27

The Importance of Fostering a Strong Industrial Safety Culture and Change Management

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27.1
Introduction

Industrial plants and facilities are all unique, both in the application of a technology and culture. Safe and reliable operation of the workplace requires the diligent focus of a team of industrial professionals. A key element of an industrial plant's safe operation – its industrial safety culture – depends on every employee, from the board of directors, to the control room operator, to the field technician in the plant, to the security officers, and to contractors on-site. Industrial safety culture is an organization's values and behaviors – modeled by its leaders and internalized by its members – that serve to make industrial safety the overriding priority. The strength of an organization's dedication to safe operation can be seen in its industrial safety culture. If the safety culture of an organization is not placing safety as their number one priority then it would be in their best interests to implement a change management plan (CMP) to ensure that they are not placing production over safety. Change management is the application of managerial tools and techniques that promote the successful planning, communication, and implementation of change (Kotter, 1996), controlling and directing changes resulting from reorganization, new policy, and system or component modifications to achieve a smooth transition without adversely impacting personnel or interrupting corrective actions initiated before the change was introduced.

Industrial safety culture is to an organization what personality is to an individual: an intangible facet that can be seen only through behaviors and espoused values. It is under constant change; it represents the collective behaviors of the organization, which adapt over time as the organization and its members change and apply themselves to their daily activities (Harvard Business Review, 1995). As problems are encountered, the organization learns. Successes and failures become ingrained into the organization's industrial safety culture and form the basis for the means by which the organization does business. These behaviors are taught to new members of the organization as the correct way to perceive, think, act, and feel. Industrial safety is a collective responsibility. No-one in the organization is exempt from the obligation to ensure industrial safety first. Placing industrial safety first will ensure

that an organization is in a prevention mode versus a correction mode. Preventing injuries and events through preplanned activities such as pre-job briefings or in the engineering design of a component or structure will eliminate a potential latent issue that was not previously addressed.

The strength of an organization's industrial safety culture could lie anywhere along a broad continuum, depending on the degree to which the attributes of industrial safety culture are embraced. Even though industrial safety culture is an intangible concept that cannot simply be measured through quantitative means, it is possible to monitor the health of an organization's industrial safety culture based on observable behaviors. When deviations from expected behaviors are noted, it is the obligation of the organization to assess and correct such deviations promptly and thoroughly. This monitoring and adjustment process itself facilitates the desired behaviors of a learning organization – one that places industrial safety as its overriding priority and relentlessly seeks ways continuously to improve itself.

The industry recognizes the importance of building and maintaining a strong industrial safety culture. This requires the commitment of its leaders and the dedication of every individual. In-depth assessments are performed to gauge the health of each industrial facilities safety culture. It is recommended by the OSHA (Occupational Safety and Health Administration) Voluntary Protection Plan (VPP) (OSHA, 2011) that a periodic self-assessment be carried out to determine to what degree the organization has a healthy respect for industrial safety and that industrial safety is not compromised by production priorities. These assessments, and the actions taken in response to them, provide assurance that the proper attention to industrial safety culture is in place in daily operations and behaviors when compared with industry standards of excellence in this area.

Since industrial safety culture evolves over time (Kotter, 1996), it is also appropriate to review any evidence of problems on a frequent, ongoing basis. Personnel and organizational changes, budget challenges, handling of emergent issues, and day-to-day organizational dynamics can have a profound impact on what is viewed as important and hence can influence the behaviors (Kotter, 1996) and industrial safety culture at the place of business. Management has many sources of data available that may indicate the potential of an industrial safety cultural issue. These data include performance indicators such as OSHA Recordable Rates, Total Industrial Safety Accident Rates, corrective action programs (CAPs), the employee reach-out programs, quality assurance audits and quality control inspections, self-assessments, and benchmarking data.

The purpose of this chapter is to provide a framework for facilities to monitor their industrial safety culture on a continuous and real-time basis. The guidance provided is intended to provide one means of accomplishing industrial safety culture monitoring, but should not be viewed as the only way. This guideline should form the basis for developing tools that address the elements discussed in this chapter and that can be used to foster continuous improvement of industrial safety culture.

27.2
Process Description

The industry approach, in the experience of the author, to assessing and addressing industrial safety culture issues places primary responsibility on line management, and in particular on the site leadership team (SLT). The purpose is to provide an objective, transparent, and safety-focused process, which uses all of the information available (e.g., performance trends, industry evaluations, industrial safety culture assessments, self-assessments, audits, etc.) to provide an early indication of potential problems, develop effective corrective actions, and monitor the effectiveness of the actions.

