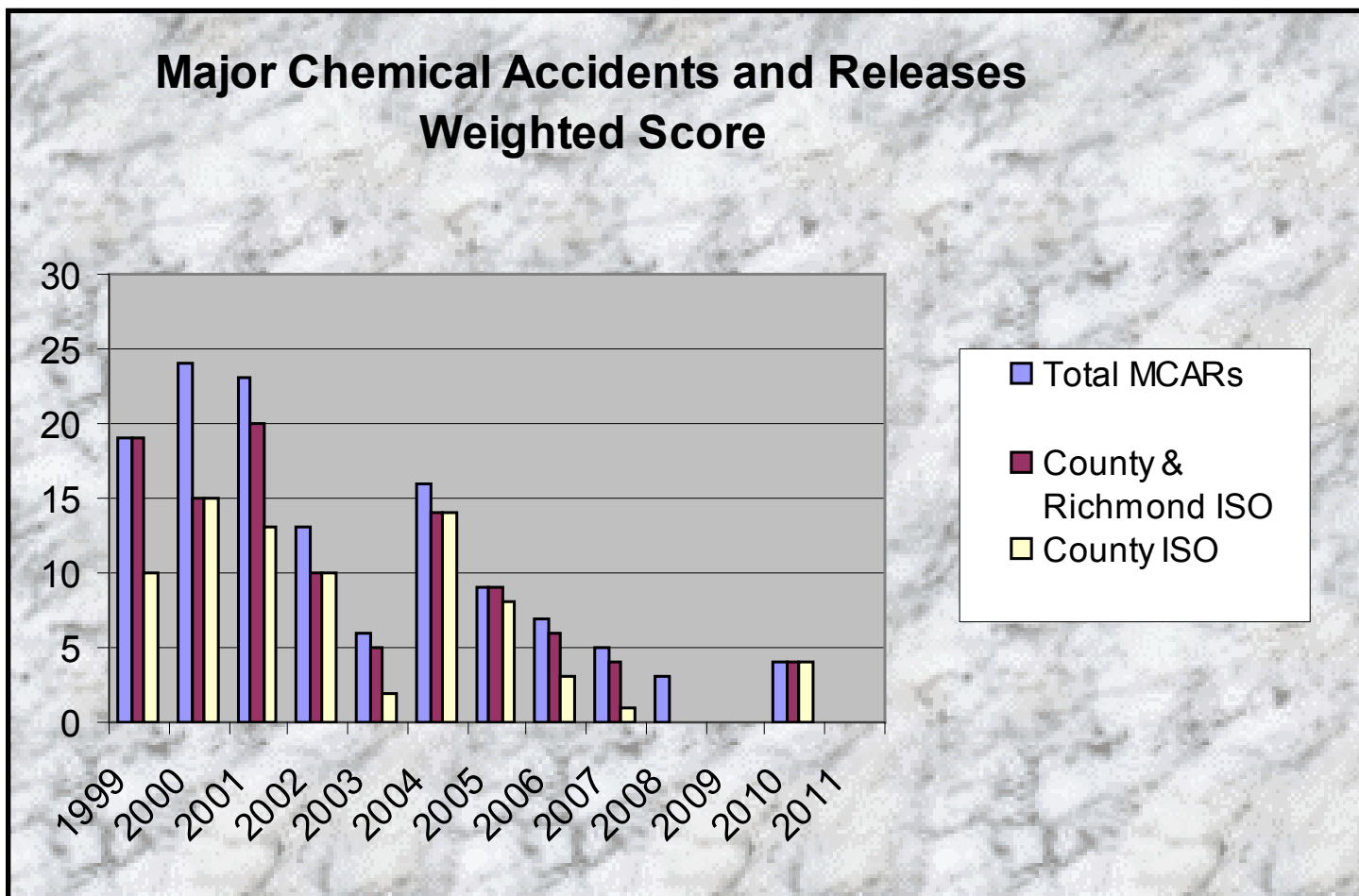
NOTE: The charts do not include any transportation MCARs that have occurred.





A weighted score has been developed giving more weight to the higher severity incidents and a lower weight to the less severe incidents. The purpose is to develop a metric of the overall process safety of facilities in the County, the facilities that are covered by the County and the City of Richmond Industrial

Safety Ordinances, and the facilities that are covered by the County's Industrial Safety Ordinance. A severity Level III incident is given 9 points, severity Level II is given 3 points and severity Level I is given 1 point. Below is a graph of this weighted scoring.



LEGAL ENFORCEMENT ACTIONS INITIATED BY HAZARDOUS MATERIALS PROGRAM

As part of the enforcement of the Industrial Safety Ordinance and the CalARP Program, Hazardous Materials Programs issues Notices of Deficiencies on the Safety and Risk Management Plans and issues Audit Findings on what a stationary source is required to change to come into compliance with the regulations. Table I shows the action that has been taken by Hazardous Materials Programs. Hazardous Materials Programs has not taken any action through the District Attorney's Office for noncompliance with the requirements of the Industrial Safety Ordinance.

PENALTIES ASSESSED AS A RESULT OF ENFORCEMENT

No penalties have been assessed this year for non-compliance with the Industrial Safety Ordinance.

TOTAL FEES, SERVICE CHARGES, AND OTHER ASSESSMENTS COLLECTED SPECIFICALLY FOR THE INDUSTRIAL SAFETY ORDINANCE

The fees charged for the Industrial Safety Ordinance are to cover the time that the Accidental Release Prevention Engineers use to enforce the ordinance, the position of the Hazardous Materials Ombudsman, outreach material and to cover a portion of the overhead for the Hazardous Materials Programs. The fees charged for administering this ordinance and the Richmond Industrial Safety Ordinance for the fiscal year 2010-11 is \$713,631.

TOTAL PERSONNEL AND PERSONNEL YEARS USED BY HAZARDOUS MATERIALS PROGRAM TO IMPLEMENT THE INDUSTRIAL SAFETY ORDINANCE

The Accidental Release Prevention Programs Engineers have reviewed resubmitted Safety Plans, prepared and presented information for public meetings, performed audits of the stationary sources for compliance with both the California Accidental Release Prevention Program and Industrial Safety Ordinance and did follow-up work after a Major Chemical Accident or Release. The following is a breakdown of the time that was spent on the County's and the City of Richmond's Industrial Safety Ordinances:

- Four ISO/CalARP Program facility audits were done between November 2010 and October 2011. It takes four to five engineers four weeks to perform the on-site portion of an ISO/CalARP Program audit. The audit process encompasses off-site time that includes a quality assurance process, working with the facility to address any questions, posting public notices, attending public forum to share audit findings, addressing any questions from the public and issuing the final report. The total time taken to perform these audits in 2011 is 3,900 hours. Approximately one-third of the time is dedicated to the Industrial Safety Ordinance for a total of 1,300 hours.
- Updating Safety Program Guidance document – 500 hours
- Reviewing information for the website – 60 hours
- Reviewing Safety Plans and following up with the facilities on any deficiencies – 80 hours
- Health Services Community Education and Information Office or the Accidental Release Prevention Engineers prepare material for presentations and public meetings – total approximately 80 personnel hours.
- Total of 2,020 hours is the approximate personnel time spent on the Industrial Safety Ordinance.

This is not including the Ombudsman time spent on helping to prepare for the public meetings, working with the engineers on questions arising from the Industrial Safety Ordinance, and answering questions from the public on the Industrial Safety Ordinance.

COMMENTS FROM INTERESTED PARTIES REGARDING THE EFFECTIVENESS OF THE INDUSTRIAL SAFETY ORDINANCE

No comments were received on the County's or the City of Richmond's Industrial Safety Ordinances during the last year.

THE IMPACT OF THE INDUSTRIAL SAFETY ORDINANCE ON IMPROVING INDUSTRIAL SAFETY

Four programs are in place to reduce the potential of an accidental release from a regulated stationary

source that could impact the surrounding community. The four 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 locally by the Hazardous Materials Programs staff, and the Industrial Safety Ordinance administered by the Hazardous Materials Programs staff. Each of the programs is very similar in requirements, with the Industrial Safety Ordinance being the most stringent. The prevention elements of the program level 3 regulated stationary sources under the federal Accidental Release Prevention Program is almost identical to the Process Safety Management Program. The main differences between the federal Accidental Release Prevention and the CalARP Programs are as follows:

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

The differences between the CalARP and the Industrial Safety Ordinance Safety Programs are as follows:

- 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
- All of the processes at the regulated stationary sources are covered
- Managing changes in the organization for operations, maintenance, and emergency response
- The implementation of a Human Factors Programs

The Board of Supervisors amended the County's Industrial Safety Ordinance to expand the require-

ment of the ordinance in 2006. These amendments are as follows:

- Expand the Human Factors section of the Industrial Safety Ordinance to include the following:
 - » Maintenance procedures
 - » Management of Organizational Changes
 - Maintenance personnel
 - A job task analysis for each of the positions that work in operations, maintenance, emergency response and Health and Safety
 - Include temporary changes in the Management of Organizational Change
- 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 a Safety Culture Assessment

The Safety Culture Assessment guidance chapter was finalized in November 2009. The Industrial Safety Ordinance Guidance Document is being updated to include the remaining changes to the ordinance and a draft was issued on September 2010. The Accidental Release Prevention Engineers have participated with the Center for Chemical Process Safety on developing the second edition of the "Inherently Safer Chemical Processes" 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.

