



# **Industrial Safety Ordinance**

## **Annual Performance Review & Evaluation Report**

*January 25, 2011*

**By Contra Costa Health Services Hazardous Materials Programs**

# Table of Contents

Executive Summary .....	3
Public Participation.....	4
Audits .....	4
Major Chemical Accidents or Releases .....	4
Conclusion .....	4
Introduction .....	5
Expand the Human Factors Program to included Maintenance .....	5
Annual Performance Review and Evaluation Report.....	6
Effectiveness of Contra Costa Health Services' Implementation of the Industrial Safety Ordinance .....	7
Effectiveness of the Procedures for Records Management .....	7
Number and Type of Audits and Inspections Conducted .....	8
Number of Root Cause Analyses and/or Incident Investigations Conducted by Health Services.....	8
Health Services' Process for Public Participation .....	8
Effectiveness of the Public Information Bank .....	9
Effectiveness of the Hazardous Materials Ombudsman.....	11
Other Required Program Elements Necessary to Implement and Manage the Industrial Safety Ordinance.....	12
Regulated Stationary Sources Listing .....	12
Locations of the Regulated Stationary Sources Safety Plans.....	12
Annual Accident History Report and Inherently Safer Systems Implemented as Submitted by the Regulated Stationary Sources.....	13
Status of the Incident Investigations, Including the Root Cause Analyses Conducted by the Regulated Stationary Sources .....	16
Major Chemical Accidents or Releases .....	19
Legal Enforcement Actions Initiated by Health Services.....	20
Penalties Assessed as a Result of Enforcement.....	20
Total Fees, Service Charges, and Other Assessments Collected Specifically for the Industrial Safety Ordinance.....	20
Total Personnel and Personnel Years Used by Health Services to Implement the Industrial Safety Ordinance .....	20
Comments From Interested Parties Regarding the Effectiveness of the Industrial Safety Ordinance .....	21
The Impact of the Industrial Safety Ordinance on Improving Industrial Safety .....	21
City of Richmond Industrial Safety Ordinance.....	23
Attachment A - Hazardous Materials Ombudsman Report.....	24
Attachment B - Regulated Sources Annual Performance with Accident History and Inherent Safety Implementation.....	28
Annual Performance Review and Evaluation Submittal.....	30
Annual Performance Review and Evaluation Submittal.....	32
Annual Performance Review and Evaluation Submittal.....	34
Annual Performance Review and Evaluation Submittal.....	38
Annual Performance Review and Evaluation Submittal.....	40
Table 1. Summary of Implemented ISS .....	42
Annual Performance Review and Evaluation Submittal.....	44



# Executive Summary

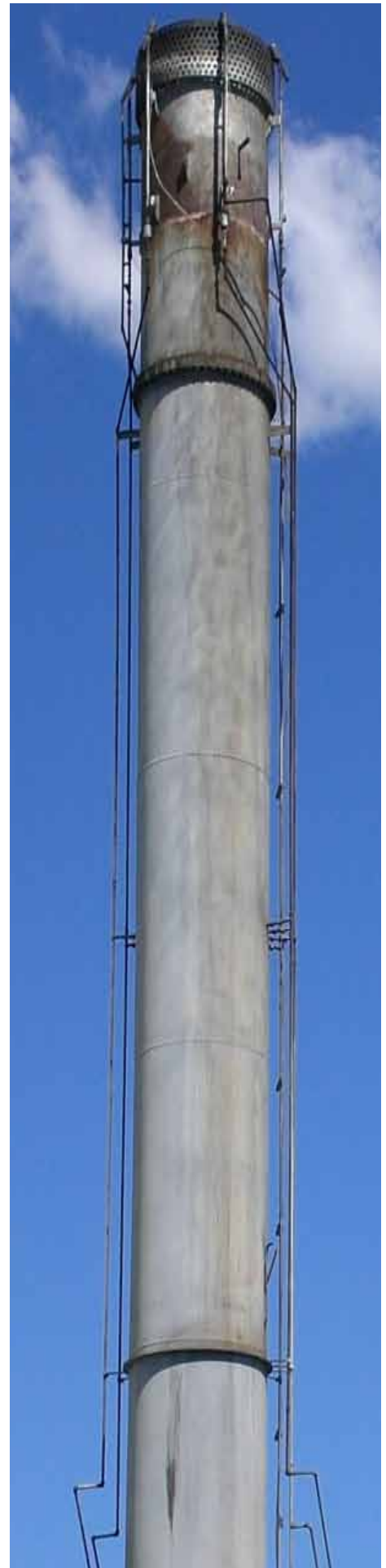
The Industrial Safety Ordinance requires regulated facilities to implement safety programs to prevent chemical accidents from occurring that could have a detrimental impact to the surrounding communities. The requirement of the Industrial Safety Ordinance is one of the most stringent in the United States, if not the world. Additionally, the Industrial Safety Ordinance is designed to include participation from all of the stakeholders, from industry, agencies, elected officials, to the public.

This is the 10th year since the Contra Costa County Board of Supervisors passed the County's Industrial Safety Ordinance that there has not been a severity Type III Major Chemical Accident or Release in the County. The trend since the adoption of the Industrial Safety Ordinance has been less severe and fewer Major Chemical Accidents or Releases (MCAR) each year. However, there were four severity Type I MCAR events from Tesoro and Conoco Phillips in October and November of this year. Overall, this is an indication of the effect of the County's Industrial Safety Ordinance, the regulated facilities implementation of the requirements and the oversight from the Accidental Release Prevention Programs Engineers.

The Accidental Release Prevention Programs Engineers are continuing to develop ways to improve the overall implementation of the Industrial Safety Ordinance and the prevention program elements. The Hazardous Materials Programs Staff participated with the Center for Chemical Process Safety in writing the second edition of the book *"Inherently Safer Chemical Processes"*, that was published in spring 2009. The staff has also been working with other agencies such as the U.S. Environmental Protection Agency and California Occupational Safety and Health Administration, for sharing of inspection results. Staff also worked with the Contra Costa County regulated businesses in the development of the Safety Culture Guidance Document.

The U.S. Chemical Safety and Hazard Investigation Board (CSB) has recognized the efforts of Contra Costa County in ensuring that the process safety requirements are being implemented by the County's regulated businesses in CSB's DVD *"Anatomy of a Disaster: Explosion at BP Texas City Refinery"*.

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, Washington at a Tesoro Refinery and the Deepwater Horizon incident in the Gulf of Mexico.