Although it is not possible to measure culture directly, and therefore there must be some subjectivity, there are aspects of facility conditions which can be trended to provide a notification to site leadership to determine if industrial safety cultural issues contributed to the condition. Process weaknesses, discovered through audits, self-assessments, inspections, and so on, also can provide symptoms of industrial safety cultural problems. Similarly, the attitudes and behaviors of site personnel can be assessed through surveys, interviews, and behavioral observations. Behavioral observations that are conducted utilizing company- and activity-specific information cards have been the most useful tools for collecting data in the experience of the author. These observation cards are similar to those found in the DuPont Safety Program (DuPont, 2011) and BST (Behavioral Science Technology) Safety Program (BST, 2010). It is the responsibility of the SLT to employ all of these tools and take effective action.

27.2.1
Process Inputs

The following are the inputs to the industrial safety culture process. For each input, there are data (e.g., deficiencies, violations, or weaknesses) which can be reviewed in combination with data from other inputs to determine whether an industrial safety culture is healthy or positive. They provide a useful framework for assessing and categorizing the data and, in combination, are used to identify potential industrial safety cultural issues for action. Using a consistent model and terminology throughout the entire process will allow clear communication of issues which the entire site can understand and respond to. Each input has an owner whose responsibilities include assessing the data against the organization's or specific industries' defined principles and attributes and reporting their results to the SLT on a periodic basis.

- **OSHA inspection results**. These include the baseline inspections of facility and processes, supplemental inspections, event follow-up, and so on (OSHA, 2011). These can be utilized as valuable inputs for the site, and may incorporate insights into industrial safety culture.
- **Operating experience**. Data on previous deficiencies (such as operations, design, and equipment) are used to improve procedures and processes and to avoid

future problems. Information from operating experience can also be used to look for industrial safety culture issues.

- **Quality assurance/self-assessment/benchmarking/behavioral observations**. Each site performs a variety of self-reviews. These include audits required in the quality assurance (QA) programs, department self-assessments, and benchmarking of other sites in the industry (or other industries). It also includes observation programs by managers and supervisors in the field.

- **Employee reach-out program**. This program looks at the site's safety conscious work environment and provides opportunities to raise issues outside the normal chain of command. This is to protect the confidentiality of the individuals concerned. It may not be appropriate to enter some of the issues in the CAP, but the issues will be considered by the SLT (Osland and Turner, 2010). An example would be an employee who observes a co-worker working on a piece of equipment without locking it out. The co-worker may be a friend or a superior and the observer does not want to create any personal problems with the at-risk employee, but wants the behavior to be correct. This would allow the employee to raise their concern anonymously and not have the fear of retaliation by the at-risk individual or the company. Another example would be if a supervisor directs an employee to violate a safety policy, regulation, or law. Then the employee would have a means to raise their concern without fear of retaliation (Harvard Business Review, 1995).

- **Site performance trends.** Each site should have a broad suite of indicator, such as injury rates, which it uses to assess performance. These indicators go beyond the general production performance indicators (which generally measure plant-wide outcomes) and assess intermediate outcomes, which, if not corrected, could lead to safety system failures, events, or injuries. Trends can be developed in these indicators and the cause of the trend – be it process or design deficiencies, training, resources, or industrial safety culture issues – can be examined and corrective action taken. Examples include operator workarounds, control room deficiencies, preventive maintenance deferred, open positions, and so on. These trends would be available to regulatory agencies.

- Note that a site may have additional process inputs that it finds effective in helping to assess industrial safety culture.

27.2.2
Corrective Actions

Problems in all of these areas are fed into the site's Corrective Action Program (CAP), where they are assessed for significance, including whether significant analyses will be conducted. The CAP is used to identify trends which can be assessed for industrial safety culture issues (Owens, 2011). In some cases, the CAP is not the appropriate location for the problem; for example, some reach-out issues, allegations, violations, perhaps some industrial safety culture assessment issues, and some organizational or personal issues. Cultural and organizational issues may more appropriately be placed in an Improvement Plan, or whatever

term the site uses, or may be brought to the SLT's attention by an Industrial Safety Culture Monitoring Panel (ISCMP). This panel would consist of a cross-functional team from different departments that would look at the identified issues for trends and areas to focus on to stay in prevention. From a loss prevention engineering standpoint, the panel could take actions to stay out in front of issues before they become events or injuries. For example, if there are several minor first aid injuries on a particular valve hand, the panel may recognize the trend and take actions to replace it with a better design before a significant injury occurs.