All of these requirements will and have lowered the probability of an accident occurring. Contra Costa County has been recognized in the Chemical Safety and Hazard Investigation Board Report on the BP March 23, 2005 Texas City Investigation as an alternative model for doing process safety inspections. The report states "Contra Costa County and the U.K. Health and Safety Executive conduct frequent scheduled inspections of PSM and major hazard facilities with highly qualified staff." This was done to compare to the number of OSHA process safety management audits conducted. Carolyn W. Merritt, the Chemical Safety and Hazard Investigation Board Chair at that time, also recognized Contra Costa County in testimony to the House of Representatives Committee on Education and Labor chaired by Representative George Mill-

er. Senator Barbara Boxer, during a hearing to consider John Bresland's nomination to the Chemical Safety and Hazard Investigation Board as the Chair (replacing Carolyn Merritt), asked Mr. Bresland about the Contra Costa County program for process safety audits of refineries and chemical companies. The Chemical Safety and Hazard Investigation Board also mentions Contra Costa County in a DVD "Anatomy of a Disaster: Explosion at BP Texas City Refinery" on the resources given to audit and ensure facilities are complying with the regulations. The Chemical Safety and Hazard Investigation Board made a recommendation in their final investigation report on an incident that occurred at the Bayer CropScience Institute, West Virginia facility that West Virginia or the Kanawha Valley adopts a process of auditing their chemical facilities using the Contra Costa County auditing process. The Hazardous Materials Programs staff and a representative from the local United Steelworkers Union were part of a panel when the Chemical Safety and Hazard Investigation Board presented this report to the Kanawha Valley community.

Contra Costa Hazardous Materials Programs was asked to give testimony at the 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. The testimony was on the success of the Accidental Release Prevention Programs that are in place in Contra Costa County. The hearing was specific on two major incidents that occurred in Anacortes, Wash. at a Tesoro Refinery and the Deepwater Horizon incident in the Gulf of Mexico. A link to the testimony is posted on the Health Services website and can be found at <http://help.senate.gov/hearings/hearing/?id=fe34048f-5056-9502-5d69-2609a5d5501a>.

CITY OF RICHMOND INDUSTRIAL SAFETY ORDINANCE

The City of Richmond on December 18, 2001 passed its version of the Industrial Safety Ordinance, which became effective January 17, 2002. Richmond's Industrial Safety Ordinance (RISO) mirrors the County's Industrial Safety Ordinance, with the exception of the 2006 amendments to the County's Ordinance.

Richmond's Industrial Safety Ordinance covers two stationary sources: Chevron Richmond Refinery and General Chemical West Richmond Works.

Chevron and General Chemical West Richmond Works submitted their Safety Plans to Hazardous Materials Programs, which have been reviewed and considered complete. The public comment period for these plans ended in January 2004. Public meetings held in 2004 in North Richmond and Richmond discussed Chevron and General Chemical West Richmond Works audit findings. The second Richmond Industrial Safety Ordinance/CalARP Program audits for these facilities occurred in 2006 and public meetings were held in June 2007 at Hilltop Mall at "Lessons from Katrina," the 2007 Neighbor Works Week Homeownership Faire & Disaster Preparedness Expo.

Hazardous Materials Program followed up on the January 15, 2007 fire at the Chevron Refinery. The follow-up included a public meeting, City Council meetings, meetings with Chevron on the investigation and the root cause analysis. Chevron Richmond Refinery was audited for the third time for RISO/CalARP program in April 2008. The report was finalized and results were available at the Recycle More Earth Day Event in Richmond in June 2009. Copies of the audit results are available at the Richmond Library and a summary of the audit is also available on Hazardous Materials Programs' website.

CCHMP performed an RISO/CalARP program audit at General Chemical Richmond in January of 2009. The final report was shared in a public event in Richmond in September 2010. CCHMP performed the fifth RISO/CalARP program audit at Chevron Richmond Refinery in February 2011. The final audit report was shared at the West County Emergency Preparedness Fair in El Cerrito in September 2011. CCHMP is scheduling presentations at several neighborhood groups to share the audit findings.

CCHMP presented the 2010 annual RISO report to the Richmond City Council on July 26, 2011. Copies of the RISO report were posted on cchealth.org and provided to select community members for distribution.

ATTACHMENT A

HAZARDOUS MATERIALS OMBUDSMAN REPORT **Hazardous Materials Ombudsman Evaluation**

October, 2009 through September, 2010



HAZARDOUS MATERIALS OMBUDSMAN EVALUATION

October, 2010 through September, 2011

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 October, 2010 through September, 2011 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.

II. PROGRAM ELEMENTS

1. Continuing an Outreach Strategy

This period efforts were focused on maintaining the outreach tools currently available. Copies of the Ombudsman Brochure were translated into Spanish and were distributed to the public at meetings, presentations, public events, and through the mail. A contact person was also established in Public Health that could receive calls from the public in Spanish and serve as an interpreter to respond to these calls. In addition to explaining the services provided by the position, the brochure also provides the phone numbers of several other related County and State programs. The web page was maintained for the program as part of Contra Costa Health Services web site. This page contains information about the program, links to other related web sites, and information about upcoming meetings and events. A toll-free phone number is published in all three Contra Costa County phone books in the Government section.

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

During this period, the Hazardous Materials Ombudsman received 148 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. This year, for the first time, the Ombudsman used the services of the Linguistic Access Unit of the Health Care Interpreters Network of Health Services to help a Chinese-speaking homeowner with questions about mold.

Complaints about the Hazardous Materials Programs can also be received via telephone and in writing. Persons that make complaints via telephone are also asked to provide those complaints in writing. During this period, the Hazardous Materials Ombudsman did not receive any complaints about the Hazardous Materials Program.

This year, the Ombudsman facilitated an Environmental Health Department workshop for business owners concerning their new permit fee structure and a community meeting for the Public Works Department in Clyde about the development of a trail on the site of a contaminated railroad bed. The Ombudsman also facilitated a tour of an industrialized area of the County for the Federal Environmental Protection Agency.

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.

- **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, writes letters and provides support for 3 monthly Commission meetings. During this period, the Ombudsman helped to prepare the Chair to give presentations on the Household Hazardous Waste and Brownfields reports the Commission completed the previous year; conducted research on home-generated pharmaceutical disposal options and impacts on the environment; and trends in industrial accidents.

- **Public and Environmental Health Advisory Board**

As staff to the Environmental Health subcommittee of PEHAB, the Ombudsman keeps the committee informed on issues they are interested in such as refinery flaring, contaminated fish consumption, climate change, and Integrated Pest Management.

- **Integrated Pest Management Advisory Committee**

During this period the Ombudsman represented the Health Department on, and was elected to be chairperson of, the County Integrated Pest Management Advisory Committee. This Committee brings Department representatives and members of the public together to help implement the County's Integrated Pest Management policy.

- **Asthma Program**

The Ombudsman participated in the Public Health Department's asthma program as a resource on environmental health issues. The Ombudsman represented the Asthma program in two regional collaboratives related to asthma issues, particularly diesel pollution – the Ditching Dirty Diesel Collaborative and the Bay Area Environmental Health Collaborative. The Ombudsman also gave presentations to several High School classes on asthma and air pollution.

- **East County Environmental Justice Collaborative**

During this period the Ombudsman provided technical assistance to the East County Environmental Justice Collaborative, a Public Health Department project in Bay Point and Pittsburg. This project was funded by grants from the Federal EPA and the San Francisco Foundation that the Ombudsman helped secure. The Ombudsman helped develop research materials and gave presentations to residents as part of this project. The Ombudsman also talked to teachers, principals and parents in the Pittsburg School District to encourage them to participate in the environmental education programs offered by the Contra Costa Water District.