## Public Participation

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

- Public outreach information booths at existing venues
  - » Air Products Safety Plan and preliminary audit findings, Shell Oil Products US Martinez Refinery preliminary audit findings and Tesoro Golden Eagle Refinery Safety Plan and preliminary audit findings were shared at the King of the County BBQ at the Waterfront Park in Martinez in June 2010.
  - » Conoco Phillips preliminary Audit Findings were shared at the Sugartown Festival and Street Faire in Crockett in July 2010.
  - » General Chemical Richmond Safety Plan and preliminary audit findings and Chevron Richmond Refinery Safety Plan were shared at the West County Emergency Preparedness Fair at Hilltop Mall in Richmond in September 2010.
  - » Conoco Phillips preliminary Audit Findings were also shared at the Rodeo-Hercules Safety Day in Hercules in October 2010.
- Most recent audit findings summarized in easily read format in both 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

## 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 one ISO audit this year:

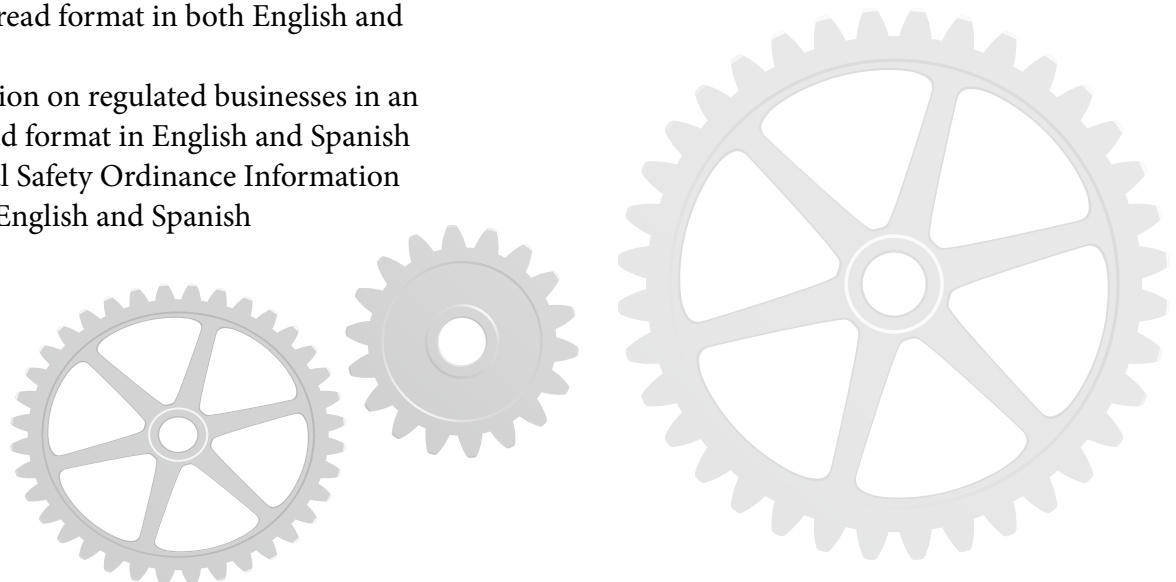
- Air Liquide Large Industries —June 2010

## Major Chemical Accidents or Releases

Another measure of the effectiveness of the Industrial Safety Ordinance is by the number and severity of Major Chemical Accidents or Releases that have occurred. Since the last report to the Board there were four Major Chemical Accidents or Releases with a severity Type I that resulted in minor injury or impact to the community.

## Conclusion

The number and severity of Major Chemical Accidents or Releases have been in a generally 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 has decreased.





# Introduction

The 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 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 Health Services stating how the stationary source is complying with the ordinance, except the Human Factors portion (completed January 15, 2000)
- Contra Costa Health Services 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 Health Services (completed January 15, 2001)
- For Major Chemical Accidents or Releases, stationary sources are required to perform a root cause analysis as part of their incident investigations (ongoing)
- Contra Costa Health Services 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 or for mitigations resulting from a process hazard analysis
- Contra Costa Health Services 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 Plans (completed January 15, 2001) and every three years after the initial

audit/inspection (ongoing)

- Contra Costa Health Services 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:

## Expand the Human Factors Program to included Maintenance

1. Expand the Management of Organizational change to include Maintenance and all of Health and Safety positions
2. Require the stationary sources to perform Safety Culture Assessments one year after the Hazardous Materials Programs develops guidance on performing a Safety Culture Assessment
3. Perform Security Vulnerability Analysis

The seven stationary sources now covered by the 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 Large Industries

The Air Liquide Rodeo Hydrogen Facility began operation in July 2009 and is located adjacent to the ConocoPhillips Rodeo Refinery. The facility produces purified hydrogen for industrial customers and also produces steam and electricity for the ConocoPhillips Refinery.

Contra Costa Health Services 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 guidance document by January 15, 2001. Since the amendment, Hazardous Materials Program staff has been

working with the stationary sources to develop Safety Culture Assessment Guidance Document which was finalized and issued on November 10 2009. Staff began the review of these Safety Culture Assessments in December 2010. Additionally, staff is 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 Health Services has reviewed all of the Safety Plans submitted to the department and has started the fourth round of audits of the stationary sources, as required by the ordinance. In addition, Contra Costa Health Services has 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 Health Services is meeting the requirements of the ordinance as follows:
  - » Effectiveness of the department's program to ensure stationary source's compliance with the ordinance
  - » Effectiveness of the procedures for records management
  - » Number and type of audits and inspections conducted by Health Services as required by the ordinance
  - » Number of root cause analyses and/or incident investigations conducted by Health Services
  - » Health Services' 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 all stationary sources' 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 Health Services, including the status for implementing the recommendations
  - » Description of inherently safer systems implemented by the regulated stationary source
  - » Legal enforcement actions initiated by Health Services, 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 from interested parties regarding the effectiveness of the local program that raise public safety issues
- The impact of the ordinance in improving industrial safety

# Effectiveness of Contra Costa Health Services' Implementation of the Industrial Safety Ordinance

Health Services has developed policies, procedures, protocols and questionnaires to implement both the California Accidental Release Prevention 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

