

## **SECTION B - CHAPTER 7: MANAGEMENT OF ORGANIZATIONAL CHANGES**

Section 450-8.016(b)(1)(F) of County Ordinance Chapter 450-8, as amended by County Ordinance 2006-22<sup>1</sup>, requires Stationary Sources to conduct a Management of Organizational Change (MOOC) prior to staffing changes for changes in permanent staffing levels/reorganization in operations, maintenance, health and safety, or emergency response. This requirement also applies to stationary sources using contractors in permanent positions in operations and maintenance as well as temporary changes associated with strike preparations. Staffing changes that last longer than 90 days are considered permanent. For example, permanent positions exclude contractors hired for specific projects such as building a new process unit or specialty tasks. Employees and their representatives shall be consulted<sup>2</sup> in the MOOC process. The intent of this chapter is to identify those requirements that Stationary Sources must incorporate either into their existing Management of Change procedure to satisfy these requirements or to develop a separate MOOC procedure for staffing changes. Primarily, this chapter details requirements for identifying the technical basis for the organizational change (Section 7.3) and for assessing the impact of the organizational change on safety and health (Section 7.4). It is not the intent of this chapter to address the general requirements of Management of Change specified in Section 450-8.016(a)(6). The requirements of this chapter apply to:

- Reduction in the number of positions, or number of personnel within those positions in: operations, including engineers and supervisors with direct responsibilities in operations; positions with emergency response duties; positions with maintenance duties; and positions with health and safety duties
- Substantive increase in the duties in: operations, including engineers and supervisors with direct responsibilities in operations; positions with emergency response duties; positions with maintenance duties; and positions with health and safety duties (e.g., addition of equipment or instrumentation which significantly adds to the complexity of the system)
- Changes in the responsibilities of positions in: operations, including engineers and supervisors with direct responsibilities in operations; positions with emergency response responsibilities; positions with maintenance responsibilities; and positions with health and safety responsibilities

Each Stationary Source must develop criteria or guidance to assist appropriate personnel in determining “when” an MOOC should be initiated. Process changes may impact the way personnel interact with the process<sup>3</sup> and may trigger an MOOC.

The following process for managing organizational changes is based upon results of Contra Costa County Hazardous Materials Programs’ (CCHMP’s) audit experience and the method described in *Management of Safety and Health During Organizational Change*<sup>4</sup>. Sample worksheets provided in this publication are included in Attachment B of this document. Stationary Sources may also consider applying appropriate questions or indicators from the latent conditions checklist, Attachment A. Stationary Sources electing to develop and implement programs other than those described in this chapter must consult with CCHMP representatives.

## 7.1 FORMING A “CHANGE TEAM” OR “MOOC TEAM”

The *Management of Safety and Health During Organizational Change* publication advocates the use of a “change team” or “MOOC team” to scrutinize staffing changes. Stationary Sources should use a “change team” or “MOOC team” to satisfy the requirement that employees and their representatives be consulted in the Management of Organizational Change. The “change team” or “MOOC team” should include employees and their representatives, as appropriate, from engineering, maintenance, emergency response, and operations as well as health and safety. Each Stationary Source must develop and disseminate criteria or guidance to assist personnel responsible for conducting the MOOC in determining whether a team approach is appropriate and the composition of the team. The “change team” or “MOOC team” must be given the time, resources, and management support to properly evaluate proposed staffing changes.

## 7.2 DEFINING THE EXISTING SITUATION AND IDENTIFYING AFFECTED AREAS

Stationary Source representatives must clearly understand their existing situation (e.g., personnel, personnel responsibilities, program requirements) before they can thoroughly analyze the impact of the staffing change(s) on safety and health. Prior to conducting the MOOC, the Stationary Source shall ensure that the written descriptions of job tasks are current and accurate for the positions under evaluation. Although complete and up to date descriptions of job functions are more commonly available, they are not the best means to assess a position’s responsibilities. Stationary Sources need to evaluate job tasks and any “other” activities that an individual performs to effectively account for the existing situation. All positions that may be reduced or eliminated as well as those positions that may have an increase in duties and/or responsibilities associated with the change must be assessed. It should be emphasized that the Stationary Source must understand the existing situation for positions that could be changed before a determination can be made of whether a “*substantive increase in duties*” or “*change of responsibilities*” exists. Members of the “change team” or “MOOC team” should consider developing checklists of general program requirements (maintenance, emergency response, health and safety, and operational) that must be met. The following program requirements are examples that the Stationary Source may elect to consider:

- Process Safety Management Programs
- Human Factors
- Self Audits/Inspections
- Accident/Incident Reporting
- Safe Work Practices
- Maintenance/Mechanical Integrity
- Health and Safety Training
- Contractor Safety
- Emergency Response

- Occupational Health Program
- Operations
- Safety Meetings

Members of the “change team” or “MOOC team” should also consider developing the specific tasks within each of the program requirements for which personnel are responsible (e.g., operations – correct staffing to handle the number of alarms associated with an upset or emergency; contractor safety – responsibility inspecting and auditing contractor work in progress; maintenance – tasks requiring craft-specific capabilities). Additionally, Stationary Sources may elect to incorporate within the checklist “reminders” of the effects of the change(s) on procedures and training (e.g., could the organizational change require changes in personnel needing emergency response training; could the organizational change require additional training for maintenance personnel if they expand from area-specific maintenance to other areas or facility-wide).

Once the Stationary Source has clearly identified the existing situation, they should first identify all areas (e.g., programs, procedures, meetings, training, etc.) that could potentially be affected by the change. Then the review should focus on those areas with highest priority (i.e., not every identified change may warrant an extensive review). Members of the “change team” may elect to revise the checklists included in Attachment B of this document to reflect conditions at their location.

### **7.3 DEVELOPING THE TECHNICAL BASIS FOR THE ORGANIZATIONAL CHANGE**

One or more members of the “change team” or “MOOC team” must determine the purpose, scope, and schedule of the pending staffing change and the potentially affected positions. This information should include what is to be changed, what is to be achieved by the change, why will the change achieve the intended goal, and why is the change necessary at this time. Members of the “change team” or “MOOC team” may elect to incorporate information from the worksheet in Attachment B. This information may be documented on the usual Management of Change form as the technical basis for the change.

### **7.4 ASSESSING THE IMPACT OF THE ORGANIZATIONAL CHANGE ON SAFETY AND HEALTH**

Members of the “change team” or “MOOC team” must assess the impact that the staffing change(s) will have on safety and health once they have clearly detailed the existing situation (e.g., program requirements, personnel tasks/responsibilities) and the reason for the organizational change. Members of the “change team” or “MOOC team” should determine the potentially affected programs and tasks using the checklists/reminders developed in Section 7.2 (if available). Members of the “change team” or “MOOC team” should also document the effects of the change and potential action items to mitigate the

consequences of the change. Members of the “change team” or “MOOC team” that are implementing the checklists developed in Section 7.2 should be encouraged to use the checklists to prompt discussion and brainstorming. It should not be used as an absolute.

Performing an accurate MOOC evaluation might necessitate an iterative process to ensure that all factors are addressed. For example, if the “change team” or “MOOC team” is evaluating the safety and health of the organizational change and discovers that another position may be affected by the change that was not evaluated (i.e., in the defining the existing situation phase Section 7.2), the team must stop and re-define their existing situation and technical basis.<sup>5</sup> The Stationary Source must clearly understand their existing situation before they can thoroughly analyze the overall impact of the staffing change(s) on safety and health.

Of primary importance during this phase of the MOOC, is assessing the impact of the change on safety and health during “off hours” or during emergency situations (e.g., spills, fires, explosions, excursions). For example, the “change team” or “MOOC team” may identify that the proposed organizational change will affect “Operations”. In particular, the personnel change will affect the number of operators available to bring the process to a safe state in an emergency situation. To assist in assessing the impacts of these situations, “change teams” or “MOOC teams” are encouraged to perform some type of time sequencing analysis to outline all of the tasks that must be performed during critical and emergency situations<sup>6</sup> and the time required to perform such tasks. The intent of such an analysis should be to identify if there are situations where, for example, an operator is required to perform multiple tasks in unreasonable timeframes based on the situation (e.g., an operator must run up to the fifth deck to turn a valve, run down to the first deck for another valve, and back to the fifth deck all within a short timeframe). Such an analysis is more than just adding up the number of instrument loop counts on the process.<sup>7</sup> Another example is the addition of equipment that significantly adds to the complexity of the unit and requires additional resources to bring it to a safe state during emergency situations or that requires additional maintenance resources in order to properly prepare the equipment to be placed back into operation. The “change team” or “MOOC team” should then identify the consequences of the change and identify action items to mitigate the consequences if necessary.