- **Bay Area Air Quality Management District's Community Air Risk Evaluation Program**

During this period the Ombudsman represented the Public Health Division on the advisory board to this Air District program. This advisory board meets quarterly to discuss implementation of this program that identifies and creates strategies to address health risks in communities with high air pollution emissions in the Bay Area. Two of these areas are in Contra Costa County.

- **Richmond General Plan Health Element**

During this period the Ombudsman provided technical assistance to the City of Richmond as part of an effort to evaluate the effectiveness of the implementation of the new Health and Wellness Element of their updated General Plan. The Ombudsman helped to develop a

report on how to develop indicators of effectiveness and gave presentations to the Community Advisory Panel the City used to provide feedback on the development of the Health and Wellness Element.

- **Climate Change**

During this period the Ombudsman provided technical assistance to the Public Health Department on determining the role of public health in addressing climate change. The Ombudsman attended several workshops and participated in a number of meetings with other health-based organizations on this topic.

- **San Francisco Bay Stakeholder Advisory Group for Contaminated Fish Consumption**

This year the Ombudsman was invited to serve on the California Department of Public Health's San Francisco Bay Stakeholder Advisory Group for Contaminated Fish Consumption. This is a two year effort to develop updated and effective public messaging for the new fish consumption advisories for San Francisco Bay that have been developed by the State.

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, Cumulative impacts assessment, emergency management practices, health mitigations for consumption of contaminated fish, and land-use planning for greenhouse gas reduction.

III. PROGRAM MANAGEMENT

The Hazardous Material Ombudsman continued to report to the Public Health Director on a day-to-day basis during this period, while still handling complaints and recommendations about the Hazardous Materials Programs through the Health Services Director. The Ombudsman also was a member of Health Services Emergency Management Team and participates on its HEEP management team. The Ombudsman also assisted the Asthma program in the writing of grants to fund ongoing programs.

IV. GOALS FOR THE 2011/12 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 and the Public and Environmental Health Advisory Board; provide technical support to the Asthma program, and represent it on the Ditching Dirty Diesel Collaborative and the Bay Area Environmental Health Collaborative; chair the Integrated Pest Management Advisory Committee; and participate on the CAER Emergency Notification committee, the Air District CARE Advisory Board and the San Francisco Bay Stakeholder Advisory Group.

During this period the Ombudsman will assist the Public Health Department develop and implement a climate change program to increase the consideration of public health issues in local Climate Action Plans, focusing on the areas of community engagement, maximizing public health co-benefits and minimizing the impacts on vulnerable populations.



ATTACHMENT B

REGULATED SOURCES ANNUAL PERFORMANCE WITH ACCIDENT HISTORY AND INHERENT SAFETY IMPLEMENTATION



 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-1 of 2
Policy	Document Owner:	Approved By:	Revision No.: 1

Annual Performance Review and Evaluation Submittal

June 30, 2011

*Attach additional pages as necessary

1. Name and address of Stationary Source: **Air Liquide Rodeo Hydrogen Plant, 1391 San Pablo Blvd., Rodeo, California 94572**
2. Contact name and telephone number (should CCHMP have questions): **Jim Stonecipher 510-245-7285 (ext 2203)**
3. Summarize the status of the Stationary Source's Safety Plan and Program (450-8.030(B)(2)(i)): **Rewritten and submitted to Contra Costa County in July 2010. Waiting on results of review.**
4. Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)): **Updated Safety Plan in July 2010 when submitted response to RMP review by County.**
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)): **CCHS Office, 4585 Pacheco Boulevard, Suite 100, Martinez; Rodeo Public Library; Crockett Public 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)): **An RCFA was performed for an incident occurring on October 22, 2010. The final RCFA report was submitted to CCHS and all recommendations from the RCFA have been implemented.**
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)): **On October 22, 2010 5 kV Breaker on a plant motor did not open in the set time. This failure caused the A Buss main breaker to open resulting in a loss of power to critical operating equipment. Breaker testing in a repair shop confirmed opening times exceeded the protection relay setting. The breaker was repaired and returned to the facility. The setting on the motor protection relay for the failed breaker was originally 300 ms but has been increased to 1,000 ms to prevent reoccurrence. Additionally, motor protection relays on similar 5 kV breakers was also reviewed and also increased to 1000 ms to prevent occurrence on different motors.**
8. Summary of the status of implementation of recommendations formulated during audits, inspections, Root Cause Analyses, or Incident Investigations conducted by the Department (450-8.030(B)(2)(v)): **All RCFA recommendations have been implemented. Audit action items from the 2010 site audit are currently being implementd. The action plan has been developed with CCHS to close remainig audit items.**
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)): **No changes at this time.**
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)): **None**

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-2 of 2
Policy	Document Owner:	Approved By:	Revision No.: 1

11. Summarize total penalties assessed as a result of enforcement of this Chapter (450-8.030(3)): None
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 nine facilities subject to the Industrial Safety Ordinance was \$568,631. The total Industrial Safety Ordinance program fees for these nine facilities was - \$713,631. (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)): 1510 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 has prompted us to look at employee perception through the use of safety culture assessment. The safety culture assessment was conducted in mid 2010 with nearly 100% participation. Results are then communicated to employees during safety meetings and suggestions on how to improve the safety of our facility were gathered and action plans generated. To date we have implemented a hands-on driving course to improve employee safety when operating a motor vehicle and training has been schedule for later this year in Hot Work, Confined Space, Energy Isolation and Safe Work conditions. Air Liquide has also contracted with an engineering firm to assist in the development of Latent Condition and Inherently Safer Design programs.**
16. List examples of changes made at your stationary source due to implementation of the Industrial Safety Ordinance (e.g., recommendations from PHA's, Compliance Audits, and Incident Investigations in units not subject to CalARP regulations; recommendations from RCA's) that significantly decrease the severity or likelihood of accidental releases. **The stationary source is currently developing a Latent Conditions program that focuses on reducing the potential human error associated with Management of Change, procedure development and modification, Incident Investigation and Process Hazard Analysis. With operator input site specific latent condition checklists have been developed that can be applied during these four critical risk reduction task. Knowledge gained through the use of these checklists will then be incorporated into our process safety system ultimately reducing the likelihood of human error in the field.**
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

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-1 of 2
Policy	Document Owner:	Approved By:	Revision No.: 1

Annual Performance Review and Evaluation Submittal

June 27, 2011

*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 CCHS have questions): Eric Schneider (925) 372-9302
3. Summarize the status of the Stationary Source's Safety Plan and Program (450-8.030(B)(2)(i)): The stationary Source's Safety Plan is complete per the CCHS requirements and submitted to CCHS for review. The program was audited in the past year by CCHS and a Safety Cultral Survey standard was created and executed in the past yearas part of the plan. The Program has been implemented as required.
4. Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)): 6/01/11 – Several updates were completed to the plan as a result of the CCHS Audit preformed in October 2010. These were all clarifying updates in accordance with the CCHPM. A new section covering the Safety Cultural Survey requirement has been added to the plan. The safety culture survey was initiated in October, 2010 with resluts catagorized in December. The results were reviewed with all stie employees and follow actions identified. CCHS audited the survey processand standards. Updates to the standard were submitted and apprvoed in May, 2011 by CCHS. Updated Section 9 (Annual Preformance Review and Evaluation Submittal).
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)): CCCHS Office, 4585 Pacheco Boulevard, Martinez; Martinez Library (library closest to the stationary source); Air Products – See contact in #2, above.
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 incidents in the past year.
7. Summary of each Root Cause Analysis (Section 450-8.016(C)) including the status of the analysis and the status of implementation of recommendations formulated during the analysis (450-8.030(B)(2)(iv)): No events triggered this requirement since the previous Annual Performance Review and Evaluation submittal.
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)): Air Products and CCHS completed the formal (3 year) CalARP ISO audit in July 2009 with follow up action items identified. After review of the action items, a response was provided to CCHS with identified completed items or a scheduled completion date. As of Oct., 2010 all 14 have been compelted and approved by CCHS. The 14 ensure action items are total between Martinez- Shell and Martinez- Tesoro sites. Minor updates were also completed as a result of the Safety Plan Audit.