Health Services 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 draft Contra Costa County Safety Program Guidance Document was issued September 30, 2010 to the regulated facilities which incorporated updates from the ISO amendments and additional clarifications from all the audits, these documents give guidance to the

stationary sources for complying with the Industrial Safety Ordinance. The policies, procedures, protocols, and questionnaires, are available through Health Services. The guidance documents can be downloaded through Health Services' website: [www.cchealth.org/groups/hazmat/california\\_accidental\\_release\\_prevention\\_guidance\\_document.php](http://www.cchealth.org/groups/hazmat/california_accidental_release_prevention_guidance_document.php) and [www.cchealth.org/groups/hazmat/industrial\\_safety\\_ordinance\\_guidance.php](http://www.cchealth.org/groups/hazmat/industrial_safety_ordinance_guidance.php)

## Effectiveness of the Procedures for Records Management

Health Services has set up hard copy and computer files for each of the stationary sources. 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

The paper files for the stationary sources are kept in a central location. The Accidental Release Prevention Programs staff has files set up on the Health Services network where the files for each of the different stationary sources are found and are accessible to each of the Accidental Release Prevention Programs Engineers, Supervisor and the Hazardous Materials Programs Director. Portable document format of these files is also available at the Hazardous Materials Programs office for public access and viewing. The Accidental Release Prevention Programs files also contain regulations, policies, information from the U.S. EPA, California Emergency Management Agency (CalEMA), 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 Program Offices.

## Number and Type of Audits and Inspections Conducted

Hazardous Materials Programs 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. Health Services reviewed all of the Safety Plans and audited/inspected all of the stationary sources' Safety Programs within that year (2000). Health Services 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 fall 2005, which were completed in spring of 2007. The fourth round of audits was completed in August 2009. Air Liquide submitted a Risk Management Plan and Safety Plan to Health Services in July 2009 and was audited in June 2010.

When Hazardous Materials Programs reviews a Safety Plan, a Notice of Deficiencies is produced to document what changes to a stationary source is required to make before Health Services 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, Hazardous Materials Programs 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 Program will open a public comment period on the Safety Plan and will make available the plan in a public meeting or venue.

Hazardous Materials Programs will respond to all written comments in writing and when appropriate use the comments in the audit/inspection of the regulated stationary sources.

Hazardous Materials Programs 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, Hazardous Materials Programs will issue the Preliminary Audit Findings for public comment and will make available the findings in a public meeting or venue. Hazardous Materials Programs 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, Hazardous Materials Programs will issue the Final Audit Findings and will respond in writing to any written public comments received. Table I lists the status of Health Services review of the different stationary sources' Safety Plans and audit and inspections of their Safety Programs.

## Number of Root Cause Analyses and/or Incident Investigations Conducted by Health Services

The Hazardous Materials Programs has not performed any root-cause analyses or incident investigations in the 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 the following address: [www.cchealth.org/groups/hazmat/accident\\_history.php](http://www.cchealth.org/groups/hazmat/accident_history.php). This list includes major accidents that occurred prior to the adoption of the Industrial Safety Ordinance.

## Health Services' Process for Public Participation

In 2005, Hazardous Materials Programs 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 Hazardous Materials Programs 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/](http://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 Health Services. 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



TABLE I

NAME	Safety Plan (SP) Received	Notice of Deficiencies (NOD) Issued-SP	Safety Plan Complete	SP Public Meeting Date	Audit/ Inspection	Audit Public Meeting
Air Liquide	7/10/09				6/1/10	
Air Products – Shell & Tesoro	1/14/00	6/15/00	8/30/00	9/13/00	11/22/00	5/8/03
	1/16/01 (HF update)	5/10/01 (HF up-date)	6/19/01 (HF up-date)	5/8/03	5/3/02 (HF only)2/27/04	9/24/06
	6/26/03	8/24/07	9/14/07	9/23/07	1/22/07	9/23/07
	7/14/05		7/1/08	6/19/10	7/20/09	6/19/10
	12/1/06					
	6/20/08					
	6/30/10					
ConocoPhillips - Rodeo	1/15/00	3/14/00	5/30/00	6/15/00	6/30/00	4/9/02
	1/12/01 (HF update)	9/10/01 (HF up-date)	3/18/02 (HF up-date)	4/9/02	11/5/01 (HF only)	6/22/04
	8/10/05	3/28/06	8/9/02	10/7,13/07	8/1/03	7/8/04
	8/7/09	10/22/10	11/5/07		8/15/06	10/7,13/07
					10/6/08	7/18/10, 10/9/10
General Chemical/Bay Pt. Works	1/14/00	6/12/00	12/20/00	1/2/01	8/11/00	1/2/01
	1/15/01 (HF update)	7/23/01 (HF up-date)	11/16/01 (HF up-date)	5/1/03	5/20/02 (HF only)	5/1/03
	12/10/03	7/28/08	3/17/04	11/16/05	6/20/03	11/16/05
	10/9/07		12/13/08	1/31/06	8/29/05	1/31/06
				11/4/08	1/7/08	11/8/06
						1/2/07
						11/4/08
Shell Martinez Refinery	1/14/00	7/19/00	4/9/01	5/8/03	10/31/00	5/8/03
	1/16/01 (HF up-date)7/22/02	11/9/01 (HF up-date)	1/3/02 (HF up-date)	9/24/06	4/29/02 (HF only)	9/24/06
	1/11/06	3/21/03	9/15/03	9/23/07	11/26/04	9/23/07
	9/3/10	8/15/06	11/2/06		10/23/06	6/19/10
					4/30/09	
Tesoro Golden Eagle Refinery	1/14/00	8/16/00	1/31/01	5/6/03	9/15/00	5/6/03
	1/12/01 (HF update)	9/18/01 (HF up-date)	12/14/01 (HF up-date)	9/23/07	12/3/01 (HF only)	9/24/06
	6/21/02	7/30/07	6/21/03	6/10/10	9/8/03	9/23/07
	6/22/07		11/5/07		11/7/05	6/10/10
	12/11/09		6/4/10		8/18/08	

- Hazardous Materials Program Incident Search
  - » Online search of the hazardous materials incident database for incidents that have occurred since 1993 by entering a date range, address, city and/or facility name
- Facility Search
  - » Online search of the facilities that handle hazardous materials by name of the facility, street name, 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

## 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 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 Contra Costa Health Services Hazardous Materials Programs. The Industrial Safety Ordinance expands on this program. Stationary sources are required to submit a Risk Management Plan to Hazardous Materials Programs that is similar to the Safety Plans that are submitted. Hazardous Materials Programs reviews these Risk Management Plans and performs the CalARP Program audit simultaneously with the Industrial Safety Ordinance audit. Hazardous Materials Programs Performs Unannounced Inspections of the 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 Health Services 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 were issued
- When the plan was determined to be complete by Health Services
- 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 was 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 their Safety Plan to Health Services 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. Below in Table II is a listing of the regulated stationary sources with the location of each of their Safety Plans.



