

# Safety Audit Summary

## General Chemical Corporation Bay Point Works

### 501 Nichols Road, Bay Point

#### Introduction

Contra Costa Health Services (CCHS) conducted a third comprehensive audit/inspection of the safety programs, policies, and procedures developed by General Chemical Bay Point Works (BPW) located at 501 Nichols Road, Bay Point. This safety audit, conducted in September 2005, was performed to determine compliance with the California Accidental Release Prevention (CalARP) Program and the more comprehensive Contra Costa County Industrial Safety Ordinance (ISO) Safety Program. The prevention programs address maintenance, operating procedures, contractor safety, personnel training, incident investigations and understanding hazards at the plant. The inspection also examines the management systems in place to implement these programs and the plant's emergency response program to make sure that the plant is prepared to respond to an emergency involving a hazardous chemical.

The audit also verified that General Chemical plant has addressed Contra Costa County's specific requirements for managing additional safety programs beyond those already required under State and Federal regulations. These additional safety programs include:

- Effectively managing organizational changes at the facility so there is minimal impact to emergency response and operations;
- Conducting detailed incident investigations to fix the systems or safety programs that were at fault, instead of just assigning blame to an employee, in order to prevent possible future similar incidents from occurring;
- Reviewing the facility's operations for signs of hidden problems that could lead to possible significant incidents. Identifying these signs and correcting them are the primary purposes of the human factors program; and
- Assessing ways to improve new and existing equipment/processes to reduce the impact of the hazards and make them safer.

During a comprehensive safety audit, CCHS reviews individual safety programs through answering more than 470 questions. The CCHS 2005 safety audit at General Chemical resulted in 103 corrective actions for General Chemical BPW to implement and 29 other items that are not required but may assist in accident prevention. Identified below is a summary of some of the findings, both good and bad, within the various safety programs. For ease of presentation, the safety programs have been grouped into three broad topics: management systems, process/equipment issues, and the County ISO requirements.

#### Management System

- **Management Oversight:** CCHS found that there was a lack of staff with appropriate expertise to ensure the safety programs are in place and implemented. A baseline has not been specifically developed to measure the effectiveness of the safety program elements (i.e., risk management program elements, human factors program, root cause analysis and incident investigations).
- **Changes in Process and Equipment:** A tracking system was not in place to ensure that temporary changes are completed when designated or how and when the change can be extended. Personnel were not aware of the changes. No documentation was provided to those granting authorization for the changes.
- **Compliance Audit:** BPW completed a compliance audit in March 2004. However, BPW did not review the actions and did not promptly determine and document an appropriate response to each of the findings of the compliance audit.
- **Contractor Safety:** BPW did not consistently obtain and evaluate information regarding the contractor safety programs when selecting a contractor. BPW usually hires the same contractors. BPW did not follow their policy on providing contractors with a site orientation and performing field surveys.
- **Emergency Response:** BPW's emergency response plan did not include documentation of proper first aid and emergency medical treatment necessary to treat accidental human exposures, and written information was not readily available to be provided to the medical facility treating potentially exposed personnel if there was an event. The emergency response plan did not include a matrix that identifies emergency response equipment and types and frequencies of inspections required.

## Process/Equipment Issues

- **Mechanical Integrity:** BPW's computerized Maintenance Management System did not accommodate the following: allow maintenance personnel to change the preventive maintenance frequency or other information; document when maintenance activities were actually completed; and allow personnel to readily assess the status of overdue maintenance activities.
- **Process/Equipment Safety Information:** BPW achieved great improvement in upgrading a Process Safety Information binder that was found to be relatively up to date. BPW still needs to confirm that all information is consistent for all processes.
- **Process Hazard Analysis (PHA):** BPW has completed several PHA/revalidation reports since the last audit, and most of the reports have been completed on a timely manner. Three of the PHA reports were identified to be late. BPW needs to ensure that all PHAs are revalidated every five years.
- **Operating Procedures:** During the CCHS four-week audit, CCHS observed that operators did not have access to hard copies of the operating procedures and computers in the control rooms were down and required maintenance. There was no process in place to annually certify that operating procedures are current and accurate.

## Industrial Safety Ordinance (ISO) Requirements

- CCHS found that BPW made changes in their key safety/management positions without conducting a Management of Organizational Change to ensure responsibilities for addressing safety elements and emergency response are clearly defined. BPW had trouble retaining operators and engineers, although technically the positions were not eliminated. Some of these positions were vacant for up to a year. Training of replacement personnel was found to be less than adequate.
- CCHS also identified significant deficiencies in the following: maintaining an effective safety program and implementing reviews for signs of hidden problems that could lead to possible significant incidents; encouraging employee participation in addressing and reviewing documentation related to safety elements; and effectively addressing inherently safer systems/design in the existing and new processes (look for ways to reduce the hazard and make the process safer).

## Follow-up Safety Program Activities

CCHS has been very concerned about General Chemical Bay Point Works' safety programs. General Chemical has been working with CCHS to complete the following actions:

- Conduct an internal Safety Culture Survey
- Apply lessons learned from the third party Safety Culture and Management System Evaluation that was completed for the Richmond Work Facility to the Bay Point Works facility.
- Schedule and Implement the actions identified from the 2005 CCHS safety audit. BPW has been aggressively implementing these actions. BPW has provided an updated master schedule on a monthly basis for CCHS to review and there have been follow-up meetings (at least monthly) with CCHS to review the master schedule and the status of the actions completed.
- General Chemical has been responsive in providing timely completion of a majority of the actions identified during the 2005 audit. Based on CCHS monthly progress review meetings with BPW, CCHS has confirmed that through December 2006, BPW has completed about 88 percent of the total recommendations identified during the 2005 safety audit.

## Next Steps

The results of the entire safety audit are now available for review and CCHS encourages the public to provide comments. Written comments postmarked no later than January 15, 2007 should be sent via email to [ARPTeam@hsd.co.contra-costa.ca.us](mailto:ARPTeam@hsd.co.contra-costa.ca.us) or addressed to Contra Costa Health Services Hazardous Materials Programs, c/o Randy Sawyer, 4333 Pacheco Blvd., Martinez, CA 94553. CCHS will respond to all written comments.

## Additional Information

For more information, call 925-646-2930 or logon to the CCHS website ([cchealth.org](http://cchealth.org)). To review the complete safety audit report, visit the Bay Point Library at the Riverview Middle School, 205 Pacifica Avenue, Bay Point, CA 94565 or call 925-646-2286 for an appointment to view the report at CCHS' offices.



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