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-2 of 2
Policy	Document Owner:	Approved By:	Revision No.: 1

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)): Converted Consequence of Deviation document to a SWIM document to minimize the chance of human error. Added a plant trip alarm at 800deg F to magnetic thermocouples used to monitor hot spots on the transferheader.
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)): None
11. Summarize total penalties assessed as a result of enforcement of this Chapter (450-8.030(3)): None
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 nine facilities subject to the Industrial Safety Ordinance was \$568,631. The total Industrial Safety Ordinance program fees for these nine facilities was - \$713,631. (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)): 1510 hours were used to audit/inspect and issue reports on the Risk Management Chapter of the Industrial Safety Ordinance.
14. Copies of any comments received by the source (that may not have been received by the Department) regarding the effectiveness of the local program that raise public safety issues (450-8.030(B)(6)): None
15. Summarize how this Chapter improves industrial safety at your stationary source (450-8.030(B)(7)): Air Products is committed to the safer operation of our facilities and has implemented applicable requirements outlined in the ISO and CalARP regulations. Both the ISO and Human Factors programs are an integral part of our five year Operating Hazard Review revalidations and on-going management of change process. This has helped the site maintain a safety record of no employee recordable or Lost Time Injuries, with one low severity contractor recordable, since the last plan submittal. There have been no incidents resulting in an offsite impact. The Chapter has helped reinforce the need to maintain and follow a structured safety program to help ensure the safety of our employees and the communities in which we operate
16. List examples of changes made at your stationary source due to implementation of the Industrial Safety Ordinance (e.g., recommendations from PHA's, Compliance Audits, and Incident Investigations in units not subject to CalARP regulations; recommendations from RCA's) that significantly decrease the severity or likelihood of accidental releases: Air Products has continued to refine the Tier IV site specific documents at the request of CCHS to clarify ISO requirements. The implementation of the ISO standards has resulted in improvement of our Standard Work Instruction Manuals contributing to our ongoing safe operation. Items from the audit identified improvement in our RMP and Safety documentation. We completed a safety culture assessment and to identified areas of improvement in our safety process with the involvement of our employees
17. Summarize the emergency response activities conducted at the source (e.g., CWS or TEN activation) in response to major chemical accidents or releases: There were no emergency response activities to this site since the previous Annual Performance Review and Evaluation submittal.

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-1 of 2
Policy	Document Owner:	Approved By:	Revision No.: 1

Annual Performance Review and Evaluation Submittal

June 27, 2011

*Attach additional pages as necessary

1. Name and address of Stationary Source: Air Products
Tract 1, Tesoro Refinery (Golden Eagle - Avon), Solano Way, Martinez, CA 94553
2. Contact name and telephone number (should CCHS have questions): Eric Schneider, (925) 372-9302
3. Summarize the status of the Stationary Source's Safety Plan and Program (450-8.030(B)(2)(i)): The stationary Source's Safety Plan is complete per the CCHS requirements and submitted to CCHS for review. The program was audited in the past year by CCHS and a Safety Cultral Survey standard was created and executed in the past yearas part of the plan. The Program has been implemented as required.
4. Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)): 6/01/11 – Several updates were completed to the plan as a result of the CCHS Audit preformed in October 2010. These were all clarifing update in accordance with the CCHPM. A new section covering the Safety Cultural Survey requirement has been added to the plan. The safety culture survey was intiated in October, 2010 with resluts catagorized in December. The results were reviewed with all stie employees and follow actions identified. CCHS audited the survey processand standards. Updates to the standard were submitted and apprvroed in May, 2011by CCHS. Updated Section 9 (Annual Preformance Review and Evaluation Submittal)
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)): CCHS Office, 4585 Pacheco Boulevard, Martinez; Martinez Library (library closest to the stationary source); Air Products – See contact in #2, above.
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): None
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 events triggered this requirement since the previous Annual Performance Review and Evaluation submittal.
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)): Air Products and CCHS completed the formal (3 year) CalARP ISO audit in July 2009 with follow up action items identified. After review of the action items, a response was provided to CCHS with identified completed items or a scheduled completion date. As of Oct., 2010 all 14 have been compelted and approved by CCHS. The 14 ensure action items are total between Martinez- Shell and Martinez- Tesoro sites. Minor updates were also completed as a result of the Safety Plan Audit.

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-2 of 2
Policy	Document Owner:	Approved By:	Revision No.: 1

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)): None
system.
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)): None
11. Summarize total penalties assessed as a result of enforcement of this Chapter (450-8.030(3)): None
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 nine facilities subject to the Industrial Safety Ordinance was \$568,631. The total Industrial Safety Ordinance program fees for these nine facilities was - \$713,631. (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)): 1510 hours were used to audit/inspect and issue reports on the Risk Management Chapter of the Industrial Safety Ordinance.
14. Copies of any comments received by the source (that may not have been received by the Department) regarding the effectiveness of the local program that raise public safety issues (450-8.030(B)(6)): None
15. Summarize how this Chapter improves industrial safety at your stationary source (450-8.030(B)(7)): *Air Products is committed to the safer operation of our facilities and has implemented applicable requirements outlined in the ISO and CalARP regulations. Both the ISO and Human Factors programs are an integral part of our five year Operating Hazard Review revalidations and on-going management of change process. This has helped the site maintain a safety record of no recordable or Lost Time Injuries since the last plan submittal. There have been no incidents resulting in an offsite impact. The Chapter has helped reinforce the need to maintain and follow a structured safety program to help ensure the safety of our employees and the communities in which we operate*
16. List examples of changes made at your stationary source due to implementation of the Industrial Safety Ordinance (e.g., recommendations from PHA's, Compliance Audits, and Incident Investigations in units not subject to CalARP regulations; recommendations from RCA's) that significantly decrease the severity or likelihood of accidental releases: *Air Products has continued to refine the Tier IV site specific documents at the request of CCHS to clarify ISO requirements. The implementation of the ISO standards has resulted in improvement of our Standard Work Instruction Manuals contributing to our ongoing safe operation. Items from the audit identified improvement in our RMP documentation. We completed a safety culture assessment and to identified areas of improvement in our safety process with the involvement of our employees.*
17. Summarize the emergency response activities conducted at the source (e.g., CWS or TEN activation) in response to major chemical accidents or releases: *There were no emergency response activities to this site since the previous Annual Performance Review and Evaluation submittal.*

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-1 of 10
Policy	Document Owner:	Approved By:	Revision No.: 1

Annual Performance Review and Evaluation Submittal

June 30, 2011

*Attach additional pages as necessary

1. Name and address of Stationary Source: ConocoPhillips Rodeo Refinery, 1380 San Pablo Avenue,
Rodeo, CA 94572
2. Contact name and telephone number (should CCHMP have questions): John Driscoll 510-245-4466
3. Summarize the status of the Stationary Source's Safety Plan and Program (450-8.030(B)(2)(i)): The Safety Plan was last revised in July 2009 per the required 3 year schedule. CCHMP reviewed and the changes they requested were completed on 11-4-2010.
4. Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)): The original Safety Plan for this facility was filed with Contra Costa Health Services on January 14, 2000. A revised plan was filed on April 7, 2000 with the updated recommendations requested by CCHS. A Human Factors Amendment was submitted on January 15, 2001. In conjunction with CCHSs required 2nd public meeting on our plan and audit findings, we submitted a complete revision of the plan to reflect the change in ownership of our facility and to update where needed. We took this opportunity to include Human Factors within the plan instead of having it as an amendment. On August 9, 2002 the plan was resubmitted. Public meetings for our plans were held on June 22, 2004 in Rodeo and July 8, 2004 in Crockett. As required the Plan was fully updated in August 2005 on the 3 year cycle. The Plan was reviewed by CCHS and was revised on July 28, 2006 with recommended changes. The last update to the Safety Plan was in July 2009. Recommendations requested by CCHMP were incorporated into the Safety Plan 11-4-2010.
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; Rodeo Public Library; Crockett Public 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)): Summary of Loss of Cogen Event 10-22-2010. See Attachment 1.
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)): Loss of Cogen Event 10-22-10 See Attachment 2.
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 2008 CalARP/ISO audit findings have been addressed. There are no RCA or incident investigations that have been 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)): _____

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-2 of 10
Policy	Document Owner:	Approved By:	Revision No.: 1

See Attachment 3.

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 nine facilities subject to the Industrial Safety Ordinance was \$568,631. The total Industrial Safety Ordinance program fees for these nine facilities was - \$713,631. (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)): 1510 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 have been received.
15. Summarize how this Chapter improves industrial safety at your stationary source (450-8.030(B)(7)): In addition to the ConocoPhillips Corporate Health Safety Environment Management Systems the ISO provides another tool for the continuation of improvement of health and safety 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 Units 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 accelerate rate. A list of inherently safer systems as required by the ISO for PHA recommendations and projects are listed in Attachment 3.
17. Summarize the emergency response activities conducted at the source (e.g., CWS or TEN activation) in response to major chemical accidents or releases: See Attachment 1.