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	

## 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 is a listing of 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 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 (two times)	Inherent	Minimization
	Reduce the impact by using a less hazardous chemical (two times)	Inherent	Moderate
Air Products at Shell Martinez Refinery	Eliminated use of hazardous chemical (one time)	Inherent	
Air Products at Tesoro	Reduced potential of a hazard by upgrading interlocks and control display (two times)	Active	Simplify
ConocoPhillips-Rodeo Refinery	Reduction of inventory by combining or removing equipment from the process (three times)	Inherent	Minimization
	Revised equipment metallurgy, components, controls features (25 times)	Passive	Simplify
	Reduced the potential of a hazard by equipment/process design change (three times)	Passive	Moderate
	Reduced potential of exposure by adding controls (two times)	Active	Simplify
General Chemical West Bay Point Works	Minimize exposure to the hazard by changing materials of construction (one time)	Passive	Simplify
Shell Martinez Refinery	Reduced exposure potential with change of equipment (one time)	Inherent	Substitution
	Change equipment design to reduce potential of a hazard (one time)	Passive	Moderate
	Reduced potential of exposure by removing or modifying piping and equipment design (three times)	Passive	Minimization
	Reduced potential of exposure by adding controls (one time)	Active	Simplify

Regulated Stationary Source	Inherently Safer System Implemented	Design Strategy	Category
Tesoro Golden Eagle Refinery	Eliminated equipment including three blowdown towers, decommissioned hazardous materials systems (2) and eliminated a vessel (1)	Inherent	Simplify
	Reduced potential of a hazard or frequency with design features (12 times)	Passive	Simplify
	Use smaller quantities of hazardous materials when the use cannot be eliminated	Passive	Minimize





## 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-or off-site property damage (including cleanup and restoration activities) initially estimated at \$500,000 or more. On-site estimates shall be performed by the regulated stationary source. Off-site estimates shall be performed by appropriate agencies and compiled by Health Services*
- *Results in a vapor cloud of flammables 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 three major chemical accidents or releases that have occurred within the last year in Contra Costa County. The record of the major chemical accidents or releases that have 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 two incidents are available at the Hazardous Materials Program office and web page.





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 shut-down, damage at one of the substations.	Visible flare, overcast and light wind condition.
Tesoro Golden Eagle Refinery	11/10/10 (CWS 3)	1	Power outage from third 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.



TABLE IV

Regulated Source	Date MCAR	Severity	MCAR Descriptions	Onsite Impact	Offsite Impact
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 three hours into the incident (~2:20 p.m.), 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 7 p.m.	Overpressured fuel gas system resulted in flaring. Loss of steam and hydrogen resulted in a slow down of some units. Power plant turbinized tripped off resulted in smokey 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.
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 three foot diesel top layer for odor control. One Contractor medically treated off-site and 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

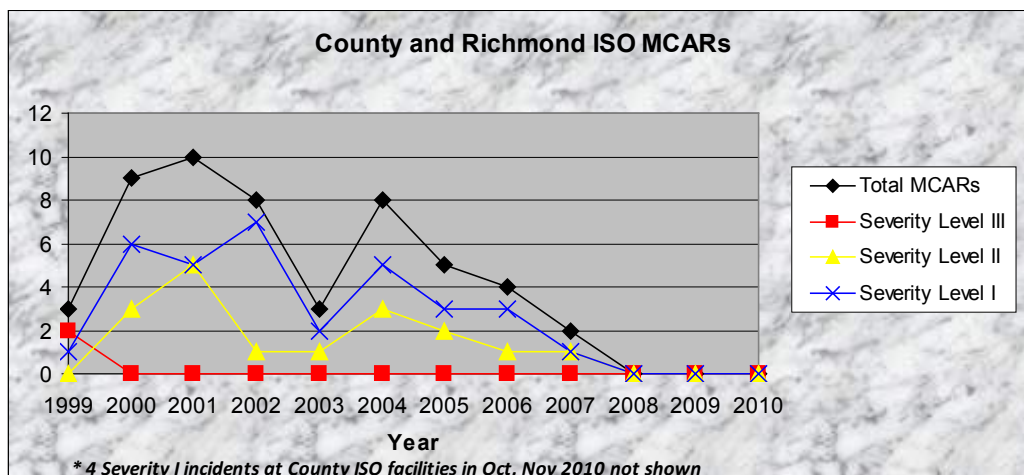
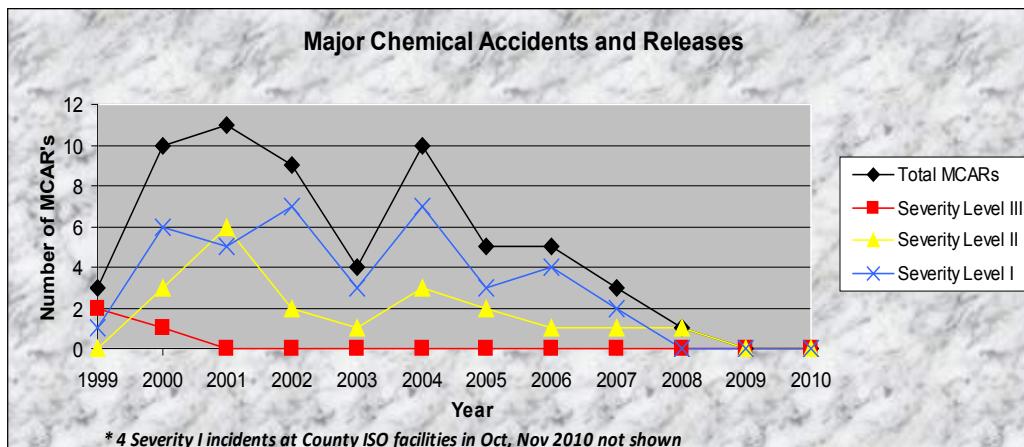
Hazardous Materials Programs has analyzed the Major Chemical Accidents or Releases (MCAR) that have occurred since the implementation of the Industrial Safety Ordinance. The analysis includes the number and severity of the MCARs. Three different levels of severity were assigned:

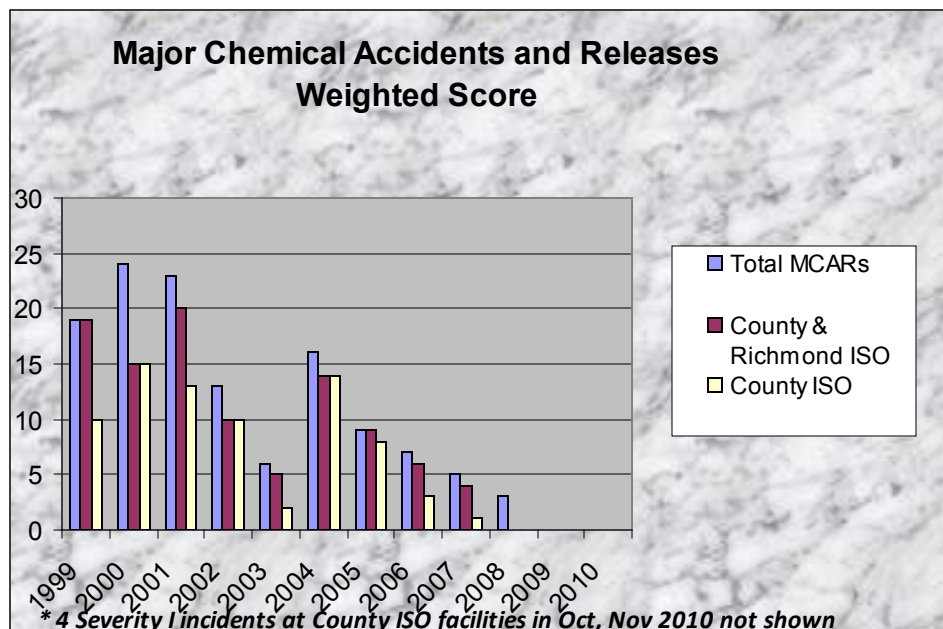
- Severity Level III – A fatality, serious injuries, or major onsite or offsite damage occurred
- Severity Level II – An impact to the community occurred, or if the situation was slightly different the accident may have been considered major, or there is a recurring type of incident at that facility
- 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 September 2010 for all stationary sources in Contra Costa County,

the MCARs that have occurred at the County's Industrial Safety Ordinance stationary sources, 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. There were four severity type I MCAR events from Tesoro and Conoco Phillips in October and November this year that are not shown on the graphs. 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 nine points, Severity Level II three points, and Severity Level I one point. Below is a graph of this weighted scoring.





## Legal Enforcement Actions Initiated by Health Services

As part of the enforcement of the Industrial Safety Ordinance and the CalARP Program, Hazardous Materials Programs issues Notice 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 noncompliance 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 2009–10 is \$524,244.

## Total Personnel and Personnel Years Used by Health Services 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:

- One ISO/CalARP Program facility audit was done between November 2009 and October 2010. It takes five engineers four weeks to perform an ISO/CalARP Program on site portion of the 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 this audit in 2010 is 950 hours. Approximately one-third of the time is dedicated to the Industrial Safety Ordinance for a total of 316 hours.
- Developing Safety Culture Assessment Guidance and establishing Process Safety Measurement – 200 hours
- Reviewing information for the website – 40 hours
- Reviewing Safety Plans and following up with the facilities on any deficiencies – 200 hours
- Health Services Communications Office or the Accidental Release Prevention Engineers prepare material for presentations and public meetings – total approximately 80 personnel hours.
- Working with Public Health Division on preparing meetings and material for the Spanish speaking communities – 40 personnel hours
- Total of 1,510 hours is the approximate personnel time spent on the Industrial Safety Ordinance.

This is not including the ombudsman time spent helping 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 Hazardous Materials Programs, and the Industrial Safety Ordinance administered by Hazardous Materials Programs. 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 identical to the Process Safety Management Program. The main differences between the federal Accidental Release Prevention and the CalARP Programs are as follows:

1. The number of chemicals regulated
2. The threshold quantity of these chemicals
3. An external events analysis, including seismic and security and vulnerability analysis, is required
4. Additional information in the Risk Management Plan
5. Health Services is required to audit and inspect stationary sources at least once every three years
6. The interaction required between the stationary source and Health Services

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 practices
- All of the process at the regulated stationary source 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 requirement 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 in 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 lower 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. 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 Miller. 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. 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, Washington 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 by using the following link: <http://help.senate.gov/hearings/hearing/?id=fe34048f-5056-9502-5d69-2609a5d5501a>.

## City of Richmond Industrial Safety Ordinance

The City of Richmond passed its version of the Industrial Safety Ordinance on December 18, 2001 that became effective on January 17, 2002. Richmond's Industrial Safety Ordinance mirrors the County's Industrial Safety Ordinance, with the exceptions of the 2006 amendments to the County's Ordinance. Richmond's Industrial Safety Ordinance covers two stationary sources: Chevron 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.

Health Services 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 and the final report has been 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.

Health Services 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.



# **Attachment A**

## **Hazardous Materials Ombudsman Report**

Hazardous Materials Ombudsman Evaluation  
October 2009 through September 2010

### **I. Introduction**

On July 15, 1997 the Contra Costa County Board of Supervisors authorized the 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:

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

This evaluation covers the period from October 2009 through September 2010 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 website. 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 171 information requests. More than 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 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.

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.

In September, the Ombudsman facilitated a workshop for business owners concerning their new permit fee structure.

### **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 nonprofit 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, prepares reports, writes letters and provides support for three monthly Commission meetings. During this period, the Ombudsman completed writing reports on Household Hazardous Waste and Brownfields for the Commission.
- *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 newly created 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 Division's Asthma Program as a resource on environmental health issues. The Ombudsman also participated in countywide asthma coalition meetings, and represented the Asthma Program at regional meetings pertaining to asthma issues, particularly diesel pollution. The Ombudsman gave presentations to nine high school classes on

asthma and air pollution. The Ombudsman has also begun to provide technical support for efforts to address the impacts of climate change on sensitive populations, and efforts to improve health outcomes through improvements to the built environment.

- *East County Environmental Justice Collaborative*—During this period the Ombudsman provided technical assistance to the East County Environmental Justice Collaborative, a Public Health Division 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 Element of their updated General Plan.
- *National Conversation on Public Health and Chemical Exposure*—

wide effort organized by the federal Environmental Protection Agency and Centers for Disease Control to create an agenda for reducing the public's exposure to toxic chemicals. As part of this effort, the Ombudsman organized two local workshops to gather input from the public on these issues.

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, community-based participatory research 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 2010/11 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 East County Environmental Justice collaborative; chair the Integrated Pest Management Advisory Committee, and participate on the CAER Emergency Notification committee,

During this period the Ombudsman represented the Public Health Division in this yearlong nation-

the Air District CARE Advisory Board and the Richmond Health Element Implementation Group.