27.2.3
Other Inputs

There may be additional inputs that come directly to the attention of the Department Manager, or similar position, such as allegations or other sensitive information, which are not appropriate to be handled through the CAP, but are important in assessing industrial safety culture. These allegations could be non-compliance with OSHA regulations or disposing of hazardous materials in unauthorized places.

27.2.4
Industrial Safety Culture Monitoring Panel (ISCMP)

An ISCMP (Harvard Business Review, 1995) monitors the inputs most indicative of the health of the organization's industrial safety culture to identify potential concerns in the work environment that merit additional attention by the organization. This cross-functional panel is comprised of experienced senior managers with diverse backgrounds. Panel reports are provided to the SLT. The panel's membership should be limited to a small number of members to protect the confidentiality of personal information.

27.2.5
Site Leadership Team (SLT)

An SLT is responsible for reviewing facility performance and taking a holistic view of all of the potential indications of industrial safety culture. The team should address the subtle issues gleaned from the variety of process inputs described above, and also specific items identified through an employee reach-out type program and industrial safety culture surveys and assessments. The SLT should receive periodic reports from the ISCMP and as issues emerge which the panel believes warrants immediate SLT attention. While maintaining an ongoing sensitivity to industrial safety culture issues, the team should also meet semi-annually to discuss and assess cultural issues. Prior to annual meetings, the SLT should receive a written report from the ISCMP summarizing issues and trends identified from the process inputs such as hand injuries or confined space violations.

27.2.6
Facility Response

An SLT should be responsible for determining what actions are necessary to address any industrial safety culture issues. In addition, the team is responsible for assessing the effectiveness of prior actions and redirecting these actions where appropriate. *Site response* actions might include: changes in policies, program modifications, training, additional or more independent assessments, benchmarking, and so on. The site responses, of course, provide feedback into the process inputs and into the CAP and/or facility improvement plan.

27.2.7
Communication

The SLT is also responsible for ensuring there is appropriate *communication* (Harvard Business Review, 1995) of its conclusions and actions. This communication is internal to the facility workforce and, if appropriate, corporate, and external, if appropriate, to the public. Raw data and reports, such as evaluations and the industrial safety culture assessment, would be available at the facility for regulatory review.

27.2.8
External Input

An Industrial Safety Review Board (or equivalent) provides an additional perspective to the SLT. The experience and independent views of the board can assist the SLT in many ways, including bringing a fresh look at cultural problems which may be invisible to those living in the culture day to day. Corporate organizations or fleets may also be used to provide external input.

27.2.9
Regulatory Oversight

Regulatory oversight may have a footprint in the process through its VPP (OSHA, 2011), OSHA, MSHA (Mine Safety and Health Administration), NRC (Nuclear Regulatory Commission) inspections, and baseline and supplemental inspections. It also retains traditional enforcement and the allegation and chilling effect processes. The inspection process provides valuable independent oversight to the facility.

27.2.10
Performance Trends

Areas that can provide indications of the site's safety focus include human performance (procedure use and adherence, self-checking, questioning attitude, placekeeping) and equipment reliability indicators. Although human performance

indicators vary site-to-site, they often include time clocks or hours worked without station level or department level consequential errors, trends of error rates, or lower level trends in CAP data (Owens, 2011).

Similarly, equipment reliability is often monitored in unique ways that can include equipment failure clocks, system availability and reliability, and trends in consequential equipment failures. Although there may be variations in such metrics across industry, the SLT uses these as tools to manage their station's issues. Variations in these indicators signal changes to which the organization must respond and such response can provide key industrial safety culture insights. Performance metrics associated with the challenges that the workers must face to run the operation can provide useful industrial safety culture insights.

27.2.11
Corrective Action Program

Each of the process owners will use the CAP to look for industrial safety culture issues in their area (Owens, 2011). For example, several documented occurrences of the same work group not wearing the required personal protective equipment (PPE) or several lock-out tag out non-compliances. In addition, the CAP should be used to identify trends across the entire data set of the CAP, for example, by using keywords. The data from investigation determinations will also provide insights into potential industrial safety culture issues and trends.