Stationary Sources that elected not to develop the checklists and Stationary Sources that want to perform a more detailed analysis than associated with the checklists may elect to conduct a modified PHA (e.g., What-If analysis) to analyze the potential impact of the change on safety and health. Members of the change team may elect to incorporate information from the worksheet shown in Attachment B. This information may be documented on the usual Management of Change form as the impact on safety and health.

## **7.5 COMPLETING THE MANAGEMENT OF ORGANIZATIONAL CHANGE**

The management of organizational change procedure should be completed in accordance with Section 450-8.016(a)(6) following identification of the technical basis of the change (Section 7.3) and the potential impacts of the change (and suggested action items to mitigate the impacts) on safety and health (Section 7.4). Of particular importance, is to ensure that employees affected by a change are informed of, and trained in, the change prior to the change occurring. Also of particular importance, is to ensure that operating, maintenance, health and safety, and emergency response procedures associated with the change are updated accordingly. Stationary Sources may elect to include these types of reminders in the checklists developed in Section 7.2 and implemented in Section 7.4 (e.g., is additional training required; does the change affect the procedures for notifying off-duty personnel during an emergency; etc.).

“Change team” or “MOC team” members must document the MOC process thoroughly. Documentation must include: MOOC team members, description of the MOOC, how the existing situation was defined, technical basis for the change, how any impacts on safety and health were assessed, negative impacts identified and documented mitigation actions that resolved each identified negative impact. This documentation must also clearly identify if the management decision is inconsistent with the team findings (e.g., the MOOC team concludes that removing a particular position could negatively impact safety and cannot be appropriately mitigated; whereas members of management believe that the negative impacts can be mitigated through certain corrective actions).

## **7.6 OPTIONAL CONSIDERATIONS**

This section describes additional considerations for conducting MOOC’s that are not required by the County’s ISO or the City of Richmond’s ISO.

### **7.6.1 MOOC SCREENING PROCESS**

Stationary Sources are encouraged to develop a documented screening process to briefly review all pending changes in positions of operation, maintenance, emergency response, and health & safety to determine whether the change would be subject to a full MOOC evaluation. The intent of such a screening process would be to ensure that all position changes receive some type of evaluation even if an MOOC was not ultimately required.

### **7.6.2 CAPTURING EXPERIENCE FROM PERSONNEL**

Stationary Sources are encouraged to develop a process to attempt to capture the knowledge and experience from personnel before they change positions or leave the Stationary Source. Stationary Sources may also consider using the documentation features of the MOOC program for these types of changes. Most individuals have the best of intentions to write information down or inform others of those especially hard-learned lessons before they depart, but unfortunately time and other factors do not always allow for this to occur. Stationary Sources that are

able to document a fraction of someone's historical knowledge of system design, operating characteristics, unique maintenance perspective, or other historical pieces of information are much better off for it.

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<sup>1</sup> Modifications were made to the Contra Costa County's Industrial Safety Ordinance (ISO) in 2006. The most significant change was adding maintenance and emergency response staffing changes to the list of changes that require a Management of Organizational Change evaluation. Since the corresponding City of Richmond's Industrial Safety Ordinance has not been amended, Stationary Sources subject to the City of Richmond's ISO are encouraged to comply with the County ISO amendments.

<sup>2</sup> The intent of consult is to exchange information, solicit input and participation from the employees and their representatives. It requires more than simply informing employees

<sup>3</sup> CCPS (2007), *Human Factors Methods for Improving Performance in the Process Industries*

<sup>4</sup> American Chemistry Council, formerly called the Chemical Manufacturers Association or CMA, Management of Safety and Health During Organizational Change (1998)

<sup>5</sup> CCPS (2008), *International Conference on Risk-Based Process Safety*, Dossey, M., "Human Factors Programs within Contra Costa County".

<sup>6</sup> I. Nimmo, Its Time to Consider Human Factors in Alarm Management, Chemical Engineering Progress, November 2002

<sup>7</sup> I. Nimmo, Determining Operator Workload and Console Loading is more than a simple loop count, November 2002