During this period the Ombudsman will help the Hazardous Materials Commission research and develop policy recommendations on the following issues:

- Pipeline Safety
- Industrial Safety and the Industrial Safety Ordinance
- Nanotechnology
- Environmental and health impacts of pharmaceutical wastes



# Attachment B

## Regulated Sources Annual Performance with Accident History and Inherent Safety Implementation

Annual Performance Review and Evaluation  
Submittal

June 01, 2010

\*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 CCHS have questions): Jim  
Stonecipher 510-245-7285 (ext 203)
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):  
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)):  
Not applicable (no incidents)  
\_\_\_\_\_
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)):  
Responded to RMP paper review in July  
2010 with revised RMP and Safety Plan.  
Count completed audit of plant in June 2010.  
Waiting on audit report.  
\_\_\_\_\_
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
- 
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)):  
CalARP Program fees are - \$594,823 and the Risk Management Chapter of the Industrial Safety Ordinance fees are - \$304,033. These numbers include the fees for both the County and City of Richmond facilities.
- 
13. Summarize total personnel and personnel years utilized by the jurisdiction to directly implement or administer this Chapter (450-8.030(B)(5)):  
4400 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 recieved
- 
15. Summarize how this Chapter improves

industrial safety at your stationary source (450-8.030(B)(7)):

This chapter has prompted us to relook at some of our safety processes and how to improve them. For exmple, we have all of the components of an Employee Particiaption Program in place but we are now looking at creating a single document which summarizes these elements. Air Liquide has a mature HSE process in place and is committed to maintaining HSE excellence.

---



---

16. List examples of changes made at your stationary source due to implementation of the Industrial Safety Ordinance (e.g., recommendations from PHA's, Compliance Audits, and Incident Investigations in units not subject to CalARP regulations; recommendations from RCA's) that significantly decrease the severity or likelihood of accidental releases:  
None at this time. While the Rodeo facility is a new site that began operation in 2009, Air Liquide has been in business for a long time. Air Liquide already has a mature HSE system in place at the site which incorporates best practices from the learnings and experience throughout Air Liquide. We are in the process of making sure that Rodeo employees are fully indoctrinated and engaged in our LIVES HSES culture including identifying and mitigating potentially at risk conditions and at risk behaviors, involvement on safety teams and in monthly safety meetings, and participation in monthly formal HSES inspections.
- 
- 
17. Summarize the emergency response activities conducted at the source (e.g., CWS or TEN activation) in response to major chemical accidents or releases:  
Not applicable, no incidents have occurred at the site.
-

# Annual Performance Review and Evaluation Submittal

June 01, 2010

\*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):  
Michael Cabral, (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  
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)):  
6/01/10 – Reviewed Section 7 (–no updates  
needed). Updated Section 8 (Annual  
Preformance Review and Evaluation  
Submittal). Minor updates for APCI  
Standard References general document,  
to include references to Safety Culture  
Assesment, and expanded corporate audit  
note to include references to ISO and Human  
Factors programs.
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, 4333 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. At this time 8 ensure actions items out  
of 14 have been completed or responded  
to. All action items are expected to be  
completed or responded to by February,  
2011. The 14 ensure action items are the  
total between Martinez- Shell and Matinez-  
Tesoro sites.
9. Summary of inherently safer systems  
implemented by the source including but  
not limited to inventory reduction (i.e.,  
intensification) and substitution (450-

8.030(B)(2)(vi)):

There were no planned shutdowns during this period for upgrades of the process. The use of casutic was eliminated in the boiler feed water treatment.

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 \$595,000. The total Industrial Safety Ordinance program fees for these nine facilities was - \$304,000. (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)):

4400 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 and in our Operating Hazards Review Process. In the coming year, we will complete a safety culture assessment and expect to identify 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.

---

## Annual Performance Review and Evaluation Submittal

June 01, 2010

\*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):  
Michael Cabral, (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 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)):  
6/01/10 – Reviewed Section 7 (–no updates needed). Updated Section 8 (Annual Performance Review and Evaluation Submittal). Minor updates for APCI Standard References general document, to include references to Safety Culture Assessment and expanded corporate audit note to include references to ISO and Human Factors programs

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, 4333 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. At this time 8 ensure actions items out of 14 have been completed or responded to. All action items are expected to be completed or responded to by February, 2011. The 14 ensure action items are total between Martinez- Shell and Martinez-Tesoro sites.

---

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)):  
Process control upgrades for the electrical and on-line control system were implemented in January 2010. This included the transferring of the safety critical controls and shutdowns from a hard wired/ relay based system to a solid state system. These upgrades improved overall system reliability and provide future flexibility and upgradeability to the critical safety system. The upgrades were implemented via the Management of Change process. Along with this upgrade, improvements to the HMI and controls to reduce human error were implemented. Thereby giving the operations team more convenient information regarding plant status, thus simplifying operations and providing for an inherently safer 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 \$595,000. The total Industrial Safety Ordinance program fees for these nine facilities was - \$304,000. (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)):  
4400 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. In the coming year, we will complete a safety culture assessment and expect to identify 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.
- 

## Annual Performance Review and Evaluation Submittal

June 28, 2010

\*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 CCHS 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.
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 next update is scheduled for July 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, 4333 Pacheco Boulevard, 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):  
There have been no major chemical accidents or releases during the current reporting 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)):  
None

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 are in preliminary draft technical review status with CCHS

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

See Attachment 1

10. Summarize the enforcement actions (including Notice of Deficiencies, Audit Reports, and any actions turned over to the Contra Costa County District Attorney's Office) taken with the Stationary Source

pursuant to Section 450-8.028 of County Ordinance 98-48 (450-8.030(B)(2)(vii)):  
None

11. Summarize total penalties assessed as a result of enforcement of this Chapter (450-8.030(3)):

No penalties have been assessed against any facility.