27.2.12
Report

The panel should review all the process input data and look for potential safety culture problems both across and within each of the process inputs. Incipient or identified weaknesses should be reported. The documentation should include the scope of the inputs reviewed, specific trends of the process inputs over time, any adverse industrial safety culture impacts identified, the organizations involved, and actions being taken to mitigate or address the impacts. One example could be the company's OSHA Recordable Rate. The rate could be looked at as a whole and broken down into pieces, which would show the type of injury, the part of the body injured, what day the injuries are occurring, and even the time of the injuries, depending on how far the panel wanted to drill down to get to the root cause of the trend.

27.3
Site Leadership Team Industrial Safety Culture Review

The SLT is comprised of the senior-most management personnel charged with the safe operation of a facility. Although position titles may vary among different businesses, from the author's experience, the SLT is typically comprised of a Site Vice

President, Plant Manager, and department heads responsible for operations, maintenance, engineering, and regulatory assurance. The senior manager responsible for the CAP should also be included, if not typically a member of the SLT.

To promote and monitor the health of the organization's industrial safety culture, the SLT periodically (e.g., semi-annually) assesses the facility's performance. This self-critique is intended to be reflective and performed by the SLT itself in a group setting. During this review, the SLT examines a variety of information that reflects the health of the organization's work environment, such as a specific plant location or specific department in a plant, to discern trends and early indications of industrial safety culture challenges. The reports of the ISCMP and previous industrial safety culture assessments, and any insights from the off-site industrial safety review board (or equivalent) should be reviewed by the SLT prior to the meeting. The chairperson of the ISCMP should be present at the meeting.

Although a variety of inputs may be considered during the self-critique, the most valuable insight often comes from the frank discussion of industrial safety culture based on the SLT's observations and insights. As the organization's senior leaders, the SLT possesses broad, diverse backgrounds in managing industrial facilities and the professionals that make up the workforce. The SLT is often able to discern subtle trends and early indications of industrial safety culture challenges from personal interactions, in-field observations, and other means. The end result should be an improved understanding among the members of the SLT of where their efforts to improve the station's industrial safety culture further should be applied.

27.3.1
Off-site Industrial Safety Review Board

Many facilities benefit from a periodic, independent review of the organization's performance by a team of consultants whose focus is on industrial safety. These consultants are often former regulators or leaders in the industry who spend time on-site to observe the behaviors and performance of the organization, and also review historical data. Given their independent and industry-level perspectives, these consultants can offer industrial safety culture insights that may not be directly apparent to the SLT. The insights of the off-site safety specialists should be included in the periodic assessments conducted by the SLT.

27.4
Change Management

At this point in the chapter, you are probably thinking about how all this applies to your organization and, more importantly, how to make the change to an organization that places safety as their number one priority. That is where *Change Management* comes into play. Like a large vessel in water, the larger the boat or ship, the harder it is to turn or change direction. The same applies to organizations

and the safety culture of an organization. Safety culture is an organization's values and behaviors modeled by its leaders and internalized by its members that serve to make personnel safety the overriding priority.

Change management is the application of managerial tools and techniques that promote the successful planning, communication, and implementation of change. Controlling and directing changes resulting from reorganization, new policy, and system or component modifications (Osland and Turner, 2010) to achieve a smooth transition without adversely impacting personnel or interrupting corrective actions initiated before the change was introduced. This can be accomplished with a CMP – a plan developed and approved by an organization that documents the thought process for evaluating a planned change and establishes the implementation of the change, including monitoring and contingencies. This process provides instruction on when a CMP is required and administrative controls for implementing CMPs.

Change management ensures that for high-risk, complex or major changes, including those addressing significant organizational changes, industrial safety aspects have been addressed and personnel safety is the overriding priority. Changes to programs, processes, procedures, and guidelines are implemented in a deliberate and controlled manner in order to maximize the effectiveness of the change and reduce errors in work performance. Changes in organizational alignment where organizational responsibilities and reporting relationships are changing are evaluated and implemented in a deliberate and controlled manner in order to ensure effective organizational performance. Changes provide positive expectations; appropriate training, and accountability to ensure that enhanced processes are provided and embraced. Changes are anchored into the organizational culture. A positive change process that is supported by employees and managers alike can be a good indication of an organizational culture that is conducive to good safety performance and low injury rates.