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-3 of 10
Policy	Document Owner:	Approved By:	Revision No.: 1

Attachment 1

Loss of Cogen Units - October 22, 2010 - Summary

At 10:43 am on Friday, October 22 the Air Liquide hydrogen plant (Unit 120) shutdown unexpectedly which caused the refinery to stop or restrict production on hydro-treating and hydro-cracking units. Unit 120 was providing 105 MMSCFD of hydrogen and 174 MLB/Hr of steam to the refinery. When the refinery suddenly lost the steam production from Air Liquide the steam and fuel systems went through sudden changes causing the loss one of the SPP (Steam Power Plant) cogeneration unit turbines. A steam curtailment emergency procedure was implemented immediately. After five starting attempts, GTG23A (A Turbine) was producing steam at 1:30 PM. Operators and maintenance technicians were unable to synchronize the generator to the power grid. Troubleshooting efforts caused A Turbine to trip at 1:57 PM causing the 600# steam system pressure to drop. When the 600# (High Pressure) Steam system dropped to 560#, an air purge, on the steam injection system, caused a flameout of C Turbine by blowing condensate into the fuel nozzles. There was a severe loss of instrument air after the loss of C Turbine. The remaining B Turbine shutdown when the governor system could not adjust the fuel flow without instrument air.

The shutdown of refinery process units resulted in a smoky flare which is a community impact. Due to visible smoke from the refinery, a Community Warning System (CWS) Level 2 notification was made to the Contra Costa County Hazardous Material Notification Policy. A CWS Level 2 is a “Major Chemical Accident or Release” (MCAR) as defined by the Industrial Safety Ordinance.

Key Findings and High Value Learnings

The physical causes of this incident, which played out in unique cascading steps, included:

- 1) The fuel gas system pressure jump caused by the Air Liquide shutdown caused the shutdown of “A” Gas Turbine Generator
- 2) The inability to restart “A” Gas Turbine Generator associated with electrical circuit problems caused the second trip of the “A” Gas Turbine Generator (GTG23A).
- 3) The automatic air purge on the steam injection system caused a flameout on the C Turbine, and
- 4) The loss of instrument air due to system leakage and faulty make-up air pressure control valve caused the shutdown of B Turbine.

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-4 of 10
Policy	Document Owner:	Approved By:	Revision No.: 1

BACKGROUND

The Rodeo Refinery is supplied steam and hydrogen (in the future electricity will be supplied) from a third party, Air Liquide, since the start-up of the HEP (Hydrocracker Expansion Project) in September 2009. The Air Liquide Hydrogen Plant, Unit 120, is supplied Refinery fuel gas, boiler feed water, and air. Although there have been previous sudden shutdowns of the Air Liquide hydrogen unit, the previous consequences were loss of production and flaring. The loss of hydrogen forces Unit 246, the Heavy Oil Hydro-cracking Unit to stop production. Unit 250, the Diesel Hydro-Treating process must also shutdown after an Air Liquide shutdown. During 2010, all previous Unit 120 shutdowns were at much lower hydrogen production rates except one on October 6th. Four of the ten shutdown events (including this event) in 2010 resulted in flaring with SO₂ emissions greater than the Reportable Quantity of 500 lbs.

The refinery maintains a steam reserve capacity to mitigate the effects of losing any one of the major steam producers. Three gas turbine generators with heat recovery steam generators at the Steam Power Plant and Air Liquide are the major producers of steam. Steam production rate is controlled by the Refinery 600# steam system pressure. The refinery wide emergency operating procedure for steam curtailment includes the new HEP units and Air Liquide's operation. Process units have emergency steam curtailment procedures that are implemented when directed by shift supervision or unit conditions.

The three gas turbine generators at the Steam Power Plant are designated GTG23 A, B, and C (this report will use the terms A Turbine, B Turbine, or C Turbine). Fuel gas from the refinery or natural gas from PG&E (Pacific Gas and Electric Company) is supplied to compressors to provide fuel for the turbines or the COEN duct burners. "A" Turbine has a Woodward control system while "B" & "C" Turbines have newer Triconex systems. Both systems control turbine operation by throttling the fuel to the turbine to drive a generator. Operation of the gas turbine generators is normally in an automatic mode limited by the exhaust gas temperature. The COEN burners provide added heat to generate additional steam as determined by 600# Steam system pressure.

DESCRIPTION OF ACTIONS BEFORE THE EVENT

On October 22, 2010 at 10:43 AM, Unit 120 was reportedly shutdown by a trip of the main electrical supply breaker. The trip was the result of a high pump bearing temperature alarm and the slow response of the pump's circuit breaker. The system is designed to protect the plant from an apparent short circuit in the pump's power supply. The loss of power caused the plant shutdown.

The Refinery was supplying Unit 120 with 14 MMSCFD (million standard cubic feet per day) of fuel gas prior to the shutdown. Unit 120 was exporting 105 MMSCFD of hydrogen and 174 MLB/Hr (thousand pounds per hour) of steam to the refinery. An initial jump in steam exports occurred because of the shutdown. Steam supplied to the refinery increased for four

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-5 of 10
Policy	Document Owner:	Approved By:	Revision No.: 1

minutes before flow ceased. The Refinery 600# steam system pressure dropped to 400# by 11:00 AM. The refinery fuel gas system was severely out of balance and pressure increased. Since Unit 120 was no longer using 14 MMSCFD of Fuel Gas the Refinery Fuel Gas Center vented to the flare to control pressure. A Community Warning System Level 1 was called at 11:08 AM due to the excessive flaring. The hydrogen consuming units, Unit 246 Hydrocracker and Unit 250 Diesel Hydrotreater, transitioned to a circulating mode of operation. Unit 240 Hydrocracker went to minimum flow through the First Stage Reactor and shutdown the Second Stage to limit hydrogen consumption.

After five starting attempts, A Turbine was operating and producing steam by 1:30 PM. Operators and maintenance technicians were unable to synchronize the generator to the power grid. Troubleshooting efforts caused A Turbine to trip at 1:57 PM causing the 600# steam system pressure to drop. Ten minutes after the 600# steam system pressure dropped to 560#, an air purge was system activated on the steam injection lines of the running turbines. The steam injection was off line since the initial steam pressure drop at about 11:00 AM. When the 600# steam system was restored by running the A turbine, a permissive relay was reset. It is believed that condensate collected in the C Turbine steam injection line and was blown into the turbine fuel nozzles causing a flameout. (The similar problem did not occur on the B Turbine. The steam injection dropout valve on B Turbine was discovered leaking about 500 pounds per hour. This prevented the B Turbine steam injection line from cooling and collecting condensate.) The SPP Instrument Air system pressure began to drop quickly after C Turbine shutdown. The loss of air prevented the control system from adjusting the fuel throttle valve leading to the high combustor temperature shutdown of B Turbine.

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-6 of 10
Policy	Document Owner:	Approved By:	Revision No.: 1

ATTACHMENT 2

Loss of Cogen Units-October 22, 2010, recommendations and follow-up actions

Unit 120 Shutdown

Recommendation 1: Target June 30, 2011

The Unit 120 Hydrogen Plant unscheduled shutdowns will likely cause significant San Francisco Refinery (SFR) upsets due to the sudden loss of Hydrogen and a surge of 15 – 20+MMSCF/D of gas into the Sweet Fuel Gas System. Causes and recommendations to improve the Unit 120 reliability are outside the scope of this investigation. The Incident Investigation Report for the 9/13/10 Flaring Event due to a Unit 120 shutdown was issued on 10/7/10. The 9/13/10 Incident Report included recommendations to decrease the impact on the Fuel Gas System and minimize the Flaring event including revising and finalizing the EOP for an emergency Unit 120 shutdown event. Recommendations included the following:

- A.** Add a second Unit PV-6400 dump valve of Sweet Fuel Gas to the Flare size for about 15 MMSCF/D. The current PV-6400 will divert about 7 MMSCF/D of Sweet Fuel Gas to the Flare. A Unit 120 shutdown will surge about 15 – 20+ MMSCF/D of gas to the Sweet Fuel Gas System. Note: An engineering project request was completed and the design study is underway for completion of piping tie-ins during the mid-year 2011 turnaround period.
- B.** Immediately cut Unit 231 Magnaformer rate to 12 MB/D, Coker Coil Charge to 6 MB/D, and Unit 200 crude rates to minimum to reduce Sour Gas production.
- C.** Operate Unit 240 Plant 4 Hydrogen Plant that will provide emergency Hydrogen, Steam, and consume Fuel Gas. Note: Unit 240 Plant 4, which was down for maintenance at the time of this incident, was restarted to add a buffer effect in the Fuel Gas system in case there is another Air Liquide outage that might generate a Fuel Gas pressure surge.