12. Summarize the total fees, service charges, and other assessments collected specifically for the support of the ISO (450-8.030(B)(4)):  
CalARP Program fees for these eight facilities are - \$420,000, the Risk Management Chapter of the Industrial Safety Ordinance fees are - \$524,000.(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)):

4400 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 conjunction with the ConocoPhillips Corporate Health Safety Environment

Management Systems the ISO is another tool  
in the continuation of improving 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.  
A list of inherently safer systems as required by the ISO for PHA recommendations and new construction is attached
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 have occurred since the last report



# Attachment 1

## July 2009 – June 2010 ISS improvements

Type	ISS category	Description
Project	Passive	New vessel with upgraded metallurgy
Project	Passive	Upgraded metallurgy in air coolers and piping
HEP Project	Passive	New valves with upgraded metallurgy
HEP Project	Passive	Upgraded metallurgy in reactors
HEP Project	Passive	Upgraded metallurgy of quench valves and piping
HEP Project	Passive	Installed control valves to prevent potential releases
HEP Project	Passive	Installed a vacuum fractionation tower to reduce operating temperatures and pressures.
HEP Project	Passive	Minimized volume of hot oil contained in the unit above flash point
HEP Project	Passive	Combined unit operations to reduce system volume
HEP Project	Passive	Installed fire proof coatings on EIV's
HEP Project	Passive	Installed EIV's fail closed to prevent potential hazardous situation
HEP Project	Passive	Installed steam drive pumps for better control to limit flaring
HEP Project	Passive	Installed new heat exchangers with upgraded pressure rating
HEP Project	Inherent	Eliminated tank to consolidate storage facilities.
HEP Project	Passive	Eliminated parallel water cooler to reduce potential leak points.
HEP Project	Passive	Upgraded metallurgy of reboiler tubes
Project	Passive	Upgraded metallurgy of the radiant tubes in heater
Project	Passive	Upgraded pump to better metallurgy
Project	Passive	Upgraded overhead exchanger to better metallurgy
Project	Passive	Upgraded metallurgy in the TV-205 stem
Project	Passive	Upgraded metallurgy in thermowells
Project	Passive	Upgraded metallurgy in exchanger
Project	Passive	Minimized releases by redesigning pump seal
Project	Passive	Upgraded metallurgy of bonnet on vacuum valve
Project	Passive	Cooling water added to IB bearing housing to prevent hazardous bearing failure
Project	Passive	Upgraded metallurgy of two exchangers
Project	Passive	Seismic retrofit of tank to prevent potential release
Project	Passive	Upgraded metallurgy of relief valve
Project	Passive	Improve current samples stations to mitigate potential H2S exposure
Project	Passive	Upgraded metallurgy of piping
Project	Passive	Upgraded metallurgy of piping
Project	Passive	Upgraded metallurgy of piping
Project	Passive	Upgraded metallurgy of piping


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

### Annual Performance Review and Evaluation Submittal

June 30, 2010

\*Attach additional pages as necessary

1. Name and address of Stationary Source: General Chemical Bay Point Works, 501 Nichols Road, Bay Point, California 94565
2. Contact name and telephone number (should CCHS 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)): General Chemical – BPW Safety Plan and Program are currently in place. The Safety Plan and program are reviewed regularly for improvement opportunities
4. Summarize Safety Plan updates (i.e., brief explanation of update and corresponding date) (450-8.030(B)(2)(ii)): Changes to the plan included minor updates on the organization chart and on references to the location of emergency contact information; effective date: March 31, 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)): CCHS Office, 4585 Pacheco Blvd. Suite 100, Martinez, CA 94553; Bay Point Library (library closest to the stationary source).
6. Provide any additions to the annual accident history reports (i.e. updates) submitted pursuant to Section 450-8.016(E)(2) of County Ordinance 98-48 (450-8.030(B)(2)(iii)) (i.e., provide information identified in Section 450-8.016(E)(1) for all major chemical accidents or releases occurring between the last annual performance review report and the current annual performance review and evaluation submittal (12-month history): There have been no major chemical accidents or releases at Bay Point Works between the last and the current annual performance review and evaluation submittal
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 has been no root cause analysis for major chemical accident or release performed during this period
8. Summary of the status of implementation of recommendations formulated during audits, inspections, Root Cause Analyses, or Incident Investigations conducted by the Department (450-8.030(B)(2)(v)): An audit was conducted in January 2008, resulting in 76 recommendations. General Chemical has addressed 95% of those recommendations and is currently working to resolve the rest.
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)): BPW replaced a glass distillation column with PTFE lined stainless steel.
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)): CalARP Program fees are - \$594,823 and the Risk Management Chapter of the

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

Industrial Safety Ordinance fees are - \$304, 033. These numbers include the fees for both the County and City of Richmond facilities.

13. Summarize total personnel and personnel years utilized by the jurisdiction to directly implement or administer this Chapter (450-8.030(B)(5)): 4400 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)): The Facility has not received any comments (that may not have been received by the Department) regarding the effectiveness of the local program.
15. Summarize how this Chapter improves industrial safety at your stationary source (450-8.030(B)(7)): This chapter helps the facility prevent chemical accidents and minimize the potential risks and exposure to employees, community and the environment .
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 facility has conducted PHAs on all units including those that are not subject to CalARP regulations. The facility has implemented many recommendations from these PHAs. The plant has also provided more internal and external safety training for employees. Additionally, BPW has made and continues to make many changes to procedures in order to take full advantage of programs such as human factors.
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 have been no emergency response activities in response to major chemical accidents or releases during the period.



# Annual Performance Review and Evaluation Submittal

June 30, 2010

\*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 CCHS 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 2007,  
incorporating updates addressing findings  
from the October/November 2006 CalARP/  
ISO audit. 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)): SMR's Safety Plan  
was last updated in September 2007,  
incorporating updates addressing findings  
from the October/November 2006 CalARP/  
ISO audit. SMR's Safety Plan is next due  
for update in September 2010. This update  
will address findings from the May 2009  
CalARP/ISO audit.
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 at 4585 Pacheco Boulevard,  
Suite 100, Martinez; Martinez Public  
Library (library closest to the stationary
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, 2009 to June 30,  
2010), 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, 2009 to June 30,  
2010), 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)):  
38 of 60 action items arising from the May  
2009 CalARP/ISO Audit have been closed.  
(Closure to date was validated during an  
unannounced inspection on May 7, 2010.)  
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.
10. Summarize the enforcement actions  
(including Notice of Deficiencies, Audit  
Reports, and any actions turned over to the

source).



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 \$595,000. The total Industrial Safety Ordinance program fees for these nine facilities was - \$304,000. (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)):

4400 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, 2009 to June 30, 2010).