CMPs are required for all major changes. The use a *Change Determination Checklist* (see the example in Figure 27.1) can help in determining whether a change is major. *Major change* is a change that is highly complex and/or leads to a high-risk impact in industrial safety, environmental safety regulatory relationships, continued safe operation of the plant, stability of the organization, information technology (IT) systems or other complex processes, modifications with significant plant impact, and procedures/programs/processes/guidelines with complex or significant change.

CMPs should have the following participants based on the complexity of change:

- *Sponsor* or owner of the CMP responsible for its creation, specifications, quality, approval, overall implementation, and effectiveness.
- *Change Champion*, who is the creator and implementer of the CMP. For multi-facility CMPs there should be a lead change champion in addition to a change champion from each affected facility.

MAJOR CHANGE MANAGEMENT PLAN DEVELOPMENT CHECKLIST

(Page 1 of 2)

Change Title:				
Effective Date of Change:				
Change Champion:				
CHECKLIST FOR EFFECTIVE CHANGE MANAGEMENT	**N/A**	**YES**	**NO**
1. Has the objective of the change been clearly defined?				
2. Have the "before" and "after" values and beliefs for impacted organizations been clearly defined?				
3. Has consideration been given to dealing with resistance to the change?				
4. Nuclear Safety Aspects of the CMP–For high risk, complex or major changes including those addressing significant organizational changes, have nuclear safety culture aspects been addressed such that nuclear safety is the overriding priority?				
• Has Nuclear Safety been prioritized over production as the primary driver for all aspects of the change?				
• Were resource issues addressed in the CMP?				
• Were safety, design and operating margins maintained or increased as a result of the change?				
• Will the actions resulting from this change improve the long term health of the unit?				
• Does the CMP address how this change will be prioritized with other ongoing activities? (i.e. diverting of resources from other important projects/initiatives).				
• Does the CMP consider any effects on security safeguards and Physical Protection?				
• Does the communication plan address any potential nuclear safety culture issues?				
5. Has a focal point or responsible person to implement the change been named?				
6. Has a flow chart of the existing process and proposed new process been created to determine impacted interfaces?				
7. Has the proposed change been discussed (in person) with the impacted interfaces?				
8. Have the items listed below been evaluated/assessed for impact?				
• EP Program				
• ERO Rosters				
• Training Schedules				
• Vacation Schedules				
• Organization Charts				
• Employees to supervisor lists (payroll, HR, Dosimetry, EP, etc.)				
• UFSAR/ Technical Specifications/Codes of Federal Regulations (e.g., 10CFR50.54(q) Emergency Plans				
• QATR and Nuclear/Plant Policies				
• Employee expectations				
• Software purchases or modifications				
• Software change of ownership/official contacts or documentation				
• PC hardware needs or impacts				
• Impact on other plant (how do they do it)-FPL plants				
• Impact on other plant (how do they do it)-industry benchmarking				
• Impact on sign, labels, previous memos				
• Impact on existing priorities and schedules				
• Supporting organizations				
• Business Plan (Goals, initiatives, improvement plans, etc.)				
• Policies, Procedures and training materials				

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Figure 27.1 Major change management plan development checklist.

- *Program Owner*, who is the individual department head at each facility who is responsible for administering the change management process at his/her facility.
- *Peer Group*, which is the group of change champions for any multi-facility change management team. The peer group should work as a team to develop and implement the change management process.
- *Stakeholders*, who are any individual(s) or group(s) who is (are) affected by the change and/or is (are) key to successful implementation of the change. Proper alignment and buy-in by stakeholders is key to successful change implementation.

Change management starts with buy-in and responsibilities at the top of the organization. Chief Executive Officer Direct Reports or Direct Reports to Vice Presidents ensure that effective structures and processes are in place for change management. They approve and support major CMPs before they are implemented. It is also their responsibility to ensure for high-risk, complex, or major changes, including those addressing significant organizational changes, that industrial safety culture issues have been addressed and personnel safety is the overriding priority. This is how change management was handled in the nuclear and chemical facilities that the author has experienced working in and also recommends that this process be adopted by other organizations.

The Sponsor is responsible for ensuring that a CMP is developed for applicable changes and appoints a Change Champion. The Sponsor also validates the change and reviews the impact, implementation, communication, monitoring, and schedule. Communicating the overview of the CMP requirements and expectations prior to implementation to management is vital to the success of the change.