A separate joint SFR and Air Liquide Team is investigating issues to improve Unit 120 reliability.

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-7 of 10
Policy	Document Owner:	Approved By:	Revision No.: 1

Fuel Gas pressure increased by 20 psi causing A-Turbine shutdown:

Recommendation 2: Target Dec 31, 2011

- A. Identify and implement solutions to the fuel gas system pressure surge when U120 shuts down with engineering evaluation and progress action levels. The following table is by no means all of the engineering solutions, but lists initial thoughts from the team and operations personnel. Further engineering analysis is required. The initial actions A. through D. may be found to be adequate to address the problem:

Potential Action	Target
A. Retune PV6400 at Unit 233 for faster response to open faster and relieve fuel gas pressure spike	Completed
B. Reduce level of fuel gas pressure spike by controlling amount of RFG-A rate to U-120 in conjunction with operation of U240 Plant 4.	Completed;
C. Enhance PV6400 pressure control capability (larger valve, or second parallel valve of "X" capacity)	7/1/11
D. Improve fuel gas control at SPP by tuning fuel gas skids, lowering pressure on Ranerex to 165-175 psig, placing controls on automatic, etc...	Completed
E. Further potential actions if above steps are determined to be inadequate:	
1. Install a suction pressure control valve on the F-17 overhead line, G-17 Fuel gas Compressor suction line, to control the Unit 233 Fuel Gas pressure at 65 – 70 psig.	Requires engineering, hardware/ MOC. Timing difficult unless refinery-wide outage. Hot tap connections may be required.
2. Upgrade the A-Turbine Woodward Governor controls to the equivalent of the Digital Triconex controls (an B, C Turbines)	Major controls engineering, hardware/ MOC. Currently phase timing for ~2014.

- B. Expedite the issuance of REOP for Unit 120 shutdown. Ensure it includes appropriate actions to cover scenarios that address Unit 240 Plant 4 running and also not running.
5/1/11 Completed

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-8 of 10
Policy	Document Owner:	Approved By:	Revision No.: 1

Condensate swept into C-Turbine (Second Turbine to shutdown) due to air purge activation

Recommendation 3: Target April 1, 2012

The activation of the air purge was an unexpected result of the 600# steam system pressure transients.

- A. Revise the SPP Turbine Emergency Shutdown Procedure to block in the Steam Injection for all operating Turbines if the Steam Injection is lost for any reason. This action will have priority over the actions to restart a turbine to prevent the inadvertent shutdown of the operating turbines. Note: This procedure change was made and operators trained per MOC requirements.
- B. Consider changing the Air Purge drop out to include a manual reset before it can be activated after a drop-out event.

B-Turbine (Third Turbine shutdown) SPP Instrument Air Header lost pressure.

Recommendation 4: Target July 1, 2011

After the C Turbine shutdown, the SPP Instrument Air pressure lost pressure rapidly. The letdown from the refinery air system could not keep up with the air loss. Later turbine shutdown events have indicated that there is likely a severe air leak present in the system. One potential location is the C Turbine compressor discharge check valve based on system responses.

- A. Consider revising the SPP Turbine Emergency Shutdown Procedure to block in the Instrument Air to both of the shutdown turbines to prevent loss of Instrument Air. When a turbine is ready to start open the SPP Instrument Air block valve and continue with the startup.
- B. Emergency Refinery Air make-up control valve PCV-905 did not fully open when the SPP Instrument Air pressure dropped below the set point of 80 psig. Remove and repair or replace the PCV-905 pressure regulator to ensure that it will fully open when the SPP Instrument Air pressure drops below 80 psig. Note: This was completed and internal parts failure were found when valve PCV-905 was removed/inspected/serviced/tested/reinstalled.
- C. Consider troubleshooting the SPP Instrument Air system for leaks, such as the turbine compressor outlet check valves. Note: B Turbine check valve was repaired after the incident in December, 2010. The outlet check valves will be inspected/serviced/tested during the individual SPP A and C Turbine Generator outages in early 2011.

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-9 of 10
Policy	Document Owner:	Approved By:	Revision No.: 1

Attachment 3

July 2010 - June 2011 ISS improvements			
<i>Reference</i>	<i>Type</i>	<i>ISS category</i>	<i>Description</i>
M20092138-001	Project	Inherent	Eliminated excess equipment to reduce potential leak points
M20101295-001	Project	Passive	Upgraded metallurgy of an exchanger and associated piping
M2008273-001	Project	Passive	Upgraded piping metallurgy
M20091760-002	Project	Passive	Addition of new blast resistant operator shelter
M2010180-001	Project	Passive	Upgraded piping metallurgy
M2009481-001	Project	Passive	Upgraded piping metallurgy
M2010736-002	Coker Bottom Unheading Project	Passive	Removal of personnel from a hazardous situation
M20101774-001	Project	Passive	Upgraded tower and associated piping
M20101983-001	Project	Passive	Upgraded piping metallurgy
M20102325-001	Project	Passive	Upgraded piping metallurgy
M20102473-001	Project	Inherent	Eliminated excess piping to reduce potential leak points
M20102610-001	Project	Passive	Upgraded piping metallurgy
M20102616-001	Project	Passive	Upgraded piping metallurgy
M2011199-001	Project	Passive	Upgraded injection quill metallurgy
M2011587-001	Project	Passive	Upgraded metallurgy of heater tubes
M2011588-001	Project	Passive	Upgraded metallurgy of reactor scallops
M2011253-001	Project	Inherent	Eliminated excess piping to reduce potential leak points
M2010642-002	Project	Passive	Upgraded metallurgy of level bridle
M2011710-001	Project	Passive	Upgraded metallurgy of heater tubes
M2011711-001	Project	Passive	Upgraded metallurgy of level bridle
M2011706-001	Project	Passive	Upgraded pump and piping metallurgy
M2011817-001	Project	Passive	Upgraded piping metallurgy
M20111300-001	Project	Passive	Upgraded piping metallurgy
M20111301-001	Project	Passive	Upgraded tower and piping metallurgy
M20111302-001	Project	Passive	Upgraded piping metallurgy
M20101724-001	Project	Passive	Re-rate of heat exchanger to avoid overpressure
M2011141-001	Project	Inherent	Eliminated excess piping to reduce potential leak points
M20111313-001	Project	Passive	Upgraded exchanger metallurgy
M2009528-001	Project	Passive	Upgraded piping metallurgy
M2008892-001	Project	Passive	Upgraded piping metallurgy
M2008891-001	Project	Passive	Upgraded piping metallurgy

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B- 10 of 10
Policy	Document Owner:	Approved By:	Revision No.: 1

<i>Reference</i>	<i>Type</i>	<i>ISS category</i>	<i>Description</i>
M20101821-001	Project	Passive	Upgraded piping metallurgy
M2011569-001	Project	Inherent	Eliminated excess piping to reduce potential leak points
M2010889-001	Project	Passive	Installed EIV's fail closed to prevent potential hazardous situation
M20102380-001	Project	Passive	Improve current samples stations to mitigate potential H₂S exposure
M20101117-001	Project	Passive	Upgraded exchanger shells and shell covers metallurgy
M20101120-001	Project	Passive	Upgraded metallurgy of process vessels.
M2010403-001	Project	Inherent	Eliminated excess piping to reduce potential leak points
M20102566-001	Project	Passive	Upgraded piping metallurgy
M2011135-001	Project	Passive	Upgraded piping metallurgy
M2011817-001	Project	Passive	Upgraded piping metallurgy
M2011939-001	Project	Passive	Upgraded piping metallurgy
M2011949-001	Project	Passive	Upgraded piping metallurgy
M20111250-001	Project	Passive	Upgraded piping metallurgy
M20111358-001	Project	Inherent	Eliminated excess piping to reduce potential leak points
M2011528-001	Project	Inherent	Eliminated excess piping to reduce potential leak points

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-1 of 2
Policy	Document Owner:	Approved By:	Revision No.: 1

Annual Performance Review and Evaluation Submittal

June 30, 2011

*Attach additional pages as necessary

1. Name and address of Stationary Source: General Chemical West LLC, Bay Point Works
501 Nichols Rd., Bay Point, CA 94565
2. Contact name and telephone number (should CCHMP have questions): Jim Craig, 925-458-7363
3. Summarize the status of the Stationary Source's Safety Plan and Program (450-8.030(B)(2)(i)): The facility's safety plan has been updated as of May 31, 2011.
4. Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)): There have been numerous revisions to the plan during 2011 (rev date 5/31/11) as well as corresponding revisions to the other safety manual chapters to reflect current ISO compliant practices.
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, CA 94553; Bay Point Library (library closest to the stationary source). The plan is located at the Bay Point Works office complex as well as electronically, it was signed and approved by the Director of Manufacturing on 6/28/11.
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 MCAR events since last update.
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 MCAR events, thus no root cause analyses were required to be performed.
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)): At this time 46 (78%) of the 59 recommendations as result of the 2011 triannual ISO Audit are considered by the facility to be closed with the remainder in progress.
9. Summary of inherently safer systems implemented by the source including but not limited to inventory reduction (i.e., intensification) and substitution (450-8.030(B)(2)(vi)): The facility has reduced overall regulated hazardous material inventories by 47% or 1,711,792 pounds since its prior submission. Notable specifics include: NH₃ < 30%, NH₄F < 17%, NH₄F/H₃PO₄ Blends < 93%, NH₄OH < 85%, HCl < 92%, AHF < 4%, HNO₃ < 82%, and Mixed Acid Etchants < 43%. Additionally the facility used its' ISS worksheets and checklists for the 2 PHA's conducted this year to ensure ISS is considered.
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.