---

# Attachment 1

**Table 1. Summary of Implemented ISS**

ISS Item Number	ISS Type	Source / Study	Description
M20081564-001	Inherent / Substitute	RCA	Replaced SRU-3 Catalytic Oxidizer with a Thermal Oxidizer. Thermal Oxidizer is not subject to accumulation of condensed sulfur that could be subsequently oxidized resulting in offsite SO <sub>2</sub> pluming.
R2009094-001	Passive/ Moderate	ISS Existing Analysis	ISS Review Question III.A.: “Is it possible to limit the supply pressure of raw materials to less than the maximum allowable working pressure of the vessels they are delivered to?” Reviewed pressure drop in butane unloading piping and pump discharge pressure, and installed lower head pump.
M2007435-001	Active/ Simplify	Project	Installed a steam control valve and temperature control loops on asphalt slop tanks. Former temperature control on these tanks was procedural: opening a manual steam valve and monitoring a local dial temperature probe. Reduces risk of overheating the tanks.
M20083147-001	Passive/ Minimize	Project	Corrected dead leg pipe arrangement downstream of heat exchanger tube side. Also installed block valves on tube inlet and tube outlet, which allows exchanger to be isolated with less exposure during maintenance.
M20091316-001	Passive/ Minimize	Project	Modified piping to compressor sour seal oil pots to eliminate dead legs, and to eliminate flow to process sewer.
M20093619-001	Passive/ Minimize	Project	Removed 2” caustic wash-out line on Alky reactor. This line is no longer used for de-inventorying and caustic washing due to new procedures that have been developed to more effectively chemically wash the reactor.

# Attachment 1

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

ISS Item Number	ISS Type	Source /Study	Description
M20081564-001	Inherent / Substitute	RCA	Replaced SRU-3 Catalytic Oxidizer with a Thermal Oxidizer. Thermal Oxidizer is not subject to accumulation of condensed sulfur that could be subsequently oxidized resulting in offsite SO2 pluming.
R2009094-001	Passive/ Moderate	ISS Existing Analysis	ISS Review Question III.A.: "Is it possible to limit the supply pressure of raw materials to less than the maximum allowable working pressure of the vessels they are delivered to?" Reviewed pressure drop in butane unloading piping and pump discharge pressure, and installed lower head pump.
M2007435-001	Active/ Simplify	Project	Installed a steam control valve and temperature control loops on asphalt slop tanks. Former temperature control on these tanks was procedural: opening a manual steam valve and monitoring a local dial temperature probe. Reduces risk of overheating the tanks.
M20083147-001	Passive/ Minimize	Project	Corrected dead leg pipe arrangement downstream of heat exchanger tube side. Also installed block valves on tube inlet and tube outlet, which allows exchanger to be isolated with less exposure during maintenance.
M20091316-001	Passive/ Minimize	Project	Modified piping to compressor sour seal oil pots to eliminate dead legs, and to eliminate flow to process sewer.
M20093619-001	Passive/ Minimize	Project	Removed 2" caustic wash-out line on Alky reactor. This line is no longer used for de-inventorying and caustic washing due to new procedures that have been developed to more effectively chemically wash the reactor.

# Annual Performance Review and Evaluation Submittal

June 30, 2010

\*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 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 Health Services on December  
10, 2009. Contra Costa Health Services has  
completed four audits of 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  
and most recently August-October, 2008. 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,  
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 no accidents meeting the  
major chemical accident or release criteria  
during this reporting period.
7. Summary of each Root Cause Analysis  
(Section 450-8.016(C)) including the  
status of the analysis and the status of  
implementation of recommendations  
formulated during the analysis (450-8.030(B)  
(2)(iv)):

Status of Root Cause Analysis  
Recommendations: All investigation  
recommendations from root cause analyses  
submitted to CCHS are closed except as  
noted below.



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.

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 and August-October, 2008. 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. 56 of those recommendations are closed, which is 77% of the recommendations. The remaining recommendations are on target according to a response submitted to CCHS on 5/4/09. Please refer to that submittal.

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 any 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”: CalARP program fees for these eight facilities are \$420,408.42. The Risk Management Chapter of the Industrial Safety Ordinance fees are \$524,243.94.

---

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”: 4400 hours were used to audit/inspect and issue reports on the Risk Management Chapter of the Industrial Safety Ordinance.

---

14. Copies of any comments received by the source (that may not have been received by the Department) regarding the effectiveness of the local program that raise public safety issues (450-8.030(B)(6)):

This facility has not received any comments to date regarding the effectiveness of the local program.

---

15. Summarize how this Chapter improves industrial safety at your stationary source (450-8.030(B)(7)):
- Chapter 450-8 improves industrial safety by expanding the safety programs to all units in the refinery. In addition, the timeframe is shorter to implement recommendations generated from the Process Hazard

Analysis (PHA) safety program than state or federal law. This has resulted in a faster implementation of these recommendations.

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

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

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

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 CAN 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.

Item Identifier	Implementation Category	Risk Reduction Category	Risk Reduction Strategy–Description
PTS 11806, 11916, 11730	Project	Inherent	Simplify – Eliminated three atmospheric blowdown towers and routed process streams to a safer location.
A007-2005-702	PHA	Inherent	Simplify – Eliminated a vessel and routed associated process stream to a safer location.
A014-054-S	Project	Passive	Minimize – Use smaller quantities of hazardous materials when the use of material could not be avoided.
A016-2001-380	PHA	Inherent	Simplify – Decommissioned and demolished a hazardous materials system.
A016-2001-400	PHA	Passive	Simplify – Relocated equipment to enhance ergonomic access.
A067-2003-ISS-50	PHA	Passive	Simplify – Used alternate design features to reduce the frequency of the hazard.
A068-2004-550	PHA	Passive	Simplify – Used alternate design features to reduce the frequency of the hazard.
A068-2004-551	PHA	Passive	Simplify – Used alternate design features to reduce the frequency of the hazard.
A068-2004-ISS-14	PHA	Passive	Simplify – Used alternate design features to reduce the frequency of the hazard.
A069-2004-132	PHA	Passive	Simplify – Used alternate design features to reduce the frequency of the hazard.
A069-2004-145	PHA	Passive	Simplify – Used alternate design features to reduce the frequency of the hazard.
A069-2004-297	PHA	Passive	Simplify – Used alternate design features to reduce the frequency of the hazard.
A075-2007-004	PHA	Passive	Simplify – Used alternate design features to reduce the frequency of the hazard.
PTS 11872	Project	Passive	Simplify – Used alternate design features to reduce the frequency of the hazard.
PTS11942	Project	Inherent	Simplify – Decommissioned and demolished a hazardous materials system.
PTS 11887	Project	Passive	Simplify – Used alternate design features to reduce the frequency of the hazard.
PTS 11891	Project	Passive	Simplify – Used alternate design features to reduce the frequency of the hazard.