Once a Change Champion (manager or supervisor of the affected responsibility area) has been established, it is their responsibility to prepare a CMP to ensure that industrial safety culture and personnel safety are considered. The Change Champion also provides managerial oversight during implementation of the change along with periodic feedback to the sponsor of the progress of the CMP during implementation.

The Program Owner maintains ownership of the change management process at their facility, and ensures that CMPs and associated actions are tracked to completion.

The first step in the process is to determine the extent of the major change. The Change Champion will have the Site Change Management Coordinator or Manager determine if a CMP is needed to implement the change effectively. *If* the change is *not* major, *then* use the guidance (Figure 27.2) and implement the change. Personnel change and transfer of responsibilities may be better suited to a worksheet than a checklist; the *Major Change Management Determination Checklist* worksheet may be used when there is a position vacancy or functional transfer (see Figures 27.3–27.5).

MAJOR CHANGE MANAGEMENT PLAN DEVELOPMENT CHECKLIST

(Page 2 of 2)

8.	Has the OE program for industry experiences in the area being changed been researched to assess/gain lessons learned?		
9.	Has an implementation/transition plan and schedule been developed? • Develop Vision • Seek input from lowest level appropriate • Tie together training, procedures, roll out and implementation monitoring into a specific timetable or schedule • If several groups are affected, each group is in concurrence with the implementation plan		

CHECKLIST FOR EFFECTIVE CHANGE MANAGEMENT	N/A	YES	NO
10. Has the need to make changes to the Job/Task analysis for accredited training programs been considered? Contact Training if the answer to any of the following questions is yes.			
• Does the change create the need for new skill/knowledge to perform an existing task?			
• Does the change eliminate the need for a particular skill/knowledge previously essential for performing an existing task?			
• Does the change create an entirely new task?			
• Does the change cancel an existing task that job incumbents no longer perform?			
• Does the change result in a realignment of a task to a different Job Category?			
11. When designing the training plan to support the change, were the following lessons learned considered: • When a new qualification card is approved, determine the training needs of incumbents who currently hold the card and fully document how their qualification has been upgraded to meet new requirements • OJT is another drain on resources and should be resources loaded by the training plan • Reel time training on changes should be reinforced during continuing training and captured in initial lesson plans • Compliance with the Qualification manual			
12. Have potential areas for problems to arise post change, and monitoring techniques to catch the problems at an early stage, been identified?			
13. Where applicable, has performing a validation effort, lab, or pilot to test the change and provide a feedback loop been considered?			
14. Have clear and simple communication on the change been provided. • Employee meetings • Website • Information line • Developed a communication package and train management team to deliver at appropriate forums			
15. Has a monitoring system been developed to look at how effective the objectives of the change are being implemented? • 12 month effectiveness review (if required) • Trend CRs or ARs for indications of implementing problems • Develop performance measurement system			
Checklist completed: **Change Champion** Signature: _____	Date: ___/___/___		

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Figure 27.2 Change guidance.

CHANGE MANAGEMENT PLAN REVIEW AND APPROVAL
SITE - SPECIFIC APPROVAL
(Page 1 of 1)

Action
Tracking No. _____ _____ _____

Title: _____

Change Champion _____ Date _____

If applicable,

Human Resources Manager _____ Date _____

Training Manager _____ Date _____

IM Nuclear Systems Manager _____ Date _____

Other _____ Date _____

Change Sponsor _____ Date _____

Chief Nuclear Officer Direct
Reports or Direct Report to
VP Nuclear Operations, North
and South Regions
(major changes only) _____ Date _____

Change Champion Closeout
Note: The Licensing Mgr shall
verify that all actions of the
CMP are complete before
declaring a License
Amendment. _____ Date _____

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Figure 27.3   Change management review.

MAJOR CHANGE MANAGEMENT DETERMINATION CHECKLIST
(Page 1 of 2)

1.0   CHANGE DESCRIPTION:

_____
_____

- Change champion (name) _____
- Sponsor (name) _____
- Responsible Manager (name) _____

2.0   IS THIS CHANGE HIGHLY COMPLEX AND DOES IT LEAD TO A HIGH RISK IMPACT IN ANY OF THE FOLLOWING AREAS:

    Y__   N__   Personnel Safety
    Y__   N__   Industrial / Radiological / Environmental Safety
    Y__   N__   Regulatory Relationships (Licensing Basis, Tech. Specs. FSAR, E-Plan, Security Plan,
                        Design Basis, etc.
    Y__   N__   Continued safe operation of the plant
    Y__   N__   Procedures / programs / processes with complex or significant changes
    Y__   N__   IT systems or other complex processes
    Y__   N__   Stability of the organization including significant organizational changes