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-2 of 2
Policy	Document Owner:	Approved By:	Revision No.: 1

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 nine facilities subject to the Industrial Safety Ordinance was \$568,631. The total Industrial Safety Ordinance program fees for these nine facilities was - \$713,631. (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)): 1510 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 since the last update.
15. Summarize how this Chapter improves industrial safety at your stationary source (450-8.030(B)(7)): By providing regulatory guidance and support when it is requested and through thorough compliance audits that are conducted triannually.
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: Improved analyses of processes at the facility in regards to continuous improvement of the physical units as well as internal program oversight.
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 emergency response activities took place since the last update.

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-1 of 4
Policy	Document Owner:	Approved By:	Revision No.: 1

Annual Performance Review and Evaluation Submittal

June 30, 2011

*Attach additional pages as necessary

1. Name and address of Stationary Source: Shell Oil Products U.S. Martinez Refinery
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)): SMR's Safety Plan was last updated in September 2010. SMR's Safety Program is being implemented. SMR's Safety Program was most recently reviewed by CCHS during the CalARP/ISO audit conducted in May 2009.
4. Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)): Updates to SMR's Safety Plan submitted in September 2009 address comments from CCHS generated during the May 2009 CalARP/ISO Audit. While some of the comments pertained specifically to the Safety Plan document, others pertained directly to program elements, which were subsequently documented 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)): CCHMP Office at 4585 Pacheco Boulevard, Suite 100, Martinez; Martinez Public Library (library closest to the stationary source).
6. Provide any additions to the annual accident history reports (i.e. updates) submitted pursuant to Section 450-8.016(E)(2) of County Ordinance 98-48 (450-8.030(B)(2)(iii)) (i.e., provide information identified in Section 450-8.016(E)(1) for all major chemical accidents or releases occurring between the last annual performance review report and the current annual performance review and evaluation submittal (12-month history)): There were no MCAR's in the current reporting period (July 1, 2010 to June 30, 2011), and therefore no updates to the Accident History.
7. Summary of each Root Cause Analysis (Section 450-8.016(C)) including the status of the analysis and the status of implementation of recommendations formulated during the analysis (450-8.030(B)(2)(iv)): There were no MCAR's in the current reporting period (July 1, 2010 to June 30, 2011), and therefore no RCA's were required.
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)): 52 of 55 action items arising from the May 2009 CalARP/ISO Audit have been closed, and none of the remaining action items are overdue. There have been no RCA's 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, Table 1.

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-2 of 4
Policy	Document Owner:	Approved By:	Revision No.: 1

10. Summarize the enforcement actions (including Notice of Deficiencies, Audit Reports, and any actions turned over to the *Contra Costa County District Attorney's Office*) taken with the Stationary Source pursuant to Section 450-8.028 of County Ordinance 98-48 (450-8.030(B)(2)(vii)): There were no enforcement actions during this period.
11. Summarize total penalties assessed as a result of enforcement of this Chapter (450-8.030(3)): No penalties have been assessed against this facility.
12. Summarize the total fees, service charges, and other assessments collected specifically for the support of the ISO (450-8.030(B)(4)): The total CalARP Program fees for the nine facilities subject to the Industrial Safety Ordinance was \$568,631. The total Industrial Safety Ordinance program fees for these nine facilities was - \$713,631. (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)): 1510 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)): SMR has integrated requirements of the Industrial Safety Ordinance into our Health, Safety, and Environment Management System; in the context of our HSE MS, the ISO requirements help 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: See Attachment 1, Table 2.
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 MCAR's in the current reporting period (July 1, 2010 to June 30, 2011).

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-3 of 4
Policy	Document Owner:	Approved By:	Revision No.: 1

Attachment 1

Table 1. Summary of Implemented ISS

ISS Item Number	ISS Type	Source/Study	Description
R2009088-001	Simplify (active?/passive?)	ISS Review of Existing Process	Split electrical feed to primary and standby Stabilizer Reflux Pumps.
M2011224-001	Minimize (inherent)	ISS Review of Existing Process	Remove heater from TK-1110. Demo steam supply line to TK-1110 heater and condensate return line from TK-1110 heater up to main steam/condensate headers respectively.
M2010530-001	Minimize (inherent)	ISS Review of Existing Process	Removed 1 1/2 inch bleeder on sour water header piping.
M20103740-001	Minimize (inherent/moderate)	ISS Review of Existing Process	Eliminated some potential leak sources : removed LT/LC 2802 on V968; removed associated valves and replaced with boiler makers.
M2010362-001	Minimize (inherent)	ISS Review of Existing Process	Remove 1.5 inch clarified oil line. Line no longer in use and considered a deadleg.
M20102792-001	Minimize (inherent/minimize and passive/moderate)	ISS Review of Existing Process	Removed sight glasses from V-702/703 and upgraded metallurgy of bottom and PSV piping.
M20102185-001	Simplify (passive)	ISS Review of Existing Process	Stabilized the FG header pressure by methodically removing FG from FG consuming furnaces in response to a significant decrease in FG header pressure. (Stable FG header pressure eliminates a cause of unstable conditions in FG consuming furnaces.)
M20101503-001	Minimize (inherent)	ISS Review of Existing Process	Removed 2" pipe dead leg at Alky Reactor tube side inlet.
M20093716-001	Minimize (inherent)	ISS Review of Existing Process	Removed 8" deadleg on E-746 outlet piping.
M20093703-001	Minimize (passive/moderate)	ISS Review of Existing Process	Replaced Hot Gas Bypass Line with Alloy 20.
M20093645-001	Minimize (inherent)	ISS Review of Existing Process	Removed tubing associated with unused local high regen pressure override 5PY652B. Breaking or leaking tubing would cause CCU upset as the large blast off valve would fail open.

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-4 of 4
Policy	Document Owner:	Approved By:	Revision No.: 1

Table 2. ISO-only Recommendations Implemented (not required by CalARP)

Recommendation Number	Source/Study	Description
R2009170-003	Asphalt PHA	A study has been completed and has found that several asphalt tanks had less than 20 minutes between HLA and HHLA. All tanks had at least 20 minutes between HHLA and overfill. The tank level alarms for tanks 560, 1048, 552, 553, 554, 555, 556, 557, 558, 1043, 1044, 1045, and 985 have been modified to give at least 20 minutes between alarm and before overfill.
R2010035-008	Cogen PHA	Lowered the burner trip pressure to 33 psig at PT920 and PT970. Configured High ESP Limits on 66PI1417 & 66PI1617 (steam drum pressure).
R2010035-003	Cogen PHA	Removed check valves from Continuous Blowdown Drums to Deaerators.
R2010035-001	Cogen PHA	Provided alternate means for protecting Operator when entering Turbine areas: new Fire Suppression system was installed on Cogen Train #1 (STATEX); this new system allows operations to enter turbine compartments without potential consequences of activating CO2 suppression system.