3.0   ARE OTHER ORGANIZATIONS (INTERNAL OR EXTERNAL) INVOLVED?

    How many? _____
    How important to the change? (Check one)
        Very important   __
        Important   __
        Not important   __

4.0   IS THIS CHANGE "MAJOR"?   (MULTIPLE "YES" ANSWERS ABOVE AND/OR MULTIPLE ORGANIZATIONS INVOLVED). JUDGMENT IS REQUIRED BASED ON THE IMPACT TO THE FACILITY AND THE ORGANIZATION.

        Yes __ No__

If **Yes** is checked, then a documented approved plan is required using the applicable tools provided in this procedure.

If **No** is checked, use the Standard change management guidance provided in Attachment 6.

Completed: _____   Date: _____

Figure 27.4   Major change management determination checklist.

Approved: _____ Date: _____

5.0   DESCRIPTION OF CHANGE

   This section should contain:
   1.   Reason / driver for the change.

6.0   SCHEDULE / ACTIVITY / ACTION LIST

   This section should contain the following:
   1.   A detailed listing of activities required for successful completion.
   2.   All activities should be broken into small enough pieces to facilitate ownership.
   3.   This should include descriptions, owners, and proposed and actual due dates.
   4.   It should integrate communications, training and any other activities necessary to successfully complete the change.

7.0   COMMUNICATION PLAN

   This section should include the following:
   1.   The message to be sent
   2.   The target audience
   3.   Method(s) used for the communication
   4.   The frequency and total number of communications
   5.   Where and when the message will be communicated

8.0   TRAINING PLAN (IF APPLICABLE)

   This should include the following:
   1.   Topic
   2.   Who will develop and present the topic
   3.   Target audience
   4.   Training location and time

9.0   AFFECTED DOCUMENTS

   This should include the following:
   1.   A list of affected site and fleet documents
   2.   A plan for changing the affected documents

Figure 27.4   (*continued*)

27.4.1
Change Management Plan – Applicable to Only One Facility

27.4.1.1   **Development and Initial Review**

> **Note**
>
> Some change initiatives may require preparatory work to be completed before an actual change can occur. The CMP does not have to be approved prior to the start of that preparatory work if there are no significant incremental costs as a result of the preparatory work.

PERSONNEL CHANGES
(Pages 1 of 3)

Personnel change and transfer of responsibilities may be better suited to a worksheet than a checklist. The worksheet below may be used when there is a position vacancy or functional transfer.

NOTE
Central to this change planning guide should be increased management and independent oversight to identify early signs of performance slippage due to the change.

Personnel Vacancy
1. Position title: _____
2. Date of vacancy: _____ Expected replacement date: _____
3. Will there be an interim/acting appointment?
 Yes _____ (Go to 4)   No _____ (Go to 5)
4. Name of interim/acting appointment: _____
5. Specify major duties and responsibilities of this position and BRIEFLY describe below. (Note any impact on reactor safety.)

NOTE
May be one individual filling all duties or multiple individuals filling portions of the duties.

Normal Duties	Responsible Individual

Outage Duties: BRIEFLY describe, note any impact on reactor safety.

Outage Duties	Responsible Individual

E-Plan duties or position: _____

Training Required: Note any training needed for this position

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Figure 27.5   Personnel changes worksheet.

PERSONNEL CHANGES
(Pages 2 of 3)

Normal Duties	Outage Duties

Meetings and Committees (attended by this position)

Meeting	Time	Frequency	Location	Person Attending

6. Review this worksheet with individual(s) filling roles in interim. Yes___ No___

7. Distribute copies of this worksheet to interfacing organizations. Yes___ No___

8. Conduct interim turnover briefing, using the checklist items below:

- ❑ Normal Job Duties
- ❑ Training Program Status & Issues
- ❑ Specialized Training needs (i.e., E-Plan, etc)
- ❑ Outage Job Duties
- ❑ Existing Action Plans, Corrective Actions or Action Requests (include current status/due dates)
- ❑ Meetings and Committee Representations
- ❑ Ongoing Regulatory/Agency Issues
- ❑ Open Personnel Issues (vacation schedules, manpower needs, etc.)
- ❑ Legal Issues
- ❑ Customer/Supplier Relationships
- ❑ Anticipated Duration of Interim Role(s)

Figure 27.5 *(continued)*

<u>**PERSONNEL CHANGES**</u>
(Pages 3 of 3)

Transfer of Organizational Function Plan

1. Function being transferred/combined   Transferring Org/Mgr   Receiving Org /Mgr

2. Action needed to modify / accomplish training
   in support of transfer   Responsibility / Due Date

3. List the organizations that are impacted by these changes:

4. Date(s) the changes become effective:

5. Describe how these changes will be communicated to the organization

Completed by: _____ Date: _____

If transferring responsibility between organizations, obtain these additional signatures:

Approved: _____   Date: _____
     (Transferring Org.)

Approved: _____   Date: _____
     (Receiving Org.)

Figure 27.5 *(continued)*

27.4.1.2   Change Champion

IF a major change, *DEVELOP* the CMP using Figures 27.1 and 27.2. *NOTIFY* the change management program owner.

   For a major change, *ENSURE* any item from Attachment 2 that is designated as a ''No'' is addressed in the plan implementation.

   Create an action tracking item for the CMP major or standard, and *INCLUDE* any actions needed for completion of the CMP.

Note

Face-to-face discussion is required with stakeholders to *ENSURE* that the CMP is understood and to *PROVIDE* an opportunity to ask and answer questions.

   SUBMIT the CMP to stakeholders for *REVIEW* and comment.

   ENSURE that the CMP is consistent with site-specific regulatory requirements, that is, OSHA, EPA (Environmental Protection Agency), and so on.

   WHEN the CMP is approved, *ENSURE* that the action tracking item is updated to ensure that key actions are being tracked.

27.4.1.3   Stakeholders

REVIEW the draft CMP and provide comments, if any, to the Change Champion. Participation in the change management process and its implementation is key to a successful change process.

Note

The following reviews are for the Change Champion's consideration; they are not mandatory unless the change directly affects their accountabilities. However, careful consideration should be given to include these reviewers.

27.4.1.4   Training Manager

IF special training (e.g., classroom training) is required for this *CHANGE*, the Training Manager should *REVIEW* the CMP for training requirements and *PROVIDE* comments, if any, to the Change Champion.

27.4.1.5   Human Resources Manager

REVIEW CMPs involving organization changes or changes where personnel policies may be affected.

27.4.1.6   Information Management Nuclear Systems Manager

REVIEW CMPs where changes to IT requirements are necessary to the responsible manager.

IF an organizational CMP affects a site-specific regulatory document, that is, OSHA, EPA, and so on, *ENSURE* that the appropriate change request is initiated.

27.4.2
Final Approval

Final approval for a major change is by Chief Executive Officer Direct Report or Vice President Nuclear Operations, and for a standard change, Change Champion and Sponsor.

27.4.3
Implementation

27.4.3.1   Change Champion

EXECUTE the CMP.

TRACK actions associated with the change.

MONITOR effectiveness of the change during implementation. Make changes based on monitoring results as necessary.

For major and standard CMPs, *ENSURE* that the action tracking item is updated, including the need to track any follow-up reviews (e.g., effectiveness reviews, self-assessments, etc.). When all of the actions for a CMP have been completed, the action tracking item can be closed.

WHEN all actions are *COMPLETE* for a major CMP, *CLOSE* the plan with the program owner.

27.4.3.2   Sponsor

PROVIDE oversight and support for implementing the change.

ENSURE that any action items resulting from the CMP are tracked and closed:

CMP – multi-site CMP process.

WHEN a change is identified which impacts multiple facilities, the Change Champion/Sponsor develops the fleet-wide CMP.

The fleet-wide CMP will include specific corporate actions and generic site actions needed for implementation of the changes.

Each site Change Champion will *GENERATE* a site tracking action to address the actions required to *IMPLEMENT* the change at their site.

The fleet-wide CMP will remain open until all of the site's tracking actions for the change have been completed. A follow-up should be conducted on a periodic basis to evaluate the effectiveness of the change.

27.5
Conclusion

In closing, the most important assets of a company are the people who work there. Therefore, fostering a strong industrial safety culture is paramount to a successful business. Placing personnel safety first and foremost only adds value when it is embraced and demonstrated in an organization. If your organization is only talking about safety and not taking action to demonstrate it, I would suggest changing your organization's paradigm and following the steps of change management described in this chapter. Remember, the larger the ship, the harder it is to turn!

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