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-1 of 5
Policy	Document Owner:	Approved By:	Revision No.: 1

Annual Performance Review and Evaluation Submittal

June 30, 2011

*Attach additional pages as necessary

1. Name and address of Stationary Source: _____
 Tesoro Golden Eagle Refinery
 150 Solano Way
 Martinez, CA 94553
2. Contact name and telephone number (should CCHS have questions): Claire Spencer at (925) 370-3274, Rich Leland at (925) 370-3264 or Sabiha Gokcen at (925) 370-3620.
3. Summarize the status of the Stationary Source's Safety Plan and Program (450-8.030(B)(2)(i)): An updated Safety Plan was submitted to Contra Costa Hazardous Materials Program on December 10, 2009. Contra Costa Health Services has completed five audits on the safety programs. The first audit was in September, 2000 on the safety programs. The second audit was in December, 2001 and focused on Inherently Safer Systems and Human Factors. An unannounced inspection occurred in March, 2003. CalARP/ISO audits were conducted in August, 2003, November-December, 2005, August-October, 2008 and most recently April-May 2011. All safety program elements required by the ISO have been developed and are implemented.
4. Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)): The original Safety Plan for this facility was filed with Contra Costa Health Services on January 14, 2000. An amended plan, updated to reflect CCHS recommendations and ownership change, was filed on November 30, 2000. A Human Factors Amendment was submitted on January 15, 2001. A Power Disruption Plan was submitted, per Board of Supervisor request, on June 1, 2001. An amended Safety Plan, updated to reflect ownership change was submitted on June 17, 2002.
The Safety Plan for this facility will be updated whenever changes at the facility warrant an update or every three years from June 17, 2002. In addition, the accident history along with other information is updated every year on June 30. Most recently, updated Safety Plan was submitted to Contra Costa Health Services on December 10, 2009.
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)): CCHS Office, 4585 Pacheco Boulevard Ste 100 Martinez CA, Martinez library
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 accident history report submittal (January 15) and the annual performance review and evaluation submittal (June 30)): _____
There have been three accidents meeting the major chemical accident or release criteria during this reporting period. The root cause analysis reports for two are attached to this filing.
October 10, 2010 – Tank 650 Seal Fire (report attached)
November 9, 2010 – Refinery-wide Power Outage (still under investigation)
December 10, 2010 – Refinery-wide Power Outage (report attached)
7. Summary of each Root Cause Analysis (Section 450-8.016(C)) including the status of the analysis and the status of implementation of recommendations formulated during the analysis (450-8.030(B)(2)(iv)): _____
Status of Root Cause Analysis Recommendations:

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-2 of 5
Policy	Document Owner:	Approved By:	Revision No.: 1

For the March 24, 2006 #2HDS fire investigation, one recommendation remains open. It is a long-term recommendation updating the P&IDs to include metallurgy on the P&IDs. It is on target for its completion date.

For the October 10, 2010 Tank 650 Seal Fire and the December 10, 2010 Power Outage, all recommendations are on target for resolution on the dates submitted to Contra Costa Health Services in the root cause analysis reports.

8. Summary of the status of implementation of recommendations formulated during audits, inspections, Root Cause Analyses, or Incident Investigations conducted by the Department (450-8.030(B)(2)(v)): _____
"CCHS Information": CCHS completed an audit on September 15, 2000, December, 2001, August, 2003, November/December, 2005, August-October, 2008, and April-May 2011. There are no RCA or Incident Investigations that have been conducted by the Department.

Facility status of audit recommendations: All recommendations from CCHS audits prior to 2008 are closed. For the 2008 audit, there are 73 recommendations total in the audit and all are closed.

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)): _____
Golden Eagle is submitting a list of the Inherently Safer Systems (ISS) that meet the criteria for Inherent or Passive levels only and that were completed within the last year (see attached).
10. Summarize the enforcement actions (including Notice of Deficiencies, Audit Reports, and any actions turned over to the Contra Costa County District Attorney's Office) taken with the Stationary Source pursuant to Section 450-8.028 of County Ordinance 98-48 (450-8.030(B)(2)(vii)): _____
"CCHS Information": none
11. Summarize total penalties assessed as a result of enforcement of this Chapter (450-8.030(3)): _____
"CCHS Information": No penalties have been assessed against this facility.
12. Summarize the total fees, service charges, and other assessments collected specifically for the support of the ISO (450-8.030(B)(4)): _____
"CCHS Information": The total CalARP program fees for the nine facilities subject to the Industrial Safety Ordinance was \$568,631. The total Industrial Safety Ordinance Program fees for these nine facilities was \$713,631. 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)): _____
"CCHS Information": 1510 hours were used to audit/inspect and issue reports on the Risk Management Chapter of the Industrial Safety Ordinance.
14. Copies of any comments received by the source (that may not have been received by the Department) regarding the effectiveness of the local program that raise public safety issues(450-8.030(B)(6)): _____
This facility has not received any comments to date regarding the effectiveness of the local program.
15. Summarize how this Chapter improves industrial safety at your stationary source (450-8.030(B)(7)): _____
Chapter 450-8 improves industrial safety by expanding the safety programs to all units in the refinery. In addition, the timeframe is shorter to implement recommendations generated from the Process Hazard Analysis (PHA) safety program than state or federal law. This has resulted in a faster implementation of these recommendations.

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

 CONTRA COSTA HEALTH SERVICES HAZARDOUS MATERIALS PROGRAMS	Title: INDUSTRIAL SAFETY ORDINANCE ANNUAL PERFORMANCE REVIEW AND EVALUATION		
	Document No.:	Date Effective:	Page: B-3 of 5
Policy	Document Owner:	Approved By:	Revision No.: 1

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

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

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.

This question was broadly answered under question 15 above. Some examples of changes that have been made due to implementation of the ordinance are as follows. There are some units that were not covered by RMP, CalARP or PSM. Those units are now subject to the same safety programs as the units covered by RMP, CalARP and PSM. They have had PHAs performed on them according to the timeline specified in the ISO and the PHA recommendations have been resolved on the timeline specified in the ISO. A list of inherently safer systems as required by the ISO for PHA recommendations and new construction is attached to this filing as mentioned in the response to question 9. With respect to Compliance Audits, there was a compliance audit performed in April, 2009 in addition to the CCHS audits mentioned above. All audit findings are being actively resolved. Root Cause Analysis findings and recommendations for MCARs are listed in the response under question 6.

17. Summarize the emergency response activities conducted at the source (e.g., CWS or TEN activation) in response to major chemical accidents or releases:

Please refer to #6 which has the CWS classifications for the major chemical accidents and releases as well as any information regarding emergency responses by agency personnel.

<i>Item Identifier</i>	<i>Implementation Category</i>	<i>Risk Reduction Category</i>	<i>Risk Reduction Strategy - Description</i>
ARO 044	Project	Inherent	Eliminate – Demolished a hazardous materials storage vessel.
ARO 209	Project	Inherent	Eliminate – Demolished a hazardous materials storage vessel.
ARO 269	Project	Inherent	Eliminate – Demolished a hazardous materials storage vessel.
ARO 271	Project	Inherent	Eliminate – Demolished a hazardous materials storage vessel.
ARO 367	Project	Inherent	Eliminate – Demolished a hazardous materials storage vessel.
ARO 374	Project	Inherent	Eliminate – Demolished a hazardous materials storage vessel.
ARO 377	Project	Inherent	Eliminate – Demolished a hazardous materials storage vessel.
ARO 378	Project	Inherent	Eliminate – Demolished a hazardous materials storage vessel.
ARO 588	Project	Inherent	Eliminate – Demolished a hazardous materials storage vessel.
PTS 12106	Project	Inherent	Eliminate – Demolished a hazardous materials storage vessel.
PTS 11870	Project	Passive	Moderate – Reduction of hazardous conditions by process design features.
PTS 12136	Project	Passive	Moderate – Reduction of hazardous conditions by equipment design features.
PTS 12144	Project	Passive	Moderate – Reduction of hazardous conditions by equipment design features.
PTS 12161	Project	Passive	Moderate – Reduction of hazardous conditions by equipment design features.

<i>Item Identifier</i>	<i>Implementation Category</i>	<i>Risk Reduction Category</i>	<i>Risk Reduction Strategy - Description</i>
Item Identifier	Implementation Category	Risk Reduction Category	Risk Reduction Strategy - Description
A005-2008-001	PHA	Passive	Simplify – Used alternate design features that make operating errors less likely.
A011-2004-256	PHA	Passive	Simplify – Used alternate design features to reduce the frequency of the hazard.
A013-2004-103	PHA	Passive	Simplify – Used alternate design features to reduce the frequency of the hazard.
A016-2001-056	PHA	Inherent	Eliminate – Demolished a hazardous materials storage vessel.
A022-2010-001	PHA	Passive	Moderate – Reduction of hazardous conditions by process and equipment design features.
A054N-2004-010	PHA	Inherent	Eliminate – Demolished two hazardous materials storage vessels.
A054N-2004-085	PHA	Passive	Moderate – Reduction of hazardous conditions by process design features.
A060-2007-004	PHA	Passive	Moderate – Reduction of hazardous conditions by equipment design features.